



G002238

Control M2.2 FIRE H

Part no. 5100037-01A

System: TS1000, CFD500 T

General Description

The Control M 2.2 is a Control Panel with a 2.2" graphical colour display used to manage and supervise the fire detection system.

Control M 2.2 is equipped with communication buses interfacing with other system modules directly via the backbone bus. The module provides the following general features:

- A backlit 2.2" graphical colour display
- Alarm buzzer
- LED status indicators
- Backbone Bus Interface
- Ethernet connection (RJ45)
- RS-422/RS-485 interface (not isolated)
- RS-485 interface (isolated)
- USB interface for service
- Two configurable powered I/Os
- Two programmable relay outputs

Refer to the User Guide for more information on operation of Control M 2.2.

For details on assembling a system and definitions of common system terms, refer to the Installation Manual.

Data

Nominal supply voltage	24 V DC
Operating voltage range	19-30 V DC
Current consumption (at 24V)	105 mA
Ingress protection	IP20
Operating temperature range	-40 °C to +85 °C (Tx)
Weight	245 g ± 5%
Display	2.2", 240×320 pixels, TFT
Ethernet	10/100 Mbit, autosense
USB	USB 2.0
Relays rating	Max. 30 V DC, 500 mA
I/O 70 (as input)	24 V DC 5-70 mA
I/O 70 (as output)	24 V DC Max. 70 mA
Cable terminals	2.5 mm ²
SD Memory	(Needed to save history at restart)
Certified according to	ROHS EN 45545 See separate document for approvals and certifications

Settings

The module is identified by a physical address on the Backbone Bus. The address is set with an 8-pole DIP switch.

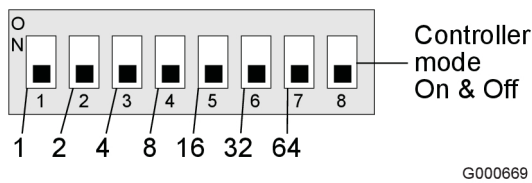
Hot-Swap Replacement of the Module

Replace this module following these steps:

1. Remove the old module from its holder.
2. Address the new module DIP-Switch settings using old module as a guide.
3. If installed, move the Micro SD memory from the old module to the new module.
4. Plug the new module back into its holder.

Address Switch

This switch identifies modules in the system and sets the function. Control modules can operate in Controller Mode or in Managed Mode, for example repeaters and protocol converters. Address 1 and 2 are dedicated for control modules in Controller Mode. One control module per central shall be set in Controller Mode. If the system shall be redundant it is required to have a second control module, also set in Controller Mode. Modes for Managed and Controller are set with DIP switches as described in the following table:



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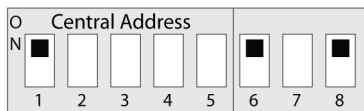
	Managed Mode	Controller Mode
DIP 8	Controller Mode (OFF)	Controller Mode (ON)
DIP 7	Module Address (3-125)	Spare
DIP 6		Master (ON/OFF)
DIP 5		Central Address (1-30)
DIP 4		
DIP 3		
DIP 2		
DIP 1		

Control Modules have two different modes of operation, as determined by their DIP settings (normally pre-set from factory):

Controller Mode

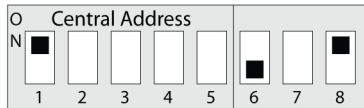
Single Central System:

Central 1 Primary
(automatically module address 1)



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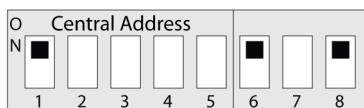
Central 1 Secondary (optional)
(automatically module address 2)



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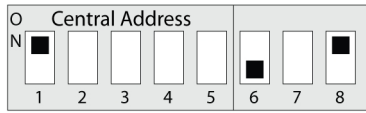
Multi Central System:

Central 1 Primary
(automatically module address 1)



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Central 1 Secondary (optional)
(automatically module address 2)



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Central 30 Primary
(automatically module address 1)



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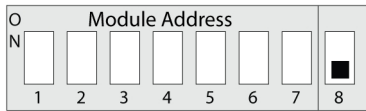
Central 30 Secondary (optional)
(automatically module address 2)



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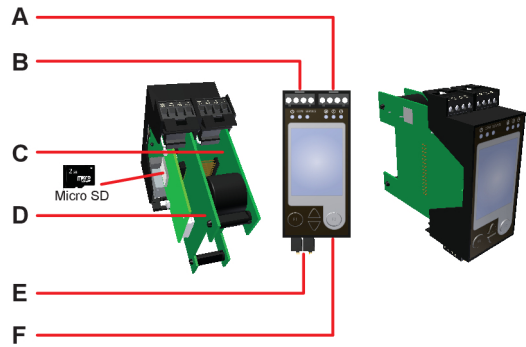
Managed Mode

Module Address 3-125



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Detail Overview



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Detail	Description
A	RS 422/485
B	Digital Input
C	Relay Board
D	MAIN PCB
E	RS485 Relay Output
F	USB and Ethernet

Connections



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	Connector No.	Function	Description
A	15	D+	RS485 in/out Not isolated (RS422Tx)
	16	D-	
	17	D+	RS422Rx Isolated
	18	D-	
B	11	DIN1A	Digital In 1 (Type 2)
	12	DIN1B	
	13	DIN2A	Digital In 2 (Type 2)
	14	DIN2B	
E	1	C	Programmable output 1 Max. 32V/1A
	2	NO	
	3	NC	Programmable output 2 Max. 32V/1A
	4	C	
	5	NO	

	Connector No.	Function	Description
E	6	D+	RS485 in/out Isolated
	7	D-	
	8	SG	

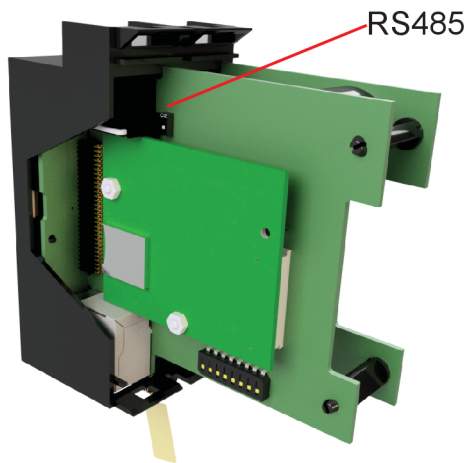
	Connector No.	Function	Description
E	9	D+	Terminal for connection of 120 Ω RS485 termination resistor
	10	D-	

Connector A RS485 Termination

Should the module be the last unit on the backbone bus, a built-in termination resistor (120 ohm) can be activated with the DIP switch located on the MAIN PCB for connector A RS485 termination.

Should the module be connected to other system modules, not being the last unit on the backbone bus, this DIP switch must be inactivated.

For recommendations and examples on RS485 termination, refer to the Installation Manual.



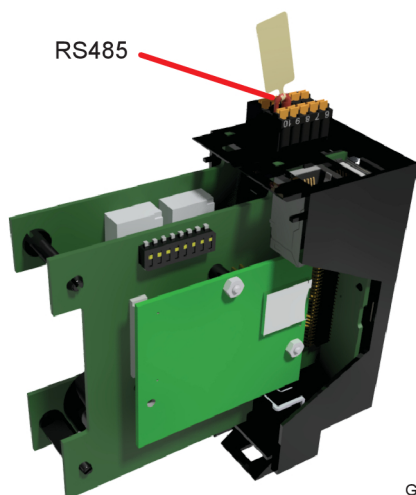
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Connector E RS485 Termination

Below the Control M 2.2 module there is a termination resistor (120 ohm) dedicated for RS485 channel termination.

Should the module be connected to other system modules, not being the last unit on the backbone bus, this termination resistor must be removed.








For recommendations and examples on RS485 termination, refer to the Installation Manual.



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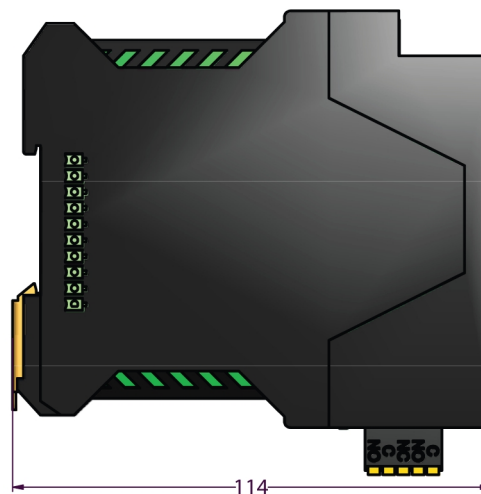
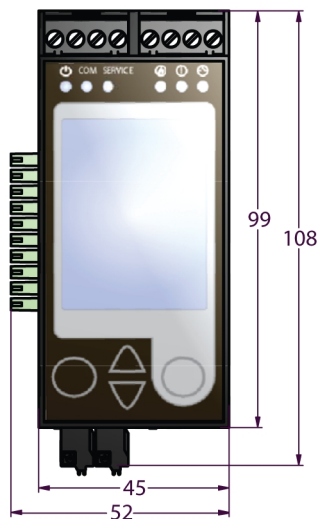
Figure 1. RS485 termination

Indicators

Front	Indicator	Colour, pattern	System status*
	 Power	Green steady light.	The power supply to the control panel is OK.
		Yellow steady light.	During the start-up phase this indicator is yellow until the system is ready.
	 Communication activity	Green steady light.	Communication between the system modules is OK.
	 Service	Yellow steady light.	There is a disturbance in the system. For instance a dirty detector that has reached the contamination level.
	 Fire alarm	Flashing red light.	An un-muted fire alarm in the system.
		Steady red light.	All fire alarms are muted.
	 Fault	Flashing yellow light.	An un-muted fault in the system.
		Steady yellow light.	All faults are muted.
 Disabling	Steady yellow light.	At least one disabled function in the system.	

* Control M 2.2 indicators display system status. Refer to the User Guide for more information.

Module Dimensions (mm)



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Mounting

Mount the module on a horizontal 35 mm DIN rail.