



Operation Manual FT128 Rev 2.2 For Software V2.2.X



MA350

This page has deliberately been left blank.



# Table of Contents

1	Introduction		8
1.1 Overview		8	
	1.2 Defi	nitions / Explanations	8
	1.2.1	Alarm Point	8
	1.2.1.1	Smoke Detector	8
	1.2.1.2	Sensor	8
	1.2.1.3	Analogue Detector (sensor)	8
	1.2.1.4	Analogue Detector (Sensor) Base (ASB)	9
	1.2.1.5	Conventional Detector Race (CDR)	9
	1.2.1.0	Addressable	۳ م
	1.2.1.8	Conventional Zone Line Input.	9
	1.2.2	Output Unit	9
	1.2.3	Output / Control Output	9
	1.2.4	Short Circuit Isolator (ISO)	9
	1.2.5	Remote Display Unit (RDU)	9
	1.2.6	COM Loop	10
	1.2.7	Control Unit (C.U.) / CIE	10
	1.2.8	Fire Brigade Panel (FBP)	10
	1.2.9	Control Panel (CP)	10
	1.2.10	LED	10
	1.2.11	Remote Indicating Light (RIL)	10
	1.2.12	Display / LCD	10
	1.2.13	Door Open	10
	1.2.14	Site Specific Data (SSD)	10
	1.2.15	Software S/W / Firmware / System program	10
	1.2.16	EBLWin	10
	1.2.17	Web-Server	10
2	Overviev	V	11
_	21 The	FT128 CIE	11
	2.1 MC	Versions	11
	2.2 0/11 2.3 Doc	uments	11
	2.0 D00	lications	11
	2.5 PC S	SW	11
•			
3	Control	& Indicating Equipment (CIE)	12
	3.1 FT1	28 Specifications	12
	3.2 FI1	28 Limitations	13
	3.3 FI1	28 CIE Layout	14
	3.4 LED	Indicators and Push Button	16
	3.4.1	Fire Brigade Panel Display and Control	16
	3.4.2	Control Panel Display and Control	17
4	Control	Jnit Options	19
	4.1 Opti	onal I/O Matrix 4582	19
	4.2 AS1	668 Fan Control Module	19
	4.3 Zone	e Control & Indication Module	21
	4.4 NZ F	Fire Brigade (LED) Mimic Board	22
	4.5 Occ	upant Warning System (OWS)	23
	4.6 Gas	eous Extinguishing Control Module	25
	4.6.1	Overview	25



4.6.2 4.7	2 Display Board & Decal FT128 External Termination	25 27
5 Nor	mal Operation	29
51	The Display in ET128	29
51	1 I CD Backlight	29
513	2 The I CD Information Priority Order	29
6 Use	r level, User name & Password	. 31
6.1	User Level 0	32
6.2	User Level 1	32
6.3	Access Level 2A	32
6.4	User Level 2B	33
6.5	User Level 3A	34
6.6	Access Level 3B	34
6.7	Access Level 4	34
6.8	Passwords / Change of Password	35
6.8.	Password for Web-server access only	35
7 Sile	nce Alarm Devices	36
7 1	Silence Alarm Devices (Incide Switch)	36
7.1	NZ EB "Silence Alarms" Bulgin key (outside switch)	37
1.2		57
8 Disa	able / Re-Enable Alarm Devices	38
9 Sile	nce Buzzer	39
91	Silence Buzzer by Open Door	39
9.2	Silence buzzer by the "FB Bulgin Key"	30
0.2		30
		. 00
3.5		
10 Disa	able / Re-enable all control, extinguishing, ventilation interlocking outputs	40
10 Disa	able / Re-enable all control, extinguishing, ventilation interlocking outputs	40 41
10 Disa 11 Disa 12 Doo	able / Re-enable all control, extinguishing, ventilation interlocking outputs able button	40 41 42
10 Disa 11 Disa 12 Doo	able / Re-enable all control, extinguishing, ventilation interlocking outputs able button r Open	40 41 42
<ul> <li>10 Disa</li> <li>11 Disa</li> <li>12 Doo</li> <li>12.1</li> <li>12.2</li> </ul>	able / Re-enable all control, extinguishing, ventilation interlocking outputs able button or Open LED "Door open" Outputs for Routing Equipment (Fire Brigade TX and Fault TX)	<b>40</b> <b>41</b> <b>42</b> 42
10 Disa 11 Disa 12 Doo 12.1 12.2 12.3	able / Re-enable all control, extinguishing, ventilation interlocking outputs able button or Open LED "Door open" Outputs for Routing Equipment (Fire Brigade TX and Fault TX) Silence Buzzer by Door Switch	40 41 42 42 42
<b>10 Disa</b> <b>11 Disa</b> <b>12 Doo</b> 12.1 12.2 12.3	able / Re-enable all control, extinguishing, ventilation interlocking outputs able button or Open LED "Door open" Outputs for Routing Equipment (Fire Brigade TX and Fault TX) Silence Buzzer by Door Switch	40 41 42 42 42 42
10 Disa 11 Disa 12 Doo 12.1 12.2 12.3 13 Tec	able / Re-enable all control, extinguishing, ventilation interlocking outputs able button or Open LED "Door open" Outputs for Routing Equipment (Fire Brigade TX and Fault TX) Silence Buzzer by Door Switch hnical Address / Presentation Number	40 41 42 42 42 42 42
<ul> <li>10 Disa</li> <li>11 Disa</li> <li>12 Doo</li> <li>12.1</li> <li>12.2</li> <li>12.3</li> <li>13 Tect</li> <li>13.1</li> </ul>	able / Re-enable all control, extinguishing, ventilation interlocking outputs able button or Open LED "Door open" Outputs for Routing Equipment (Fire Brigade TX and Fault TX) Silence Buzzer by Door Switch hnical Address / Presentation Number Technical Address for COM Loop Units	40 41 42 42 42 42 42 42 42 42
<b>10</b> Disa <b>11</b> Disa <b>12</b> Doo 12.1 12.2 12.3 <b>13</b> Tech 13.1 13.2	able / Re-enable all control, extinguishing, ventilation interlocking outputs able button or Open LED "Door open" Outputs for Routing Equipment (Fire Brigade TX and Fault TX) Silence Buzzer by Door Switch hnical Address / Presentation Number Technical Address for COM Loop Units Presentation Number	40 41 42 42 42 42 42 42 43 43
<ul> <li>10 Disa</li> <li>11 Disa</li> <li>12 Doo</li> <li>12.1</li> <li>12.2</li> <li>12.3</li> <li>13 Tech</li> <li>13.1</li> <li>13.2</li> <li>14 Alar</li> </ul>	able / Re-enable all control, extinguishing, ventilation interlocking outputs able button or Open LED "Door open" Outputs for Routing Equipment (Fire Brigade TX and Fault TX) Silence Buzzer by Door Switch hnical Address / Presentation Number Technical Address for COM Loop Units Presentation Number	40 41 42 42 42 42 42 42 43 43 43
10 Disa 11 Disa 12 Doo 12.1 12.2 12.3 13 Tech 13.1 13.2 14 Alar	able / Re-enable all control, extinguishing, ventilation interlocking outputs able button or Open LED "Door open" Outputs for Routing Equipment (Fire Brigade TX and Fault TX) Silence Buzzer by Door Switch hnical Address / Presentation Number Technical Address for COM Loop Units Presentation Number	40 41 42 42 42 42 43 43 43 43 43
10         Disa           11         Disa           12         Doo           12.1         12.2           12.3         13           13         Tect           13.1         13.2           14         Alar           14.1         14.2	able / Re-enable all control, extinguishing, ventilation interlocking outputs able button or Open LED "Door open" Outputs for Routing Equipment (Fire Brigade TX and Fault TX) Silence Buzzer by Door Switch hnical Address / Presentation Number Technical Address for COM Loop Units Presentation Number m Types Pre-Warning	40 41 42 42 42 42 42 43 43 43 43 43
10 Disa 11 Disa 12 Doo 12.1 12.2 12.3 13 Tech 13.1 13.2 14 Alar 14.1 14.2 14.2	able / Re-enable all control, extinguishing, ventilation interlocking outputs able button or Open LED "Door open" Outputs for Routing Equipment (Fire Brigade TX and Fault TX) Silence Buzzer by Door Switch hnical Address / Presentation Number Technical Address for COM Loop Units Presentation Number Presentation Number Pre-Warning Fire Alarm	.40 41 42 42 42 42 42 43 43 43 43 43 43 43 43 43
10 Disa 11 Disa 12 Doo 12.1 12.2 12.3 13 Tech 13.1 13.2 14 Alar 14.1 14.2 14.2 14.2	able / Re-enable all control, extinguishing, ventilation interlocking outputs         able button	40 41 42 42 42 42 42 43 43 43 43 43 43 44 44 45 47
10 Disa 11 Disa 12 Doo 12.1 12.2 12.3 13 Tech 13.1 13.2 14 Alar 14.1 14.2 14.2 14.2 14.2	able / Re-enable all control, extinguishing, ventilation interlocking outputs	40 41 42 42 42 42 43 43 43 43 43 43 44 44 45 47 .47
10 Disa 11 Disa 12 Doo 12.1 12.2 12.3 13 Tecl 13.1 13.2 14 Alar 14.1 14.2 14.2 14.2 14.2 14.2 14.2	able / Re-enable all control, extinguishing, ventilation interlocking outputs         able button         or Open         LED "Door open"         Outputs for Routing Equipment (Fire Brigade TX and Fault TX)         Silence Buzzer by Door Switch         hnical Address / Presentation Number         Technical Address for COM Loop Units         Presentation Number         m Types         Pre-Warning         Fire Alarm         Alarms (X1)         42.1.1         Display Alarms (X1)         42.1.2         Display Faults (X2)	40 41 42 42 42 42 42 42 42 43 43 43 43 43 43 44 45 47 .47 .48 48
10 Disa 11 Disa 12 Doo 12.1 12.2 12.3 13 Tech 13.1 13.2 14 Alar 14.1 14.2	able / Re-enable all control, extinguishing, ventilation interlocking outputs	40 41 42 42 42 42 42 42 42 43 43 43 43 43 43 43 43 43 43 43 43 43
10 Disa 11 Disa 12 Doo 12.1 12.2 12.3 13 Tech 13.1 13.2 14 Alar 14.1 14.2	able / Re-enable all control, extinguishing, ventilation interlocking outputs	40 42 42 42 42 43 43 43 43 43 43 43 43 43 43 43 43 43
10 Disa 11 Disa 12 Doo 12.1 12.2 12.3 13 Tecl 13.1 13.2 14 Alar 14.1 14.2	able / Re-enable all control, extinguishing, ventilation interlocking outputs         able button	40 41 42 42 42 42 42 42 43 43 43 43 43 43 43 43 43 43 43 43 43
10 Disa 11 Disa 12 Doo 12.1 12.2 12.3 13 Tecl 13.1 13.2 14 Alar 14.1 14.2	able / Re-enable all control, extinguishing, ventilation interlocking outputs         able button	40 41 42 42 42 42 42 42 42 42 43 43 43 43 43 43 43 43 43 43 44 45 47 .47 .48 .49 .49 .49 .49
10 Disa 11 Disa 12 Doc 12.1 12.2 12.3 13 Tec 13.1 13.2 14 Alar 14.1 14.2	able / Re-enable all control, extinguishing, ventilation interlocking outputs         able button         able button         r Open         LED "Door open"         Outputs for Routing Equipment (Fire Brigade TX and Fault TX)         Silence Buzzer by Door Switch         hnical Address / Presentation Number         Technical Address for COM Loop Units         Presentation Number         m Types         Pre-Warning         Fire Alarm         4.1         1.1         Display Faults (X2)         4.2.1.2         1.3         Display Faults (X2)         4.2.1.4         1.5         1.6         Re-Enable Zone (X4)         4.2.1.5         Disable Zone (X6)         4.2.1.7         Re-Enable Zone / Address (X7)         4.2.1.8       Disable / Re-Enable Control (X8)	40 41 42 42 42 42 42 42 42 42 43 43 43 43 43 43 43 43 43 43 43 43 43
10 Disa 11 Disa 12 Doo 12.1 12.2 12.3 13 Tech 13.1 13.2 14 Alar 14.1 14.2	able / Re-enable all control, extinguishing, ventilation interlocking outputs         able button         able button         or Open         LED "Door open"         Outputs for Routing Equipment (Fire Brigade TX and Fault TX)         Silence Buzzer by Door Switch         hnical Address / Presentation Number         Technical Address for COM Loop Units         Presentation Number         m Types         Pre-Warning         Fire Alarm         1       Fire Alarm Menu (X1-X9)         4.2.1.1       Display Faults (X2)         4.2.1.2       Display Faults (X2)         4.2.1.3       Display Fore (X4)         4.2.1.4       Disable Zone (X4)         4.2.1.5       Disable Zone (X6)         4.2.1.7       Re-Enable Zone (X6)         4.2.1.8       Disable / Re-Enable Control (X8)         4.2.1.9       Disable / Re-Enable Control (X8)	40 41 42 42 42 42 42 43 43 43 43 43 43 43 43 43 43 43 43 43
10 Disa 11 Disa 12 Doo 12.1 12.2 12.3 13 Tecl 13.1 13.2 14 Alar 14.1 14.2	able / Re-enable all control, extinguishing, ventilation interlocking outputs	40 41 42 42 42 42 43 43 43 43 43 43 43 43 43 43 43 43 43



1.	4.4	Quiet Alarm	. 51
	4.5	Co-Incidence Alarm (Two-Unit / -Zone Dependence)	. 51
14	4.6	Delayed Alarm	. 52
	14.6	.1 General Time Delay Applications	. 52
	14.6	.2 Time delay in Residential Applications	. 53
14	4.7	Alarm Acknowledgement Facility (AAF)	. 53
14	4.8	Local Alarm Acknowledgement (LAA)	. 53
14	4.9	Acknowledged Alarm (for only NZ)	. 54
14	4.10	Isolated Alarm (for only NZ)	. 54
15	Alar	m Reset	. 55
1	5 1	Pre-Warning Reset	55
1	52	Fire Alarm Reset	55
	15.2	1 All (default)	55
	15.2	2 Single	55
	15.2	.3 Single Reset with Automatic Disablement	. 56
1	5.3	Alert Annunciation Alarm Reset	. 56
1	5.4	Co-Incidence Alarm Reset	. 56
1	5.5	Heavy Smoke / Heat Alarm Reset	. 56
1	5.6	Quiet Alarm Reset	. 56
1	5.7	Alarm Acknowledgement	. 56
	15.7	.1 Alarm Acknowledgement Facility (AAF) Reset	. 56
	15.7	.2 Local Alarm Acknowledgement (LAA) Reset	. 57
1	5.8	Delayed Alarm	. 57
16	Foul	4	EO
10	raui		. 50
10	b.1	Fault Messages	. 59
10	0.2	Fault Acknowledge	. 68
47	<b>^</b>		60
17	Con	imissioning an F1128	. 09
17 18	SSD	) Download	. 71
17 18 18	<b>SSD</b> 8.1	Download COM Loop Menu	. <b>71</b> . 71
17 18 18	<b>SSD</b> 8.1 18.1	Download COM Loop Menu .1 Check Loop	. <b>71</b> . 71 . 71 . 71
17 18 18	<b>SSD</b> 8.1 18.1 18.1	Download         COM Loop Menu         .1       Check Loop         .2       Auto Generate SSD	. <b>71</b> . 71 . 71 . 71 . 71
17 18 18	Con SSD 8.1 18.1 18.1 8.2	Download         COM Loop Menu         .1       Check Loop         .2       Auto Generate SSD         SSD Download to the Control Unit	. <b>71</b> . 71 . 71 . 71 . 72 . 72
17 18 18 18 18	Con SSD 8.1 18.1 18.1 8.2 8.3	Download         COM Loop Menu         .1       Check Loop         .2       Auto Generate SSD         SSD Download to the Control Unit         User Definable Text Messages Download	. 71 . 71 . 71 . 71 . 72 . 72 . 73
17 18 18 18 18 18	Com SSD 8.1 18.1 18.1 8.2 8.3 Dow	Download         COM Loop Menu         .1       Check Loop         .2       Auto Generate SSD         SSD Download to the Control Unit         User Definable Text Messages Download         vnload Software (System Firmware)	. 71 . 71 . 71 . 72 . 72 . 72 . 73
17 18 18 18 18 18 19	Com SSD 8.1 18.1 18.1 8.2 8.3 Dow	Download         COM Loop Menu         .1       Check Loop         .2       Auto Generate SSD         .2       SSD Download to the Control Unit         User Definable Text Messages Download         vnload Software (System Firmware)         Download of SAW in ET128	. 71 . 71 . 71 . 72 . 72 . 72 . 73 . 73 . 74
17 18 18 18 18 18 18 18 19	Com SSD 8.1 18.1 18.1 8.2 8.3 8.3 Dow 9.1 9.1	Download         COM Loop Menu         .1       Check Loop         .2       Auto Generate SSD         .2       SSD Download to the Control Unit         .1       User Definable Text Messages Download         .1       Download of S/W in FT128         .2       Download of S/W in FT128	. 71 . 71 . 71 . 72 . 72 . 73 . 74 . 74 . 75
17 18 18 18 18 18 19 19	Com SSD 8.1 18.1 18.1 8.2 8.3 000 9.1 9.2	Download         COM Loop Menu         .1       Check Loop         .2       Auto Generate SSD         .SSD Download to the Control Unit         User Definable Text Messages Download         mload Software (System Firmware)         Download of S/W in FT128         Earlier S/W Version Download	. 71 . 71 . 71 . 72 . 72 . 72 . 73 . 74 . 74 . 75
17 18 18 18 18 18 19 19 19 19 20	Com SSD 8.1 18.1 8.2 8.3 Dow 9.1 9.2 Rest	Download         COM Loop Menu         .1       Check Loop         .2       Auto Generate SSD         .2       SSD Download to the Control Unit         User Definable Text Messages Download         vnload Software (System Firmware)         Download of S/W in FT128         Earlier S/W Version Download	. 71 . 71 . 71 . 72 . 72 . 73 . 74 . 74 . 75 . 76
17 18 18 18 18 18 18 18 18 19 19 19 19 19 20 20	Com SSD 8.1 18.1 8.2 8.3 Dow 9.1 9.2 Rest 0.1	Download         COM Loop Menu         .1       Check Loop         .2       Auto Generate SSD         SSD Download to the Control Unit         User Definable Text Messages Download         mload Software (System Firmware)         Download of S/W in FT128         Earlier S/W Version Download         Boot Menu	. 71 . 71 . 71 . 72 . 72 . 73 . 74 . 75 . 76 . 78
17 18 18 18 18 18 18 18 19 19 19 19 20 20 21	Com SSD 8.1 18.1 8.2 8.3 Dow 9.1 9.2 Rest 0.1 Acco	Download         COM Loop Menu         .1       Check Loop         .2       Auto Generate SSD         .2       SSD Download to the Control Unit.         User Definable Text Messages Download         vnload Software (System Firmware)         Download of S/W in FT128         Earlier S/W Version Download         tart         Boot Menu	. 71 . 71 . 71 . 72 . 72 . 72 . 72 . 72 . 72 . 72 . 73 . 74 . 75 . 76 . 78 . 79
17 18 18 18 18 18 19 19 19 20 20 20 21 22	Com SSD 8.1 18.1 8.2 8.3 Dow 9.1 9.2 Rest 0.1 Acco Perf	Download         COM Loop Menu         .1       Check Loop         .2       Auto Generate SSD         .2       Auto Generate SSD         SSD Download to the Control Unit         User Definable Text Messages Download <i>mload Software (System Firmware)</i> Download of S/W in FT128         Earlier S/W Version Download         tart         Boot Menu         ess         orm Monthly Test (H1)	.71 .71 .72 .72 .72 .72 .72 .72 .72 .72 .72 .72
17 18 18 18 18 18 18 19 19 20 20 21 22 23	Com SSD 8.1 18.1 8.2 8.3 Dow 9.1 9.2 Rest 0.1 Acco Perf	Download         COM Loop Menu         .1       Check Loop         .2       Auto Generate SSD         .2       SSD Download to the Control Unit.         User Definable Text Messages Download         mload Software (System Firmware)         Download of S/W in FT128         Earlier S/W Version Download         tart         Boot Menu         ess         orm Monthly Test (H1)	.71 .71 .72 .72 .72 .73 .74 .74 .75 .76 .78 .78 .79 .81
17 18 18 18 18 18 19 19 19 20 20 21 22 23 27	Com SSD 8.1 18.1 8.2 8.3 Dow 9.1 9.2 Rest 0.1 Acco Perf Disa 3.1	Download         COM Loop Menu         .1       Check Loop         .2       Auto Generate SSD         .2       Auto Generate SSD         SSD Download to the Control Unit         User Definable Text Messages Download <i>mload Software (System Firmware)</i> Download of S/W in FT128         Earlier S/W Version Download         tart         Boot Menu         ess         orm Monthly Test (H1)         Disable Zone (H2/B1)	.71 .71 .72 .72 .72 .72 .73 .74 .75 .76 .76 .78 .79 .81 .83 .84
17 18 18 18 18 19 19 20 21 22 23 23 27	Com SSD 8.1 18.1 8.2 8.3 Dow 9.1 9.2 Rest 0.1 Acco Perf Disa 3.1 3.2	Download         COM Loop Menu         .1       Check Loop         .2       Auto Generate SSD         SSD Download to the Control Unit.         User Definable Text Messages Download <i>mload Software (System Firmware)</i> Download of S/W in FT128         Earlier S/W Version Download         tart         Boot Menu         ess         orm Monthly Test (H1)         Disable Zone (H2/B1)         Disable Zone / Address (H2/B2)	.71 .71 .72 .72 .72 .73 .74 .75 .74 .75 .76 .78 .79 .81 .83 .84 .85
17 18 18 18 18 18 18 19 19 19 20 21 22 23 23 23 23 23 25 25 25 25 25 25 25 25 25 25	Com SSD 8.1 18.1 8.2 8.3 Dow 9.1 9.2 Rest 0.1 Acco Perf Disa 3.1 3.2 3.3	Download         COM Loop Menu	.71 .71 .72 .72 .72 .73 .74 .74 .75 .76 .78 .78 .79 .81 .83 .84 .85 .86
17 18 18 18 18 18 19 19 19 20 21 22 23 23 23 23 23 23 23 23 23	Com SSD 8.1 18.1 8.2 8.3 Dow 9.1 9.2 Rest 0.1 Acco Perf Disa 3.1 3.2 3.3 3.4	Download         COM Loop Menu.         .1       Check Loop         .2       Auto Generate SSD.         .5       SSD Download to the Control Unit.         User Definable Text Messages Download <i>mload Software (System Firmware)</i> Download of S/W in FT128.         Earlier S/W Version Download.         tart         Boot Menu.         ess.         orm Monthly Test (H1)         Disable Zone (H2/B1)         Disable Zone / Address (H2/B2)         Disable Output (H2/B3)         Disable All Control, Extinguishing, Ventilation Interlocking Outputs (H2/B4)	.71 .71 .72 .72 .72 .73 .74 .75 .74 .75 .76 .78 .79 .81 .83 .84 .85 .86 .87
17 18 18 18 18 19 19 20 21 22 23 23 23 23 23 23 23 23 23	Com SSD 8.1 18.1 8.2 8.3 Dow 9.1 9.2 Rest 0.1 Acco Disa 3.1 3.2 3.3 3.4 3.5	Imissioning an F1128         P Download         COM Loop Menu.         .1       Check Loop .         .2       Auto Generate SSD.         SSD Download to the Control Unit.         User Definable Text Messages Download . <i>mload Software (System Firmware)</i> .         Download of S/W in FT128.         Earlier S/W Version Download.         tart         Boot Menu.         ess.         orm Monthly Test (H1)         Disable Zone (H2/B1)         Disable Zone / Address (H2/B2)         Disable Output (H2/B3)         Disable All Control, Extinguishing, Ventilation Interlocking Outputs (H2/B4)         Re-Enable Zone (H2/B5)	. 71 . 71 . 72 . 72 . 72 . 73 . 74 . 75 . 76 . 78 . 79 . 81 . 83 . 84 . 85 . 86 . 87 . 88
17 18 18 18 18 18 18 19 19 19 20 21 22 23 23 23 23 23 23 23 23 23	Com SSD 8.1 18.1 8.2 8.3 Dow 9.1 9.2 Rest 0.1 Acco Perf Disa 3.1 3.2 3.3 3.4 3.5 3.6	Imissioning an F1128	.71 .71 .72 .72 .72 .73 .74 .74 .75 .76 .76 .78 .77 .78 .79 .81 .83 .84 .85 .86 .87 .88 .88 .88
17 18 18 18 18 19 19 20 21 22 23 23 23 23 23 23 23 23 23	Com SSD 8.1 18.1 8.2 8.3 Dow 9.1 9.2 Rest 0.1 Acco Perf 0.3 3.1 3.2 3.3 3.4 3.5 3.6 3.7	Download         COM Loop Menu         .1       Check Loop         .2       Auto Generate SSD         SSD Download to the Control Unit         User Definable Text Messages Download <i>mload Software (System Firmware)</i> Download of S/W in FT128         Earlier S/W Version Download         tart         Boot Menu         ess         orm Monthly Test (H1)         Disable Zone (H2/B1)         Disable Zone (H2/B1)         Disable All Control, Extinguishing, Ventilation Interlocking Outputs (H2/B4)         Re-Enable Zone (Address (H2/B5)         Re-Enable Zone (Address (H2/B6)         Re-Enable Qutput (H2/B7)	. 71 . 71 . 71 . 72 . 72 . 72 . 73 . 74 . 75 . 76 . 76 . 77 . 76 . 77 . 76 . 77 . 76 . 78 . 79 . 81 . 83 . 84 . 85 . 86 . 87 . 88 . 88 . 89 . 90



23.8	8 Re-Enable All Control, Ventilation, Extinguishing, Or Interlocking Outputs (H2/B8)	91
23.9	Disable / Re-Enable Alarm Devices (H2/B9)	92
23.1	0 Disable / Re-Enable Outputs for Routing Equipment (H2/B10)	93
23.′	Disable / Re-Enable Alert Annunciation Function (H2/B11)	
24 S	et Calendar and Clock (H3)	95
24.1	Daylight Saving Time	95
25 P	resent System Status (H4)	96
25.1	Disablement (H4/U1)	96
25.2	2 Disablement by Time Channel (H4/U2)	97
25.3	B Sensor Values (H4/U3)	98
2	5.3.1 Reset of a Week Average Sensor Value	101
25.4	Sensors Activating SERVICE Signal (H4/U4)	101
25.5	5 Technical Warning (H4/U5)	102
25.6	6 Event Log (H4/U6)	103
25.7	Version and Alarm Counter (H4/U7)	104
26 S	ervice (H5)	105
26.1	Calibration of Supervised Outputs (H5/A1)	105
26.2	2 Sensitive Fault Detection Mode (H5/A2)	106
26.3	3 Service Mode for COM-Loop (H5/A3)	107
26.4	Display Current Consumption in Unit (H5/A4)	108
26.5	5 Display Current Consumption on COM-Loop (H5/A5)	109
26.6	Display Statistics for COM Loop (H5/A6)	110
26.7	7 Activate Address Setting Mode for DU (H5/A7)	111
26.8	Setup wireless detectors (H5/A8	111
20.0		
26.9	<ul> <li>End setup wireless detectors (H5/A9)</li> </ul>	111
26.9 26.2	<ul> <li>End setup wireless detectors (H5/A9)</li> <li>Show Information about Site Specific Data (H5/A10)</li> </ul>	111 112
26.9 26.7 <b>27</b>	<ul> <li>Bed setup wireless detectors (H5/A9)</li> <li>Bed setup wireless detectors (H5/A9)</li> <li>Show Information about Site Specific Data (H5/A10)</li> <li>cknowledge FAULTS (H6)</li> </ul>	111 112 <b>113</b>
26.9 26.2 26.2 27 A 28 P	<ul> <li>Bedge Wileless detectors (H5/A9)</li> <li>End setup wireless detectors (H5/A9)</li> <li>Show Information about Site Specific Data (H5/A10)</li> <li>cknowledge FAULTS (H6)</li> <li>erform ZONE TEST (Test Mode) (H7)</li> </ul>	111 112 113 114
26.2 26.2 27 A 28 P 29 M	<ul> <li>End setup wireless detectors (H5/A9)</li> <li>Show Information about Site Specific Data (H5/A10)</li> <li>cknowledge FAULTS (H6)</li> <li>erform ZONE TEST (Test Mode) (H7)</li> <li>laintenance (H8)</li> </ul>	111 112 113 114 116
26. 26. 27 A 28 P 29 M 29.	<ul> <li>Dectap wireless detectors (H5/A9)</li> <li>End setup wireless detectors (H5/A9)</li> <li>Show Information about Site Specific Data (H5/A10)</li> <li>cknowledge FAULTS (H6)</li> <li>reform ZONE TEST (Test Mode) (H7)</li> <li>laintenance (H8)</li> <li>Disconnect / Re-connect COM loop (H8/S1)</li> </ul>	111 112 <b>113</b> <b>113</b> <b>114</b> <b>116</b> 116
26.9 26.7 27 A 28 P 29 N 29.7 29.2	<ul> <li>Detup wireless detectors (H5/A9)</li> <li>End setup wireless detectors (H5/A9)</li> <li>Show Information about Site Specific Data (H5/A10)</li> <li>cknowledge FAULTS (H6)</li> <li>erform ZONE TEST (Test Mode) (H7)</li> <li>laintenance (H8)</li> <li>Disconnect / Re-connect COM loop (H8/S1)</li> <li>Disconnect / Re-connect Zone Line Input (H8/S2)</li> </ul>	111 112 <b>113</b> <b>114</b> <b>116</b> 117
26.9 26.7 27 A 28 F 29 N 29.7 29.2 29.2	<ul> <li>End setup wireless detectors (H5/A9)</li> <li>Show Information about Site Specific Data (H5/A10)</li> <li>cknowledge FAULTS (H6)</li> <li>erform ZONE TEST (Test Mode) (H7)</li> <li>laintenance (H8)</li> <li>Disconnect / Re-connect COM loop (H8/S1)</li> <li>Disconnect / Re-connect Zone Line Input (H8/S2)</li> <li>Disconnect / Re-connect addressable zone interface input (H8/S3)</li> </ul>	111 112 113 113 114 116 116 117 118
26.9 26.7 27 A 28 P 29 N 29.7 29.2 29.2 29.2 29.2	<ul> <li>Detup wireless detectors (H5/A9)</li> <li>End setup wireless detectors (H5/A9)</li> <li>Show Information about Site Specific Data (H5/A10)</li> <li>cknowledge FAULTS (H6)</li> <li>derform ZONE TEST (Test Mode) (H7)</li> <li>laintenance (H8)</li> <li>Disconnect / Re-connect COM loop (H8/S1)</li> <li>Disconnect / Re-connect Zone Line Input (H8/S2)</li> <li>Disconnect / Re-connect addressable zone interface input (H8/S3)</li> <li>Acknowledge SERVICE Signal (H8/S4)</li> </ul>	111 112 113 114 116 116 117 118 119
26.9 26.7 27 A 28 P 29 M 29.7 29.2 29.2 29.2 29.4 29.5	<ul> <li>End setup wireless detectors (H5/A9)</li> <li>End setup wireless detectors (H5/A9)</li> <li>Show Information about Site Specific Data (H5/A10)</li> <li>cknowledge FAULTS (H6)</li> <li>erform ZONE TEST (Test Mode) (H7)</li> <li>laintenance (H8)</li> <li>Disconnect / Re-connect COM loop (H8/S1)</li> <li>Disconnect / Re-connect Zone Line Input (H8/S2)</li> <li>Disconnect / Re-connect addressable zone interface input (H8/S3)</li> <li>Acknowledge SERVICE Signal (H8/S4)</li> <li>Restore Weekly Average to Default (H8/S5)</li> </ul>	111 112 113 113 114 116 116 117 118 119 120
26.9 26.7 27 A 28 F 29 N 29.7 29.2 29.2 29.2 29.4 29.5 29.6	<ul> <li>End setup wireless detectors (H5/A9)</li> <li>Show Information about Site Specific Data (H5/A10)</li> <li>cknowledge FAULTS (H6)</li> <li>erform ZONE TEST (Test Mode) (H7)</li> <li>laintenance (H8)</li> <li>Disconnect / Re-connect COM loop (H8/S1)</li> <li>Disconnect / Re-connect Zone Line Input (H8/S2)</li> <li>Disconnect / Re-connect addressable zone interface input (H8/S3)</li> <li>Acknowledge SERVICE Signal (H8/S4)</li> <li>Restore Weekly Average to Default (H8/S5)</li> <li>Test of Alarm Devices (H8/S6)</li> </ul>	111 112 113 113 114 116 116 116 117 118 119 120 121
26.9 26.7 27 A 28 P 29 N 29.7 29.2 29.2 29.2 29.4 29.6 29.6 29.7	<ul> <li>End setup wireless detectors (H5/A9)</li> <li>Show Information about Site Specific Data (H5/A10)</li> <li>cknowledge FAULTS (H6)</li> <li>erform ZONE TEST (Test Mode) (H7)</li> <li>laintenance (H8)</li> <li>Disconnect / Re-connect COM loop (H8/S1)</li> <li>Disconnect / Re-connect Zone Line Input (H8/S2)</li> <li>Disconnect / Re-connect addressable zone interface input (H8/S3)</li> <li>Acknowledge SERVICE Signal (H8/S4)</li> <li>Restore Weekly Average to Default (H8/S5)</li> <li>Test of Alarm Devices (H8/S6)</li> <li>Safe Shut Down Of Control Unit (H8/S7)</li> </ul>	111 112 113 113 113 114 116 116 116 117 118 119 120 121 122
26.9 26.7 27 A 28 P 29 N 29.7 29.2 29.2 29.2 29.4 29.5 29.6 29.7 29.8	<ul> <li>End setup wireless detectors (H5/A9)</li> <li>Show Information about Site Specific Data (H5/A10)</li> <li>cknowledge FAULTS (H6)</li> <li>erform ZONE TEST (Test Mode) (H7)</li> <li>laintenance (H8)</li> <li>Disconnect / Re-connect COM loop (H8/S1)</li> <li>Disconnect / Re-connect Zone Line Input (H8/S2)</li> <li>Disconnect / Re-connect addressable zone interface input (H8/S3)</li> <li>Acknowledge SERVICE Signal (H8/S4)</li> <li>Restore Weekly Average to Default (H8/S5)</li> <li>Test of Alarm Devices (H8/S6)</li> <li>Safe Shut Down Of Control Unit (H8/S7)</li> <li>Activate Zone-Address in Alarm Mode (H8/S8)</li> </ul>	111 112 113 113 114 114 116 116 116 117 118 120 121 122 123
26.9 26.7 26.7 28 P 29.7 29.7 29.7 29.7 29.7 29.7 29.8 29.6 29.8 29.8 29.8 29.8	<ul> <li>End setup wireless detectors (H5/A9)</li> <li>End setup wireless detectors (H5/A9)</li> <li>Show Information about Site Specific Data (H5/A10)</li> <li>cknowledge FAULTS (H6)</li> <li>rerform ZONE TEST (Test Mode) (H7)</li> <li>laintenance (H8)</li> <li>Disconnect / Re-connect COM loop (H8/S1)</li> <li>Disconnect / Re-connect Zone Line Input (H8/S2)</li> <li>Disconnect / Re-connect addressable zone interface input (H8/S3)</li> <li>Acknowledge SERVICE Signal (H8/S4)</li> <li>Restore Weekly Average to Default (H8/S5)</li> <li>Test of Alarm Devices (H8/S6)</li> <li>Safe Shut Down Of Control Unit (H8/S7)</li> <li>Activate Zone-Address in Alarm Mode (H8/S8)</li> <li>Activate Output (H8/S9)</li> </ul>	111 112 113 113 113 114 116 116 116 117 118 120 121 122 123 125
26.9 26.7 27 A 28 P 29 N 29.7 29.7 29.7 29.6 29.7 29.8 29.6 29.7 29.8 29.9 29.8 29.9	<ul> <li>Berto Bertop Wireless detectors (H5/A9)</li> <li>End setup wireless detectors (H5/A9)</li> <li>Show Information about Site Specific Data (H5/A10)</li> <li>cknowledge FAULTS (H6)</li> <li>erform ZONE TEST (Test Mode) (H7)</li> <li>laintenance (H8)</li> <li>Disconnect / Re-connect COM loop (H8/S1)</li> <li>Disconnect / Re-connect Zone Line Input (H8/S2)</li> <li>Disconnect / Re-connect addressable zone interface input (H8/S3)</li> <li>Acknowledge SERVICE Signal (H8/S4)</li> <li>Restore Weekly Average to Default (H8/S5)</li> <li>Test of Alarm Devices (H8/S6)</li> <li>Safe Shut Down Of Control Unit (H8/S7)</li> <li>Activate Zone-Address in Alarm Mode (H8/S8)</li> <li>Activate Output (H8/S9)</li> <li>Reset activated output (H8/S10)</li> </ul>	111 112 113 113 113 114 116 116 116 116 117 118 120 121 122 123 125 126
26.9 26.2 26.2 26.2 28 P 29.2 29.2 29.2 29.2 29.2 29.2 29.2 29.	<ul> <li>Cettap wireless detectors (H5/A9)</li> <li>End setup wireless detectors (H5/A9)</li> <li>Show Information about Site Specific Data (H5/A10)</li> <li>cknowledge FAULTS (H6)</li> <li>erform ZONE TEST (Test Mode) (H7)</li> <li>laintenance (H8)</li> <li>Disconnect / Re-connect COM loop (H8/S1)</li> <li>Disconnect / Re-connect Zone Line Input (H8/S2)</li> <li>Disconnect / Re-connect addressable zone interface input (H8/S3)</li> <li>Acknowledge SERVICE Signal (H8/S4)</li> <li>Restore Weekly Average to Default (H8/S5)</li> <li>Test of Alarm Devices (H8/S6)</li> <li>Safe Shut Down Of Control Unit (H8/S7)</li> <li>Activate Zone-Address in Alarm Mode (H8/S8)</li> <li>Activate Output (H8/S9)</li> <li>Reset activated output (H8/S10)</li> </ul>	111 112 113 113 113 114 116 116 116 116 117 120 121 121 122 123 125 126 127
26.9 26.7 27 A 28 P 29 N 29.7 29.2 29.2 29.3 29.4 29.5 29.6 29.7 29.8 29.7 30 In 30.7	<ul> <li>berder Wieless detectors (H5/A9)</li> <li>End setup wireless detectors (H5/A9)</li> <li>Show Information about Site Specific Data (H5/A10)</li> <li>cknowledge FAULTS (H6)</li> <li>erform ZONE TEST (Test Mode) (H7)</li> <li>laintenance (H8)</li> <li>Disconnect / Re-connect COM loop (H8/S1)</li> <li>Disconnect / Re-connect Zone Line Input (H8/S2)</li> <li>Disconnect / Re-connect addressable zone interface input (H8/S3)</li> <li>Acknowledge SERVICE Signal (H8/S4)</li> <li>Restore Weekly Average to Default (H8/S5)</li> <li>Test of Alarm Devices (H8/S6)</li> <li>Safe Shut Down Of Control Unit (H8/S7)</li> <li>Activate Zone-Address in Alarm Mode (H8/S8)</li> <li>Activate Output (H8/S9)</li> <li>Reset activated output (H8/S10)</li> <li>heterlocking Outputs and Inputs (H9)</li> <li>Activated Interlocking Outputs/Inputs (H9/C1)</li> </ul>	111 112 113 113 113 114 116 116 116 116 117 118 120 121 122 123 126 127
26.9 26.9 26.7 28 P 29 N 29.7 29.2 29.2 29.2 29.2 29.4 29.5 29.6 29.5 29.6 29.5 29.5 29.5 30 In 30.7 30.2	<ul> <li>Bend setup wireless detectors (H5/A9)</li> <li>Show Information about Site Specific Data (H5/A10)</li> <li>cknowledge FAULTS (H6)</li> <li>erform ZONE TEST (Test Mode) (H7)</li> <li>laintenance (H8)</li> <li>Disconnect / Re-connect COM loop (H8/S1)</li> <li>Disconnect / Re-connect Zone Line Input (H8/S2)</li> <li>Bisconnect / Re-connect addressable zone interface input (H8/S3)</li> <li>Acknowledge SERVICE Signal (H8/S4)</li> <li>Restore Weekly Average to Default (H8/S5)</li> <li>Test of Alarm Devices (H8/S6)</li> <li>Safe Shut Down Of Control Unit (H8/S7)</li> <li>Activate Zone-Address in Alarm Mode (H8/S8)</li> <li>Activate Output (H8/S9)</li> <li>Reset activated output (H8/S10)</li> <li>heterlocking Outputs and Inputs (H9)</li> <li>Activate Interlocking Outputs/Inputs (H9/C1)</li> <li>Activate Interlocking Output (H9/C2)</li> </ul>	111 112 113 113 113 114 116 116 116 116 117 118 120 121 122 125 126 127 127 128
26.9 26.9 26.7 27 A 28 P 29.7 29.2 29.2 29.2 29.2 29.2 29.2 29.2	<ul> <li>Bend setup wireless detectors (H5/A9)</li> <li>Show Information about Site Specific Data (H5/A10)</li> <li>cknowledge FAULTS (H6)</li> <li>erform ZONE TEST (Test Mode) (H7)</li> <li>laintenance (H8)</li> <li>Disconnect / Re-connect COM loop (H8/S1)</li> <li>Disconnect / Re-connect Zone Line Input (H8/S2)</li> <li>Disconnect / Re-connect addressable zone interface input (H8/S3)</li> <li>Acknowledge SERVICE Signal (H8/S4)</li> <li>Restore Weekly Average to Default (H8/S5)</li> <li>Test of Alarm Devices (H8/S6)</li> <li>Safe Shut Down Of Control Unit (H8/S7)</li> <li>Activate Zone-Address in Alarm Mode (H8/S8)</li> <li>Activate Output (H8/S9)</li> <li>Reset activated output (H8/S10)</li> <li>neterlocking Outputs and Inputs (H9)</li> <li>Activate Interlocking Outputs/Inputs (H9/C1)</li> <li>Reset Interlocking Output (H9/C3)</li> </ul>	111 112 113 113 113 114 116 116 116 116 117 120 121 122 123 125 126 127 128 129
26.9 26.7 26.7 27 A 28 P 29.7 29.2 29.2 29.2 29.2 29.2 29.2 29.3 29.4 29.5 29.7 30 In 30.7 30.2 30.2 30.2	<ul> <li>Bend setup wireless detectors (H5/A9)</li></ul>	111 112 113 113 113 114 116 116 116 116 117 120 121 122 123 125 126 127 127 128 129 130
26.9 26.2 26.2 26.2 28 F 29.2 29.2 29.2 29.2 29.2 29.2 29.2 29.	<ul> <li>Certap Wireless detectors (H5/A9)</li></ul>	111 112 113 113 113 114 116 116 116 116 116 117 120 121 122 123 125 125 126 127 127 128 129 130 131
26.9 26.2 26.7 27 A 28 P 29.2 29.2 29.2 29.2 29.2 29.2 29.2 29.	<ul> <li>Certap Wireless detectors (H5/A9)</li> <li>End setup wireless detectors (H5/A9)</li> <li>Show Information about Site Specific Data (H5/A10)</li> <li>cknowledge FAULTS (H6)</li> <li>erform ZONE TEST (Test Mode) (H7)</li> <li>laintenance (H8)</li> <li>Disconnect / Re-connect COM loop (H8/S1)</li> <li>Disconnect / Re-connect Zone Line Input (H8/S2)</li> <li>3 Disconnect / Re-connect addressable zone interface input (H8/S3)</li> <li>4 Acknowledge SERVICE Signal (H8/S4)</li> <li>5 Restore Weekly Average to Default (H8/S5)</li> <li>5 Test of Alarm Devices (H8/S6)</li> <li>7 Safe Shut Down Of Control Unit (H8/S7)</li> <li>3 Activate Zone-Address in Alarm Mode (H8/S8)</li> <li>4 Activate Output (H8/S9)</li> <li>10 Reset activated output (H8/S10)</li> <li>nterlocking Outputs and Inputs (H9)</li> <li>Activate Interlocking Outputs/Inputs (H9/C1)</li> <li>2 Activate Interlocking Output (H9/C2)</li> <li>3 Reset Interlocking Output (H9/C3)</li> <li>4 Disable Interlocking Output (H9/C4)</li> <li>5 Restore (H10)</li> </ul>	111 112 113 113 114 116 116 116 116 117 118 120 121 122 123 125 126 127 127 128 129 130 131 132



33	How to	Avoid Unnecessary (Nuisance) Fire Alarms	
34	Block V	Viring Diagram	
35	Revisio	n History	
3	35.1 Op	eration Manual Revisions Table	
3	35.2 Sol	tware Revision 2.2.0 Modifications	
	35.2.1	New common features and additions	
	35.2.2	New or modified features in EBLWin only	
	35.2.3	New or modified feature in system software EBL only	

# Table of Figures

Figure 2 The FT128 Front, FBP (upper black part) and CP (lower grey part)15Figure 3: Fire Fan Control Display19Figure 4 Zone Control & indication Display.21Figure 5 NZ Fire Brigade Mimic Sample Drawing22Figure 6: Occupant Warning System Display23Figure 7 Gas Extinguishing Display Layout26Figure 8 SUB836 Adaptor Board27Figure 9 SUB835 external Terminal Board28Figure 10 FT128 General Arrangement137Figure 11 FT128 Standard Block Wiring Diagram138Figure 12 NZFT128 Block Wiring Diagram for NZ139	Figure 1 FT128 Control & Indicating Equipment.	14
Figure 3: Fire Fan Control Display19Figure 4 Zone Control & indication Display21Figure 5 NZ Fire Brigade Mimic Sample Drawing22Figure 6: Occupant Warning System Display23Figure 7 Gas Extinguishing Display Layout26Figure 8 SUB836 Adaptor Board27Figure 9 SUB835 external Terminal Board28Figure 10 FT128 General Arrangement137Figure 11 FT128 Standard Block Wiring Diagram138Figure 12 NZFT128 Block Wiring Diagram for NZ139	Figure 2 The FT128 Front, FBP (upper black part) and CP (lower grey part)	15
Figure 4 Zone Control & indication Display.21Figure 5 NZ Fire Brigade Mimic Sample Drawing22Figure 6: Occupant Warning System Display23Figure 7 Gas Extinguishing Display Layout26Figure 8 SUB836 Adaptor Board.27Figure 9 SUB835 external Terminal Board28Figure 10 FT128 General Arrangement.137Figure 11 FT128 Standard Block Wiring Diagram138Figure 12 NZFT128 Block Wiring Diagram for NZ139	Figure 3: Fire Fan Control Display	19
Figure 5 NZ Fire Brigade Mimic Sample Drawing22Figure 6: Occupant Warning System Display23Figure 7 Gas Extinguishing Display Layout26Figure 8 SUB836 Adaptor Board27Figure 9 SUB835 external Terminal Board28Figure 10 FT128 General Arrangement137Figure 11 FT128 Standard Block Wiring Diagram138Figure 12 NZFT128 Block Wiring Diagram for NZ139	Figure 4 Zone Control & indication Display	21
Figure 6: Occupant Warning System Display23Figure 7 Gas Extinguishing Display Layout26Figure 8 SUB836 Adaptor Board27Figure 9 SUB835 external Terminal Board28Figure 10 FT128 General Arrangement137Figure 11 FT128 Standard Block Wiring Diagram138Figure 12 NZFT128 Block Wiring Diagram for NZ139	Figure 5 NZ Fire Brigade Mimic Sample Drawing	22
Figure 7 Gas Extinguishing Display Layout26Figure 8 SUB836 Adaptor Board27Figure 9 SUB835 external Terminal Board28Figure 10 FT128 General Arrangement137Figure 11 FT128 Standard Block Wiring Diagram138Figure 12 NZFT128 Block Wiring Diagram for NZ139	Figure 6: Occupant Warning System Display	23
Figure 8 SUB836 Adaptor Board.27Figure 9 SUB835 external Terminal Board.28Figure 10 FT128 General Arrangement.137Figure 11 FT128 Standard Block Wiring Diagram138Figure 12 NZFT128 Block Wiring Diagram for NZ139	Figure 7 Gas Extinguishing Display Layout	26
Figure 9 SUB835 external Terminal Board       28         Figure 10 FT128 General Arrangement       137         Figure 11 FT128 Standard Block Wiring Diagram       138         Figure 12 NZFT128 Block Wiring Diagram for NZ       139	Figure 8 SUB836 Adaptor Board	27
Figure 10 FT128 General Arrangement	Figure 9 SUB835 external Terminal Board	28
Figure 11 FT128 Standard Block Wiring Diagram	Figure 10 FT128 General Arrangement	137
Figure 12 NZFT128 Block Wiring Diagram for NZ	Figure 11 FT128 Standard Block Wiring Diagram	138
	Figure 12 NZFT128 Block Wiring Diagram for NZ	139

# List of Tables

Table 1 FT128 specifications	12
Table 2 FT128 Limitations	13
Table 3 Fire Brigade Panel LED indicators	16
Table 4 Fire Brigade Panel Push buttons	16
Table 5 Control Panel LED indicators	17
Table 6 Control Panel push buttons	18
Table 7 Indicators and buttons in 1668 module	
Table 8 Zone control LEDs and Buttons	21
Table 9 OWS controls and indications	24
Table 10 Gas Front Status LED Indication and flash Pattern	
Table 11 LCD priority order	30
Table 12 Access levels and users	31
Table 13 Data affected by restart	76
Table 14 Other Drawing Lists	136



# 1 Introduction

## 1.1 Overview

**FT128 Operation Manual** is a document intended to be used by the end user and the fire brigade personnel, as well as the service / commissioning engineers, who should read this document in conjunction with the FT128 Technical / Programming manual, since most of the information in one of the documents is not found in the other document and vice versa.

The block wiring diagram of a standard FT128 system and general arrangement are shown in Chapter "Block Wiring Diagram" on page 136.

Due to continual development and improvement, different S/W versions might be found. This document is valid for **S/W version 2.2.x.** On the date of printing this manual x=0.

The software version is the firmware (system software) downloaded in to the control unit via PC windows based software e.g. EBL128 V2.2.x. The latest system software is factory downloaded in FT128 before delivery. However, software may be upgraded to a newer revision on site.

The software version is dependent on the country where the control panel to be installed, that is due to the variations in the standard in each country. Two separate software versions are available, Australian (AU) and New Zealand (NZ).

The PC software is a windows based software **EBLWin** which has to be installed in your PC, and must have a version number similar to the software (system software) version number i.e. version V2.2.X. The **EBLWin** is used to download the firmware and the Site Specific Data (SSD) into the control unit.

Only the first two digits <u>must be</u> the same in the system software and the **EBLWin** version number i.e. 2.2.x (x = minor modifications).

**Note**: Regarding upgrade from S/W version 1.x.x to version 2.x.x see chapter "Software (S/W) download", page 74.

## **1.2** Definitions / Explanations

Definitions / explanation and abbreviations are used frequently in this document and are shown in the following sections.

### 1.2.1 Alarm Point

Unit, which can generate a fire alarm in FT128, i.e. analogue detector (sensor), conventional detector, manual call point, COM loop module, etc.

## **1.2.1.1** Smoke Detector

Only one type of analogue and conventional smoke detectors is available: the photoelectric (optical) smoke detector.

### 1.2.1.2 Sensor

Sensor = analogue detector

## **1.2.1.3** Analogue Detector (sensor)

Contains an A/D-converter. The **FT128** picks up the digital values ("sensor values") for each detector individually. All evaluations and "decisions" are then made in C.I.E.. As from version 2.0.x the latest detector generation (440x) can be used. In the "Advanced mode", the alarm algorithms are stored in the detector instead of the control unit. Analogue



detectors are addressable – an address setting tool 4314/4414 is used to set up the address and mode for each device.

## **1.2.1.4** Analogue Detector (Sensor) Base (ASB)

A sensor is plugged in an ASB, which is connected to a COM loop (see below).

## **1.2.1.5** Conventional Detector

Detector with only two states, <u>normal</u> or <u>fire alarm</u>. A conventional detector in alarm simulates low resistance (560 Ohm) across the Zone Line Input. Normally plugged in a conventional detector base **CDB** (see below) which is connected to a conventional Zone Line Input. Some types are water proof and cannot be plugged in the standard base. An End-Of-Line device is connected in the last unit on the conventional zone line.

## 1.2.1.6 Conventional Detector Base (CDB)

A conventional detector is plugged in a CDB and connected to a conventional Zone Line Input.

## 1.2.1.7 Addressable

A unit with a built-in address device (e.g. a manual call point). Each unit is <u>individually</u> identified, handled and indicated in FT128

(The unit can consequently be an I/O unit, to which one or more conventional "alarm points" can be connected on the zone line).

## 1.2.1.8 Conventional Zone Line Input

Zone line input on e.g. an I/O unit, intended for one or more conventional alarm points. End-of-line device in the last alarm point must be fitted.

### 1.2.2 Output Unit

Addressable unit with programmable control outputs (e.g. an I/O unit) connected to the COM loop (see below).

### 1.2.3 Output / Control Output

Defined or programmable function, relay contact output or voltage output (supervised / monitored) voltage output in FT128 or an output unit connected to the COM loop.

## 1.2.4 Short Circuit Isolator (ISO)

Addressable unit for automatic disconnection of a COM loop segment (see below) in case of a short circuit on the loop. As per AS1670.1, one isolator is required every 40 alarm points on the COM loop.

## 1.2.5 Remote Display Unit (RDU)

The RDU is an addressable unit for fire alarm presentation (including user definable text messages, if programmed). Two types are normally used: External Presentation Unit 1728 (EPU) and Alert Annunciation Unit 1736 (AAU).

**Note:** An optional RS485 communication module (chip) must be fitted in order to interface up to 8 display units (1728 / 1736), end of line resistor must be set via a jumper link on the last unit. For more information, refer to the technical manual of 1728 and 136



## 1.2.6 COM Loop

Loop = twisted pair cable, to which all the addressable units can be connected. Starts in FT128 and it returns back to FT128.

## 1.2.7 Control Unit (C.U.) / CIE

**C**ontrol **U**nit = **C**ontrol and **I**ndicating **E**quipment = Unit to which the alarm points are connected (via the COM loop). Indicates on the front, fire alarms, fault conditions, etc.

### 1.2.8 Fire Brigade Panel (FBP)

The fire brigade panel is an integral part of FT128, intended for fire alarm, fault and disablement presentation, etc. The FBP compromises the top part of the front display.

### 1.2.9 Control Panel (CP)

A part of FT128 intended for the building owner / manager, service personnel, etc., to "communicate" with the control unit. It compromises the bottom part of the front.

### 1.2.10 LED

LED (Light Emitting Diode) = Yellow, green or red optical indicator ("lamp").

## 1.2.11 Remote Indicating Light (RIL)

A unit with an LED, connected to an ASB, CDB or a detector with a built-in LED, for external indication. Illuminates when the built-in LED in the detector is lit.

### 1.2.12 Display / LCD

LCD (Liquid Crystal Display) = Display for presentation of fire alarms, fault messages, etc. Normally alphanumeric characters and backlight.

#### 1.2.13 Door Open

In FT128, there is a door switch which is activated when the control unit door is open. Opening the control panel door will generally disables the external strobe or strobe/sounder combination.

#### 1.2.14 Site Specific Data (SSD)

The SSD is unique for each installation. All alarm points, presentation numbers, user definable text messages, programmable outputs, etc. are programmed (configured) in the PC program **EBLWin** and has to be downloaded in FT128.

#### 1.2.15 Software S/W / Firmware / System program

The software, also called Firmware and system program makes the microprocessor in FT128 work. It is factory downloaded but a new version can be downloaded in FT128 on site using the PC program EBLWin.

## 1.2.16 EBLWin

PC program used to create and download the SSD in FT128 unit. It is also used to download another / new software version. Can be used during commissioning / maintenance of FT128 system (autogenerate COM loop SSD, acknowledge faults, etc.).

#### 1.2.17 Web-Server

The **Web-server** is used to get FT128 information as well as remote control via a PC (browser) and an intranet / internet. The Web-server is configured via the PC tool **EBLWin**.



# 2 Overview

## 2.1 The FT128 CIE

FT128 is a microprocessor controlled intelligent fire alarm Control and Indicating Equipment (CIE) intended for Analogue addressable smoke and heat detectors as well as conventional detectors and manual call points. Programmable inputs, control outputs and I/O units are available. Up to 255 addresses can be connected to FT128.

FT128 is certified to the Australian Standard AS7240.2 and AS7240.4 and NZS4512: 2003. The Fire Brigade Panel controls and indicators are incorporated as part of the front fascia and conform to AS4438.3.

## 2.2 S/W Versions

Due to continual development and improvement, different S/W versions can be found. You can update the S/W in FT128 on site.

## 2.3 Documents

The following documents are available:

- Operation Manual (this document)
- Technical / Programming manual
- Drawings

Normally, information that is found in one document is not to be found in another document, i.e. the documents complement each other. Also a product leaflet is available.

## 2.4 Applications

**FT128** is intended for small and medium installations. The intelligent control unit offers the system designer and end user a technically sophisticated range of facilities and functions. Programming (via EBLWin) and commissioning is an easy process.

## 2.5 PC S/W

The PC program **EBLWin** is used for programming and commissioning, i.e. to:

- Auto-generate, i.e. to identify the units connected on the COM loop and create default settings, which can be edited, saved and used as a Site Specific Data (SSD).
- Create / download / upload (backup) the site specific data (SSD)
- Download new S/W version (firmware), settings, conventions, configurations, FT128 data / etc.
- Create / download the user definable text messages (alarm text) shown in the display in FT128 / RDU's.
- Download software to the Web-server.
- Create and download the Web-server configuration.
- See alarms, faults, disablements, etc. and reset, acknowledge fault, re-enable.

**EBLWin** must have the same version no. as the EBL128 S/W, e.g. 2.2.x. (x indicates only a small correction and is not required to be the same). Old SSD files can be opened in a newer (higher) version of EBLWin, then edited, saved and thereafter downloaded to FT128. If a backup is required, use the same EBLWin version as the EBL128 S/W version.

**EBLWin key 5094** is a USB unit that has to be plugged in the PC to log on to the CIE.



# 3 Control & Indicating Equipment (CIE)

# 3.1 FT128 Specifications

#### Table 1 FT128 specifications

ltem	Specifications
Mains Voltage	230V <sub>AC</sub> (176-264), 1.6A
System Voltage	24V <sub>DC</sub> @ 1.6A
Current Consumption	Quiescent / alarm current is dependent on other equipment fitted in FT128, type and number of expansion boards, connected external equipment, etc. <sup>1</sup> .
Ambient Temperature (°C)	Operating 0 to + 40, Storage -40 to +70
Ambient humidity (%RH)	Maximum 90, non-condensing
Size (mm)	Standard cabinet 630H x 450W x 210D (with door closed)
	Large cabinet 920H x 450W x 210D (with door closed) <sup>2</sup>
Enclosure Material	1.5 Zinc anneal steel
Enclosure Colour	Oyster, powder coated, ripple finish
Approvals	AS7240.2, AS7240.4, AS4428.3 and NZS4512
	Single COM loop, can connect up to 255 devices
	Single programmable input I0
	Two programmable Supervised voltage outputs, 0.75 Amp each
Standard Inputs / Outputs <sup>3</sup>	One programmable relay outputs, contact rating 2 Amp <sup>4</sup>
	One programmable clean contact (N/O or N/C) inputs
	One non-programmable relay outputs for ASE (fault)
	Two x 24V outputs for Web server, ASE, remote display units, external applications, etc.
Expansion Boards <sup>5</sup>	Max. 4 of 4580, 4581 or 4583 or any combination <sup>6</sup>
I/O Matrix 4582 board	Max. 8 if no expansion boards fitted.

<sup>&</sup>lt;sup>1</sup> Refer to the technical manual and the current calculation spread sheet.

<sup>&</sup>lt;sup>2</sup> A combination of large and medium enclosures can be used to fit more options.

<sup>&</sup>lt;sup>3</sup> Refer to FT128 block wiring diagram, drawing no. F665

<sup>&</sup>lt;sup>4</sup> Voltage output V0 is used to provide 2 additional sets of relay contacts on the external termination board SUB835.

<sup>&</sup>lt;sup>5</sup> Expansion boards are internally connected to the COM loop.

<sup>&</sup>lt;sup>6</sup> It is allowed to have up to 4 boards of any type with warning for 4583 if more than 2 are added. Available only in V2.1.0 and higher.



# **3.2** FT128 Limitations

In addition to increasing the number of the COM loop units to 255 in software  $\geq$  V2.0, other limitations have also been increased as well as adding new types e.g. technical warning. The following table lists some of the limitations in V2.2.0 software.

Item	CIE
Fire alarms (presented in the FT128 display as ZONE and/or ZONE-ADDRESS) <sup>7</sup>	256
Number of zones	99 <sup>7</sup>
Faults	200
External faults	50
Technical warnings	50
Short Circuit Isolators	64
Loop units	255
Trigger conditions (in all the control expressions)	Approx. 1000
Interlocking Combinations	100
3379 + 4477 units	50
Total number of detectors and/or Manual Call Points	512 <sup>8</sup>
Max. number of AAF zones	50
Max. number of detectors per AAF zone	5
Max. number of I/O Matrix boards with expansion boards.	4
Number without expansion boards.	8
Max. number of expansion boards 4580, 4581 & 45839	6
Max. number of outputs per CIE including all kinds of outputs	200
Max. number of inputs	128
Max. number of 4380 units	10

|--|

<sup>&</sup>lt;sup>7</sup> Up to 256 ZONEs and/or ZONE-ADDRESSES can be programmed but only the zone numbers 01-99 can be used.

<sup>&</sup>lt;sup>8</sup> Max. number of alarm points per CIE (microprocessor) is 512 (including conventional alarm points) and maximum number of alarm points per zone is 32. Care must be taken in order not to exceed 512 detectors and/or Manual Call Points connected to the CIE i.e. 255 COM loop units + 257 conventional detectors / MCP.

<sup>&</sup>lt;sup>9</sup> Expansion boards are internally connected to COM loop 0, ensure total number of expansion boards and I/O matrix boards connected to the COM loop does not exceed 4. Software 2.1.1 allows to use 4 expansion boards.



# **3.3** FT128 CIE Layout



Figure 1 FT128 Control & Indicating Equipment.

The FT128 control and indicating equipment (CIE) is housed in a metal cabinet powder coated oyster colour. The cabinet has an inner and outer door. The outer door is fitted with a 003 key to provide access level 1 and is made of tinted high impact plastic and allows easy viewing of all indicators and controls.

Access to the inner door is gained by first opening the outer door which then provides access to the inner door fixing screws.

Opening the inner door allows access to the control unit hardware for the purpose of maintenance or servicing.

Figure 1 above shows the standard FT128 in the medium size cabinet fitted with only one option (OWS). Other options e.g. AS1668, Zone Control, etc, can also be fitted depending on the space available on the front face plates.





Figure 2 The FT128 Front, FBP (upper black part) and CP (lower grey part)

An alphanumeric display is provided to view which alarm point / zone has generated a fire alarm(s). In the alphanumeric display (LCD, 2x40 characters), the information displayed on the first row depends on how many alarm points / zones have generated fire alarm (and also convention). On the second row, a user definable text message is shown for an alarm point or a zone, if programmed. See chapter "Fire alarm", page 45.

Fire services personnel use the FBP in FT128 to take operational control of the system.

The CP is used to "communicate" with FT128, e.g. for commissioning, monthly tests, maintenance, etc. Access codes for different users and access levels are required. A keypad is used to get access to the menu tree, i.e. the main and sub menus for data input / output and manoeuvres, etc. The CP also holds several system status LEDs.



## 3.4 LED Indicators and Push Button

LED's and push buttons are contained on the front panel display and are described in the tables below. See also Figure 2 above, for the LEDs and push buttons.

## 3.4.1 Fire Brigade Panel Display and Control

Table 3 Fire Brigade Panel LED indicators

LED indicator		Indicating
L1	Fire (5 red) Blinking (0.4/0.4s)	Fire alarm (also pre-warning & heavy smoke / heat alarm and quiet alarm) $^{\rm 10}$
L2	Alarms queued (2 red) Blinking (0.4/0.4s)	More than one unit / zone have generated fire alarm.
L3	Extinguishing (red)	Output(s) activated for extinguishing equipment. <sup>11</sup>
L4	Ventilation (yellow)	Output(s) activated for fire/smoke ventilation equipment. <sup>11</sup>
L5	Fire Brigade TX (red)	Output activated for Fire Brigade TX (routing equipment) and/or corresponding programmable output(s) of the routing equipment. <sup>11</sup>
		Test of routing equipment in progress (see menu H1).
L6	Operation (green)	Power on, i.e. the FT128 power supply (switch mode power supply and/or batteries) are connected and working properly.

#### Table 4 Fire Brigade Panel Push buttons

	Push button	Operation/function
P1	Alarms queued (BLACK)	Used, when LEDs "Alarms queued" (L2) are lit, to scroll/browse through the queued alarms (zones).
P2	Silence buzzer (yellow)	Used to silence the buzzer in FT128
P3	Silence Alarm devices (red)	Used to silence devices configured as "Alarm devices" such as sounders or OWS (i.e. to "reset" outputs for alarm devices). <sup>12</sup>
P4	Reset (green)	Used to reset the fire alarm(s), has to be pressed for > 0.5 Secs
P5	Disable (yellow)	Used to disable active alarm(s), all outputs of the device or zone in alarm will be disabled.

<sup>&</sup>lt;sup>10</sup> In the New Zealand convention also "Acknowledged alarm" (ACK).

<sup>&</sup>lt;sup>11</sup> L3, L4 and L5 can as an alternative be programmed to indicate when a programmable input is activated, i.e. input trigger condition "Extinguishing system released", "Activated fire ventilation" and "Activated routing equipment" respectively (e.g. L5 can be turned on when a programmable input is activated by an activated routing equipment output). L5 is turned on until all fire alarms are reset.

<sup>&</sup>lt;sup>12</sup> Via EBLWin can be set if the alarm devices are to be continuously off / disabled or re-sound for a new alarm.





## 3.4.2 Control Panel Display and Control

Table 5 Control Panel LED indicators

LED indicator		Indicating
L7	General fault (yellow)	Fault(s), i.e. not acknowledged fault(s) and/or acknowledged but not corrected fault(s).
L8	Disablements (yellow)	Something is disabled / disconnected via a menu, via disable switch or automatically via "Single encapsulated reset". It may also be via zone control module if fitted.
L9	Test mode (yellow)	One or more zones are in "test mode".
L10	Door open (yellow)	A door is open in FT128 control panel.
L11	Fault TX activated (yellow)	One or more non-acknowledged faults. Output for fault TX (routing equipment) is also activated, if not disabled before.
		Test of routing equipment in progress (see menu H1).
L12	Service (yellow)	One or more sensors have reached the service level. See menu H4/U6.
L13	Fault / Disablements Alarm devices (yellow)	One or more outputs (type Alarm device) is / are <u>disabled</u> . <b>Blinking</b> : One or more supervised outputs (type Alarm device) have generated <u>fault(s)</u> <sup>13</sup> .
L14	System fault (yellow)	FT128 is not running (due to S/W / CPU / memory fault) <sup>14</sup> .
L15	Fault / Disablements Fire Brigade TX (yellow)	Output for Fire Brigade TX (routing equipment) is <u>disabled</u> via menu (H2/B10) or via an open door, if programmed (Not allowed in the AU convention. <b>Blinking</b> : Routing equipment power supply output or one or more supervised outputs (type Routing equipment) have generated <u>fault(s)</u> <sup>15</sup> .
L16	Fire Brigade TX delay (yellow)	The Alert Annunciation function is enabled, i.e. the time channel controlling this function is "on". <sup>16</sup>

<sup>&</sup>lt;sup>13</sup> This is also valid when FT128 has no "contact" with a unit with such an output, e.g. 4477, 3379, 3361, etc.

<sup>&</sup>lt;sup>14</sup> The LED is turned on during restart and stays on for restart code other than 00, 03 or 25 until the fault is acknowledged.

<sup>&</sup>lt;sup>15</sup> This is also valid when EBL128 has no "contact" with a unit with such an output, e.g. an I/O unit 3361, etc.

<sup>&</sup>lt;sup>16</sup> The Alert Annunciation function is described in the FT128 Technical / Programming Manual, chapter "Alert annunciation". The LED "L16" will be "on" if the AA function is enabled for at least one alarm point / zone. Normally, only one time channel us ed for this function but two or more channels can be used. The AA function can, as an alternative, be continuously "on".



Key/push button		Operation/function		
P6	Fault acknowledge (yellow)	Used to acknowledge the faults shown in menu H6. Also used to acknowledge SERVICE signal, see menu H8/S4. <sup>17</sup>		
P8	Access (white)	Used to log on, i.e. to get access to the menu tree (via an access code) to carry out disablements, etc. In conjunction with a fire alarm, some information is available and some actions are possible to perform via the "Fire alarm menu" (X1-X9) without log on, see chapter "Fire alarm", page 45.		
P9	Return (white)	Used to stop input of data, leave a menu ("one step up") and to log off.		
1	1 – 9 and 0	Numeric keys for the figures 0-9.		
C	С	Used to <b>clear</b> /delete just written data.		
A	А	Used to <b>accept</b> a menu and accept input of data.		
	$\begin{array}{c} \leftarrow & \rightarrow \\ \uparrow & \downarrow \end{array}$	Left / right keys are used to move the cursor in a menu. Up / down keys are used to scroll between the menus.		

#### Table 6 Control Panel push buttons

<sup>&</sup>lt;sup>17</sup> In New Zealand convention, the "Fault acknowledge" button is used to acknowledge a Fire alarm, i.e. the alarm abbreviation "ALM" in the LCD is changed to "ACK".



# 4 **Control Unit Options**

## 4.1 Optional I/O Matrix 4582

The I/O matrix board is an interface between the CIE (COM loop) and various types of application boards e.g. AS1668 fan control board, Zone Disable and indication board, LED mimic board, etc.

Up to eight I/O matrix boards 4582 can be used in FT128 if no expansion boards type 4580, 4581 or 4583 are used. The limitation of the I/O matrix configuration as follow:

- Up to two I/O matrix boards can be programmed in FT128 as type "Zone control" and / or "Generic" e.g. NZ fire brigade panel, LED mimic, etc.
- Up to eight I/O matrix boards can be programmed as type "Fan control" if no other I/O matrix boards are used for generic or zone control i.e. up to 32 fans can be controlled and displayed in FT128.
- A combination of any of the two previous options can be used if the maximum number of each application is maintained.

In the generic application, each I/O matrix board can operate up to 48 LEDs (outputs) and 16 switches (inputs). All outputs and inputs can be configured individually via EBLWin.

The I/O matrix board can be used remotely, it requires 24V and COM loop in addition to an application board.

**Note**: Jumper links JP1-JP3 are used to set the I/O matrix board number (0-3) and JP5-JP6 are used to set the application type (generic, fan control or zone control).For more details refer to the Technical / Programming manual.

## 4.2 AS1668 Fan Control Module

The fan control module is designed to meet the requirements of the Australian standard AS1668.2, the front display is shown in Figure 3 below.



Figure 3: Fire Fan Control Display

Each fan control module consists of an I/O matrix 4582 and display / control board SUB902. Each module can control and indicate the status of up to 4 different fans. Up to 8 x AS1668 fan modules can be used to provide 32 fan interfaces if no other Expansion Boards or 4582 are used in different applications.

**Note**: the total number of fan modules must be reduced by one for every other option fitted, e.g. zone module, generic module, expansion board, etc.



A fan reset switch is provided to independently reset the fan module as required by AS1668.2 i.e. reset the alarm in the CIE will not restore the fans to the non-fire condition until the reset switch is pressed.

A remotely located (mechanical services) 3361 module is required for each fan and configured in the control panel using EBLWin. For standard fan configuration e.g. smoke exhaust fans, the simple standard mode can be used to program 3361 while for more configuration options e.g. supply air fans, the enhanced mode can be used.

The I/O matrix board 4582 is a COM loop unit which can be fitted with the front display board inside the control panel or remotely in a separate enclosure.

For more information refer to FT128 Technical / Programming manual and to drawing no. F665

LED indicator & buttons		Indicating		
Running	Fan running - Red	Illuminates to indicate fan running.		
Stopped	Fan Stopped - Green	Illuminates to indicate fan stopped.		
Fault	Fan Fault - Yellow	Illuminates when the signal to the fan to change state is restored, either via manual override switch or by the CIE in Auto mode <u>but</u> the feedback signal confirming the change of state has not been received by 3361 input in the field within 30 seconds. Or There is an open circuit in the 3361 supervised input where the feedback from the pressure switch is connected. Or The pressure switch is faulty		
On	LED – Red	Indicates "On" position of the button, fan starts up manually		
	Button	Fan is running in manual mode independent of an alarm in CIE.		
Auto	LED – Green	Indicates "Auto" position of the button, normal operation		
	Button	Fan may run or stop automatically depending on the alarm condition in the CIE		
Off	LED - Yellow	Indicates "Off" position of the button, fan stops manually		
	Button	Fan is stopped in manual mode independent of an alarm in CIE.		

Table 7 Indicators and buttons in 1668 module



## 4.3 Zone Control & Indication Module

The zone control module is used as a simple and easy method to disable (isolate) individual zones for service and maintenance purposes as well as providing alarm and fault indication for these zones. The front display layout is shown in Figure 4.

Each zone control module consists of a universal I/O matrix 4582 and application board SUB900 specifically configured to provide up to 12 individual zone alarm and zone fault indicators as well as a disablement control with indicator to indicate switch activation. The module is normally mounted in the CIE. but it is also possible to connect the module externally via a COM loop.

The Zone Control Module provides a simplified indication of zone status without the need for a liquid crystal display. The disable control allows a specific zone to be temporarily disabled without the need to access the CIE menu. This is typically used where building works or maintenance procedures are being carried out in a localised area of a building.

For more information refer to the Technical / Programming manual and to drawing no. F665.



Figure 4 Zone Control & indication Display

Table 8 Zone control LEDs and	Buttons
-------------------------------	---------

LED indicator & buttons		Indicating
AL	Alarm – Red 1-12	Illuminates when an alarm from a conventional zone or an addressable device or group of addressable devices designated as a zone enters an alarm state.
DS	Disable - Yellow 1-12	Illuminates when a zone is disabled either by the disable switch on the zone control card or where the zone is disabled via menu H2/B1
FT	Fault – Yellow 1-12	Illuminates when either a short circuit or open circuit fault on conventional zone or any fault that prevents an addressable alarm point in a designated zone to operate properly.
Disable	Button 1-12	Pressing the disable switch will disable the specific zone selected. Pressing the switch a second time will re-enable the zone. Functions same as menu H2/B1.
LED Test	Button	Is selectable to either be activated from the CIE or at the zone control module itself, this feature can be utilised when the module is mounted externally via the COM loop.



# 4.4 NZ Fire Brigade (LED) Mimic Board

The generic feature in EBLWin software supports the mimic applications of the I/O matrix board 4582. This feature is used in the New Zealand fire brigade mimic panels.

Each NZ mimic board provides 12 LED indicators and screw terminals for 4 inputs (switches). The first 3 LEDs used for Normal (green), Defect (yellow) and common alarm (red). The remainder 9 LEDs (red) used to indicate separate zone alarm indications or sprinkler flow switch indication. Two of the four inputs are used to interface the Bulgin keys to the CIE. Additional mimic boards provide 12 red LED indicators for each board.

Up to 4 mimic boards can be interfaced to each I/O matrix board 4582 to provide indications for up to 48 LED's, up to two I/O matrix boards can be used in the NZ mimic applications, if no zone control modules used. Total number of LED indicators that FT128 can provide is 96 indicators.

Figure 5 below shows an example of a mimic display used in conjunction with FT128 in New Zealand Steel project.



Figure 5 NZ Fire Brigade Mimic Sample Drawing



# 4.5 Occupant Warning System (OWS)

The standard BROOKS OWS display and control layout is shown in Figure 6. For more details, refer to the standalone OWS manual MA380 or OWS kit manual MA385.



Figure 6: Occupant Warning System Display

Brooks Occupant Warning System is a single zone intelligent system designed to warn the occupant to evacuate the building in the event of fire or emergency. It can be incorporated in FT128 with some options depending on the available space in the standard cabinet, larger enclosures can be used to allow for more options.

The OWS comprises of an amplifier, control / indication front and speakers / strobes distributed within the building to provide audible and visual warning to the occupant as well as PA notifications. In addition to the T3 and AS2220 tones, the OWS provides in its standard configuration alert and evacuation messages as well as electret microphone for PA purposes.

Brooks OWS can be fitted in FT128 system inside the same cabinet, separate power supply to suit the amplifier size must be used. The OWS provides high quality audio output utilising high efficiency class D amplifier, sizes available: 60W, 120W and 250W.

The front display push buttons / indicators and its function are explained in Table 9.

### Features:

- High power efficient class D audio amplifiers with standby input to maximize power conservation in quiescent condition.
- Selectable time delay between alert tone / message and evacuation tone / message, time is configurable 1, 3 or 5 minutes.
- Configurable audio warnings with pre-recorded digital voice messages.
  - For Australian applications, it meets the requirements of the ISO7731, ISO8201 standards, clause 3.22 of AS1670.1-2004 and relevant clauses of AS1670.4-2004.
  - For New Zealand applications, it complies with the NZS4512 and the AS2220.1 standards.
  - For non-regulatory applications, the tones and voice message can be customized.
- Auxiliary input to connect to Brooks single or multiple zone remote microphones.
- Supervised speaker circuit, trigger input and strobe output.
- Speaker output can be split into a max of 16 individual speaker circuits using the optional 4 zone split board. Each circuit is individually supervised for short and open-circuit faults.
- OWS fault changeover relay output to report a fault condition in the FT128.



LED indicator 8	& buttons	Indicating	
Auto	LED - Green	Illuminates to indicate the "Auto" position of the button, normal position.	
	Button	OWS controlled only by alarm condition	
Isolato	LED - Yellow	Illuminates to indicate "Isolate" position of the button.	
	Button	Disable all outputs to the speakers. CIE fault is generated if the isolate button remains active for more than 5 minutes	
	LED – Red	Illuminates to indicate the "Manual" position	
Manual	Button	Enables manual activation of Alert, EVAC or PA. OWS fault is generated if the manual button remains active for more than 5 min.	
Alert	LED – Green	Indicates that alert tone/message is active	
	Button	Manual trigger of the alert tone/message	
Evac	LED - Red	Indicates that evacuation tone/message is active	
	Button	Manual trigger of the evacuation tone/message	
РА	LED - Yellow	Indicates that PA is enabled	
	Button	Enables PA mode	
Press to Talk	LED - Yellow	Indicates PA is broadcasting	
	Button	Press and hold to broadcast via the electret mic	
Fault	Yellow	Indicates common fault in OWS i.e. speaker fault, trigger fault, strobe fault, etc.	

#### Table 9 OWS controls and indications

## Notes:

The OWS requires separate power supply as well as power supply supervision board. Standard FT128 is not capable to supply the required current to the amplifier.

A fault signal will be generated if the isolate or manual mode is kept active for more than 5 minutes (OWS software V1.5 and higher)



# 4.6 Gaseous Extinguishing Control Module

## 4.6.1 Overview

The gaseous extinguishing system control module is provided for use as an option in FT128. The gas module is comprised of the following:

- Control Board SUB928, software is configured to interface with CIE.
- Display Board SUB929
- CIE interface board SUB943.
- Front panel decal with interconnection cable

In addition to the control module, system ancillaries may include:

- A combination of BROOKS Warning Signs
- BROOKS Local Control Station (LCS)
- Voice / Tone Electronic sounder
- Dual Strobe Module

The gas control module combined with other Brooks system components has been designed to provide the monitoring and control functions of a complete gaseous extinguishing system that meets the requirements of the relevant clause 7.1 to 716 of the Australian Standard AS4214-2002 (including amendment 1). For more details, refer to FT2GAS Operation / technical manual MA400.

The gas control module has the following inputs / outputs:

- Three fully supervised external input circuits, gas lock-off valve input, manual release input and gas discharged sensor input.
- Fully supervised system inoperative sign 24V output rated @ 0.5A maximum.
- Fully supervised 2 wire system output for level 1 and level 2 alarm to Brooks warning signs (alarm 1 [+/-] & alarm 2 [-/+]) rated @ 3A maximum.
- Fully supervised gas release output rated @ 5A maximum.
- Gas release clean-contact relay output rated @ 2A maximum.
- Gas Fault clean-contact relay output rated @ 2A maximum.
- Gas Isolate clean-contact relay output rated @ 2A maximum.
- One four-wire Local Control Station (LCS) interface. Both the local gas isolate control and the local gas release control are fully supervised for open and short circuit faults.
- Adjustable gas release timer settings via a built-in DIP switch.

**Note**: the current rating above is the maximum current capacity of the outputs, a power supply calculations must be performed to ensure that the power supply capacity is sufficient to run the system in full alarm condition without exceeding the maximum current rating of the power supply.

### 4.6.2 Display Board & Decal

The gaseous extinguishing front display is shown in Figure 7 on page 26.

All LED indicators on the front display are covered by a polycarbonate decal clearly labelled with their functions.

When the system is in normal condition, all LED indicators will be extinguished.

The gaseous extinguishing system status indicating LEDs and flash patterns are described in the following table. The default state of the LED indicators is OFF, if it is not defined in Table 10 below.





#### Figure 7 Gas Extinguishing Display Layout

### Table 10 Gas Front Status LED Indication and flash Pattern

Туре	LED Name	Module Conditions	LED Pattern
	1st Alarm	One zone or zone address in alarm	
	2nd Alarm – Timer Running	Both zones or zone addresses in alarm	
Alarm	Gas Initiated	Gas release output activated	Fast Flash
	Gas Externally Released	External gas release control activated	
	Gas Discharged	Gas discharged sensor input activated	
Fault	Gas Fault	Fault in any of the supervised inputs or outputs	Steady ON
	Gas Discharge Inhibited	Gas discharge inhibited via LCS isolate switch	
Disable	Gas Discharge Disabled	Gas discharge disabled by the service master abort switch or the gas lock-off valve controls	Steady ON
	Service Switch Active	Illuminates when the master abort switch is activated	
	Service, Master Abort	Gas service master abort switch	



# 4.7 FT128 External Termination

In the Australian convention, the FT128 Main Board 4556 is mounted on the rear of the front door. In order to avoid the field wiring termination on the swing door, an adapter board SUB836<sup>18</sup> is added to the main board. The new version of the adapter board is plugged in the screw terminals of the main board 4556 and interfaced to another external termination board SUB835 mounted on the equipment plate. The adapter board SUB836 is connected to the termination board SUB835 via ribbon cable.

The FT128 has only one programmable relay. To increase the number of programmable relays in the standard FT128 system, another relay with two changeover contacts has been added to the termination board to provide 2 sets of additional relay contacts. This relay is controlled by the "Voltage output S0" <sup>19</sup> e.g. if S0 is programmed for general alarm, the following will be available:

- Voltage output S0 on CON 7
- Change over alarm contacts R2-1 on CON 5
- Change over alarm contacts R2-2 on CON 6

The PCB layout of the adapter board SUB936 is shown in Figure 8.

The PCB layout of the external termination board SUB835 is shown in Figure 9, page 28.

**Note:** As shown in Figure 8 and Figure 9, one physical PCB is used for both boards but different components are fitted in each one.



Figure 8 SUB836 Adaptor Board

<sup>&</sup>lt;sup>18</sup> The adapter board shown in Figure 8 and external termination board shown in Figure 9 use a new PCB revision (PCB250 Rev 5). In all previous revisions, the adapter board is soldered in the terminals of FT128 main board (4556).

<sup>&</sup>lt;sup>19</sup> The voltage output V0 terminals are still available on the termination board SUB835 please note, the current limitation of V0 is less than 200mA.





Figure 9 SUB835 external Terminal Board

The adapter board SUB836 provides additional terminals to support connections of COM loop SA & SB (CON 3) and 24V (CON 6) to I/O matrix boards 4582 mounted on the front door.

The external termination board SUB835, as shown in Figure 9, provides the two additional alarm relay contacts R2-1 and R2-2 (CON4 & CON 5), current rating for the contacts is 2A @  $30V_{DC}$ . The SUB835 provides additional terminals as well for the COM loop and  $24V_{DC}$ , these terminals can be utilised for modules mounted on the equipment plate and requiring COM loop connections or  $24V_{DC}$ .



# 5 Normal Operation

When FT128 is in normal operation and in quiescent state, i.e. no fire alarms and normally no faults, no disablements, no service signal, no zones in test mode, no activated interlocking in / outputs and/or no open doors, only the LED "Operation" (L6) is to be lit.

# 5.1 The Display in FT128

The display (LCD) will in normal operation and in quiescent state show the following information:

```
DD-MM-YYYY *** FT128 *** hh:mm [i]
User programmable information text.
```

Top (first) row <sup>20</sup> :

**DD** = Day, e.g. 28

MM = Month, e.g. 11 (=November)

**YYYY** = Year, e.g. 2013

**hh** = hours, e.g. 21

mm = minutes, e.g. 45

[i] = Will only be shown in case of one or more Technical Warnings in the system.

Bottom (second) row:

The information on the bottom row (40 characters) can be created via EBLWin, i.e. it is user definable.

## 5.1.1 LCD Backlight

When the information above is shown in the LCD, the backlight is OFF.

As soon as any other information (see below) is shown in the LCD, the backlight is turned ON.

## 5.1.2 The LCD Information Priority Order

The different types of alarms, faults, etc. listed below are described in other parts of this document.

The LCD information priority order is shown in Table 11.

Note: Fire alarms are:

- Fire alarm
- Heavy smoke/heat alarm
- Alert Annunciation (AA)
- Acknowledged alarm (New Zealand only)
- Isolated alarm (New Zealand only)

**Note:** When "More..." is shown, it is possible to scroll between the items with " $\downarrow$ " and " $\uparrow$ ".

<sup>&</sup>lt;sup>20</sup> The information on the top row (40 characters) is included in the text file downloaded in FT128, i.e. the information may be different to the information shown above.



### Table 11 LCD priority order

Priority	Event
1	Fire alarms (see below)
2	Quiet alarm
3	Co-incidence alarm
4	Delayed alarm
5	Pre-warning
6	Test mode alarm
7	LAA / AAF alarm <sup>21</sup>
8	New Zealand convention only:
C	"Routing equipment left isolated"
9	Fault (not acknowledged)
11	Disablement
12	Zones in "Test mode"
13	Interlocking input / output active
14	Information in normal operation in quiescent state

<sup>&</sup>lt;sup>21</sup> The AAF function is used in conjunction with an AAM Control (3340) and the new Local Alarm Acknowledgement LAA module.



# 6 User level, User name & Password

EBLWin software supports different user levels for different users.

To log on to FT128 (version  $\ge 2.0$ ) a **User name** and a **Password** are required (see page 79). Ten different User names with individual Passwords can be used. Each user name has access to a specific user level allowing access to specific menus according to Table 12 below.

User level	User level name / type	Required action / equipment	Access to
0	None	None (Door closed).	View indications and controls
1	Fire service personnel	Open door (003 key required).	Fire alarm response via fire brigade section, fan control, OWS controls and hot keys for zone disablement.
2A	Information only	003 key + logon as "Information only"	Same as 1 + keypad. Menu H4, H6 <sup>a)</sup> , H9 <sup>b)</sup> & H10
2B	Building occupier.	003 key + logon as "Building officer"	Same as 2A + keypad. Menu H1-H4, H6, H7, H9 & H10
ЗA	Service personnel.	003 key + logon as "Service personnel"	Same as 2A + keypad. Menu H1-H10
3B		PC + EBLWin + H/W key	SSD & S/W download
4		PC + EBLWin + H/W key + special password	SSD & S/W download + reset of alarm counter

Table	12	Access	levels	and	users
-------	----	--------	--------	-----	-------

<sup>a)</sup> Information only, i.e. faults cannot be acknowledged.

<sup>b)</sup> Menu H9/C1 only.

Ten different user names with individual passwords are available and can be defined via EBLWin (menu "System") in the "User data" dialog box. They can be used to log on to an FT128 (version  $\ge$  2.0) and/or Web-server access. Three user names and passwords are set as default as shown in this "User data" dialog box:

	Usemame	Initials	Password	EBL	WEB	Туре	
•	Information only	ю	000000			InformationOnly	
	Building officer	BO	111111			BuildingOfficer	
	Service personnel	SP	222222			ServicePersonnel	
			000000			InformationOnly	
			000000			InformationOnly	
			000000			InformationOnly	
			000000			InformationOnly	
			000000			InformationOnly	
			000000			InformationOnly	
			000000			InformationOnly	

It is recommended to change the default passwords and to add a number of new user names and passwords. However, these access codes can be changed by typing over the previous password and reassigning the EBL and/or Web check boxes with the appropriate access level in the Type field.



**Note:** Initials are required in system FT128 since they will be used in the event log instead of the User names.

In a new CIE (i.e. before any Site Specific Data has been downloaded), only user "0" is available. No password is required and you have access to all menus. After download of SSD the downloaded user names and passwords will be valid.

# 6.1 User Level 0

With the door closed **no** access to controls. Indicators viewed through outer door.

## 6.2 User Level 1

After the door has been opened using 003 key (LED "Door open" is lit), **the designated user / fire brigade personnel** will have access to the following push buttons:

Push button	Operation/function
P1	Scroll / browse through the active queued alarms
P2	Silence the buzzer in FT128
P3	Silence all alarm devices (OWS or sounders).
P4	Reset fire alarms (S) (see below)
P5 🦲	Disable active alarm (S)
OWS	OWS controls
AS1668 Fan Control	Manual override of AS1668 fans, if fitted
Zone Disablement	Quick access to zone disable / re-enable, if fitted

## 6.3 Access Level 2A

When the door has been opened using the 003 key, the door switch will activated (LED "Door open" is lit), you have access as per access level 1 and after log on as "Information only" (level 2A) the following menus are accessible:

H4 Present system status	
U1 Disablement	
U2 Disablement by time channel.	
U3 Sensor values	
U4 Sensors activating SERVICE signal	
U5 Technical warning	
U6 Event log	
U7 Version and alarm counter	
H6 Display FAULTS (Note: Information only)	
H9 Interlocking outputs and inputs	
C1 Activated interlocking outputs/inputs	
H10 Change password (In this case for "Information only")	



# 6.4 User Level 2B

After the door has been opened using 003 key (LED "Door open" is lit), you have access to level 1 and after log on as "Building officer" (level 2B ), the following menus will be accessible:

H1 Perform monthly test
H2 Disable or re-enable
B1 Disable zone
B2 Disable zone / address
B3 Disable output
B4 Disable all control, ventilation, extinguishing or interlocking outputs
B5 Re-enable zone
B6 Re-enable zone / address
B7 Re-enable output
B8 Re-enable all control, ventilation, extinguishing or interlocking outputs
B9 Disable / Re-enable alarm devices
B10 Disable / Re-enable outputs for routing equipment
B11 Disable / Re-enable alert annunciation function
H3 Set calendar and clock.
H4 Present system status
U1 Disablement
U2 Disablement by time channel.
U3 Sensor values.
U4 Sensors activating SERVICE signal
U5 Technical warning
U6 Event log
U7 Version and alarm counter
H6 Acknowledge FAULTS.
H7 Perform ZONE TEST (Test mode).
H9 Interlocking outputs and inputs
C1 Activated interlocking outputs/inputs
C2 Activate interlocking output
C3 Reset interlocking output
C4 Disable interlocking output
C5 Re-enable interlocking output
H10 Change password (In this case for "Building officer")



# 6.5 User Level 3A

When the door has been opened using 003 key (LED "Door open" is lit), the service / maintenance personnel have access as per access level 1 and after log on as "Service personnel" (level 3A <sup>22</sup>), access to all levels in the menu, i.e. same as level 2B and also to the following menu:

Same menus as in access level 2B plus the following:
H5 Service
A1 Calibration of supervised outputs
A2 Sensitive fault detection mode
A3 Service mode for COM-loop
A4 Display current consumption in unit
A5 Display current consumption on COM loop
A6 Display statistics for COM loop
A7 Activate address setting mode for DU
A8 Setup wireless detectors
A9 Setup wireless detectors
A10 Show information about site specific data
H8 Maintenance
S1 Disconnect / Re-connect COM-loop
S2 Disconnect / Re-connect Zone Line Input
S3 Disconnect / Re-connect addressable zone interface input
S4 Acknowledge SERVICE signal
S5 Restore weekly average to default
S6 Test of alarm devices
S7 Safe shut down of control unit
S8 Activate zone / address in alarm mode
S9 Activate output
S10 Reset activated output
H10 Change password (In this case for "Service personnel")

# 6.6 Access Level 3B

Used by Service / maintenance / commissioning engineers when a PC (i.e. **EBLWin**) is to be connected to FT128 for backup (upload), download of site specific data (SSD) and /or download of software.

An **EBLWin** key in the PC is required.

# 6.7 Access Level 4

Used by manufacturer or by personnel authorised by the manufacturer for re-initialisation (reset) of the alarm counter, change software configurations, on-line status checking, etc. A special password is required.

<sup>&</sup>lt;sup>22</sup> If the code for access level 3A has already been used to logon to access level 2B, a new logon to access level 3A is not required.



## 6.8 Passwords / Change of Password

Normally, the user names and passwords are downloaded / changed via EBLWin (menu system I User data) i.e. SSD download.

A logged on person (user name) can change his password via menu H10. If "Safe shutdown of control unit" (menu H8/S7) is done following the password change, this password will be valid also after power down else not.

A password changed via menu H10 (+ H8/S7) will be valid until it is changed via menu H10 again or it is erased via EBLWin (menu Tools I Reset user passwords).

### 6.8.1 Password for Web-server access only

Normally a password consists of 6 digits, this allows the same user to get access to the control unit as well as to the Web-server if both are selected.

If a user should have access to the Web-server only, it is possible to choose a stronger password. It consists of 6 to 10 characters and digits as well as letters and alphanumeric characters. Note that the letters are case sensitive.



# 7 Silence Alarm Devices

In FT128, on the FBP, there is a push button (P3) "Silence Alarm devices".

If the push button "Silence Alarm devices" is pressed during a pre-warning, a fire alarm <sup>23</sup> or a Co-incidence alarm, the following will happen:

- LEDs "Fire" (L1) and "Alarms queued" (L2) <sup>24</sup> continue to be blinking (0.4 / 0.4).
- Activated outputs<sup>25</sup>, programmed for sounders or OWS (type Alarm devices), will be silenced.

In the case of <u>a new alarm</u>, or <u>if the push button "Silence Alarm devices" is pressed again</u>, the sounders or the OWS will automatically reactivate.

```
Note: This is also valid for Pre-warning and Co-incidence alarm.
```

In EBLWin, if option Button "Silence alarm devices" disables alarm devices was selected, the button "Silence alarm devices" (P3) will have the same function as in the menu H2/B9, see page 92. See also chapter "Disable / Re-enable alarm devices", page 38.

**Note 1:** This option (Button Silence alarm devices disables alarm devices) <u>must not be</u> <u>used</u> in the Australian convention as this is a violation to AS4428.3: 2010.

**Note 2:** In the NZ convention, the function is already implemented in the firmware i.e. there is no need to tick the check box.

Name	EBI Win 202
System	
Jser definable text	- En
	Pansonic
Page 1 Page 2	
Eault latching	Silence Buzzer With Door Switch
Global Reset of Fan Control Outputs	Redundant TLON Network
Use Daylight saving time	Hashing LED on MCP
	Rashing green polling LED on 4400, 4401
Button 'Silence alarm devices ' disables alarm devices	Inhanced Disablement
Door Closing by Time	Main Power Loss Fault Delay Time (minutes)
Active 13:02	30

The "FIRE" LEDs will indicate steady instead of blinking when the alarm devices are disabled.

## 7.1 Silence Alarm Devices (Inside Switch)

**Note**: The functions in this chapter are valid for the NZ convention only.

The button "Silence alarm devices" (P3) is called the "inside switch", it operates slightly different in the NZ convention as shown in the following section.

<sup>&</sup>lt;sup>23</sup> In the New Zealand convention "Acknowledged alarm" (ACK) as well.

<sup>&</sup>lt;sup>24</sup> When more than one fire alarm is activated.

<sup>&</sup>lt;sup>25</sup> Including Addressable siren 3377/4477, Addressable sounder base 3379, Addressable beacon 4380 and Addressable Light indicator 4383.


The switch toggles between two states:

Alarm devices disabled

When the button is pressed, all programmable outputs of type "Alarm devices" are isolated, i.e. sounders, OWS, strobes, etc. and prevents new alarms from activating the warning devices.

 Alarm devices enabled When the button is pressed again, all programmable outputs of type "Alarm devices" will be enabled.

If the silence alarm devices switch (inside switch) is left in its isolated state when the CIE door is being closed, the buzzer will beep continuously and the message "*Silence switch left active*" will be shown in the LCD. This feature is required in NZS4512 to ensure that the door cannot be closed while the alarm devices are isolated. For priority order see chapter "The Display in FT128", page 29.

**Note**: The silence alarm devices switch on the front display (inside switch) has no function if the "Silence alarms" Bulgin key in the FT128 cabinet or in the remote fire brigade panel (see below) is turned to the silence alarms position.

## 7.2 NZ FB "Silence Alarms" Bulgin key (outside switch)

**Note**: The functions in this chapter are valid for the NZ convention only.

The **New Zealand FB** "Silence Alarms" Bulgin key switch is connected to NZ mimic application board via a programmable input in the I/O matrix board 4582 with the trigger condition "Silence alarms".

The fire brigade Bulgin key switch can be in one of two states:

- 1. <u>The Bulgin key switch is turned **ON** (i.e. "Silence Alarms" position).</u>
  - All programmable outputs of type "Alarm devices" are disabled. The "Silence Alarm Devices" switch in FT128 front display (see above) has no function.
  - LEDs "Fire" (on FT128 front display) changes from blinking to steady (continuous).<sup>26</sup>
  - The CIE built-in buzzer is silenced.
  - A fault is generated<sup>27</sup>: "FAULT: FB Silence switch active".
- 2. The Bulgin key switch is turned OFF (i.e. "Normal" position).
  - The fault "FAULT: FB Silence switch active" will be Serviced<sup>28</sup>.
  - Any alarm point / zone in fire alarm state will automatically be disabled / isolated. (I.e. it has to be re-enabled via menu H2/B5-B6.)
  - Any alarm point / zone in fire alarm state will automatically change state to "Isolated alarm" and in the fire alarm list (presented in the LCD) will "**ALM**" be changed to "**ISO**".

An example:

ISO ZONE-ADDR 12-46 LAST ZONE 12 No. 01 This is a user defined alarm text.

The CIE built-in buzzer is re-enabled.

<sup>&</sup>lt;sup>26</sup> This is valid also if the fire alarm is activated after the Bulgin key switch (outside switch) is turned ON (Silence Alarms position).

<sup>&</sup>lt;sup>27</sup> Always latched, regardless of if faults are programmed to be not latched.

<sup>&</sup>lt;sup>28</sup> Since this fault is always latched, it has to be acknowledged via menu H6.



# 8 Disable / Re-Enable Alarm Devices

All outputs<sup>25</sup> programmed for sounders or OWS (type Alarm devices) can be collectively disabled via menu H2/B9. This is indicated by LED "Disablements" (L8) and LED Fault / Disablements "Alarm devices" (L13) steady (continuous).

**NOTE:** Disabled outputs will remain disabled until they are re-enabled again via menu H2/B9.



# 9 Silence Buzzer

The FT128 built-in **buzzer** will sound for:

- Fire alarm and acknowledged alarm <sup>29</sup> (0.4 / 0.4 sec.)
- Co-incidence alarm: When only one zone / address (alarm point) is in alarm status (0.8 / 5 sec.)
- Pre-warning (0.8 / 5 sec.)
- Quiet alarm (0.8 / 5 sec.)
- fault (continuous)
- Activated interlocking input (0.8 / 0.8 sec.), if this option is selected via EBLWin.
- Delayed alarm

Press "Silence buzzer" (P2) to silence the buzzer.

In case of a new alarm or if the push button "Silence buzzer" is pressed again, the buzzer will automatically re-sound  $^{\rm 30}$ 

**NOTE:** This is also valid for pre-warning, co-incidence alarm, etc.

## 9.1 Silence Buzzer by Open Door

In EBLWin the function "Silence Buzzer by Door Switch" can be selected. The buzzer will then be turned off as long as the FT128 door is open.

## 9.2 Silence buzzer by the "FB Bulgin Key"

Note: Valid only for the New Zealand convention.

When the **New Zealand FB "Silence Alarms" Bulgin key switch** (outside switch) is turned ON (i.e. "Silence Alarms" position) the buzzer is silenced until the Bulgin key is turned to the "Normal" position.

## 9.3 Buzzer

If there is a fault or disablement whilst the door to FT128 is closed, the FT128 built-in **buzzer** will sound continuously directly after the door is closed. One fault message or disablement will be shown in the LCD but more faults and/or disablements will be indicated by the word "**more**".

**Note**: In the New Zealand convention, if any of the outputs for routing equipment ("Fire Brigade TX" and "Fault TX") or outputs for alarm devices is disabled when the door of FT128 is being closed, the FT128 built-in buzzer will sound continuously immediately after the door is closed. "Alarm routing equipment left isolated", "Fault routing equipment left isolated" and "Silence switch left active" will be shown in the LCD. This information has higher priority than the normal fault messages and disablements.

<sup>&</sup>lt;sup>29</sup> Acknowledged alarm is used in the New Zealand convention only.

<sup>&</sup>lt;sup>30</sup> Not valid if the buzzer is silenced by the open door.



# 10 Disable / Re-enable all control, extinguishing, ventilation interlocking outputs

All control outputs programmed as type:

- Control (general)
- Fire ventilation
- Extinguishing system
- Interlocking

....can be collectively disabled via menu H2/B4 type by type. This is indicated by the LED "Disablements" (L8).

They will remain disabled until they re-enabled again via menu H2/B8.

See also chapters "Disable all control, ventilation, extinguishing or interlocking outputs (H2/B4)", page 87 and "Re-enable all control, ventilation, extinguishing or interlocking outputs (H2/B8)", page 91.



# 11 Disable button

When the push button "Disable" (P5) is pressed whilst there is an active alarm, all outputs configured for either the device(s) or zone(s) in alarm, will be disabled. This is indicated by the disablement LED L8.

The "DISABLE" push button (P5) is provided in the fire brigade section on the front display to enable the fire brigade personnel to disable (isolate) an active alarm such as a zone of addressable sensors, conventional zone or individual addressable device.

A single operation of the "DISABLE" button (P5) whilst there is an active alarm will initiate the following:

- Disablement of all zones in alarm and/or addressable devices in alarm.
- Illuminate the "General Disablement" LED L10.
- Disablement of all the outputs configured for zone(s) or device(s) in alarm.

The output indicators activated as a result of an alarm will not clear automatically after disablement. A subsequent reset operation is required to restore the CIE to the normal condition.

**Note**: The "Disable" button will not function unless the "Silence Alarm Devices" button has been activated first as required by AS4428.3:2010<sup>31</sup>.

<sup>&</sup>lt;sup>31</sup> This function is not required in NZ convention.



# 12 Door Open

A standard 003 key is used to open the FT128 door to get access to the front membrane and other optional modules e.g. OWS, zone disable, AS1668 fan control, etc., see also chapter "User level, User name & Password", page 31.

## 12.1 LED "Door open"

Valid for the door in FT128, door open in FT128 is indicated by LED "Door open" (L10) in FT128.

# 12.2 Outputs for Routing Equipment (Fire Brigade TX and Fault TX)

In EBLWin the following can be programmed:

Disable Routing Equipment By Door Switch	
None	
Any Control Unit Door	
Any Door	

**None**: The output(s) for routing equipment (Fire Brigade and Fault TX) will not be disabled by any open door.

**Any Control Unit Door:** Door open in FT128 will disable the output(s) for routing equipment (Fire Brigade and Fault TX).

**Any Door:** Door open in FT128 and/or Ext. Fire Brigade Panel will disable the output(s) for routing equipment (Fire Brigade and Fault TX).

Disabled outputs for routing equipment are indicated by the LED "Disablements" (L8) and "Fault / Disablements Fire Brigade TX" (L15) and listed in menu H4/U1.

The following is shown in the display:

All outputs to fire alarm routing equipment disabled by door switch

**Note**: Do not use the door open function to disable (isolate) the routing equipment. This option cannot be selected in Both Australia and New Zealand.

## **12.3** Silence Buzzer by Door Switch

In EBLWin the following can be programmed:

Silence Buzzer With Door Switch

The buzzer will be turned off as long as the FT128 door is open.



# **13** Technical Address / Presentation Number

## **13.1** Technical Address for COM Loop Units

The technical address in FT128 is used when programming (via EBLWin) all units connected to the COM loop.

The technical address is also used to identify which unit has generated a fault.

The technical address is equal to the address that is set in each unit connected to the COM loop with the Address setting tool 3314 / 4414.

Addresses 001 – 255 can be set (not 000).

## **13.2** Presentation Number

For each fire alarm point / Zone Line Input, a presentation number, **NN-NN**, has to be programmed. The presentation number is shown in the display in FT128 and in External Presentation unit 1728 and Alert Annunciation unit 1736 to identify the point / zone generating a fire alarm. It is also used to disable / re-enable fire alarm points / zones and in control conditions / expressions to activate the programmable outputs.

Together with the presentation number, an alarm text with up to 40 alphanumeric characters can be displayed (if programmed via EBLWin).





# 14 Alarm Types

In case of a fire, Analogue detectors (sensors), conventional smoke and/or heat detectors, manual call points and programmable inputs can generate **fire alarm**. <sup>32</sup>

A fire alarm could be an **Alert Annunciation alarm**, i.e. the activation of the routing equipment (Fire Brigade TX) is delayed during the acknowledgement and investigation time.

When an **Alarm Acknowledgement Facility** AAF<sup>33</sup> function is used, during the Acknowledgement Period and the Investigation Period respectively, there will be an indication in the CIE display.

The Analogue detectors can also generate other types of "alarm", i.e. **Pre-warning**, **Heavy smoke alarm** / **Heavy heat alarm** and a two-unit / zone dependent alarm point / zone generating a **Co-incidence alarm**. <sup>34</sup>

**Quiet alarm** is an alarm type that can be used for AS1668 fan control and other applications that require a non-latching / non-brigade call alarm.

FT128 can handle and present up to 256 fire alarms (alarm points and/or zones). Zone numbers 01-99 can be used and in each zone the alarm point (address) numbers 01-99 can be used. The fire alarms will be shown in FT128 display, Alert Annunciation unit 1736 and External Presentation unit 1728.

Regarding different alarm types, etc., see the following chapters.

## 14.1 Pre-Warning

An Analogue detector generates a <u>pre-warning</u> at a lower alarm level than the fire alarm level<sup>35</sup> Pre-warning can be used when <u>an early alarm</u> and/or an early action is required (e.g. a "soft" computer shut down). Normal alarm devices (output type "Alarm devices"), routing equipment, etc. will not be activated.

In case of a pre-warning, the following will happen:

- The buzzer in FT128 sounds 0.8 sec. each 5<sup>th</sup> sec. (0.8 / 5 sec.).
- Outputs programmed for pre-warning are activated<sup>36</sup>
- On the first row in the FT128 display, the presentation number (zone-address) is shown (for the first pre-warning).
- On the second row, an alarm text (= the fire alarm message) will be shown (if programmed).

Example; pre-warning zone 12, address 45 (within zone 12):

```
Pre-warning detector 12-45
(user definable text message)
```

Example; pre-warning zone 12:

```
Pre-warning zone 12
(user definable text message)
```

LEDs "Alarms queued" (L2) blinking are indicating more than one pre-warning and they will be automatically scrolled (each 5th second). Pre-warning is automatically reset see chapter "Alarm reset", page 55.

<sup>&</sup>lt;sup>32</sup> In the New Zealand convention only, a Fire alarm (ALM) can be "changed" to an Acknowledged alarm (ACK) or an Isolated alarm (ISO).

<sup>&</sup>lt;sup>33</sup> New LAA is the European version of the AAF.

<sup>&</sup>lt;sup>34</sup> This function is normally used for smoke detectors only.

<sup>&</sup>lt;sup>35</sup> See FT128 Technical / programming manual. Any programmable input can also be used to activate a pre-warning.

<sup>&</sup>lt;sup>36</sup> Outputs programmed for General pre-warning and outputs programmed for the activated pre-warning(s).



## 14.2 Fire Alarm

256 alarms (points or zones) can be presented in the FT128 display.

See also chapter "The Display in FT128", page 29. According to the AS7240.2 standard, in case of a fire alarm, the following will happen:

- The buzzer sounds 0.4 sec. each 0.8<sup>th</sup> sec. (0.4 / 0.4 sec.).
- LEDs "Fire" (L1) are blinking (0.4 / 0.4 sec.).
- Output for routing equipment (Fire Brigade TX) and outputs type "Routing equipment" are activated. See also **Note** below.
- Programmable outputs for fire alarm are activated<sup>37</sup>
- In the FT128 display, the fire alarm(s) will be presented. See below.

**Note:** Normally the CIE relay output "R0" is used as the output for Routing equipment (Fire Brigade TX). The output will then be activated for fire alarm from any alarm point or Zone Line Input.

If the fire alarm routing equipment has provision for transmission of several fire alarm signals and the alarm receiver has provision for reception of several fire alarm signals, the alarm receiver can take different actions depending on if it is a fire alarm type A or B.

If a **fire alarm type B** is received, it will indicate that only **one** Analogue addressable smoke, heat or multi detector is activated, which could be a nuisance alarm.

If a **fire alarm type A** is received, it is probably a real fire since fire alarm is then activated from:

- Two or more Analogue addressable smoke, heat or multi detectors.
- Any Manual Call Point
- Any Zone Line Input
- Any programmable input with the trigger condition "General Fire"



A: Field for the **first alarm point or zone** in alarm. By **scrolling** each alarm will be shown in this field.

- B: Field for **the most recent** <u>zone</u> in alarm.
- C: Field for total **number of zones** in alarm.
- D: Field for alarm text. (User definable)

Comments to the different fields<sup>38</sup>:

The information in the field A:

NNN ZONE-ADDR ZZ-AA

Or

NNN ZONE ZZ

<sup>&</sup>lt;sup>37</sup> Programmable outputs for "General fire alarm" and for the activated fire alarm(s).

<sup>&</sup>lt;sup>38</sup> In the New Zealand convention the presentation is different and described in separate documents.



NNN = a serial number for the displayed alarm, i.e. 001 for the first activated alarm (ZZ-AA), 002 for the second alarm and so on.

ZZ = zone number 01 - 99. AA = address 01 - 99

The information in the field B:

LAST ZONE **ZZ** 

zz = zone number 01 – 99 for the most recent zone in alarm. Displayed also if only one alarm point is in alarm.

The information in the field C:

No. **nn** 

nn = 01 - 99 = the total number of **zones** (not alarm points) in alarm.

The information in the field D:

A user definable alarm text (max. 40 characters) for the alarm displayed in the field "A".

Some Fire alarm examples:

One alarm point (e.g. detector 12-45)

001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01 "Alarm text for 12-45"

**One zone** (e.g. zone **14**; a conventional Zone Line Input)

001 ZONE 14 LAST ZONE 14 No. 01 "Alarm text for zone 14"

More than one alarm point in one zone (e.g. detectors 12-45 & -46)

001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01 "Alarm text for 12-45"

The LEDs "Alarms queued" (L2) are indicating that more than one alarm point is in alarm. Press the button "Alarms queued" (P1) to see the other alarm:

```
002 ZONE-ADDR 12-46 LAST ZONE 12 No. 01
"Alarm text for 12-46"
```

One alarm point in two zones (e.g. detectors 12-45 & 13-02)

001 ZONE-ADDR 12-45 LAST ZONE 13 No. 02 "Alarm text for 12-45"

The LEDs "Alarms queued" (L2) are indicating that more than one alarm point is in alarm. Press the button "Alarms queued" (P1) to see the other alarm:

002 ZONE-ADDR 13-02 LAST ZONE 13 No. 02 "Alarm text for 13-02"

More than one alarm point / zone

LEDs "**Alarms queued**" (L2) are blinking (0.4 / 0.4 sec.), indicating <u>more than one fire</u> <u>alarm<sup>39</sup></u>. To scroll through the alarms, use the push button "**Scroll**" (P1). The fire alarms

<sup>&</sup>lt;sup>39</sup> Up to 256 alarms can be presented in the display. Alarm = ZONE and/or ZONE-ADDRESS.



are stored in a circular buffer and when scrolling from the last to the first alarm, the LEDs "Alarms queued" will be turned off for approx. three seconds.

When the "Scroll" button has been used the first alarm will be automatically displayed again after 20 seconds.

Reset of the fire alarms, see chapter "Alarm reset ", page 55 .

**Note:** The fire alarm presentation in FT128 display is different to the alarm presentation for the **New Zealand convention** only.

The serial number for the displayed alarm is replaced with the information "ALM" as follow (an example):

ALM ZONE-ADDR 13-02 LAST ZONE 13 No. 02 "Alarm text for 13-02"

If the fire alarm is acknowledged (see page 54), "ALM" will be replaced with "ACK".

If the fire alarm or the acknowledged alarm is isolated (see page 54) "ALM" will be replaced with "ISO".

#### 14.2.1 Fire Alarm Menu (X1-X9)

During the fire alarm presentation, a special fire alarm menu can be used.

Use special menu during fire alarm

Fire alarms can be displayed via this menu but it can also be used to display faults and disablements in the system.

Alarm points, zones, control outputs and alarm devices can also be disabled / re-enabled via this menu.

No User name and Password are required.

**During the fire alarm presentation** press button "Access<sup>40</sup> and **the alarm text** will be replaced with the following:

```
001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01
Display alarms ACCEPT? X1
```

"A", " $\psi$ ", " $\uparrow$ ", " $\rightarrow$ ", " $\leftarrow$ " and "Return" can be used same as per the normal menu tree, see chapter "Access", page 79. The original presentation (the alarm text) will be automatically displayed again approx. 20 seconds after the push buttons "A", " $\psi$ ", " $\uparrow$ ", " $\uparrow$ ", " $\leftarrow$ " or "Return" are no longer used.

Press "A" or scroll (" $\psi$ ", " $\uparrow$ ") to the wanted menu and press "A".

## 14.2.1.1 Display Alarms (X1)

001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01Display alarmsACCEPT? X1

Press "A"

001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01 ZONE-ADDR: 12-45 001 of 003

<sup>&</sup>lt;sup>40</sup> Access code is not required.



First row: Explanations in chapter "Fire alarm", page 45.

<u>Second row</u>: All fire alarms (up to 256 alarms) will be displayed one at a time in zone-address order.

**001** of **003** = alarm number one of three alarms in the system is displayed to the left.

One alarm is an alarm point (ZZ-AA) or a zone (ZZ).

Press " $\psi$ " (to see the next alarm).

 001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01

 ZONE-ADDR: 12-46

 002 of 003

002 of 003 = alarm number two of three alarms in the system is displayed to the left.

Press " $\psi$ " (to see the next alarm).

001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01 ZONE-ADDR: 12-47 003 of 003

003 of 003 = alarm number three of three alarms in the system is displayed to the left.

## 14.2.1.2 Display Faults (X2)

001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01Display faultsACCEPT? X2

Press "A"

001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01 FAULT: Battery not connected CU

Only the fault message for the generated fault will be displayed here, <u>not</u> date, time and "status" information.

Press " $\psi$ " (to see the next fault).

#### 14.2.1.3 Display Disablements (X3)

Note: Also zones in "Test mode" will be displayed via this menu.

001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01 Display disablements ACCEPT? X3

Press "A"

001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01 Zone XX address XX disabled

Press " $\psi$ " (to see the next disablement).

**Note:** After all disablements, zones in "Test mode" will be displayed.

001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01 Zone in TEST MODE: 01 02 03 04



## 14.2.1.4 Disable Zone (X4)

001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01 Disable zone ACCEPT? X4

Press "A"

```
001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01
Disable zone: 00 ACCEPT?
```

Write a zone number (01 – 99) and press "A". If more zones are to be disabled, repeat the procedure.

## 14.2.1.5 Disable Zone / Address (X5)

This function is useful e.g. for a manual call point not to continue to generate alarms because of a broken glass.

001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01Disable zone / addressACCEPT?X5

Press "A"

```
001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01Disable zone:0 0 Address: 00ACCEPT?
```

Write a zone-address and press "A". If more zone-addresses are to be disabled, repeat the procedure.

## 14.2.1.6 Re-Enable Zone (X6)

001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01 Re-enable zone ACCEPT? X6

Press "A"

```
001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01Re-enable zone:ZACCEPT?
```

This is a list of disabled zones. Scroll to the required zone or write the required zone number and press "A". If more zones are to be re-enabled, repeat the procedure.

## 14.2.1.7 Re-Enable Zone / Address (X7)

001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01 Re-enable zone / address ACCEPT? X7

Press "A" e.g.:

```
001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01
Re-enable zone: <u>Z</u> Z Address: 00 ACCEPT?
```

This is a list of disabled zone-addresses. Scroll to the required zone or write the required zone number and press "A". If more zone-addresses are to be re-enabled, repeat the procedure.



## 14.2.1.8 Disable / Re-Enable Control (X8)

```
001 ZONE-ADDR12-45 LAST ZONE12No.01Disable/Re-enableCCEPT?X8
```

Press "A". E.g.:

001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01 Dis(=0) or re-en(=1) control? <u>1</u> ACCEPT?

To disable, press "0" and "A". (To re-enable, press "1" and "A".). For more information, see chapter "Disable All Control, Extinguishing, Ventilation Interlocking Outputs (H2/B4)", page 87.

## 14.2.1.9 Disable / Re-Enable Alarm Devices (X9)

001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01 Disable/Re-enable alarm dev. ACCEPT? X9

Press "A". E.g.:

001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01 Dis(=0) or re-en(=1) alarm dev? <u>1</u> ACCEPT?

To disable, press "0" and "A" (To re-enable, press "1" and "A"). For more information, see chapter "Re-enable all control, extinguishing, ventilation or alarm device outputs (H2/B8), page 91.

#### 14.2.2 Alert Annunciation Alarm (AA Alarm)

Indications, actions for an Alert Annunciation (AA) alarm is similar to a normal fire alarm except that FT128 output for routing equipment (Fire Brigade TX) will not be activated directly. An AA alarm is indicated by the LED "Fire Brigade TX delay" (L16).

The AA alarm has to be <u>acknowledged</u> within an <u>acknowledge time</u> and <u>reset</u> within an <u>investigation time</u>, otherwise the output(s) for routing equipment (Fire Brigade TX) will be activated. See FT128 Technical / Programming manual for more information regarding the AA function. Acknowledgement and reset of the AA alarm can be done on an AA unit 1736. See also chapter "Alarm Reset", page 55.

## 14.3 Heavy Smoke Alarm / Heavy Heat Alarm

An Analogue detector generates heavy smoke / heat alarm for a higher alarm level <sup>41</sup> than the fire alarm level, i.e. fire alarm is already activated by the same detector.

<u>Heavy smoke / heat alarm</u> is a confirmation that the smoke or heat is increasing and can be used for special actions, e.g. activation of smoke ventilation, etc.

In the case of heavy smoke / heat alarm, the outputs programmed for heavy smoke / heat alarm are activated.  $^{\rm 42}$ 

Heavy smoke / heat alarm will be reset when the fire alarm is reset, see chapter "Alarm reset", page 55 .

<sup>&</sup>lt;sup>41</sup> See FT128 Technical / Programming Manual.

<sup>&</sup>lt;sup>42</sup> General heavy smoke / heat alarm and individual alarm points / zones.



## 14.4 Quiet Alarm

One or more smoke detectors programmed for Quiet alarm via EBLWin, have passed the fire alarm level.

A smoke detector can be programmed via EBLWin to quiet alarm i.e. non-latching or self-resetting alarm. This feature is used in AS1668 supply air / stair pressurization fan control applications or in residential units as a non-latching smoke alarm.

In AS1668 supply air fan applications, the type "Quiet alarm" is used to set the duct detector to be non-latching and resets automatically after the post timing is completed which is configured in EBLWin.

In AS1668 fire fan control applications, the "Quiet alarm" is normally used in conjunction with one I/O Matrix board 4582, one application board SUB902 (fan control & display board) and one I/O unit 3361 (for fan control) to control each fan.

In residential applications, type "Quiet alarm" is used in conjunction with the sounder base 3379 and AAM 3340 as a local warning inside the sole occupancy unit.

Quit alarm Indications and actions:

- Detector LEDs are turned on (also a connected RIL).
- LEDs "Fire" (L1) are blinking (0.4 / 0.4 sec.).
- The buzzer sounds (0.8 / 5 sec.),
- A Quiet alarm presentation (incl. a title "Quiet alarm") in the display.

Quiet alarm detector ZZ/AA	
(User definable text message)	

Programmable outputs for quiet alarm is required e.g. 3361 outputs controlling fan operation i.e. any output with a control expression containing the trigger conditions "Quiet Alarm Zone" or "Quiet Alarm Zone Address".

Quiet Alarms are automatically reset, non-brigade call alarm and do not activate any common alarm output.

## **14.5** Co-Incidence Alarm (Two-Unit / -Zone Dependence)

When <u>only one</u> two unit dependent alarm point (i.e. one zone-address in alarm status <sup>43</sup> or when <u>only one</u> two-zone dependent zone is in alarm status<sup>44</sup>, the buzzer sounds (0.8 / 5 sec.) and there is a **Co-incidence alarm** presentation in the display.

```
Co-incidence alarm detector ZZ/AA (user definable test message)
```

or

```
Co-incidence alarm zone ZZ (user definable test message)
```

If there are Co-incidence alarms generated in other zones, the LEDs "Alarms queued" (L2) are blinking and the Co-incidence alarms will be automatically scrolled (each 5<sup>th</sup> second).

Co-incidence alarm is automatically reset 5 minutes after the alarm point / zone is no longer in alarm status or manually by pressing the Reset button (P4), see chapter" Alarm reset ", page 55.

<sup>&</sup>lt;sup>43</sup> If two or more two-unit dependent alarm points (zone - addresses) in the same zone are in alarm status at the same time, normal fire alarms will be activated in FT128. See also FT128 Technical / Programming Manual.

<sup>&</sup>lt;sup>44</sup> If two or more two-zone dependent zones in the same group are in alarm status at the same time, normal fire alarms will be activated in FT128. See also FT128 Technical / Programming Manual.



## 14.6 Delayed Alarm

Delayed alarm is an option that can be enabled via EBLWin for a specific alarm point. Two applications for delayed alarm are shown below.

## 14.6.1 General Time Delay Applications

In some premises delayed fire alarm activation from analogue smoke detectors can be used to avoid nuisance alarms. The delay time will be <u>added at the end <sup>45</sup></u> when a fire alarm normally would have been activated in the CIE.

Each analogue detector in the system can be programmed (in EBLWin) to delayed fire alarm activation, "Delayed alarm" check box in the detector properties must be ticked. (Heat detectors and manual call points <u>must not</u> have delayed fire alarm activation). The delay time interval can be set (in EBLWin, System Properties) to 0-255 seconds. In this application, the time delay must be as short as possible (less than 30 seconds In fact, if the C.I.E. is connected to the brigade, it is not recommended to use this function.

The Delayed alarm will be activated when the delay time countdown has started and a normal fire alarm will not be activated until the delay time has run out. No outputs will be activated.

#### **Function**

An alarm point has to be in "fire alarm state" for <u>the duration of the delay time</u>, in order to activate a fire alarm in the CIE. If an alarm point restores back to "normal state" during the delay time, the delay time will reset and start again when the alarm point activates a "fire alarm" again.

In case of a delayed alarm, the indications in the control unit (CIE) will be as follows:

- The buzzer in FT128 sounds 0.8 se. each 5<sup>th</sup> sec. (0.8 / 5 sec.).
- Output programmed for delayed alarm are activated<sup>46</sup>.
- On the first row in the FT128 display, the presentation number (zone-address) is shown (for the first delayed alarm).
- On the second row, an alarm text is shown (if programmed).

#### Example:

Delayed alarm detector ZZ/AA

Or

Delayed alarm ZZ

LEDs "Alarms queued" (L2) blinking are indicating more than one delayed alarm and they will be automatically scrolled (every 5<sup>th</sup> second).

Delayed alarm is automatically reset, see chapter "Alarm Reset", page 55.

**Note**: The delayed alarm function for a conventional Zone Line Input e.g. 3361 Input 0 (Z), zone expansion board 4580 inputs is different. The "Delayed alarm" check box in the Zone Line Input properties is called "AVF", the general delayed alarm function will not be used and is replaced by the alarm verification function.

<sup>&</sup>lt;sup>45</sup> This function is added in EBLWin software version V2.1.2

<sup>&</sup>lt;sup>46</sup> Outputs programmed for General pre-warning and outputs programmed for the activated pre-warning(s).



## 14.6.2 Time delay in Residential Applications

In this specific application, the alarm activation type for an output unit (3379) must be set (in EBLWin) to "DelayedAlarmZoneAddress" (or zone). In this case, when the alarm point (only analogue smoke or multi detectors) activates an alarm, the output unit 3379 will sound during the time delay period without signalling alarm to the CIE. If the alarm point remains in alarm after the time delay elapsed, the CIE will be generate a general fire alarm. The delay for this application can be selected in EBLWin system properties for up to 255 seconds.

#### Application Example:

A typical application for the delayed alarm function would be a residential accommodation where false alarms may cause a brigade call. A sounder base(s) 3379 mounted inside the apartment will activate upon receiving a delayed alarm from a smoke detector for the delay period configured in the system properties (0-255 sec). If the smoke has not been cleared from the smoke detector during the time delay, the control panel will generate a general fire alarm. If the smoke clears up within the delay time, the alarm will automatically reset, 3379 will be silenced and the system restores to the normal condition.

Several control expressions are available to cover any possible configuration:

- DelayedAlarmZoneAddress (Zone, Address), true when a certain zone / address is in delayed alarm state.
- DelayedAlarmZone (Zone), true when a certain zone or any detector in a certain zone is in delayed alarm state.
- GeneralDelayedAlarm, true when any zone or zone/address is in delayed alarm state.

## 14.7 Alarm Acknowledgement Facility (AAF)

One or more Alarm Acknowledgement Facility Controls (AAM) can be used in the FT128 system.

The AAF is a function requires wall mounted Alarm Acknowledgement Module 3340 (AAM) used in residential applications to provide the occupant with a local control facility to avoid nuisance alarms within the occupancy e.g. cooking fumes, smoking, aerosol spray, steams, etc. from generating general fire alarm within the building. It provides the occupant inside the sole occupancy unit with a pre-determined time to acknowledge a nuisance alarm and time to clear the smoke of the smoke chamber.

A complete AAF requires an AAM 3340, one or more sounder base 3379 and up to 5 smoke detectors (sensors).

Each AAF unit is configured as an AAF zone which may include up to 5 smoke detectors (sensors).

During the Acknowledgement Period (normally10-60 sec.) there is an indication in FT128 display:

AAF zone zz, activated

During the Investigation Period (normally 0-3 min.) there is an indication in the CIE display:

AAF zone zz, investigation in progress

See FT128 Technical / Programming manual chapter "Alarm Acknowledgement Facility (AAF)" for more information regarding the **AAF** function.

## 14.8 Local Alarm Acknowledgement (LAA)

One or more Local Alarm Acknowledgement Units are used in the system.



During the Acknowledgement Period (10-120 sec.) there is an indication in the control unit display:

LAA zone zz, activated

During the Investigation Period (1-9 min.) there is an indication in the CIE display:

```
LAA zone zz, investigation in progress
```

See FT128 Planning Instructions for more information regarding the LAA function and unit.

**Note**: The Local Alarm Acknowledgement unit is the Panasonic's version of the Australian Alarm acknowledgement module. In V2.2.0, the Australian AAFC function has been moved to the obsoleted units and replaced by the LAA. The function of AAFC and LAA are identical, only the wall control unit is different.

## 14.9 Acknowledged Alarm (for only NZ)

A fire alarm presented in the LCD can be acknowledged by pressing the yellow button "Fault acknowledge" (P6).

Acknowledged alarms are indicated in the fire alarm list on the LCD by "ACK" in front of the alarm. This indication is the only difference between a fire alarm and acknowledged alarm.

Acknowledged alarms "ACK" have to be reset same as normal fire alarms "ALM".

## 14.10 Isolated Alarm (for only NZ)

A fire alarm "ALM" or an acknowledged alarm "ACK" presented on the LCD can be isolated as follow:

When the "New Zealand FB Silence Switch" (outside switch) is restored i.e. from the activated to non-activated position, any fire alarm and acknowledged alarm will be isolated (disabled).

Isolated alarms are indicated in the fire alarm list on the LCD by "ISO" in front of the alarm.

This indication is the only difference between a fire alarm and acknowledged alarm.

Isolated alarms do not activate any control outputs, output for routing equipment (Fire Brigade TX), CIE buzzer and the LEDs "Fire" in the CIE.

Isolated alarm "ISO" have to be reset same as normal fire alarms "ALM".

Isolated alarms have to be re-enabled via menu H2/B5-B6 before they can activate a new fire alarm.



# 15 Alarm Reset

**Note:** The alarm "RESET" button will not function unless the programmed alarm devices have been silenced i.e. "SILENCE ALARM DEVICES" button is activated.

## 15.1 Pre-Warning Reset

Pre-warnings are non-latching i.e. they will be automatically reset when the alarm point / zone is no longer above pre-warning level. Outputs activated by pre-warning will be de-activated. (In some cases after a programmable delay time).

## **15.2** Fire Alarm Reset

In the New Zealand convention, **fire alarms** are shown in the LCD as normal fire alarms with "ALM", acknowledged alarms shown with "ACK" and isolated alarms shown with "ISO".

**Note:** The detectors having activated fire alarms after reset, must be inspected, tested and replaced when required.

<u>One</u> of the following alarm reset alternatives is valid. This is selected via EBLWin. "All" is default.

Alarm Reset Method	
All	
Single	
Single With Automatic Disablement	

**Note:** When "Single" or "Single with automatic disablement" is used, all alarms can be reset by pressing "Reset" (P4) and approx. 0.1 sec. later also press "A" and hold them pressed for > 0.5 sec. This function must not be used in the Australian or NZ convention.

## 15.2.1 All (default)

All activated fire alarms (alarm points / zones) will be reset by pressing "RESET" (P4) once but must be preceded by "Silence Alarm Devices" button (P3) activation (this is in accordance with the Australian standard AS4428.3:2010).

The push button has to be pressed for minimum 0.5 sec.

When all fire alarms are reset, LEDs "FIRE" (L1) and "Alarm Queued" (L2) are turned off. If there are other conditions (e.g. a fault condition) the corresponding information will be shown (e.g. a fault message), for the priority order see Table 11, page 30.

All outputs (for fire alarm) are reset, i.e. de-activated.

## 15.2.2 Single

Each fire alarm (alarm point / zone) has to be reset one by one.

Press "Reset" (P4) to reset the fire alarm currently shown to the left in the display.

The push button has to be pressed for min. 0.5 sec.

Output(s) programmed for that fire alarm (alarm point / zone) will be reset, i.e. de-activated.

If more than one fire alarm is activated (i.e. LEDs "Alarms queued" (L2) are lit) the next fire alarm in the queue will be shown in the display. It has to be reset same as the first one.



When all fire alarms are reset, LEDs "Fire" (L1) and "Alarms queued" (L2) are turned off. If there are other conditions (e.g. a fault condition) the corresponding information will be shown (e.g. a fault message), for priority order see Table 11, page 30.

All outputs (for fire alarm) are reset, i.e. de-activated.

## 15.2.3 Single Reset with Automatic Disablement

Similar to "Single reset" but including what is called encapsulation function.

Normally when an alarm point or zone having activated fire alarm is reset whilst still is in alarm status, it will activate a new fire alarm within 20 seconds.

When "Single with automatic disablement" reset is performed, an alarm point or zone, still in alarm status, will not only be reset but also disabled, i.e. it will not activate a new fire alarm within 20 seconds. It has to be re-enabled via menu H2/B6 (see page 89) before it can activate a new fire alarm. (This function, set via EBLWin, is a violation to AS7240-2 standard).

LED "Disablements" (L8) is indicating one or more disablements in the system.

When "All" or "Single" reset is used, "automatic disablement" (encapsulation function) can be used by pressing "Reset" (P4) and approx. 0.1 sec. later also press "Alarms queued" (P1) and hold them pressed for > 0.5 sec. The alarm point or the whole zone (conventional) currently shown in the display will be reset and disabled.

## **15.3** Alert Annunciation Alarm Reset

Regarding the function, see chapter "Alert Annunciation Alarm (AA Alarm) page 46 and FT128 Technical / Programming manual, chapter "Alert Annunciation".

Reset of the AA alarm can be performed via push button "Reset" on an AA unit 1736 or in FT128. AA alarms will be reset all at a time.

Note: Reset via an AA unit (1736) is only possible during the investigation time and only if the alarm is an AA alarm (not normal fire alarms). If more than one AA alarm is activated, they will be reset all at the same time.

## **15.4 Co-Incidence Alarm Reset**

Co-incidence alarm is automatically resets 5 minutes after the alarm point / zone is no longer in alarm status or by the Reset button (P4). See also chapter "Co-Incidence Alarm (Two-Unit / -Zone Dependence)", page 47.

## **15.5** Heavy Smoke / Heat Alarm Reset

If a heavy smoke / heat alarm has been activated, it will be reset at the same time as the corresponding fire alarm is reset. Also the output(s) will be reset, i.e. de-activated.

## **15.6** Quiet Alarm Reset

Quiet alarms are non-latching, i.e. they will be automatically reset when the alarm point / zone is no longer above alarm level. Outputs activated by quiet alarm will be de-activated (In some cases after a programmable delay time).

## **15.7** Alarm Acknowledgement

#### 15.7.1 Alarm Acknowledgement Facility (AAF) Reset

In software V2.2.0, the same function is called Local Alarm Acknowledgement (LAA) as shown below.



Note: The AAF function is used in conjunction with an Alarm Acknowledgement Module (AAM) 3340

The indication in the control unit display, during the Acknowledgement Period (10-120 sec.) and the Investigation Period (0-9 min.) respectively, will automatically clear when:

- The alarm acknowledgement process terminates because no detector in the AAF zone is above the fire alarm level
- The alarm acknowledgement process changes to a fire alarm, which has higher priority. (Regarding Fire alarm reset, see above.)

## 15.7.2 Local Alarm Acknowledgement (LAA) Reset

The indication in the Control Unit display, during the Acknowledgement Period (10-120 sec.) and the Investigation Period (1-9 min.) respectively, will automatically clear when:

- The AA process ends because no detector in the LAA zone is over the fire alarm level.
- The AA process ends up in a fire alarm, which has higher priority.

## 15.8 Delayed Alarm

The Delayed alarm will be automatically reset if the alarm point during the delay time countdown is no longer in alarm state or when a normal fire alarm is activated (i.e. when the delay time has run out).



# 16 Fault

In case of a fault condition, the following will happen in FT128:

- The buzzer in FT128 sounds steady (continuous).
- The fault relay output for routing equipment (Fault TX) is de-activated (fault relay is normally activated).
- Programmable output for general fault is activated and output(s) for general charger fault may be activated.
- LED "Fault TX activated" (L11) is illuminating.
- LED "General fault" (L7) is illuminating.
- LEDs "Fault / Disablements Alarm devices" (L13), "System fault" (L14) and/or "Fault / Disablements Fire Brigade TX" (L15) may also illuminate (depending on the type of fault).
- A fault message including date, time and status is shown in the CIE display. If the fault is generated by an alarm point or zone, the user definable alarm text will be shown.

 $\rightarrow$ 

For an alarm point / zone also the "alarm text" will be shown.

Example of a fault message:

FAULT: No reply xx-xx Date: DD-MM Time: HH:MM

Press " $\rightarrow$ " to see the technical address:

FAULT: No reply techn. address xxx 🛛 🗲 Date: DD-MM Time: HH:MM

Press " $\leftarrow$ " to see the zone-address:

- Figure 1 If more than one fault is activated, the text: "More faults" is added after the time.
- If a fault has been corrected before it has been acknowledged, the "status" text: "Serviced" is added after the time<sup>47</sup>.
- Fire alarm presentation has higher priority than the fault messages. During fire alarm presentation the faults can be shown via the special fire alarm menu X2, see page 48.

Faults are normally latched  $^{\rm 48}\,$  and have to be acknowledged via menu H6 (see page 113 ).

In this menu (H6), up to 100 faults can be listed:

- Not serviced / corrected and not acknowledged faults
- Not serviced / corrected but acknowledged faults
- Serviced / corrected but not acknowledged faults

If a fault cannot be corrected, it is important to contact service personnel / engineer immediately.

**Note:** As a warning, faults (and disablements) are also indicated by a 2-sec. beep when an open CIE door is being closed.

<sup>&</sup>lt;sup>47</sup> In EBLWin, Fault can be selected to be either latching (default in AU convention) or non-latching. Latched faults = each fault must be acknowledged. Non-latching faults = corrected faults will automatically be removed from the fault list (menu H6).

<sup>&</sup>lt;sup>48</sup> In New Zealand convention, faults must be set to non-latching.



## **16.1** Fault Messages

Below follows a list of all fault messages, in alphabetical order:

FAULT: 24 V for external equipment

Fuse "F9" on the main board 4556 is blown.

#### FAULT: 24 V for routing equipment

Fuse "F7" on the main board 4556 is blown. Also indicated by LED "L15" blinking.

#### FAULT: 24 V output, techn address xxx

Valid for an external power supply (e.g. 3366) connected on the COM loop. The output might be turned off or current output limit is exceeded.

FAULT: AAU x

AAU=1736 (Alert Annunciation Unit)

The unit is programmed as another type of unit different to the configured type in the SSD or fault in the unit.

#### FAULT: Battery

The battery check is performed every 14<sup>th</sup> minute (every 30<sup>th</sup> second in the New Zealand convention).

- Battery voltage is below 18.9 V (24.4 V in the New Zealand convention).
- Batteries (2 x 12 V) are missing or not correctly connected.
- Fuse F2 on the main board is blown.
- In line fuse between the two batteries is blown.

#### FAULT: Battery charging

The battery charging function is not working properly. The main board 4556 may have to be replaced.

←

#### FAULT: Battery, tech. address xxx

xxx = COM loop address.

This is valid for an external power supply (e.g. 3366) connected on the COM loop. Batteries (2 x 12 V) are missing or not correctly connected.

Battery fuse is blown.

#### FAULT: Cables mixed COM-loop

The two wires L (SA) and C (SB) have been mixed (swapped). Check that the wire connections are correct (according to drawing F666).

#### FAULT: Charging external power supply

A fault exists in external power supply equipment. A fault output from the external equipment is connected to a programmable input in the FT128 system. Check the input as well.



#### FAULT: Charging, techn addr xxx

Valid for an external power supply (e.g. 3366) connected on the COM loop. The battery charging function is not working properly. The charger board (3367) may need to be replaced.

#### FAULT: Checksum system program

A fault in FT128 S/W. This is very serious. Call for service personnel / engineer immediately.

#### FAULT: Cut-off SCI nn <-> SCI nn

This fault is indicating a cut-off (break) on the loop  $\underline{or}$  that the COM loop voltage is too low at the end of the loop (i.e. < 12 V<sub>DC</sub>).

SCI nn <->SCI nn describes between which Short Circuit Isolators (SCI:s) the cut-off is located.

**n** = A, B, 0, 1, 2, 3, 4, 5, 6 or up to 63. A & B is the built-in isolator in the FT128 A-direction and B-direction respectively, i.e. if <u>no SCI</u> is used the information will always be: **SCI A <-> SCI B**.

If <u>one SCI</u> (no. 0) is used, the information will be: SCI A <-> SCI 0 <u>or</u> SCI 0 <-> SCI B

...and so on.

If the break is <u>a single break</u> (cut-off) on the loop, no other fault messages will be reported.

If the loop has <u>several breaks</u>, the message reports the last isolator before the break <u>in the A-direction</u> (including the following isolator). There will also be a "FAULT: No reply ....." message for each unit that FT128 cannot find and "FAULT: Several faults ...".

**NOTE:** Each 10<sup>th</sup> minute a new attempt is made to communicate in the A-direction only.

When all breaks are repaired (corrected), the communication automatically returns to communicate in the A-direction only.<sup>49</sup>

#### FAULT: Earth fault (minus)

FAULT: Earth fault (plus)

Earth fault is detected. The system voltage is normally 24  $V_{DC}$ . +24 V to earth is normally 12.5 V. 0 V to earth is normally 11.5 V. Voltage to earth < 3.4 V = Earth fault (minus).

Voltage to earth > 18.3 V = Earth fault (plus).

Check all cables (for damage, etc.). The function cannot be guaranteed. Call for service personnel/engineer.

FAULT: Earth fault, techn address xxx

Valid for an external power supply (e.g. 3366) connected on the COM loop. Check all cables connected to the unit.

FAULT: EPU x

EPU=1728. (External Presentation Unit)

<sup>&</sup>lt;sup>49</sup> The fault has to be acknowledged and it can last up to 10 minutes before the communication returns to communicate in the Adirection only.



The unit is programmed as another type different to the type configured in the SSD or a faulty unit.

FAULT: Expansion board x

Valid for the 8-Zone Expansion Board 4580 and the 8 relays exp. board 4581 and Inputs / Outputs exp. Board 4583 mounted in the CIE (FT128). Also valid for the I/O Matrix board 4582 connected on the COM loop i.e. mounted outside the CIE. Internal fault on the board and it may needs to be replaced.

#### FAULT: External fuses

The fault is to be found in the <u>external power supply</u> (blown fuses, etc.). A fault output is connected to a programmable input in the FT128 system. Check the input as well.

FAULT: External power supply

The fault is to be found in the <u>external power supply</u>. A fault output is connected to a programmable input in the FT128 system. Check the input as well.

FAULT: Extinguishing system

The fault is to be found in the <u>extinguishing system</u>. A fault output is connected to a programmable supervised input in the FT128 system (i.e. 3361). Check the input as well.

#### FAULT: Factory settings

The battery charging (factory) settings have been "changed", e.g. because of some external disturbance. The main board has to be replaced since the battery charging function cannot be guaranteed.

#### FAULT: Fan on loop unit t.addr xxx

The LED "Fault" is lit on a fan control module, for the fan no. xx which controlled by I/O unit 3361 with the technical address xxx. The fault indicates that the fan has changed the status (run to stop or stop to run) but the corresponding I/O unit 3361 input has not been activated within 30 seconds. Check the fan pressure switch and the cables / connections.

FAULT: Fault warning routing equipment

The fault is to be found in the Fault<u>warning routing equipment</u>. A fault output is connected to a programmable supervised input in the FT128 system (e.g. I0). Check the input as well.

FAULT: FB Silence switch active

#### Only valid in the New Zealand convention.

New Zealand FB Silence switch ("outside switch") is turned ON, i.e. from not activated to activated state.



#### FAULT: Fuse on COM-loop

Fuse F4 on the main board is blown. The fuse is not replaceable.

There are more components may be faulty i.e. the main board has to be repaired / replaced.

FAULT: High current consumption in CU

FT128 current consumption, including battery charging, is over 1.8 A, and because of this, the <u>battery charging is turned off</u>. The current consumption, excluding battery charging, exceeds 0.8 A and the battery charging is turned off as long as the current consumption exceeds 0.75A (Normally this fault only appears when starting up / expanding an FT128.)

FAULT: High current on COM-loop

When starting up FT128 or when the COM-loop is re-connected, the loop current in normal condition is measured.

If the measured value is below 100 mA, this fault is generated for the measured value plus 20mA.

If the measured value is above 100 mA, this fault is generated for the measured value plus 20%.

Note! This fault is not checked in alarm condition.

There is no actual short circuit on the COM loop but very close to a short circuit, e.g. due to moisture problems. Check connections etc.

#### FAULT: Input

A fault on the supervised input I0 in FT128.

Check the cables / connections (open or short circuit).

FAULT: Input x exp board x

A fault on the supervised input x on the expansion board (4583) with address x. Check the cables / connections (open or short circuit).

FAULT: Interlocking input AA/PP

AA/PP = Area - Point

An interlocking input is not activated within the time set for fault activation (5-255 seconds). The time is counted from the activation of the output (in the interlocking combination, area / point).

FAULT: Loop unit zz - aa	$\rightarrow$
Press " $\rightarrow$ " to see the technical address.	

FAULT: Loop unit techn. address xxx

zz-aa Zone address, xxx = COM loop address

The communication with the unit is not established, i.e. the unit is probably faulty.

←



#### FAULT: Low battery capacity

Every  $4^{th}$  hour the battery circuit (connection cables, fuses, etc.) resistance is checked. A resistance over 1.4 ohm will generate a fault

In the New Zealand convention: The battery charging is turned off 60 minutes every  $24^{th}$  hour. A battery voltage < 24.4 V during these 60 minutes will generate a fault.

If a fault is generated it will automatically be Serviced after the 60 minutes.

#### FAULT: Low voltage

System voltage < 21.6 V<sub>DC</sub>.

#### FAULT: Low voltage, techn address xxx

Valid for an external power supply e.g. AU3366 connected on the COM loop. The power output is turned off because the unit's internal voltage is < 21  $V_{DC}$ . Check power supply output, it should be 24 $V_{DC}$ . Replace power supply if required.

#### FAULT: Mains

- Loss of mains, i.e. no 230 V<sub>AC</sub> or faulty power supply unit (the fault is activated after 1-300 minutes).<sup>50</sup>
- Fuse for 230 V<sub>AC</sub> blown.
- Fuse "F1" on the main board 4556 blown.

#### FAULT: Mains, external power supply

Loss of mains, i.e. no 230 V<sub>AC</sub> or faulty power supply unit in the ext. power supply equipment (the fault is activated after 1-300 minutes).<sup>50</sup> Check 230 V<sub>AC</sub> fuses. A fault output is connected to a programmable input in the FT128 system. Check the input as well.

#### FAULT: Mains, techn address xxx

Valid for an external power supply (e.g. 3366) connected on the COM loop.

- Loss of mains, i.e. no 230  $V_{\text{AC}}$  in the loop unit (the fault is activated after 1-300 minutes).  $^{50}$
- Fuse for 230 V<sub>AC</sub> blown.
- Fuse "F1" blown on the charger board 3367.

#### FAULT: No reply zz-aa

Press " $\rightarrow$ " to see the technical address.

FAULT: No reply techn. address xxx

zz-aa = Zone address, xxx = COM loop address

In spite of communication in both directions (COM loop A-direction and B-direction), the unit cannot be found.

←

 $\rightarrow$ 

- Check the unit's address (with the programming tool 3314/4414).
- Faulty unit.
- Detector might be removed (un-plugged) from its base.

<sup>&</sup>lt;sup>50</sup> The time is programmable in EBLWin. Default value depending on convention.



Double break or short-circuit on the COM loop.

(**Note:** There will also be a fault message "FAULT: Cut-off loop...." or "FAULT: Short-circuit loop....".).

FAULT: No reply AAU x

AAU = 1736. (Alert Annunciation Unit)

FT128 cannot communicate with the unit. Check / edit the address and the S/W mode in the unit (or edit the SSD).

FAULT: No reply EPU x

EPU = 1728. (External Presentation Unit)

FT128 cannot communicate with the unit. Check / edit the address and the S/W mode in the unit (or edit the SSD).

FAULT: No reply, expansion board x

Valid for the 8-Zone Expansion Board 4580, the 8 relays exp. board 4581 mounted in the CIE (FT128) and the Inputs and outputs exp. board 4583 mounted in FT128. Also valid for the I/O Matrix board 4582 connected on the COM loop, i.e. mounted outside the CIE

FT128 cannot communicate with the board. Check / edit the address. Check the cables / connections.

#### FAULT: Output Sx

This is valid for the FT128 supervised voltage outputs S0 and S1.

If the output is programmed for sounders or OWS (type Alarm devices), it is also indicated by LED "**Fault / Disablements** Alarm devices" (L13) blinking. If the output is programmed for a Fire Brigade TX (type Routing equipment), it is also indicated by LED "**Fault / Disablements** Fire Brigade TX" (L15) blinking.

- Calibration not performed via menu H5/A1.
- Short / open circuit on the connected cable / equipment.
- Blown fuse "F8" (S0) or "F6" (S1) on the main board 4556.
- Connected equipment might be "missing".
- End-of-line resistor(s) missing or not correct value See block wiring diagrams on page 136

**NOTE:** The calibrated value has to be in the range 4K7 – 50K

FAULT: Output x expansion board x

A fault on supervised output x on the expansion board (4583) with address x.

If the output is programmed for sounders (type Alarm devices), it is also indicated by LED "**Fault / Disablements** Alarm devices" (L13) blinking.

If the output is programmed for Fire Brigade TX (type Routing equipment), it is also indicated by LED "**Fault / Disablements** Fire Brigade TX" (L15) blinking.

- Calibration not performed via menu H5/A1.
- Short / open circuit on the connected cable / equipment.
- Blown fuse "F1" (Output 0) or "F2" (Output 1) on the 4583 board.
- Connected equipment might be missing.



• End-of-line resistor(s) missing or not correct value (1-5 x 33K).

Note: The calibrated value has to be in the range 4K7-50K.

#### FAULT: Output x, techn addr xxx

Valid for outputs of COM loop output unit 3364.

If the output is programmed for sounders or OWS (type Alarm devices), it is also indicated by LED "**Fault / Disablements** Alarm devices" (L13) blinking. If the output is programmed for Fire Brigade TX (type Routing equipment), it is also indicated by LED "**Fault / Disablements** Fire Brigade TX" (L15) blinking.

- Calibration not performed via menu H5/A1.
- Short / open circuit break on the connected cable / equipment.
- Connected equipment might be missing.
- End-of-line capacitor(s) or resistor(s) missing or not correct value See block wiring diagram on page 136

Note: The calibrated value has to be in the range 470nF - 5 x 470nF (2350nF).

#### FAULT: Read/write site data (SSW)

SSW = the data that has changed during operation, i.e. week average sensor values, passwords, calibration values and event logs.

- If the C.U. was powered down i.e. both mains and battery disconnected without first doing a Safe shut down of control unit via menu H8/S7 (see page 122), this fault might be generated when the C.U. is powered again. After fault acknowledge the SSW will get default values and the fault will be corrected (serviced). Supervised outputs have to be calibrated via menu H5/A1.
- Some external influence has caused a fault in the SSW. This is very serious. Call for service personnel/engineer.

FAULT: Restart, code xx addr yyyyyyyyyy

CIE (FT128) restart has occurred. See also page 76.

- xx=00: Power up Restart. (Power supply connected)
- xx=01: Watchdog Reset.
- xx=02: Accidental jump to reset vector.
- xx=03: Restart after SSD / Software / text file download
- xx=04-19: Unexpected interrupt.
- xx=20: S/W monitoring fault
- xx=25: Restart after SSD download

Note:

xx=00, 03 and 25 are normal. Only acknowledge the "fault".

xx=01, 02 or 04-20 appearing often: call for service personnel / engineer. yy...y = memory address (before restart). Write down the address and inform the service personnel / engineer.

 $\rightarrow$ 

←

#### FAULT: Sensor zz-aa

Press " $\rightarrow$ " to see the technical address.

FAULT: Sensor techn. address xxx



#### **zz-aa** = Zone address, **xxx** = COM loop address

The communication with the sensor / detector is not all established, i.e. the unit is faulty. For detector types 33xx / 43xx / 44xx: The built-in self verification function has reported a fault status.

FAULT: Several faults on COM-loop

Open (cut-offs) *I* short circuits in more than one segment on the COM loop. Normally this fault is generated in conjunction with some open / short circuit faults. In that case, first correct one fault and the next fault will be presented.

FAULT: Short-circuit, internal COM-loop

Short-circuit on the connection (ribbon cable) to or between the expansion boards (458x) in the CIE (FT128).

FAULT: Short-circuit SCI nn <-> SCI nn

SCI n <-> SCI n describes between which Short Circuit Isolators (SCI:s) 4370 / 4313 the short-circuit is located.

**nn** = A, B, 0, 1, 2, 3, 4, 5, 6 or up to 63. A & B is the built-in isolator in the FT128 A-direction and B-direction respectively, i.e. if <u>no SCI</u> is used the information will always be: SCI A <-> SCI B.

If <u>one SCI</u> (no. 0) is used, the information will be: SCI A <-> SCI 0 <u>or</u> SCI 0 <-> SCI B

...and so on.

There will also be a "FAULT: No reply ....." message for each unit that FT128 cannot find.

If several <u>short circuits</u> exist on the loop the message shows the last isolator before the break in <u>the A-direction</u> (including the following isolator). There will also be shown "FAULT: Several faults ...".

**NOTE:** Each 10<sup>th</sup> minute a new attempt is made to communicate in the Adirection only.

When all short-circuits are repaired (corrected) the communication automatically returns to communicate in the A-direction only.  $^{\rm 51}$ 

FAULT: Site specific data (SSD)

The Site Specific Data (SSD) is not downloaded correctly (a checksum fault, etc.). A new SSD download (via EBLWin) is required. If the fault cannot be corrected it is very serious. Call for service personnel / engineer immediately.

FAULT: Site specific data (SSD), AAU x

AAU=1736 (Alert Annunciation Unit)

There is no SSD (Site Specific Data) downloaded to the unit or something is wrong in the downloaded SSD.

FAULT: Site specific data (SSD), EPU x

EPU=1728 (Ext. Presentation Unit)

<sup>&</sup>lt;sup>51</sup> The fault has to be acknowledged and it can last up to 10 minutes before the communication returns to communicate in the A-direction only.



There is no SSD (Site Specific Data) downloaded to the unit or something is wrong in the downloaded SSD.

FAULT: Wrong type, expansion board x

Valid for the 8-Zone Expansion Board 4580 and the 8 relays exp. board 4581 and Inputs / Outputs exp. Board 4583 mounted in the CIE (FT128). Also valid for the I/O Matrix board 4582 connected on the COM loop i.e. mounted outside the CIE. The board is not the same type as programmed in the SSD. Change the programming (via EBLWin) or the board.

 $\rightarrow$ 

←

FAULT: Wrong type of unit zz-aa

Press " $\rightarrow$ " to see the technical address.

FAULT: Wrong type of unit t.addr xxx

**zz-aa** = Zone address, **xxx** = COM loop address

The unit is not the same type as programmed in the SSD. Change the programming (via EBLWin) **or** the unit.

FAULT: Zone line input zz-aa

Press " $\rightarrow$ " to see the technical address <u>or</u> the expansion board (4580) number and input number.

FAULT: Zone line input t.addr xxx

FAULT: Zone line input x exp board x

**zz-aa** = Zone address, **xxx** = COM loop address

a. Valid for the Multipurpose I/O unit 3361, connected on the COM loop, monitored Zone Line Input Z: Open circuit in the zone line or wrong / no End-Of-Line capacitor / short-circuit (if not programmed for fire alarm at short-circuit).
b. Valid for the 8-Zone Expansion Board 4580, mounted in the CIE (FT128): Open circuit in the zone line, wrong / no End-Of-Line capacitor / short-circuit (if not programmed for fire alarm at short-circuit).

(User programmable fault text; External fault)

A programmable input is used for an external fault to be presented in FT128 with a fault message.



## 16.2 Fault Acknowledge

When a fault is generated in FT128, the following may occur:

- The LEDs "Fault TX activated" (L11) and "General fault" (L7) are turned ON.
- LEDs Fault / Disablements "Alarm devices" (L13), "System fault" (L14) and/or "Fire Brigade TX" (L15) might be turned ON as well.
- Output for routing equipment (Fault TX) is activated.
- Output for general fault is activated.
- Output for general charge fault might be activated.
- A fault message, date and time, is shown in the FT128 display.

After the time might be shown "**More faults**" = more than one fault is generated.

After the **time** might be shown "**Serviced**" = the fault is already serviced / corrected.

"Serviced" will not be shown if the faults are set to be "Not latched".

To acknowledge faults in FT128 conduct the following:

- Login, according to chapter "Access ", page 79.
- Use **menu H6** (access code for Building officer or Service personnel is required) for fault acknowledge, see chapter "FAULT Acknowledge (H6) ", page 113. Menu H6 is a list showing a maximum of 200 faults (<u>not acknowledged</u> faults and/or <u>acknowledged but not corrected</u> faults). The first fault in the list is the most recent fault. When a fault is <u>acknowledged</u> and <u>corrected</u>, it will be removed from the list (and a new fault can be shown, if there are more than 200). Corrected faults are shown in the event log (menu H4/U6).

#### Notes:

- All faults have to be individually acknowledged one by one with push button "Fault acknowledge" (P6). Use ↑ or ↓ keys to scroll.
- If a fault has been serviced / corrected before it has been acknowledged, the text "Serviced" is added after the time<sup>52</sup>. It still has to be acknowledged.
- When a fault is <u>corrected and acknowledged</u>, it will disappear from the list (H6).
- When **all** faults have been <u>acknowledged</u>, the LED "Fault TX activated" (L11) will be turned off and output for routing equipment (Fault TX) is "reset" (as in normal operation).
- As long as there are faults (<u>not acknowledged</u> faults and/or acknowledged<u>but</u> <u>not corrected</u> faults) the LED "General fault" (L7) will be lit and general fault (and maybe general charge fault) output(s) are activated.

<sup>&</sup>lt;sup>52</sup> Via EBLWin the faults can be set to be not latched. Corrected faults will in this case automatically disappear from the list without being acknowledged before.



# 17 Commissioning an FT128

No connection, other than the mains power supply should be made, prior to checking the operation of the CIE

Mains power should be turned on and charger voltage levels checked / set. If these levels are correct, batteries can then be connected.

Basic operation of the CIE should be confirmed, ensure no earth fault shown on the LCD.



**Note:** To avoid generating earth fault when connecting a PC to FT128, it is strongly recommended that Brooks USB isolator **BA-PCISO** be used. If no isolator is used and if there are several earth faults in the system when a PC is connected, damages may result on both PCBs and the PC.

The only "fault" seen by the system, which cannot be fixed at this point of time, should be "Cut-off COM-loop". This is due to some loop units e.g. panel MCP, I/O matrix boards, etc. inside the CIE being wired to the COM loop as Class "B" wiring (no loop return wiring used). In NZ control panels the MCP mounted on the outer door may be replaced by the fire brigade Bulgin keys if required.

Before connecting any field wiring, the battery supply and mains power must be turned off.

Cable resistance readings and field connections must then be checked to ensure they are correct prior to their connection to the CIE

**Tip:** Measure the resistance of each loop wire (L & C respectively) before turning on the power. Check that the L-wire (SA) that goes out on CON 1, terminal 1 comes back at CON 1, terminal 3 and so on. If the loop has short circuit isolators, only the C-wire (SB) can be measured. Also measure the resistance between the loop wires and 24V, 0V and Earth. The resistance should be very high (mega ohm).

Once the cabinet is mounted and secured in place, the following power up procedures must be followed:

- 1. Connect the incoming mains power feed to the GPO, ensure the mains isolator switch is "OFF".
- 2. Turn "ON" the incoming mains power from the circuit breaker in the switch board.

**Note**: It should be connected to a household removable fuse for the fire alarm CIE only, via a two-way circuit breaker.

The mains cable should be securely clamped and the wires be as short as possible<sup>53</sup>. The mains safety earth (ground) should, however, be longer than the other wires, to ensure that it is the last to be disconnected if the mains cable clamp should fail. After the installation, the lid protecting the power supply screw terminals should be correctly applied.

- 3. Remove the battery fuse F2 on the main board 4556 (or the in-line fuse between batteries).
- 4. Connect the batteries to the battery leads.

 $<sup>^{53}</sup>$  Cable tie should be mounted to keep the mains wires well separated from the 24 V DC wires



5. Turn "ON" the mains isolate switch (230  $V_{AC}$ )<sup>54</sup>

**Note**: The Control Unit will be supplied pre-wired, the installer has to connect the incoming mains to the GPO only.

- 6. Re-place the battery fuse (F2) on the main board.
- 7. LED "Operation" (L6) indicates that the 24 VDC supply (power supply and/or battery) is okay.
- 8. An automatic restart will now take place, see chapter "Restart", page 76.
- 9. The site specific data (SSD) created in EBLWin can now to be downloaded, see chapter "SSD Download", Page 71.

See also chapter "Calibration of Supervised Outputs (H5/A1)", page 105.

**Note**: A "Safe shutdown" must be performed once FT128 is cleared of all faults and the system becomes in normal operational mode.

<sup>&</sup>lt;sup>54</sup> The Control Unit is supplied with a GPO which has the mains isolate switch and a power point outlet used during programming to connect the power cable to your PC.





# 18 SSD Download

**Note**: An EBLWin USB key must be used to communicate with the control panel and download the SSD using EBLWin V2.x.x.

The **S**ite **S**pecific **D**ata (SSD) for an installation is created (programmed) via the PC program **EBLWin**, which is also used to download the SSD into the FT128, Web-server and/or 1728 & 1736. The SSD will be saved in a file named **xxxxx.EBLWin**. <sup>55</sup>

The EBLWin key is a protection USB device required to log on to the Control Unit, it has a unique number. The EBLWin key identification number will be registered in the control panel event log with the date and time stamp for every SSD download performed in the control panel.

When the installation is ready, i.e. all units connected and the power is turned on, the SSD download can take place.

The PC has to be connected to the RS232 port "J3" in the control unit. Start EBLWin and open the required installation. Logon to the control unit.

**Note**: No password / access code is required to log on to the Control Unit, instead an EBLWin 5094 key is required. This key is plugged in a USB-port in your PC.

In EBLWin (menu "Tools" | "Download SSD..."), select Control Unit "0". SSD can also be downloaded to the Web-server and connected Display Units, if the check box "Download display units" and "Download Webserver SSD" respectively is marked.

After the SSD download, the control unit will restart. A number of faults may then be generated e.g. due to not connected units.

#### Disconnected at start up

Normally, this function is not used in FT128 since this control unit has only one COM loop.

In the COM loop properties dialog box, it is possible to select the option "**Disconnected at start up**". The COM loop will then be disabled directly after the download restarts and therefore no faults will be generated.

lame	Loop 0			
	Disconnected a	at startup		
Summary o	of loop units			
Туре		Amount	Quiescent Consumption	Max Consumption
AMD 430	0	0	0.0	0.0
OPT 430	1	4	1.2	9.2

**Note:** A COM loop "Disconnected at start-up" can be re-connected via menu H8/S1 but it will then be disconnected again after next restart. Finally the SSD for that control unit has to be downloaded again with the option "Disconnected at start-up" not selected.

## 18.1 COM Loop Menu

#### 18.1.1 Check Loop

In the EBLWin COM loop icon pop-up menu select "**Check Loop**". This function can be used after (or before) the SSD download. The function is as follow:

The Control Unit will find all units that are connected on the COM loop. If there is a break (cut-off) or short circuit on the loop, only the units in the A-direction will be found and shown, i.e. an indication where the break (cut-off) or short circuit is located.

 $<sup>^{55}</sup>$  xxxxx = A suitable name of the installation.



For all units, the address (1-255) and the type of unit will be reported to EBLWin. All differences compared to the installation (SSD) that is opened in EBLWin will be listed in EBLWin and can be saved and/or printed out.

"Unknown device" means that the type cannot be identified e.g. due to faulty unit.

"Several reply" means that more than one unit have the same address or bad loop communication.

**Note**: During this check loop operation, the COM loop will be disconnected (disabled) and no alarms or faults can be activated. Disconnected COM loop is indicated by the LED Fault / Disablements "General disablements" (L10).

## 18.1.2 Auto Generate SSD

If you are on site, the **Auto generate** function can be used to create the SSD. Open a new installation in EBLWin, connect the PC to the RS232 connector J3 in FT128 (on the main board) and log on. <sup>56</sup> Right click on the COM loop and select "Auto generate...". The COM loop units <sup>57</sup> connected on the COM loop will now be identified and listed in EBLWin, i.e. the SSD will be auto generated with default settings for all units (01-01, 01-02, 01-03, etc.), save the installation (SSD). The SSD can now be downloaded (see below) to FT128 directly or be edited before the download.

## **18.2** SSD Download to the Control Unit

Open the required installation (xxxxx.EBLWin) and log on to FT128.<sup>56</sup> In "Tools" menu select "Download SSD..." to open the dialog box.

Download SSD			
Control unit Control unit 0	Status	Start	
Download display units	✓ Download Webserver SSD		

Mark the required check box(es), Click "Start". Information will be shown in the "Status" coulomb and in the large white field. There is a progress bar in the dialog box as well as in the FT128 display:

Download in progress.....

Progress bar....."

<sup>&</sup>lt;sup>56</sup> An EBLWin key 5094 (a hardware key) is required, i.e. plugged in a USB port in the PC.

<sup>&</sup>lt;sup>57</sup> Each unit have to be running i.e. be connected, power supplied and the address, mode etc. have to be set.

**NOTE**: During this check, the COM loop will be disconnected (disabled) and no alarms or faults can be activated. Disconnected COM loop is indicated by the LED "Disablements" (L8).


When the download is completed successfully, the following text message will be shown:

Download completed successfully. Control unit will now restart

After the restart, another text message will be shown in the display:

```
FAULT: Restart, code 25 addr 0
Date: MM-DD Time: HH:MM Serviced
```

Code 25 indicates a normal restart after a successful download, acknowledge the restart fault.

If the download was not completed or incorrect, the following text message will be shown:

FAULT: Site specific data (SSD) Date: DD-MM Time: HH:MM

This text message means that the SSD file has not been downloaded correctly, i.e. try to download the SSD once more.

#### **18.3** User Definable Text Messages Download

Each alarm point, zone and zone line input can have a unique user definable alarm text message programmed via EBLWin. When a fire alarm is activated e.g. an addressable alarm point, the presentation number (Zone – Address) will be shown on the first row in the FT128 display and in all the external display units 1728 and 1736 with its alarm text.

All alarm texts, up to 40 alphanumeric characters each, are <u>created and downloaded</u> via **EBLWin** (SSD Download). See Technical / Programming manual, chapter "Alarm texts".

A fault message for an alarm point, zone line input will also show the alarm text.



# **19 Download Software (System Firmware)**

**Note**: When existing system requires software upgrade, first, logon to the Control Unit using a compatible EBLWin (or Win128) software version with the existing firmware version in FT128 then conduct SSD backup to save the existing Site Specific Data file. This must be performed prior to any software download.

The latest software version of the EBL128 system software <sup>58</sup> is factory downloaded before delivery. Due to continual development and improvement, different S/W versions may be found.

FT128 can be upgraded with a new S/W version, downloaded on site via EBLWin. The valid (current) S/W version is shown in menu H4/U7 or via EBLWin (Control unit pop-up menu; Software version...).

On site, new S/W for 1728, 1736 units can also be downloaded via EBLWin. See the "Technical Description" for each unit respectively.

### **19.1** Download of S/W in FT128

**Note**: Before downloading new software in existing system, SSD backup must be performed using compatible Win and EBL software then saved in the new version of EBLWin.

To download a new EBL software (system program) version, a PC and **EBLWin** <sup>59</sup> are used. The .BIN file that to be downloaded contains both the software and a text file i.e. there is one .BIN file for each convention (AU or NZ).

Before download, the PC has to be connected to the RS232 connector J3 in FT128 (on the main board). Check that the EBLWin key is plugged in a PC spare USB port in your PC

1. Start EBLWin. <u>Do not Log on to FT128</u>. In the "Tools" menu select "Download Software..." to open the dialog box and do the required settings as shown below.

	Download software to control unit / display unit
	2:\ENGINEERING SERVICES - OLD\R&D\R&D Current Proje Browse
	Download option
	<ul> <li>EBL512 G3 with front (5000)</li> </ul>
	<ul> <li>EBL512 G3 without front (5001)</li> </ul>
	EBL128 (4550)
	O Display unit (1728, 1735, 1736, 1826, 1828)
	Communication setting
	COM port Baudrate
	COM3 ¥ 115200 ¥
Progress	
bar	Start

<sup>&</sup>lt;sup>58</sup> The software (firmware) is the system software and always uses "EBL" abbreviation.

<sup>&</sup>lt;sup>59</sup> To logon to the control unit or to download software, an EBLWin key (5094) is required in a PC spare USB port.



- Select the path and the S/W file to be downloaded, e.g. Australian\_EBL128\_220.BIN. (220 = version 2.2.0)
- 3. Select the control unit, i.e. EBL128 (4550)
- Select the "COM port" to be used on your PC and baud rate (normally 115200. If the download is not successful, the baud rate might be high, use slower rate and try again.
- Set the main board in "boot mode" i.e. up to the left, put the jumper onto the two pins marked "BOOT" (JP2) and then momentarily short the solder pads marked "RESET" (JP1). The buzzer sounds continuously, the main board is now in "boot mode".
- 6. Start the download, i.e. click "Start", the buzzer stops sounding. The download status is indicated by the progress bar.
- 7. When the progress bar goes from red to green, the download is completed and the following dialog box opens:

Download completed. Restart	control unit?
<u>Y</u> es	<u>N</u> o

- 8. Remove the jumper from the two pins marked "BOOT" (JP2).
- 9. Click "Yes" and the control unit will restart.
- 10. LED "Operation" (L6) will now be lit.
- 11. After the restart fault is acknowledged, all LEDs on the FT128 front (except LED "Operation") should normally be off.
- 12. New Site Specific Data (SSD) <sup>60</sup> can now be downloaded.

### **19.2** Earlier S/W Version Download

For some reasons, it might be required to "downgrade" to an earlier S/W version. The download procedure is the same as for a new S/W.

**Note:** A corresponding Win128 / EBLWin version has to be used. EBL128 version N.N.x with Win128 / EBLWin version N.N.x.

<sup>&</sup>lt;sup>60</sup> Old SSD can be opened in EBLWin, saved and then downloaded as new SSD.



# 20 Restart

A restart may delete some data in FT128. Below is an explanation of the different data, abbreviations, also Table 13 describes the different rest alternatives and how the data respectively is affected (**cold** or **warm restart**).

- FF = Fire alarms and Faults.
- **D** = **D**isablements
- **FFD** = **F**ire alarms, **F**aults and **D**isablements.
- **SSW** = Sensor min. / max. values and performance factor, password, supervised output calibration values and event log.
- WASV = Week Average Sensor Values
- **SSD** = **Site Specific Data**, i.e. all the installation programming created and downloaded via EBLWin.
- **S/W** = Software, i.e. the EBL128 system program.

**Safe shut down of control unit** (menu H8/S7) will save the SSW data (except the week average sensor values) in a Flash ROM **before you power down FT128**. Before the first "Safe shut down" this memory is empty. After each "Safe shut down" the latest SSW data is saved. When FT128 is powered up, a restart takes place and the RAM (working memory) will read the SSW data saved in the Flash ROM.

The alarm counter value is stored in an EEPROM, i.e. the value will be retained also after the CIE has been powered down.

**Note:** After any restart, a new week average sensor value will be calculated within  $2\frac{1}{2}$  minutes, for all the Analogue smoke detectors<sup>61</sup>. Thereafter a new average sensor value will be calculated each week.

Table 13 describes the different reset alternatives and how the data respectively is affected.

Action	Data, etc. which will be <u>deleted</u>	Data, etc. which will be <u>not deleted</u>	Restart code
<b>Power down</b> <sup>62</sup> and then <b>power up</b> again. ("Cold restart")	SSW FFD, WASV	SSD, S/W	00
Via menu H8/S4 Safe shut down of control unit. ("Cold restart")	FFD, WASV	SSD, S/W, SSW	00 alt. 03
Automatically after <u>download of site</u> <u>specific data (SSD)</u> via a PC & EBLWin. ("Warm restart")	FF, WASV, D	SSD, S/W, SSW	25
Automatically after <u>download of S/W</u> via a PC & EBLWin. ("Cold restart")	FFD, WASV	SSD, S/W, SSW	03
Automatically due to <u>external</u> <u>disturbance</u> . <sup>63</sup> ("Cold restart")	FFD, WASV	SSD, S/W, SSW	01, 02 alt. 04-20

#### Table 13 Data affected by restart

<sup>&</sup>lt;sup>61</sup> During these 2½ minutes, all fire alarms from analogue smoke detectors will be suppressed.

<sup>&</sup>lt;sup>62</sup> Both the power supply (mains) and the batteries are disconnected.

<sup>&</sup>lt;sup>63</sup> If this happens often, call for service personnel / engineer.



**Note:** <u>During</u> the <u>restart</u>, the fault output "R1" for Fault TX will be "activated", the supervised 24  $V_{DC}$  outputs S0-S1 will not be supervised and S0-S1 programmed as normally high will be low for a few seconds.

During the "restart", no fire alarms can be activated and the buzzer will sound until the following text messages is show on the display:

\*\*\* FT128 \*\*\* Checking program memory.....

And for a second (if everything is all right, else see Memory fault below):

Booting.....

A fault is now generated and the following text message will be shown in the display:

```
FAULT: Restart code xx addr yyyy
Date: DD-MM Time: HH:MM
```

Regarding code **xx** and **yyyy**, see page 65. This fault is also indicated by LEDs "Fault TX activated" (L11) and "General fault" (L7).

After the fault is acknowledged (via menu H6), the LEDs will be turned OFF if there are no other faults.

After any restart, if any units was disabled before restart, an individual disablements for these unit should be done.

#### Memory fault

In case of a fault in the S/W (system program) the following text message will be shown in the display:

Memory fault in program area: xxx

This is also indicated by LED "System fault" (L14) and the buzzer sounds steady (continuous). The Fault TX output is "activated".

A new download of the S/W (system program) is required.

```
Note: After SSD download (see chapter "SSD programming & download ", page 71), the following messages <u>might</u> be shown:
```

Checksum fault in downloaded data. Control unit will now restart

FAULT: Restart code 25 addr yyyy Date: DD-MM Time: HH:MM Serviced

```
FAULT: Site specific data (SSD)
Date: DD-MM Time: HH:MM
```

The last message means that the SSD has **not** been successfully downloaded. A new SSD download has to be performed.



### 20.1 Boot Menu

The Boot menu should be used by authorised personnel only!

Note: Vital data can be erased via this menu.

The Boot menu is opened as follows:

Perform a "cold restart", i.e. power down / power up FT128.

The following text messages will be shown in the FT128 display:

\*\*\* FT128 \*\*\* Checking program memory.....

And after that, for a second:

Booting.....

When the text "Booting......" appears, press "Access" and 0.1 sec. later also press "1" and the **Boot menu** will be shown:

1:Restart, 2:Erase memory

Press "1" to perform a restart (you will also leave the Boot menu). Press "2" to open the Erase memory menu, see below.

The Erase memory menu:

1 = SSD, 2 = SSW, 3 = Texts

Press **"1"** to erase the SSD memory. Press **"2"** to erase the SSW memory. Press **"3"** to erase the texts memory.

"Erasing SSD", "Erasing SSW" and "Erasing texts" respectively will be shown and then the Erase memory menu will be shown again.

Press "Return" to return to the Boot menu.

Note:

After erasing the SSW, perform a "Power down / power up" restart directly.

All other alternatives are strictly forbidden to use. These are used for troubleshooting only and is controlled by Brooks engineers.



# 21 Access

To use the key pad in FT128 (to get access to the menu tree), it is necessary to log on with a User name and Password for level 2B or 3A.

See also chapter "User level, User name & Password", page 31.

Open the FT128 door (= level 1), press the "Access" button (P8) and continue as follows:

Action	Text in display	Comments
"Access"	Log in as: 0: Information only $\rightarrow$	Before SSD download only "0" is required to log in and get access to all the menus. After SSD download the settings done via EBLWin will be valid, i.e. up to ten (0-9) log in alternatives might be available <sup>64</sup>
Step with -> to the required alternative and press "A" or press "0", "1", "8" or "9" and "A"	Password: *****	The digits are replaced with (******) in the display.
	NO ACCESS!	Wrong password was entered. Try again. <b>NOTE:</b> After three wrong passwords the log in function will be blocked for one hour for the user name respectively.
	Perform monthly test ACCEPT? H1	Correct password was entered. Menu H1 is shown. Press "A" to accept (i.e. to perform a monthly test) or scroll / jump to another menu (H2-H10).

<sup>&</sup>lt;sup>64</sup> 0: Information only (level 2B), 1: Building officer (level 2C) and 2: Service personnel (level 3A) are default in EBLWin. For safety reasons they are recommended to be changed and others to be added, i.e. after SSD download there might be up to ten (0-9) log in alternatives available.



#### Explanations, to the table column headings:

Action = What to do e.g. use push button / key marked "Access".
Text in display = what is shown in the FT128 display.
Comments = Comments to text in the "Action" and "Text in display" columns.

Use " $\uparrow$ " and " $\downarrow$ " to scroll between the main menus H1-H10. Use "A" to accept.

Some main menus have sub menus. Use "A" to accept and then " $\uparrow$ " and " $\downarrow$ " to scroll between the sub menus e.g. B1-B10.

**Note:** The menus are circular, i.e. if you scroll with " $\downarrow$ " and the last menu is reached, the first menu comes up next. It is also possible to make "quick jumps" within each menu, e.g. in menu H1 press "6" for a quick jump to menu H6. ("0" = menu H10).

Instead of a menu identification e.g. B1, the letter L can be shown, which means that it is a List. Use " $\uparrow$ " and " $\downarrow$ " to scroll in the list.

If  $\leftarrow$  or  $\rightarrow$  is shown in a menu, use " $\leftarrow$ " or " $\rightarrow$ " to get more information. Use " $\leftarrow$ " and " $\rightarrow$ " to move the cursor in a menu. Use "Return" to return from a sub menu to the main menu. Use "Return" in a main menu (H1-H10) to leave the menu system.

**Note:** You will not be logged off until you close the door or 60 minutes after the last action (i.e. if the key pad / push buttons have not been used for 60 min.).

You will normally get some information that the action / operation you wanted is performed, (e.g. "Output xx forced active"). If not, the information will be "Operation failed!". Also if you try to disable a unit that doesn't exists in the installation.



# 22 Perform Monthly Test (H1)

FT128 and the installation shall be tested on a regular basis. In test mode, only the alarm points are tested, i.e. no outputs (no sounders) will be activated during the test. (Alarm devices can be tested via menu H8/S6).

If <u>a real fire alarm</u> is activated by **an alarm point** not **in test mode**, the normal fire alarm functions will be activated, i.e. fire alarm presentation, outputs (sounders) activated, routing equipment (Fire Brigade TX) activated, etc. but the <u>zone(s)</u> in test mode will remain <u>in test mode until the test mode is ended</u>. During the fire alarm the zone(s) in test mode can be displayed via menu X3, see chapter "Display disablements (X3)", page 48. See also chapter "The Display in FT128", page 29.

**Note:** If FT128 door is left open, the output(s) for external strobe or alarm bell might be disabled (if set in EBLWin).

There will be an automatic termination of the test mode one hour after the latest tested alarm point / zone.

See also chapter "Perform ZONE TEST (test mode) (H7)", page 114.

Action		Text in display		Comments
"Access"				According to chapter "Access", see page 79 .
	Perform monthly	r test		
			ACCEPT? H1	
"A"	Check that all L	EDs light up!	ACCEPT	
"A"				The buzzer (in FT128) sounds and all dots in the display are shown. All LEDs light up, including LEDs in units connected via I/O Matrix board 4582.
"A"	Zones to be set i <u>?</u> ? ?? ?? ??	in TEST MODE: Start test:	ACCEPT	
Write zone numbers e.g. 01, 02, 03, 04)	Zones in test mo 01 02 03 04	ode: Start test:	ACCEPT	Press "A" to start the test mode.
"A"	Zones in test mo 01 02 03 04	ode: End test:	ACCEPT	LED "Test mode" (L9) will light up. Perform the tests.
The zone(s) will stay in test mode until the test mode is terminated but after 60 minutes or if you press "Return" twice, you will be logged out from menu H1.				
Perform the test as quickly as possible, since the output(s) for routing equipment (Fire Brigade TX) are disabled (also the parts of the zones in test mode, not visible for the test personnel, are disabled).				
In order to shorten the testing time, any time delay for the detectors / zones in test mode will be "disabled", i.e. fire alarm will be detected faster than normal.				
In the tested alarm point, the LED will light up, and the LEDs "Fire" (L1) in FT128 will light up, about ten seconds, then the alarm point will be automatically reset.				
A detector in test mode will <u>not</u> be able to activate fault.				
	Zones 01 in	test mode	More	You are no longer in menu H1 but still in test mode.



After 60 minutes <b>or</b> "Return" "Return"	<b>NOTE:</b> See chapter "The Display in FT128 ", page 29 regarding priority order.	
(When required: "Access", "password") "A"	Zone in test mode: 01 02 03 04 End test: ACCEPT	Press "A" to end the test mode.
"A"	Test of routing equipment? $\underline{0}$ $(1 = Yes, 0 = No)$ ACCEPT	The LED "Test mode" is turned OFF.

Some national regulations also require a <u>routine test of the routing equipment</u>. Press "A" for no test or press "1" and "A" to start such a test. The following will happen:

- FT128 "Fault TX" output will be de-activated<sup>65</sup>, indicated by the LED "Fault TX activated" (L11). A 60 seconds count-down starts.
- After 30 seconds, FT128 "Fire Brigade TX" output (and corresponding programmable outputs type 4 = routing equipment) will be activated as well, indicated by the LED "Fire Brigade TX" (L15).
- After another 30 seconds, the test will be terminated and all the outputs and LEDs will return to "normal".

"1", "A"	Test of routing equipment in progress. nn seconds left.	"nn" starts at 60 and will count down to 00.
	Monthly test is completed! ACCEPT	
"A"	Perform monthly test ACCEPT? H1	Scroll or press "Return" to log off.

#### Notes:

If an alarm point e.g. an MCP is in alarm state when the test mode is terminated, a fire alarm will be activated.

When "Fire door closing" function is used, the fire door will be closed when the detectors controlling the door are tested via the test mode.

<sup>&</sup>lt;sup>65</sup> **Note:** This output is activated in normal state.



# 23 Disable or Re-enable (H2)<sup>66</sup>

A whole zone<sup>67</sup>, one or more alarm points within a zone and/or control outputs can be disabled via menus H2/B1-B4. This possibility can be used when a temporary disablement is required (e.g. maintenance or renovation work in the premises, etc.).

A disabled alarm point will not activate <u>Pre-warning</u>, <u>fire alarm</u> or <u>fault</u>.

**Note:** When a zone is disabled, the <u>addressable manual call points in that zone will be</u> <u>disabled</u>.

- **Zones 01-99** can be disabled via menu H2/B1.
- Up to 100 alarm points (zone / address) can be individually disabled via menu H2/B2.
- **Up to 100 outputs** can be **individually** disabled via menu H2/B3. Disabled output will stay in (or return to) the normal condition for the output.
- All outputs of a specified type can be collectively disabled via menu H2/B4.
- All outputs of type alarm devices can be collectively disabled via menu H2/B9.
- Outputs for routing equipment can be disabled via menu H2/B10.

#### Notes:

Up to 100 Interlocking outputs can be individually disabled via menu H9/C4.

The COM loop can be disabled via menu H8/S1.

A Zone Line Input can be disabled via menu H8/S2 or S3.

**Don't forget to re-enable** via the menus or use automatic re-enablement for zones and alarm points.

Disablements are indicated by LED "Disablements" (L8) and are also shown in the displayF68F. An example:



More... is indicating two or more disablements.

Disablements (and faults) are indicated by a 2-sec. beep when an open FT128 door is being closed (if used).

<sup>&</sup>lt;sup>66</sup> The word "Disable" or "Re-enable" is used in the Australian convention while "Isolate" and "De-Isolate" are used in the New Zealand convention.

<sup>&</sup>lt;sup>67</sup> When the zone disable module is used, a whole zone can be disabled without entering the menu.

<sup>&</sup>lt;sup>68</sup> Refer to Table 11 page 30 for priority order



### 23.1 Disable Zone (H2/B1)

When a whole zone is disabled, <u>all</u> alarm points within the zone are disabled.

All zones can be disabled. Disabled zones are listed in menu H4/U1.

Disabled zones can be automatically re-enabled or they have to be re-enabled via menu H2/B5.

Action	Text in display	Comments	
"Access"		According to chapter "Access", see page 79	
Scroll to menu H2.	Disable or re-enable		
	ACCEPT? H2		
"A"	Disable zone ACCEPT? B1		
"A"	Disable zone: <u>0</u> 0 ACCEPT?		
Write zone number e.g. 01	Disable zone: 01 ACCEPT?	Press "A" to accept.	
"A"	Automatic re-enabling: <u>0</u> (0=No, 1=Yes) Time: HH:MM ACCEPT?	Press "1" for auto re- enabling and accept or change the time (max. 24 bours). Press "A" to accept	
	(Default is current time + 3 hours)	LED "Disablements" (L8) will light up.	
"A"	Zone 01 is disabled		
"A"	Disable zone: <u>0</u> 0 ACCEPT?	If more disablements required, continue as above otherwise, press "Return" to menu B1.	
"Return"	Disable zone ACCEPT? B1	Scroll or press "Return" to menu H2	
"Return"	Disable or re-enable ACCEPT? H2	Scroll or press "Return"	





### 23.2 Disable Zone / Address (H2/B2)

**Up to 100** addressable alarm points (also addressable manual call points), connected to the COM loop, can be individually disabled.

Disabled alarm points (zone - address) are listed in menu H4/U1.

Disabled alarm points (zone – address) can be automatically re-enabled or they have to be re-enabled via menu H2/B6.

Action	Text in display		Comments
"Access"			According to chapter "Access", see page 79.
Scroll to menu H2.	Disable or re-enable	ACCEPT? H2	
"A"	Disable zone	ACCEPT? B1	
Scroll to menu B2.	Disable zone / address	ACCEPT? B2	
"A"	Disable zone: <u>0</u> 0 Address: 00	ACCEPT?	
Write zone number and address e.g. 01 - 01	Disable zone: 01 Address: 01	ACCEPT?	Press "A" to accept.
"A"	Automatic re-enabling: 0 (0=No,1=) Time: HH:MM	Yes) ACCEPT?	Press "1" for auto re- enabling and accept or change the time (max, 24
	(Default is current time + 3 hours)		hours). Press "A" to accept. LED "Disablements" (L8) will light up.
"A"	Zone 01 address 01 is disabled		
"A"	Disable zone: <u>0</u> 0 Address: 00	ACCEPT?	If more disablements required, continue as above otherwise, press "Return" to menu B2
"Return"	Disable zone-address	ACCEPT? B2	Scroll or press "Return" to menu H2.
"Return"	Disable or re-enable	ACCEPT? H2	Scroll or press "Return"



# 23.3 Disable Output (H2/B3)

**Up to 100** control outputs, **except outputs of type "Alarm devices"** can be individually disabled. Disabled output will stay in (or return to) the normal condition for the output respectively.

Action	Text in display		Comments
"Access"			According to chapter "Access", see page 79.
Scroll to menu H2.	Disable or re-enable	ACCEPT? H2	
"A"	Disable zone	ACCEPT? B1	
Scroll to menu B3.	Disable output	ACCEPT? B3	
"A"	Disable output type: <u>0</u> 0=Loop unit 1=S 2=R0 3=EXPB	ACCEPT?	Press: " <b>0</b> "=3361 or 3377/4477 or 3379 or 3364 or 4380 or 4383 " <b>1</b> "=CIE output S0-S1
			"2"=CIE output R0 "3"=CIE exp. board output. <sup>69</sup> Press "A" to accept.
"0", "1", "2" or "3" "A"	Disable output <u>0</u> technical address 00	00 ACCEPT?	Regarding the 3377/4477 & 3379 units' output no.:
Depending on the chosen type the	Disable S <u>0</u>	ACCEPT?	0=high priority 1=medium priority
following will be shown:	Disable R0	ACCEPT?	2=low priority Write the data.
	Disable output <u>0</u> expansion board 0	ACCEPT?	Press "A" to accept. LED "Disablements" (L8) will light up.
(Type 2 chosen.) "A"	Output R0 disabled		
"A"	Disable R0	ACCEPT?	
"Return"	Disable output type: <u>0</u> 0=Loop unit 1=S 2=R0 3=EXPB	ACCEPT?	If more disablements required, continue as above. If not, press "Return" to menu B3.
"Return"	Disable output	ACCEPT? B3	Scroll or press "Return" to menu H2.
"Return"	Disable or re-enable	ACCEPT? H2	Scroll or press "Return".

<sup>&</sup>lt;sup>69</sup> Expansion board (EXPB) 0-3, 4581: Relay output 0-7 alt. 4583: Output 0-2.



### 23.4 Disable All Control, Extinguishing, Ventilation Interlocking Outputs (H2/B4)

Outputs programmed as type <u>Control</u> (general), type <u>Fire ventilation</u>, type <u>Extinguishing</u> <u>system</u> and type <u>Interlocking</u> can for the type respectively be collectively disabled (all at the same time).. **Disabled output** means that even if the control expression (trigger condition) for the output is true, the output will not be activated. Disabled outputs are shown in menu H4/U1.

The outputs will be disabled until re-enabled again (via H2/B8).

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79 .
Scroll to menu H2.	Disable or re-enable ACCEPT? H2	
"A"	Disable zone ACCEPT? B1	
Scroll to menu B4.	Disable all control, extinguishing, ventilation or interlocking outputs ACCEPT? B4	
"A"	Disable type:00=Control1=Ventilation2=Exting3=InterlockingACCEPT?	Press: " <b>0</b> "=control outputs " <b>1</b> "= ventilation outputs
		"2"= extinguishing output "3"=interlocking outputs. Press "A" to accept. LED (L8) "Disablement" will illuminate
"0", "1", "2" or "3" "A" Depending on selected type, the following will be shown:	All xxxxx outputs disabled	XXXXX=control, ventilation, extinguishing or interlocking.
"A"	Disable type: <u>0</u> 0=control 1=ventilation 2=exting 3=Interlocking ACCEPT?	If more disablements required, continue as above otherwise, press "Return" to menu B4.
"Return"	Disable all control, ventilation, exting. or interlocking outputs ACCEPT? B4	Scroll or press "Return" to menu H2.
"Return"	Disable or re-enable ACCEPT? H2	Scroll or press "Return"



### 23.5 Re-Enable Zone (H2/B5)

Disabled zones are listed in menu H4/U1.

Re-enabling via this menu (H2/B5) has higher priority than automatic re-enabling.

Zones disabled via the "New Zealand FB Bulgin key Silence Alarms" (outside switch), have to be re-enabled via menu B5 or B6 before they can activate a new alarm.

When all zones have been re-enabled, the LED "Disablements" (L8) will be turned OFF, if there are no other disablements.

**Note:** Alarm points that have been individually disabled via menu H2/B2 cannot be collectively re-enabled via this menu. They have to be individually re-enabled.

Action Text in display Comments According to chapter "Access" "Access", see page 79. Scroll to menu H2 Disable or re-enable ACCEPT? H2 "A" Disable zone ACCEPT? B1 Scroll to menu B5 Re-enable zone ACCEPT? B5 "A" Re-enable zone: 01 L=A list in which you can ACCEPT? L scroll. Press "A" to accept. You will stay in this list until all zones are re-enabled or press "Return" to menu B5. "A" (to re-enable) Re-enable zone If more re-enabling shall ACCEPT? B5 be done, continue like or "Return" above. If not, scroll or press "Return" to menu H2. "Return" Disable or re-enable Scroll or press "Return" ACCEPT? H2



### 23.6 Re-Enable Zone / Address (H2/B6)

Disabled alarm points (zone – address) are listed in menu H4/U1. Re-enabling via this menu has higher priority than automatic re-enabling.

A zone will be presented as ZZ - 00 (ZZ=01-99).

Alarm points within a Zone disabled via the "New Zealand FB Silence Alarms Bulgin key" (outside switch), have to be re-enabled via menu B5 or B6 before they can activate a new alarm.

When all alarm points have been re-enabled, the LED "Disablements" (L8) will be turned OFF, if there are no other disablements.

Action	Text in display		Comments
"Access"			According to chapter "Access", see page 79
Scroll to menu H2:	Disable or re-enable	ACCEPT? H2	
"A"	Disable zone	ACCEPT? B1	
Scroll to menu B6.	Re-enable zone-address	ACCEPT? B6	
"A"	Re-enable zone: <u>0</u> 1 Address: 01	ACCEPT? L	L=A list in which you can scroll. Press "A" to accept.
			You will stay in this list until all zone-addresses are re-enabled or press "Return" to menu B6.
"A" (to re-enable) or "Return"	Re-enable zone-address	ACCEPT? B6	If more re-enabling shall be done, continue like
			press "Return" to menu H2.
"Return"	Disable or re-enable	ACCEPT? H2	Scroll or press "Return".



# 23.7 Re-Enable Output (H2/B7)

Disabled outputs are listed in menu H4/U1.

When all outputs have been re-enabled, the LED "Disablements" (L8) will be turned OFF, if there are no other disablements.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79.
Scroll to menu H2.	Disable or re-enable ACCEPT? H2	
"A"	Disable zone ACCEPT? B1	
Scroll to menu B7.	Re-enable output ACCEPT? B7	
"A"	Re-enable output type: <u>0</u> 0=Loop unit 1=S 2=R0 3=EXPB ACCEPT?	Only disabled type(s) will be shown. Press:
	Or, e.g. if only type 2 is disabled:	" <b>0</b> "=3361 or 3377/4477 or 3379 or 3364 or 4380 or 4383 " <b>1</b> "=CIE output S0-S1
	Re-enable output type: 02=R0ACCEPT?	" <b>2</b> "=CIE output R0 " <b>3</b> "=CIE exp. board output. <sup>70</sup> Press "A" to accept.
"0", "1", " <b>2"</b> or "3"	Re-enable output <u>0</u> technical address 000	L=A list in which you can
"A" Depending on the	Re-enable output S <u>0</u> ACCEPT? L	scroll. Regarding the 3377/4477 & 3379 units' output no.:
following will be shown:	Re-enable output R0	0=high priority 1=medium priority
	Re-enable output <u>0</u> expansion board 0 ACCEPT? L	2=low priority Press "A" to accept.
"A"	List is empty	All types are re-enabled.
"Return"	Re-enable output ACCEPT? B7	If more re-enabling required continue as above. If not, scroll or press "Return" to
	D'achte anna achte	menu H2.
"Keturn"	Disable or re-enable ACCEPT? H2	Scroll or press "Return".

<sup>&</sup>lt;sup>70</sup> Expansion board (EXPB) 0-3, 4581: Relay output 0-7 alt. 4583: Output 0-2.



### 23.8 Re-Enable All Control, Ventilation, Extinguishing, Or Interlocking Outputs (H2/B8)

Disabled outputs are listed in menu H4/U1.

When all outputs have been re-enabled, the LED "Disablements" (L8) will be turned OFF, if there are no other disablements.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79
Scroll to menu H2.	Disable or re-enable ACCEPT? H2	
"A"	Disable zone ACCEPT? B1	
Scroll to menu B8.	Re-enable all control, ventil, exting or interlocking outputsACCEPT? B8	
"A"	Re-enable type:00=Control 1=Ventilation2=Exting 3=InterlockingACCEPT?	Only disabled type(s) will be shown. Press:
	Or, e.g. if only type 1 is disabled:	"0"=control output "1"=extinguishing output
	Re-enable type: <u>0</u> 1=Ventilation ACCEPT?	"2"=ventilation output "3"=interlocking output. Press "A" to accept.
Press 1 "A"	List is empty	All types are re-enabled.
"Return"	Re-enable all control, ventil, exting or interlocking outputsACCEPT? B8	Scroll or press "Return" to menu H2.
"Return"	Disable or re-enable ACCEPT? H2	Scroll or press "Return".



### 23.9 Disable / Re-Enable Alarm Devices (H2/B9)

Disabled alarm devices are listed in menu H4/U1.

Outputs for alarm devices can be collectively disabled and re-enabled via this menu. Disabled output will stay disabled, until re-enabled again via this menu.

When all outputs type Alarm devices have been disabled, the LEDs "Disablements" (L8) and "Fault / Disablements Alarm devices" (L13) will be turned ON.

When all outputs type Alarm devices have been re-enabled, the LED "Fault / Disablements Alarm devices" (L13) will be turned OFF.

Note: This function for alarm devices is not the same as for push button "Silence alarm devices" (P3) – unless the option Button "Silence alarm devices" disables alarm devices, is selected in EBLwin System properties, see chapter "Silence Alarm devices", page 36. This menu has higher priority than the push button "Silence alarm devices".

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79
Scroll to menu H2.	Disable or re-enable ACCEPT? H2	
"A"	Disable zone ACCEPT? B1	
Scroll to menu B9	Disable / re-enable alarm devices ACCEPT? BS	
"A"	Alarm devices in normal condition Press ACCEPT to disable	Depending on the actual status one of the texts will
"A"	Alarm devices disabled Press ACCEPT to re-enable	be shown.
"Return"	Disable or re-enable outputs for routing equipment ACCEPT? B9	Scroll or press "Return" to return to H2.
"Return"	Disable or re-enable ACCEPT? H2	Scroll or press "Return".



# 23.10 Disable / Re-Enable Outputs for Routing Equipment (H2/B10)

Disabled outputs are listed in menu H4/U1.

Outputs for routing equipment (Fire Brigade TX / fault TX) can be disabled and re-enabled via this menu. Disabled output will stay disabled, until re-enabled again via this menu.

The function can be used during commissioning and testing of an installation, when only local alarms are required.

Disabled output is indicated by LEDs "Disablements" (L8) and "**Fault / Disablements** Fire Brigade TX" (L15).

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79
Scroll to menu H2.	Disable or re-enable ACCEPT? H2	
"A"	Disable zone ACCEPT? B1	
Scroll to menu B10	Disable / re-enable outputs for routing equipment ACCEPT? B10	
"A"	Routing equipment for FIRE: <u>1</u> , FAULT:1 (1=enabled, 0=disabled) ACCEPT?	To move the cursor, press " $\rightarrow$ ". Edit and/or press "A" to accept.
e.g. "0" "A"	All outputs to routing equipment for: FIRE is disabled / FAULT is enabled	
"A"	Routing equipment for FIRE:0, FAULT:1 (1=enabled, 0=disabled) ACCEPT?	
"Return"	Disable / re-enable outputs for routing equipment ACCEPT? B10	Scroll or press "Return" to return to H2.
"Return"	Disable or re-enable ACCEPT? H2	Scroll or press "Return".



### 23.11 Disable / Re-Enable Alert Annunciation Function (H2/B11)

#### Normal function:

For alarm points / zones programmed for Alert Annunciation (via EBLWin) the AA function is normally <u>enabled via a time channel</u>, e.g. enabled daytime (during working hours) and disabled night time.

As an alternative, the AA function can be continuously enabled.

#### **Turned Off**

Via this menu (H2/B11), it is possible to disable the AA function, i.e. the AA function will be disabled for the alarm points / zones programmed for Alert Annunciation in spite of the time channel being "on" or the programming being set as continuously enabled.

The AA function will stay disabled until re-enabled again via this menu.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79
Scroll to menu H2.	Disable or re-enable ACCEPT? H2	
"A"	Disable zone ACCEPT? B1	
Scroll to menu B11.	Disable / re-enable alert annunciation function ACCEPT?B11	
"A"	Alert annunciation function is in normal operation. Press ACCEPT to turn off	Depending on the actual status, one of the texts will
"A"	Alert annunciation function turned off. Press ACCEPT to set to normal	be shown.
"Return"	Disable / re-enable alert annunciation function ACCEPT? B11	Scroll or press "Return" to menu H2
"Return"	De-activate alert annunciation function ACCEPT? H2	Scroll or press "Return".

**Note:** Disabled Alert Annunciation function is not indicated by LED "Disablements" (L8).

The LED "Fault / Disablements Fire Brigade TX delay" (L16) turned off, is indicating that the Alert Annunciation function is turned off by a time channel or is disabled via this menu.



# 24 Set Calendar and Clock (H3)

When required, the clock can be corrected, so that the "time stamps" for fire alarms, faults, etc. will be correct.

#### Note:

The RTC component has no built-in battery, i.e. if FT128 is powered down (no mains <u>and</u> no battery backup) and after a new software is downloaded, the date, day of the week and the time have to be set when FT128 is powered-up again.

The information shown in the display will be saved when you press "A".

Press "Return" instead of "A" to return to menu H3 without any changes.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79
Scroll to menu H3.	Set calendar and clock ACCEPT? H3	
"A"	Date: DD-MM-20YY Time: hh:mm:ss Weekday:1 (1=Monday, 7=Sunday)	The time shown is the time when "A" was pressed (in menu H3). When required, edit the date, time and/or weekday. Press "A". <u>The "clock"</u> <u>starts again from the date,</u> <u>time, etc. shown in the</u> <u>display.</u> <u>NOTE: Press "Return"</u> (instead of "A") <u>to return</u> <u>to menu H3 if no changes</u> <u>are required.</u>
	DD=Date MM=Month YY=Year hh=hour mm=minute ss=second	
Settings done "A"	Date and time was set. Date: DD-MM-20YY Time: hh:mm:ss Day D	Depending on if "A" or "Return" is pressed.
"Return"	Set calendar and clock ACCEPT? H3	Scroll or press "Return".

### 24.1 Daylight Saving Time

The daylight saving is set via EBLWin in the system properties. When set, the time will be automatically changed according to AU or NZ convention. The daylight saving time is set in the firmware as shown below:

**Australian convention**: Forward 1 hour the first Sunday in October,  $02:00 \rightarrow 03:00$ . Backward 1 hour the first Sunday in April,  $03:00 \rightarrow 02:00$ .

**New Zealand convention**: Forward 1 hour the last Sunday in September,  $02:00 \rightarrow 03:00$ . Backward 1 hour the first Sunday in April,  $03:00 \rightarrow 02:00$ .



# 25 Present System Status (H4)

### 25.1 Disablement (H4/U1)

A list of all disablements (done via menu H2/Bx).

**NOTE:** Disablements by time channel(s) are listed in menu H4/U2.

If there are no disablements, --- List is empty --- will be shown.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79.
Scroll to menu H4.	Present system status ACCEPT? H4	
"A"	Disablement ACCEPT? U1	Press "A" for presentation in the display.
"A"	When "A" is pressed, the disablements will be shown in the display. Some examples:	L = a list in which you can scroll. If there are no disablements
	Zone XX address XX disabled	List is empty will be shown.
	or	
	Zone XX is disabled	
"Return"	Disablement ACCEPT? U1	Scroll or press "Return" to menu H4.
"Return"	Disablement ACCEPT? H4	Scroll or press "Return".

<sup>&</sup>lt;sup>71</sup> On this row, added information can also be shown e.g.:

<sup>•</sup> Automatic re-enablement HH:MM

Date and time

<sup>• (</sup>by open door in CU)



### **25.2** Disablement by Time Channel (H4/U2)

A list of all disablements by time channel(s).

Note: Other disablements are listed in menu H4/U1.

If there are no disablements, --- List is empty --- will be shown.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79
Scroll to menu H4.	Present system status ACCEPT? H4	
"A"	Disablement ACCEPT?U1	
Scroll to menu U2.	Disablement by time channel ACCEPT?U2	Press "A" for presentation in the display.
"A"	When "A" is pressed, the disablements will be shown in the display, e.g:	L = a list in which you can scroll. If there are no disablements,
	Zone XX address XX disabled (by time channel) L	List is empty will be shown.
"Return"	Disablement by time channel ACCEPT?U2	Scroll or press "Return" to menu H4.
"Return"	Present system status ACCEPT?H4	Scroll or press "Return"

When scrolling in the list the message "No more zone/addresses disabled by time channel found in the system" can be shown.



### 25.3 Sensor Values (H4/U3)

The "Momentary" value in this menu will be updated following every detector polling, i.e. approx. every 6 second.

The first week average sensor value for a new installed detector type 430x and 440x in NORMAL mode is calculated within 2½ minutes after SSD download & restart. During these 2½ minutes, no fire alarm can be activated and "Weekly: 00.0%/m" will be shown. The "Weekly" value will thereafter be updated every week.

For the 440x detectors in Advanced mode the "Weekly" value is 00.0%/m on delivery. It will be updated during the first 13 minutes when the detector has been installed. It will thereafter be calculated every 13th minute but will then only be changed downwards if required. After 18 hours it can be changed downwards or upwards and after additional 18 hours (36 hours in all) it can be changed downwards or upwards and it is also saved in the detector's EEPROM, i.e. that value will be used after the detector loses power. The "Weekly" value for the 440x detectors in Advanced mode is also called the "Contamination Compensation Value (CCV).

The "Performance factor" and "Min. / Max." values are updated each night (00:00), i.e. the values shown are from the previous day.

		Text in display	Comments
"Access"			According to chapter "Access", see page 79
Scroll to menu	H4.	Present system status ACCEPT? H4	
"A"		Disablement ACCEPT? U1	
Scroll to menu	U3.	Sensor values ACCEPT? U3	Press "A" to accept.
"A"		Start Sensor : <u>0</u> 0-00	Write the presentation number and/or press "A" to accept.
Depending on the type, the following will be shown (examples):	"A" "→" "A" "→"	Type 4301/4401:         Sensor: 01-01 (technical address AAA)         Momentary: XX.X%/m         Weekly: XX.X%/m         Sensor: 01-01         Min: XX.X%/m         Perf factor: X.XX%/m         Max: XX.X%/m         Sensor: 01-01         Current Algorithm: nnnnnn         Type 3308/3309:         Sensor: 01-02 (technical address AAA)         Momentary: XX°C         Min: XX°C         Sensor: 01-02         Current Algorithm: nnnnnn	This is a list in which you can scroll or use "→" to see the next information window for the selected sensor. Press "Return" back to "Start Sensor". Scroll or write a new presentation number or press "Return" to menu U3. Note: XX.X%/m = XX.X % obscuration per meter".

"Algorithm" displays the algorithm that is currently in use.



	"A" "→" "→" "→"	Type 4300/4400:Sensor: 01-03 (technical address AAA) Momentary: XX.X%/m Weekly: XX.X%/mSensor: 01-03Min: XX.X%/mPerf Factor: X.XX%/m Max: XX.X%/mSensor: 01-03Current Algorithm: nnnnnnSensor: 01-03 (technical address AAA) Momentary: XX°C Min: XX°C Max: XX°CSensor: 01-03Current Algorithm: nnnnnn	Perf. Factor: see below this table. nnnnnn = algorithm short name, see separate table, page 99.
"Return"		Start Sensor : <u>0</u> 0-00	Write the presentation number and/or press "A" to accept or press "Return" to menu U3.
"Return"		Sensor values ACCEPT? U3	Scroll or press "Return" to menu H4. Scroll or press "Return".
"Return"		Present system status ACCEPT? H4	Scroll or press "Return".

When scrolling the message "Please Wait....." might be shown

#### Performance Factor:



X<sub>m</sub> = momentary sensor values for 24 hours. X<sub>we</sub> = week average sensor value 14400 = pollings during 24 hours The Performance factor can be 0.00 - 2.55. How the Performance factor (Pf) is calculated is shown to the left.

The Performance factor is <u>normally close to 0.00</u>, which means that the detector is mounted in a "stable" environment. The momentary sensor values during 24 hours do <u>not</u> differ a lot from the week average sensor value.

In an "unstable" environment the Performance factor will be higher than 0.00. This could for example be the case in a factory (e.g. "dirty" activities during working hours – no or clean activities during the night) and is not a problem as long as there are no nuisance (false) alarms or other problems.



#### Algorithms

The following table showing the algorithms and the abbreviations respectively:

Algorithm Detectors 3308/3309, 430x and 440x, all in Normal mode.	Short name <sup>72</sup>
Normal sensitivity (3%) & Normal detection (15 s)	N-15
High sensitivity (2.4%) & Normal detection (15 s)	H-15
Low sensitivity (3.6%) & Normal detection (15 s)	L-15
Normal sensitivity (3%) & Slow detection (35 s)	N-35
High sensitivity (2.4%) & Slow detection (35 s)	H-35
Low sensitivity (3.6%) & Slow detection (35 s)	L-35
Heat algorithm, Class A1	A1
Heat algorithm, Class A2 (S)	A2
Heat algorithm, Class B (S)	В
Decision algorithm	Dec 73

Default is N-15 and A1 respectively.

Algorithm Detector 4400 in <u>Advanced mode</u> .	Short name
Normal area	Normal
Clean area	Clean
Cooking-Welding area	Welding
Heater area	Heater
Smoke-Steam area	Smoke

Default is Normal.

Algorithm Detector 4401 in <u>Advanced mode</u> .	Short name
Normal area	Normal
Clean area	Clean
Smoke-Steam area	Smoke

Default is Normal.

<sup>&</sup>lt;sup>72</sup> If some other short name is required, it can be changed in EBLWin. Up to six characters can be used. In the DBI (Danish) convention, up to five characters.

<sup>&</sup>lt;sup>73</sup> Analogue multi detector 4300 only.



#### 25.3.1 Reset of a Week Average Sensor Value

If a sensor (Analogue smoke detector) is replaced without having generated SERVICE signal, its week average sensor value has to be set to the default value. If not, the new / clean sensor will inherit the old / dirty sensor's week average sensor value.

It is possible to clear the week average sensor value for each sensor individually, see chapter "Restore weekly average to default (H8/S5) ", page 120. See also chapter "Acknowledge SERVICE signal (H8/S4)", page 119.

**Note**: Authorised service personnel only, must do the reset to default value. Used incorrectly it can cause nuisance fire alarms.

### 25.4 Sensors Activating SERVICE Signal (H4/U4)

Service signal is indicated by LED "Service" (L12). The <u>week average sensor value</u> is over the service level respectively for one or more sensors. (Regarding the service signal levels, see Technical / Programming manual, chapter "Service signal".

Menu H4/U4 is a list of the sensor(s) activating service signal.

**Note:** Service signal is only information to prompt that a sensor has to be cleaned / replaced soon. The service signal has to be acknowledged, see chapter "Acknowledge SERVICE signal (H8/S4)", page 119.

If there are no sensors activating service signal, --- List is empty --- will be shown.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79
Scroll to menu H4.	Present system status on display ACCEPT? H4	
"A"	Disablement ACCEPT? U1	
Scroll to menu U4.	Sensors activating SERVICE signal ACCEPT? U4	Press "A" to accept.
"A"	Sensor : ZZ-AA (technical address aaa)needs serviceL	L = a list in which you can scroll. If there are no sensors activating service signal, List is empty will be shown.
"Return"	Sensors activating SERVICE signal ACCEPT? U4	Scroll or press "Return" to menu H4.
"Return"	Present system status ACCEPT? H4	Scroll or press "Return"



# 25.5 Technical Warning (H4/U5)

One or more Technical warnings in the system are indicated in the display with **[i]**. Menu H4/U5 is a list of the Technical warnings in the system.

If there are no Technical warnings --- List is empty --- will be shown.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79
Scroll to menu H4.	Present system status ACCEPT? H4	
"A"	Disablement ACCEPT? U1	
Scroll to menu U5.	Technical warning ACCEPT? U5	Press "A" to accept.
"A"	Technical warning number NNNN xxxxxxxxxx xxxxxxxxxxxxxxxx	A list in which you can scroll. If there are no Technical warnings, List is empty will be shown.
"Return"	Technical warning ACCEPT? U5	Scroll or press "Return" to menu H4.
"Return"	Present system status ACCEPT? H4	Scroll or press "Return".



### 25.6 Event Log (H4/U6)

Presentation of the events in FT128 is divided into three event lists, Alarm, Interlocking and General. The event lists can also be read via EBLWin and the Web-server II.

The most recent event is shown in the top of the list.

The initials of the person logged on to the system will also be shown for each event when applicable (i.e. commands). Commands done via EBLWin and the Web-server will also be shown.

**Note:** The event logging is disabled as long as menu H4/U6 is open.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79
Scroll to menu H4.	Present system status ACCEPT? H4	
"A"	Disablement ACCEPT? U1	
Scroll to menu U6.	Event log ACCEPT? U6	Press "A" to accept.
"A"	Select event log: 0 0=Alarm 1=Interlocking 2=General	Select type of event log.
"0", "1" or "2" "A"	When "A" is pressed, an event will be shown in the display, e.g:	The most recent event will be shown, i.e. use " $\downarrow$ " to scroll downwards in the list.
	FIRE ALARM zone 12 address 45 DD-MM HH:MM XX	xxx:
	or	"Blank" = FT128
	FIRE ALARM zone 32 DD -MM HH:MM XX	Win = By EBLWin Web = By Web-server
	or	
	FAULT: Output S1AcknowledgeDD -MM HH:MM XX	
"Return"	Select event log: <u>0</u> 0=Alarm 1=Interlocking 2=General	Select type or press "Return" to menu U6.
"Return"	Event log ACCEPT? U6	Scroll or press "Return" to menu H4
"Return"	Present system status ACCEPT?H4	Scroll or press "Return"



### 25.7 Version and Alarm Counter (H4/U7)

Version: Menu H4/U7 can be used to see the FT128 software / firmware version.

**Alarm counter:** The alarm counter is increased with "1" every time the CIE. enters the real "fire alarm condition" (Fire alarm indication in the display, LEDs "Fire" lit and the CIE buzzer sounding), i.e. not for zones in test mode. It starts on 000 and goes to 999. It can be reset to 000 via EBLWin (Control unit menu "Reset alarm counter..."). It is stored in an EEPROM, i.e. the value will be retained also after the CIE. has been de-energized.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79.
Scroll to menu H4.	Present system status ACCEPT? H4	
"A"	Disablement ACCEPT? U1	
Scroll to menu U7.	Version and alarm counter ACCEPT? U7	Press "A" to accept.
"A"	Version: X.X.X Alarm counter: YYY	Press "Return" to menu U7.
"Return"	Version and alarm counter ACCEPT? U7	Scroll or press "Return" to menu H4.
"Return"	Present system status ACCEPT? H4	Scroll or press "Return"



# 26 Service (H5)

When commissioning an installation (at power-up etc.) and by maintenance (programming etc.), menu H5 can be used to get certain information and help.

Only authorised personnel have access to level 3A menus. User name and Password for level 3A (Service Personnel) are required.

Note:

Via a PC <sup>74</sup> and EBLWin (+ EBLWin key in the PC) you can:

- Download / upload (backup) Site Specific Data (SSD)
- Download new S/W
- Create and download the alarm texts shown in the display in FT128 / AAU / EPU.

### 26.1 Calibration of Supervised Outputs (H5/A1)

Supervised (monitored) outputs <sup>75</sup>:

- The voltage outputs (S0-S1) in the control unit
- The voltage outputs (VO0-VO1) in the COM loop output unit 3364.
- The voltage outputs (Output 0-Output 1) on the Inputs and outputs expansion board 4583

When all alarm devices (OWS, sounders, etc.) are connected, including required End-Of-Line devices<sup>76</sup> and when the SSD download is ready, a calibration has to be done.

Function: If the actual value differs from the calibrated value  $\pm$  a small tolerance <u>or</u> if the calibrated value is outside the calibration range <sup>77</sup>, a fault will be generated.

**Note**: Each output's logic is programmable via EBLWin, i.e. normally low (default) or normally high (24V) but during the calibration the outputs will automatically be low, i.e. a normally high output will be low during the calibration (a few seconds).

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79
Scroll to menu H5	Service ACCEPT? H5	
"A"	Calibration of supervised outputs ACCEPT? A1	
"A"	To calibrate supervised outputs press ACCEPT	
"A"	Calibration in progress Please wait	
"A"	Calibration is completed ACCEPT?	

 $<sup>^{74}</sup>$  Connected to the "D" connector J3 (RS232) on the main board.

<sup>&</sup>lt;sup>75</sup> Supervised (monitored) outputs can be set to be not supervised via EBLWin.

<sup>&</sup>lt;sup>76</sup> FT128 outputs (S0-S1) requires one EOL resistor (33K) in the last unit or one resistor (33K) in up to five units, 3364 outputs (VO0-VO1) requires one EOL capacitor (470 nF) in the last unit or one capacitor (470 nF) in up to five units.

<sup>&</sup>lt;sup>77</sup> 4K7 – 50K and 470 – 5x470 nF respectively.



"A"	Calibration of supervised outputs ACCEPT? A1	Scroll or press "Return" to H5.
	Service ACCEPT? H5	Scroll or press "Return"

**Note**: After the calibration it is recommended to do a "Safe shutdown of control unit" (see menu H8/S4). This will save the SSW data (e.g. the calibration values) in a Flash ROM (see page 76).

### 26.2 Sensitive Fault Detection Mode (H5/A2)

"Sensitive fault detection mode" means that the normal time delays are reduced for all type of faults, which makes it possible find faults during the commissioning instead of later.

This mode is indicated by the LED "Fault tx activated" (L11).

Notes:

The "Fault" output for routing equipment is also "activated". Don't forget to turn this mode off after the commissioning.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79
Scroll to menu H5	Service ACCEPT? H5	
"A"	Calibration of supervised outputs ACCEPT? A1	
Scroll to menu A2	Sensitive fault detection mode ACCEPT? A2	
"A"	Sensitive fault detection mode is not active Press ACCEPT to activate	The text shown depends on the actual status.
	Sensitive fault detection mode is active Press ACCEPT to deactivate	Press "A" to accept or press "Return" to menu A2.
"Return"	Sensitive fault detection mode ACCEPT? A2	Scroll or press "Return" to H5.
"Return"	Service ACCEPT? H5	Scroll or press "Return"

Note: Don't forget to turn this mode off after commissioning.



### 26.3 Service Mode for COM-Loop (H5/A3)

This mode can be used when commissioning an installation and by maintenance personnel. The COM loop communication (polling) will be turned off but there will still be voltage (24  $V_{DC}$ ) on the loop in the A-direction only, in the B-direction only or in both directions at the same time.

A volt meter can be used, e.g. to check the voltage / voltage drop on different places on the loop or to find a single break on the loop. (Since there is voltage on the loop, short circuit isolators will work normally).

It is recommended to do this check also when FT128 is power supplied via the backup battery only, since the voltage can be up to 3 V lower (compared with the switch mode power supply) due to the battery condition, backup duration, etc.

The "Service mode for COM-loop" is indicated by LED "Disablements" (L8).

When you press "Return" back to menu A3, the "Service mode for COM-loop" will be terminated.

**Note:** If short-circuit is detected on the loop when in service mode, the loop will be disabled and a fault message will be displayed:

### FAULT: SHORT CIRCUIT SCI A <-> SCI B

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79
Scroll to menu H5.	Service ACCEPT? H5	
"A"	Calibration of supervised outputs ACCEPT? A1	
Scroll to menu A3	Service mode for COM-loop ACCEPT? A3	Press "A" to accept.
"A"	Service mode for COM-loop: <u>0</u> 0=Off 1=A-dir 2=B-dir 3=Both ACCEPT?	Press: <b>0</b> =Service mode is off. <b>1</b> =Voltage in A-direction. <b>2</b> =Voltage in B-direction. <b>3</b> =Voltage in both directions. 1, 2 or 3 selected is indicated by LED "Disablements" (L8)
e.g. "1" "A"	COM-loop in service mode. Powered in A-direction.	The communication is now turned off on the COM loop but 24V still exist in the A-direction. This state will last until you press "A" or "Return" to menu A3.
"A" or "Return"	Service mode for COM-loop ACCEPT? A3	Scroll or press "Return" to H3.
"Return"	Service ACCEPT? H5	Scroll or press "Return"

...independent of where the short-circuit on the loop is situated.



### 26.4 Display Current Consumption in Unit (H5/A4)

**Control unit:** The total current consumption (incl. the charging current at 24 V) for the control unit when it is connected to the mains (230  $V_{AC}$ ), i.e. this function is not working by battery backup.

**Note**: No or very small current consumption will not be presented correctly / precisely since the accuracy is  $\pm 5$  mA.

Charging: The battery charging current.

**Low capacity voltage difference:** During the battery capacity check the voltage is measured with and without a resistor. A difference between these two voltages > 2100 mV will result in a "Low battery capacity" fault. This is checked every 4th hour.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79.
Scroll to menu H5.	Service ACCEPT? H5	
"A"	Calibration of supervised outputs ACCEPT? A1	
Scroll to menu A4	Display current consumption in unit ACCEPT? A4	
"A"	Current consumption unit: XXXX mA Charging: XXXX mA →	Press " $\rightarrow$ " for the second information window.
"→" 78	Low capacity voltage diff: XXXXX mV	Press "←" for the first information window.
"Return"	Display current consumption in unit ACCEPT? A4	Scroll or press "Return" to H5.
"Return"	Service ACCEPT? H5	Scroll or press "Return".

Note: Each window is updated continuously.

<sup>&</sup>lt;sup>78</sup> This window will not be visible until 4 hours after the CIE. is powered and the batteries have to be connected.


# 26.5 Display Current Consumption on COM-Loop (H5/A5)

An average current consumption value can be displayed for the COM loop.

**Note:** No or very small current consumption will not be presented correctly / precisely since the accuracy is  $\pm 5$  mA.

Action	Text in display		Comments
"Access"			According to chapter "Access", see page 79
Scroll to menu H5.	Service	ACCEPT? H5	
"A"	Calibration of supervised outputs	ACCEPT? A1	
Scroll to menu A5	Display current consumption on COM loop	ACCEPT? A5	
"A"	Current consumption on COM-loop is XXX mA	ACCEPT?	
"A" or "Return"	Display current consumption on COM loop	ACCEPT? A5	Scroll or press "Return" to H5.
"Return"	Service	ACCEPT? H5	Scroll or press "Return".

**Note:** Each window is updated continuously.



### 26.6 Display Statistics for COM Loop (H5/A6)

The statistics can be used during commissioning, service, etc.

**Pollings** are the number of pollings ("questions") sent out by FT128 to the units connected on the COM loop.

Parity is the received number of parity faults and % parity faults in relation to the pollings.

**No answer** is the received number of answer faults / no answers and % faults in relation to pollings.

**Bit length** is the received number of bit length faults and % bit length faults in relation to the pollings.

**No. of bits** is the number of bit faults and % bit faults in relation to the pollings. (Bit fault / incomplete answer.)

The **Parity**, **Bit length** and **No. of bits** values must normally be "0" or as close to "0" as possible. If not, there are some communication problems that have to be investigated. Check the COM loop connections and the loop units. Check that the COM loop cable is not placed too close to mains voltage cables, etc. that might cause communication disturbance / problems.

**Note:** All values are set to "0" after a restart and when you re-connect the COM loop (via menu H8/S1).

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79
Scroll to menu H5.	Service ACCEPT? H5	
"A"	Calibration of supervised outputs ACCEPT? A1	
Scroll to menu A6	Display statistics for COM loop ACCEPT? A6	
"A" 79	Pollings 1234567         Parity 000000 00.0%           No reply 000000 00.0%         →	Press " $\rightarrow$ " for the second information window.
"→"	Bit length 000000 00.0% ← No. of bits 000000 00.0%	Press " $\leftarrow$ " for the first information window.
"Return"	Display statistics for COM loop ACCEPT? A6	Scroll or press "Return" to H5.
"Return"	Service ACCEPT? H5	Scroll or press "Return" to H5.

<sup>&</sup>lt;sup>79</sup> The values are updated continuously.



### 26.7 Activate Address Setting Mode for DU (H5/A7)

This function can be used by commissioning / service engineer to activate the address setting mode in the following **D**isplay **U**nits connected to the RS485 interface in FT128:

- Ext. Presentation unit (EPU) 1728
- Alert Annunciation unit (AAU) 1736

A specific unit or all units can be activated for address setting.

**Note**: The units have to be in operation and in quiescent condition, i.e. the units have already been addressed.

Action	Text in display		Comments
"Access"			According to chapter "Access", see page 79
Scroll to menu H5.	Service	ACCEPT? H5	
"A"	Calibration of supervised outputs	ACCEPT? A1	
Scroll to menu A7	Activate address setting mode for DU	ACCEPT? A7	
"A"	Activate address setting mode for DU $\underline{0}$ (9 = All)	ACCEPT?	Write the unit's address (0- 7). 9 = All units. Press "A" to accept.
e.g. "9" "A"	Operation failed!		If the address setting mode was not activated.
e.g. "9" "A"	All DU set in address setting mode		The address has now to be set / changed in the DU respectively.
"Return"	Activate address setting mode for DU	ACCEPT? A7	Scroll or press "Return" to H5.
"Return"	Service	ACCEPT? H5	Scroll or press "Return"

### 26.8 Setup wireless detectors (H5/A8

Not available for the Australian and NZ markets yet.

### 26.9 End setup wireless detectors (H5/A9)

Not available for the Australian and NZ markets yet.



### 26.10 Show Information about Site Specific Data (H5/A10)<sup>10</sup>

Information about the latest downloaded Site Specific Data (SSD) via a PC and the program EBLWin.

- SSD name: As written in the EBLWin dialog box "System Properties" (Name).
- Downloaded: Date and time when the SSD was downloaded.
- User: User name for the person who performed the SSD download.
- **Computer:** Computer name (if programmed) for the PC that was used for the SSD download.
- **Domain:** Domain (if programmed) for the PC that was used for the SSD download.
- **EBLWin key:** The unique number for EBLWin key.
- **Convention:** (i.e. country specific functions, default EBLWin settings, etc.) is set in conjunction with the installation of EBLWin <sup>81</sup>

Action	Text in display		Comments
"Access"			According to chapter "Access", see page 79
Scroll to menu H5.	Service	ACCEPT? H5	
"A"	Calibration of supervised outputs	ACCEPT? A1	
Scroll to menu A8	Show information about site specific data	ACCEPT? A10	
"A"	SSD name: xxxxxxxxxxxxx Downloaded: DD-MM-YYYY hh:mm	÷	
"→"	User: nnnnnnnnn Computer: ccccccccc	→	Press "→" to see the next window.
"→"	Domain: ddddddd EBLWin key: 1234567890	÷	Press "→" to see the next window.
"→"	Convention: CCCCCCCCC Language: LLLLLLLL		Press "→" to see the first window.
"Return"	Show information about site specific data	ACCEPT? A10	Scroll or press "Return" to H5.
"Return"	Service	ACCEPT? H5	Scroll or press "Return"

• Language: The Control unit language.

<sup>&</sup>lt;sup>80</sup> H5/A8 and H5/A9 are allocated for wireless smoke detectors which are currently not used in the AU or the NZ conventions.

<sup>&</sup>lt;sup>81</sup> To change the convention via EBLWin, "Level 2" in the tools menu must be selected, which require a special password. Alternatively EBLWin can be re-installed.



# 27 Acknowledge FAULTS (H6)

Regarding fault indication, etc., see chapter "Fault", page 58 .

All faults are normally latched <sup>82</sup>, i.e. all faults have to be acknowledged.

See also chapter "Fault Acknowledge", page 68 .

All fault events are stored in the event log and can be listed. See also chapter "Event Log (H4/U6)", page 103

In this menu (H6) are up to 200 faults listed:

- Not corrected and not acknowledged faults (no status info.)
- Not corrected but acknowledged faults (status: Acknowledged)
- Corrected but not acknowledged faults (status: Serviced)

If there are no faults, --- List is empty --- will be shown.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79
Scroll to menu H6.	FAULT Acknowledge ACCEPT? H6	
"A"	FAULT: Xxxxxxxx→Date: DD-MM Time: HH:MM Status info.	This is a list in which you can scroll. <u>The first fault in</u>
	FAULT: Xxxxxxxx       ←         User defined Alarm text, when applicable       ←	<u>fault.</u> Status info., see above. When applicable, press
		"→" for more info. To acknowledge the fault shown in the display, press "Fault acknowledge" (P6).
"Fault acknowledge"	FAULT: Xxxxxxx → Date: DD-MM Time: HH:MM Acknowledged	The status info. is now Acknowledged. When this fault is corrected it will be removed from the list. Scroll in the list e.g. to acknowledge more faults or press "Return" to menu H6.
"Return"	FAULT Acknowledge ACCEPT? H6	Scroll or press "Return" to log off.

<sup>&</sup>lt;sup>82</sup> Can be selected to non-latching. In New Zealand convention, it must be set to non-latching.



# 28 Perform ZONE TEST (Test Mode) (H7)

Normally, zones are tested during the monthly test via menu H1, see page 81. Via menu H7 it is possible to solely perform the zone test.

Up to 99 zones can be in test mode at the same time.

In test mode, only the alarm points are tested, i.e. no outputs (no sounders) will be activated during the test. (Alarm devices can be tested via menu H8/S6).<sup>83</sup>

If <u>a real fire alarm</u> is activated by **an alarm point** <u>not</u> in test mode, the normal fire alarm functions will be activated, i.e. fire alarm presentation, outputs (OWS or sounders) activated, routing equipment (Fire Brigade TX) activated, etc. but <u>the zone(s) in test mode</u> <u>will remain in test mode until the test mode is terminated</u>. During the fire alarm the zone(s) in test mode can be displayed via menu X3, see chapter "Display disablements (X3) ", page 48.

See also chapter "The Display in FT128", page 29.

There will be an automatic termination of the test mode one hour after the latest tested alarm point / zone.

**Note:** If the door in FT128 is left open, the output(s) for external strobe or alarm bell might be disabled (if set in EBLWin).

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79
Scroll to menu H7.	Perform ZONE TEST ACCEPT? H7	
"A"	Set zone in test mode ACCEPT? D1	<b>D1</b> = Sub menu to set a zone in test mode.
"A"	Set zone: 00 in test mode Start test: ACCEPT	Write the zone number and press "A".
e.g. "01" "A"	Zone 01 in test mode	LED "Test mode" (L9) will light up.
"A"	Set zone: 00 in test mode Start test: ACCEPT	If more zones to be set in test mode, do as above, else press "Return".
"Return"	Set zone in test mode ACCEPT? D1	
The zone(s) will stay in test mode until the test mode is terminated. The test mode will also be automatically		

The zone(s) will stay in test mode until the test mode is terminated. The test mode will also be automatically terminated 60 minutes after the last testing in the zone.

Perform the test as quickly as possible, since the output(s) for routing equipment (Fire Brigade TX) are disabled (also the parts of the zones in test mode, not visible for the test personnel, are disabled).

In order to shorten the testing time, any time delay for the detectors / zones in test mode will be "disabled", i.e. fire alarm will be detected faster than normal.

In the tested alarm point, the LED will light up and the alarm point will be automatically reset after about ten seconds. The alarm will also momentarily be shown in the FT128 display. A sensor in test mode will not be able to activate fault.

<sup>&</sup>lt;sup>83</sup> When the "Fire door closing" function is used, the fire door(s) will be closed when the zone involved is set in test mode.



Action	Text in display		Comments
	Set zone in test mode	ACCEPT? D1	To terminate the test mode, the menu D1 has to be open. Press " $\psi$ " or "2" to open
			menu D2.
"√" or "2"	Set zone in test mode	ACCEPT? D2	Press "↑" to end the test mode.
"A"	End test mode zone: 01	ACCEPT? L	This is a list in which you can scroll between all the zones in test mode. Select or type the zone number and press "A". When no more zones are in test mode
	List is empty		
			List is empty
			"Test mode" (L9) is turned OFF. Press "Return" to D2.
"Return"	End zone in test mode	ACCEPT? D2	Press return to H7
"Return"	Perform zone test	ACCEPT? H7	

#### Notes:

If an alarm point (e.g. a manual call point) is in alarm state when the test mode is ended, there will be a fire alarm activated.

When the "Fire door closing" function is used, the fire door(s) will be closed when the zone involved is set in test mode.



# 29 Maintenance (H8)

Only authorised personnel have access to the level 3A menus. User name and password for level 3A (Service Personnel) are required.

Disconnected (disabled) loop, etc. is indicated by LED "Disablements" (L8) and is listed in menu H4/U1.

### 29.1 Disconnect / Re-connect COM loop (H8/S1)

To avoid damage on the units and FT128 during physical connection / disconnection of loop units, it is highly recommended to have the loop disconnected (disabled), i.e. the loop is voltage free (dead).

**Note:** When you disconnect and re-connect the COM loop, all the statistics shown in menu H5/A6 will be erased and set to "0".

Action	Text in display	Comments
"Access"		According to chapter " Access ", page 79
Scroll to menu H8.	Maintenance	
	ACCEPT? H8	
"A"	Disconnect / Re-connect COM loop ACCEPT? S1	
"A" or "Return"	COM-loop is connected. Press ACCEPT to disconnect	Depending on if the COM loop shall be disconnected or re-
"A" or "Return"	COM-loop is disconnected. Press ACCEPT to re-connect	connected, press "A" or "Return"
"A"	Disconnect / Re-connect COM loop ACCEPT? S1	Scroll or press "Return" to H8.
"Return"	Maintenance ACCEPT? H8	Scroll or press "Return".



# **29.2** Disconnect / Re-connect Zone Line Input (H8/S2)

To avoid damage on the units and FT128 during physical connection / disconnection of units, it is highly recommended to have the zone line disconnected (disabled), i.e. voltage free (dead).

Action	Text in display		Comments
"Access"			According to chapter " Access ", page 79
Scroll to menu H8.	Maintenance	ACCEPT? H8	
"A"	Disconnect / Re-connect COM loop	ACCEPT? S1	
Scroll to menu S2	Disconnect / Re-connect Zone Line Input	ACCEPT? S2	
"A"	Disconnect (=0) or Re-connect (=1) zone line input? <u>1</u>	ACCEPT?	Press "0" or "1" and press "A" to accept.
Depending on if "0" or "1" is chosen, one of the following will be shown:	Disconnect Zone Line Input <u>0</u> expansion board 0	ACCEPT?	Write the 4580 board no. (0-3) and the Zone Line
	Re-connect Zone Line Input <u>0</u> expansion board 0	ACCEPT?	Input no. (0-7). Press "A" to accept.
E.g. "0" "0" "A"	Zone line input 0 expansion board 0 disconnected		
"A"	Disconnect Zone Line Input <u>0</u> expansion board 0	ACCEPT?	Do more disconnections or press "Return".
"Return"	Disconnect (=0) or Re-connect (=1) zone line input? <u>1</u>	ACCEPT?	Write "0" or "1" and press "A" to accept or press "Return" menu S2.
"Return"	Disconnect / Re-connect Zone Line Input	ACCEPT? S2	Scroll or press "Return" to H8.
"Return"	Maintenance	ACCEPT? H8	Scroll or press "Return".



# 29.3 Disconnect / Re-connect addressable zone interface input (H8/S3)

To avoid damage on the units and FT128 during physical connection / disconnection of units, it is highly recommended to have the zone interface input disconnected (disabled), i.e. voltage free (dead).

Action	Text in display	Comments
"Access"		According to chapter " Access ", page 79
Scroll to menu H8.	Maintenance ACCEPT? H8	
"A"	Disconnect / Re-connect COM loop ACCEPT? S1	
Scroll to menu S3	Disconnect / Re-connect addressable zone	
"A"	Disconnect (=0) or Re-connect (=1) addr.	Press "0" or "1" and press "A" to accept
Depending on if "0" or "1" is chosen, one of	Disconnect addressable zone interface input, technical address: <u>0</u> 00 ACCEPT?	Write the COM loop address (001-255).
the following will be shown:	Re-connect addressable zone interface input, technical address: <u>0</u> 00 ACCEPT?	Press "A" to accept.
E.g. "0" "001" "A"	Input technical address 001 disconnected	
"A"	Disconnect addressable zone interface input, technical address: <u>0</u> 00 ACCEPT?	Do more disconnections or press "Return".
"Return"	Disconnect (=0) or Re-connect (=1) addr. zone interface input? <u>1</u> ACCEPT?	Write "0" or "1" and press "A" to accept or press "Return" menu S3.
"Return"	Disconnect / Re-connect addressable zone interface input ACCEPT? S3	Scroll or press "Return" to H8.
"Return"	Maintenance ACCEPT? H8	Scroll or press "Return".



### 29.4 Acknowledge SERVICE Signal (H8/S4)

See chapter "Sensors activating SERVICE signal (H4/U4)", page 101.

Indicated by LED "Service" (L12), which will be turned off when all sensors have been acknowledged.

When a sensor (Analogue smoke detector) that has generated SERVICE signal is acknowledged, the sensor will be given a default sensor value as for a new / clean sensor, i.e. **first** replace the sensor **then** acknowledge the service signal **as soon as possible**.

The very first week average sensor value after the SERVICE signal is acknowledged will be calculated within one hour. Thereafter a new week average sensor value will be calculated every week.

**Note:** If a sensor is <u>replaced without activating service signal</u>, it has to be reset to the default sensor value via menu H8/S5.

If there are no sensors having activated SERVICE signal,

--- List is empty --- will be shown.

Action	Text in display	Comments	
"Access"		According to chapter " Access ", page 79	
Scroll to menu H8.	Maintenance ACCEPT? H8		
"A"	Disconnect / Re-connect COM loop ACCEPT? S1		
Scroll to menu S4.	Acknowledge SERVICE signal ACCEPT? S4		
"A"	Sensor : xx-xx (technical address xxx) needs service L	L = a list in which you can scroll. Press "Fault acknowledge" to acknowledge the service signal <b>or</b> press "Return" to S4.	
"Fault acknowledge"	The service signal for that sensor is now acknowledged and the next sensor will be shown in the display.	If more service signal acknowledgements shall be done, continue like above. If not, press	
	needs service L	"Return" to menu S4.	
"Return"	Acknowledge SERVICE signal ACCEPT? S4	Scroll or press "Return" to menu H8.	
"Return"	Maintenance ACCEPT? H8	Scroll or press "Return".	



### **29.5** Restore Weekly Average to Default (H8/S5)

If a sensor (Analogue smoke detector) is replaced **without having generated SERVICE signal**, its week average sensor value has to be restored and set to a default value. If not, the new / clean sensor will inherit the old sensor's value. The week average sensor value has to be restored for each replaced sensor individually. **First** replace the sensor **then** restore the week average sensor value **as soon as possible**.

The very first week average sensor value after restoring will be calculated within one hour. Thereafter a new average sensor value will be calculated each week.

**Note:** Authorised service personnel only, must use this menu. Used incorrectly it may cause nuisance fire alarms from a sensor or no fire alarm at all.

Action	Text in display	Comments
"Access"		According to chapter " Access ", page 79
Scroll to menu H8.	Maintenance ACCEPT? H8	
"A"	Disconnect / Re-connect COM loop ACCEPT? S1	
Scroll to menu S5.	Restore weekly average to default ACCEPT? S5	
"A"	Enter zone-address to restore: <u>0</u> 0-00 ACCEPT?	Write the zone-address and press "A" to accept.
E.g. "01-01" "A"	Sensor 01-01 (tech addr 001) is restored to default average	
"A"	Enter zone-address to restore: <u>0</u> 0-00 ACCEPT?	If more sensors shall be restored, continue like above. If not, press "Return" to menu S5.
"Return"	Restore weekly average to default ACCEPT? S5	Scroll or press "Return" to menu H8.
"Return"	Maintenance ACCEPT? H8	Scroll or press "Return".



## 29.6 Test of Alarm Devices (H8/S6)

The programmable outputs <sup>84</sup> of type "Alarm device" can be collectively activated via this sub menu (S6), which makes it possible to test the alarm devices without too much disturbance on site.

The test cannot be started if fire alarm is already activated in FT128

When the test starts, the alarm devices will sound for approx. 1 seconds, be silent for approx. 29 seconds, sound for approx. 1 seconds and so on.  $^{85}$ 

Action	Text in display	Comments
"Access"		According to chapter " Access ", page 79
Scroll to menu H8.	Maintenance ACCEPT?	H8
"A"	Acknowledge SERVICE signal ACCEPT?	S1
Scroll to menu S6.	Test of alarm devices ACCEPT?	S6
"A"	Test of alarm devices? ACCEPT?	Press "A" to start the test.
"A"	Test of alarm devices in progress. End test? ACCEPT?	The test will now continue until stopped via this menu (S6) or automatically after one hour or if a fire alarm is activated. Press "A" to stop the test.
"A"	Test of alarm devices? ACCEPT	?
"Return"	Test of alarm devices ACCEPT?	Scroll or press "Return" to return to menu H8.
"Return"	Maintenance ACCEPT?	H8 Scroll or press "Return"

Note: Also disabled (and silenced) alarm devices will be tested.

<sup>&</sup>lt;sup>84</sup> Including Addressable siren 3377 / 4477, Addressable sounder base 3379, Addressable beacon 4380 and Light indicator 4383

<sup>&</sup>lt;sup>85</sup> The output activation will be steady (continuous). For the alarm devices 3377 / 4477 and 3379, the tone with the highest priority level (and type "alarm device") will be automatically selected.



## 29.7 Safe Shut Down Of Control Unit (H8/S7)

**It's not recommended** to power down (de-energize) FT128 without first doing a safe shut down. Safe shut down will save the SSW in a Flash memory and also put the CPU at rest. <sup>86</sup> See also chapter" Restart ", page 76.

**It's recommended** to do a safe shut down after commissioning the installation and after calibration of supervised outputs, change of access code etc.

**Note:** By restart and power down, the Fault TX relay, which is powered in quiescent / normal state, will be powerless, i.e. the relay contacts will alternate.

Action	Text in display		Comments	
"Access"			According to chapter " Access ", page 79	
Scroll to menu H8.	Maintenance ACCEPT?	H8		
"A"	Acknowledge SERVICE signal ACCEPT?	S1		
Scroll to menu S7.	Safe shut down of control unit ACCEPT?	S7		
"A"	For safe shut down of control unit press ACCEPT			
"A"	Control unit ready for power down. To restart without power down press ACCEPT.	it	The SSW is now saved, the CPU is at rest and	
	<b>NOTE!</b> If you change your mind regarding power do press "A" to restart the CU ( <u>or</u> wait <b>5 min.</b> for an aut restart).	own, 	the CU is ready to be de-energized.	
Power down – up <u>or</u> "A"	Normal restart indication, see page 76		After the restart / power up there will be a fault, which has to be	
<u>or</u> after 5 min.	FAULT: Restart code 0x addr 0         Date: mm-dd Time: hh:mm       Servic	ed	acknowledged, see chapter "Acknowledge FAULTS (H6)", page 113. Restart = code 03	
			01 00.	

<sup>&</sup>lt;sup>86</sup> All LEDs, incl. "Operation" (L6), will be turned off as well as the communication on the COM loop, RS232 / -485 serial lines and the input "I0".



# 29.8 Activate Zone-Address in Alarm Mode (H8/S8)

One alarm point (zone-address), not a whole zone, can be manually activated, i.e. be set in alarm mode.

**Note:** All outputs, standard and programmable, which would have been activated by a real fire alarm from the same alarm point, will be activated by this "manually activated" alarm as well.

Action	Text in display	Comments
"Access"		According to chapter " Access ", page 79
Scroll to menu H8.	Maintenance ACCEPT? H8	
"A"	Acknowledge SERVICE signal ACCEPT? S1	
Scroll to menu S8.	Activate zone/address in alarm mode ACCEPT? S8	
"A"	Select zone: 00 address: 00 ACCEPT?	
Write the zone and address e.g. "12-45"	Select zone: 12 address: 45 ACCEPT?	Press "A" to accept / activate the fire alarm.
"A"	001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01 "Alarm text for 12-45"	Normal fire alarm presentation in the FT128. If more alarm points have to be set in alarm status, press "Return" to select another zone - address and continue as above.
"Return"	Select zone: 00 address: 00 ACCEPT?	
Write another zone and address, e.g. "12-34".	Select zone: 12 address: 34 ACCEPT?	Press "A" to accept / start the fire alarm.
"A" "Alarms queued"	001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01 "Alarm text for 12-45" 002 ZONE-ADDR 12-34 LAST ZONE 12 No. 01	The LEDs "Alarms queued" (L2) are indicating that more than one alarm point is in alarm. Press the button "Alarms queued"
	"Alarm text for 12-34"	(P1) to see the other alarm. Press "Reset" to reset the alarm(s).



What happens when you press "Reset" is depending on:

a) if you still are in menu H8/S8 and single encapsulated reset is used

b) if you still are in menu H8/S8 and <u>multiple reset</u> is used **or** if you have <u>left the menu</u> system (by pressing "Peturp" two times **or** automatically after 10 minutes)

 $\underline{system}$  (by pressing "Return" two times  $\boldsymbol{or}$  automatically after 10 minutes).

Alternative a)	Activate zone/address in alarm mode	Scroll or press "Return"
"Reset"	ACCEPT? S8	to menu H8.
	Maintenance ACCEPT? H8	Scroll or press "Return".

Alternative b)	(Blank)	
"Reset"		

#### Note:

Multiple reset is default.<sup>87</sup>

By Single encapsulated reset each point has to be reset individually.

See also chapter "Alarm reset", page 55.

<sup>&</sup>lt;sup>87</sup> Alarm reset is selected via EBLWin, "Control Unit Properties", tab "Advanced".



# 29.9 Activate Output (H8/S9)

Any output can be activated via this menu (H8/S9). **Note:** It will be activated until reset via menu H8/S10.

Action	Text in display	Comments
"Access"		According to chapter " Access ", page 79
Scroll to menu H8.	Maintenance ACCEPT? H8	
"A"	Acknowledge SERVICE signal ACCEPT? S1	
Scroll to menu S9.	Activate output ACCEPT? S9	
"A"	Activate output type: <u>0</u> 0=Loop unit 1=S 2=R0 3=EXPB ACCEPT?	Loop unit=3361 or 3364 S=S0-S1, R0=R0 EXPB= 4581 or 4583
Depending on if 0, 1, 2 or 3 is selected	Activate output: <u>0</u> , technical address 000 ACCEPT?	Fill in the requested data respectively and press "A".
one of the alternatives will be shown.	Activate S <u>0</u> ACCEPT? Activate R <u>0</u>	
	ACCEPT? Activate output: <u>0</u> , expansion board 0 ACCEPT?	
"A" Depending on if 0, 1, 2 or 3 is selected one of the alternatives will be shown.	Output 0 technical address 002 forced active Output S0 forced active Output R0 forced active	
	Output 0 expansion board 0 forced active	
"A" "Return"	Activate output type: <u>0</u> 0=Loop unit 1=S 2=R0 3=EXPB ACCEPT?	If more outputs shall be activated do as above, else press "Return" to menu S9.
"Return"	Activate output ACCEPT? S9	Scroll or press "Return" to menu H8.
"Return"	Maintenance ACCEPT? H8	Scroll or press "Return".



# 29.10 Reset activated output (H8/S10)

Output(s) activated via menu H8/S9 have to be reset via this menu (H8/S10).

Note: Only output types that are activated will be shown and possible to select.

Action	Text in display		Comments
"Access"			According to chapter "Access", see page 79
Scroll to menu H8.	Maintenance	ACCEPT? H8	
"A"	Acknowledge SERVICE signal	ACCEPT? S1	
Scroll to menu S10	Reset activated output	ACCEPT? S10	
"A"	Reset output type: <u>0</u> 0=Loopunit 1=S 2=R0 3=EXPB	ACCEPT?	Only output types that are activated will be shown. Loop unit=3361 or 3364 S=S0-S1 R0=R0 EXPB= 4581 or 4583
Depending on if 0, 1, 2 or 3 is selected	Reset output: 0, technical address 000	ACCEPT? L	L=A list in which you can scroll. Select the
one of the alternatives will be shown.	Reset S <u>0</u>	ACCEPT? L	output to reset and press "A".
	Reset output: 0, expansion board 0	ACCEPT? L	
		ACCEPT? L	
"A"	Reset output type: 0 0=Loop unit 1=S 2=R0 3=EXPB	ACCEPT?	Only output types that are activated will be shown. When all outputs are reset,
			List is empty will be shown.
"Return"	Reset activated output	ACCEPT? S10	Scroll or press "Return" to menu H8.
"Return"	Maintenance	ACCEPT? H8	Scroll or press "Return".



# 30 Interlocking Outputs and Inputs (H9)

# **30.1** Activated Interlocking Outputs/Inputs (H9/C1)

If there are no output / input activated, --- List is empty --- will be shown.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79 .
Scroll to menu H9.	Interlocking outputs and inputs ACCEPT? H9	
"A"	Activated interlocking outputs/inputs ACCEPT? C1	
"A" Depending on activated output and/or input, the following will be shown:	Output AA/PP activated at HH:MM Alarm text (if progr.)	This is a list in which you can scroll.
	Output AA/PP act HH:MM, input act HH:MM Alarm text (if progr.)	AA = interlocking combination Area PP = interlocking combination Point (within the area). Press "Return" to menu C1.
	Input AA/PP activated at HH:MM Alarm text (if progr.)	
"Return"	Activated interlocking outputs/inputs ACCEPT? C1	Scroll or press "Return" to menu H9.
Scroll to menu H9.	Interlocking outputs and inputs ACCEPT? H9	Scroll or press "Return"



# **30.2** Activate Interlocking Output (H9/C2)

The output in each interlocking combination (area / point) can be manually activated via this menu. The corresponding interlocking input will be "monitored" in the same way as if the output was activated by its control expression.

Reset has to be performed via menu H9/C3.

Action	Text in display		Comments
"Access"			According to chapter "Access", see page 79 .
Scroll to menu H9.	Interlocking outputs and inputs	ACCEPT? H9	
"A"	Activated interlocking outputs/inputs	ACCEPT? C1	
Scroll to menu C2.	Activate interlocking output	ACCEPT? C2	
"A"	Activate interlocking output area $\underline{0} 0$ point 00	ACCEPT?	
e.g.: "01", "01" "A"	Interlocking output 01-01 activated		
"A"	Activate interlocking output area 01 point 01	ACCEPT?	If more outputs shall be activated do as above, else press "Return" to menu C2.
"Return"	Activate interlocking output	ACCEPT? C2	Scroll or press "Return" to menu H9.
"Return"	Interlocking outputs and inputs	ACCEPT? H9	Scroll or press "Return"



## **30.3** Reset Interlocking Output (H9/C3)

All activated interlocking outputs are listed in this menu.

Interlocking output activated via its control expression and with latching <u>output selected</u> (in EBLWin): The output has to be reset via this menu (C3).

Interlocking output activated via its control expression and with latching output **not** <u>selected</u>: The output can be reset via this menu (C3).

Interlocking output activated via menu H9/C2: The output has to be reset via this menu (C3).

Action Text in display Comments According to chapter "Access" "Access", see page 79 Scroll to menu H9. Interlocking outputs and inputs ACCEPT? H9 "A" Activated interlocking outputs/inputs ACCEPT? C1 Scroll to menu C3. Reset interlocking output ACCEPT? C3 "A" Reset interlocking output This is a list in which you area  $\underline{0}$  0 point 00 ACCEPT? can scroll. Press "A" (for reset) or "Return" (no reset) to menu C3. "A" or Reset interlocking output Scroll or press "Return" to "Return" ACCEPT? C3 menu H9. "Return" Interlocking outputs and inputs Scroll or press "Return" ACCEPT? H9

If there are no outputs to reset, --- List is empty --- will be shown.



# **30.4** Disable Interlocking Output (H9/C4)

**Up to 100** Interlocking outputs (Type = Interlocking) can be individually disabled via this menu but not via menu H2.

The "Interlocking Combination" (Area / Point) is to be entered to disable the output. **All** interlocking outputs can be collectively disabled via menu H2/B4.

Disabled interlocking outputs are listed in menu H4/U1.

The LED "Disablements" (L8) is also indicating one or more disabled interlocking outputs.

Action	Text in display		Comments
"Access"			According to chapter "Access", see page 79 .
Scroll to menu H9.	Interlocking outputs and inputs	ACCEPT? H9	
"A"	Activated interlocking outputs/inputs	ACCEPT? C1	
Scroll to menu C4.	Disable interlocking output	ACCEPT? C4	
"A"	Disable interlocking output area $\underline{0}$ 0 point 00	ACCEPT?	
e.g.: "01", "01" "A"	Disable interlocking output area 01 point 01	ACCEPT?	Press "A" to accept and/or "Return" to menu C4.
"A"	interlocking output 01 – 01 disabled		
"A"	Disable interlocking output	ACCEPT? C4	Scroll or press "Return" to menu H9.
Scroll to menu H9.	Interlocking outputs and inputs	ACCEPT? H9	Scroll or press "Return"



# **30.5** Re-Enable Interlocking Output (H9/C5)

Disabled interlocking outputs are listed in menu H4/U1.

Interlocking outputs (Type = Interlocking) will be re-enabled via this menu but <u>not via menu</u> <u>H2</u>.

**All** interlocking outputs, <u>disabled via menu H2/B4</u>, will be re-enabled via menu H2/B8 If there are no outputs to re-enable, --- List is empty --- will be shown.

Action	Text in display		Comments
"Access"			According to chapter "Access", see page 79.
Scroll to menu H9.	Interlocking outputs and inputs	ACCEPT? H9	
"A"	Activated interlocking outputs/inputs	ACCEPT? C1	
Scroll to menu C5.	Re-enable interlocking output	ACCEPT? C5	
"A"	Re-enable interlocking output area 0 0 point 00	ACCEPT?	This is a list in which you can scroll.
			Press "A" (for re-enable) or "Return" (not re-enable) to menu C5.
"A" or "Return"	Re-enable interlocking output	ACCEPT? C5	Scroll or press "Return" to menu H9.
"Return"	Interlocking outputs and inputs	ACCEPT? H9	Scroll or press "Return"



# 31 Change Password (H10)

The password can be changed for the user (user name) that is logged in but it is recommended to do it via EBLWin instead.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 79
Scroll to menu H10.	Change access code for daily duties ACCEPT? H10	
"A"	Password: New Password: Verify:	
Enter the old and new passwords and the new password again.	Password: ***** New Password: **** Verify: *****	The digits are replaced (******) in the display.
	Incorrect Password, NO change	Wrong password was entered. Try again.
	Password is changed	Correct password was entered.
	Change Password ACCEPT? H10	Scroll or press "Return" to log off.

Note: As long as you don't close the door you can enter the menu system again without a password.

**Note:** After change of password, it is recommended to do a "Safe shutdown of the control unit" (see menu H8/S7). This will save the SSW data (e.g. the new password) in a Flash ROM (see page 76).

Use EBLWin to change the password(s) if they are forgotten.



# 32 Battery Maintenance

The batteries (2 x 12 V, 7 - 27 Ah) are normally placed inside FT128 cabinet (Larger batteries are placed in a separate battery box attached to FT128 cabinet).

FT128 supervises the batteries and a fault will be generated if something goes wrong.

The batteries are rechargeable sealed Lead-Acid batteries and maintenance-free. The manufacturer's instructions shall always be followed.

The ambient temperature affects the battery capacity, self-discharge and life span. If possible, it should not be higher than normal room temperature

The current maintenance standard recommends to perform a regular battery capacity test, if this test is not performed, batteries shall be automatically changed every two years.



# 33 How to Avoid Unnecessary (Nuisance) Fire Alarms

We all realise, when life, buildings, production facilities, etc. need to be saved, it is of utmost importance that an initial fire is detected as soon as possible. That's why more and more automatic fire alarm systems are installed.

In an automatic fire alarm installation, especially if smoke detectors (sensors) are used, everybody in the building needs to be informed how to avoid unnecessary (nuisance) fire alarms.

To avoid trouble and unnecessary expenses there are a couple of things to bear in mind. Here are some advice and tips.

#### Tobacco smoke

The detectors (sensors) cannot differentiate between one type of smoke and another type. They cannot separate tobacco smoke from smouldering smoke. Intensive tobacco smoking in conjunction with poor ventilation can cause a fire alarm.

Welding, grinding, cutting, sawing & drilling, these types of activities may generate smoke.

#### Carpet welding

Welding of plastic carpets causes a smoke that can be almost invisible, but still influence the smoke detectors (sensors).

#### Cooking fumes, toasting & candles

It is not only "normal smoke" that influences smoke detectors (sensors). It is all kinds of "combustion products", caused by cooking (frying/grilling), toasting, etc. Warning! Be careful when there are smoke detectors (sensors) near such activity.

#### **Special environments**

Certain premises and environments can influence smoke detectors (sensors) and cause alarms. It can be ions (from plastics), flour dust, oil haze, aerosols, strong perfumes, strong ventilation, insecticides, disinfecting sprays, etc. If many odd and unnecessary alarms occur, the environment must be examined and perhaps other detector types have to be chosen.

#### Steam / hot air

Smoke and heat detectors are influenced by steam and hot air, e.g. from an oven, dryblower, heater, etc.

#### Exhausts

Exhausts from cars / trucks, lift trucks, lawn mowers, etc. influences smoke detectors (sensors). If windows and doors are open, exhausts can "slip in" that way.

#### Lack of maintenance

Smoke detectors (sensors) are influenced by their environment and become "dirty". In an Analogue system (like FT128) a Service signal is given when it is time to clean or exchange the smoke detectors (sensors). The alternative is to exchange detectors at even intervals, to be on the safe side.

#### Change in activities or wrong choice of detector

If the activities in the premises are altered, the detector choice might also need altering. Due to some of the special environments shown above, an in-appropriate detector type might have been chosen from the beginning and thus cause unnecessary alarms.



#### Miscellaneous

Choosing another type of detector, e.g. a multi detector (with both heat and smoke detection), can solve certain problems. Note that the coverage area can be different for different types of detectors.

It is however not always the best action is to change detector type. Here is a list of other actions, programmed via EBLWin, which can be used:

- Another <u>alarm algorithm</u> can be used, e.g. during working hours.
- Co-incidence (two units) fire alarm activation can be used.
- In an installation with addressable detectors / sensors (e.g. FT128), the affected detectors can be <u>individually disabled</u> (or whole zones) when the work is in progress. Bear in mind that the smoke spreads, and consideration must be taken to adjacent detectors/zones. Disablements can be done automatically via a <u>time channel</u> (built-in or external) or via <u>menu</u> (H2/B1-B3). Automatic re-enabling can be used.
- If there is an alarm investigation procedures for the personnel on site, the <u>alert</u> <u>annunciation</u> function can be used.
- <u>Pre-warning</u> can be used.



# 34 Block Wiring Diagram

All drawings and connection diagrams quoted in this manual are shown on Table 14. These drawings are subject to change without notice, as are other technical features and data, resulting from continual development and improvement.

ltem	Drawing No.	Issue	Description	
1	F625	1	FT128 & FT512 General Arrangement	
2	F665	8	FT128 Standard Block Wiring Diagram (BWD)	
3	F667	1	FT128 Main & Expansion Boards Layout	
4	F702A	5	NZ FT128 BWD with Mimic & Bulgin Keys	
5	F702B	5	NZ FT128 BWD without Mimic & Bulgin Keys	
7	F728	2	4580 - 8 Zone Expansion Board	
8	F729	2	4581 - 8 Relay Expansion Board	
9	F730	2	4582 - I/O Matrix board	
10	F731	2	4583 - 5 Inputs 3 Outputs Expansion Board	
11	F733	2	COM Loop Units Connection Diagram	
12	F734	2	Web-Server II Connection Diagram	
13	F735	2	3361 Addressable Multi-purpose Module	
14	F737	2	3364 / 3366AU Connection Diagram	
15	F779	1	WA ASE Connection Diagram	
16	F780	3	FT128 Gas Module Connection	
17	F784-01	0	COM Loop Cable Length & Specifications Sheet 1	
18	F784-02	0	COM Loop Cable Length & Specifications Sheet 2	

#### Table 14 Other Drawing Lists

The above drawings will be available in a separate document, only three drawing are shown in this manual:

- 1. Drawing F264 General Arrangement for FT128
- 2. Drawing F625 Standard FT128 Block Wiring Diagram
- 3. Drawing F702A Standard FT128 Block Wiring Diagram for NZ





Figure 10 FT128 General Arrangement



#### Operation Manual FT128 Rev 2.2







#### Operation Manual FT128 Rev 2.2







# 35 Revision History

## 35.1 Operation Manual Revisions Table

Issue	Date	Description	Written By	Checked By
Rev 0	16/04/07	Update the original MEW00509 Rev 2 document for the Australian convention. 16/04/07	A. Shenouda	C. Orr
Rev 1	15/01/09	Update the original MEW01091 Rev 1 document for the Australian convention.	A. Shenouda	C. Orr
Rev1.1	24/03/09	Add general arrangement drawing and update wiring diagrams	A. Shenouda	A. Shenouda
Rev1.2	02/02/11	Add OWS details & update	G. Powell	A. Shenouda
Rev 2.0	27/11/13	Update to V2.0 software and add gas module option	AS / ET	AS
Rev 2.1	06/06/14	Update to include the features in V2.1 software,	AS	
Rev 2.1.1	26/8/14	Change limitations in Table 2, page 13	AS	
Rev 2.1.2	12/1/15	Minor update to add EBLWin V2.1.2 feature, transfer drawings to separate document & keep only 2 drawings.	AS	
Rev 2.2	12/08/15	Minor update, include V2.2.x software, added Local Alarm Acknowledgement.	Edwin T.	A. Shenouda

# 35.2 Software Revision 2.2.0 Modifications

#### 35.2.1 New common features and additions

#### • Local Alarm Acknowledgement Unit 4445

The module is the Panasonic version of Brooks AAM, in EBLWin the module is called "Local Alarm Acknowledgement Unit" LAAU. **Note**: Brooks AAM (AAFC in EBLWin) has been moved to the obsolete loop unit section in EBLWin.



#### • Zone Groups

This is new control expressions that can be used to group unlimited number of zones into one zone group. A single zone can only be a member in one zone group. Maximum of 30 zone groups can be defined in a system. The new control expressions for zone groups are as follow:

- PreWarningZoneGroup (Zone Group, No. of alarms)
- FireAlarmZoneGroup (Zone Group, No. of alarms)
- HeavySmokeAlarmZoneGroup (Zone Group, No. of alarms)
- FirstAlarmInZoneGroup (Zone, Zone Group)
- Pulse on 3361 and 3364

The "Pulse" and "Delayed pulse" (defined in output signal period) can now be programmed for the outputs of 3361 and 3364. The pulse width should be fixed for 7 seconds.

• Selectable fire alarm types for zone line inputs



In previous revisions, all fire alarms from a zone line input via 3361 or 4580 are treated as a normal fire alarm (type A). In V2.2.0, the zone line input can be programmed in EBLWin V2.2.0 to one of the following five different alarm types: Smoke (B) Heat (B)

MCP (A) Other (A) Other (B)

#### 35.2.2 New or modified features in EBLWin only

- Fault latching in the Australian convention is set as default in system properties.
- If the CIE time differs more than 60 minutes to the time shown in the PC, a dialog box will display when logon is performed. Via this dialog box, the PC time can be used to update the CIE time.
- A user that is defined to have access to Web-server (not the CIE) can have a password containing between 6 and 10 character (not only digits).
- In V2.2.0, the fault list can be sorted by CIE and COM loop.

#### 35.2.3 New or modified feature in system software EBL only

 Output without a control expression are considered to be non-existent in the system. In previous versions, an output with no control expression could be manually controlled from the menu system, fan control or via EBLnet. In V2.2.0, an output with no control expression is considered to be non-existent and cannot be controlled in any way.

If an output is to be controlled manually only, it must have a never-true control expression similar to "TimeChannelActivated" (Always off).

• If an input is set to "Not used", or if an output has no control expression, the supervision fault is not generated even if the "Supervised" check box in EBLWin is checked.



NSW - Head Office 4 Pike Street Rydalmere NSW 2116 Ph: 02 9684 1466 Fax: 02 9684 4146 Website: www.BROOKS.com.au

#### VIC

1/3 Molan Street, Ringwood, VIC 3134 Ph: 03 9879 5294 Fax: 03 9879 5249

#### SA

729A Port Road, Woodville, SA 5011 Ph: 08 8347 0000 Fax: 08 8347 0600

#### QLD

2/49 Boyland Ave Coopers Plains, QLD 4108 Ph: 07 3373 8222 Fax: 07 3373 8022

#### WA

P.O. Box 2114, Midland DC W.A. 6936Ph: 08 6262 8095Fax: 02 9684 4146

#### New Zealand

Unit 106 "The Zone" 23 Edwin St, Mt Eden, Auckland 1024 Ph: +64 9 638 4644, Toll Free 0800 220 007 (NZ only) Fax: +64 9 638 4645

Or National Australian Sales Number: 1300 78 FIRE (3473) For the cost of local call.



