

SV SISTEMI DI SICUREZZA

ITALY



EXFIRE360/

MINI-EXFIRE360

EXMULTIBUS TECHNICAL SPECIFICATION

TECHNICAL SPECIFICATION

REVISION 07 OF 13/10/2020

TS-0014-EN-REV07

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INDEX OF REVISIONS

REVISION	DESCRIPTION	DATE
Revision.01	Preliminary version	17/01/2010
Revision.02	Revised for certification scope	08/03/2010
Revision.03	Revised for certification scope	20/10/2010
Revision.04	Revised for graphic update	18/11/2011
Revision.05	Revised for certification scope	26/01/2012
Revision.06	Revised for IMQ certification scope	10/01/2017
Revision.07	Revised for updating company address	13/10/2020

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1 GENERAL INFORMATION

1.1 CODES AND STANDARDS

Design of hardware and software have been developed according to the following reference standards.

Construction Products Regulation (CPR) – Regulation 305/2011.

“Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC”.

EN 54-2

“Fire detection and fire alarm systems - Part 2: Control and indicating equipment”

EN 54-4

“Fire detection and fire alarm systems - Part 4: Power supply equipment”

EN 12094-1

“Fixed firefighting systems - Components for gas extinguishing systems - Part 1: Requirements and test methods for electrical automatic control and delay devices (only for EX6EV-C card)”

EN 60079-29-1

“Explosive atmospheres - Gas detectors - Performance requirements of detectors for flammable gases”

1.2 DESIGN REQUIREMENTS

EXMULTIBUS has the environmental classification of the EXFIRE360 control panel.

1.3 MANUAL CONTROLS

Card is not equipped with manual controls.

1.4 VISIBLE INDICATIONS

Alarm, fault and other supervisory or monitoring indications are visible on the Master display, light emitting indicators adjacent to the display and on ModLcd displays installed on each module.

Touch-screen operations on Master display give access to the panel functions (at access levels 1/2/3).

Visible indications are clearly identified at access level 1 for their specific function.

1.5 DISTINCT LIGHT INDICATIONS

Visible indications are clearly identified at access level 1 for their specific function. Mandatory visible indications could be fully tested through “Test LED” function available at level 2.

EXMULTIBUS is also equipped with 5 LEDs that identify the card status.

1.6 INDICATIONS SHOWN ON ALPHANUMERIC DISPLAYS

MODLCD display shows the information about two adjacent input/output cards, including all the visible indications of the status of each input/output line: “Activate”, “Alarm”, “Supervisory”, “Fault”, “Isolate”, “Test”.

Information about the status of diagnostics and card settings can be retrieved in the card “Menu”.

2 EXMULTIBUS PRESENTATION

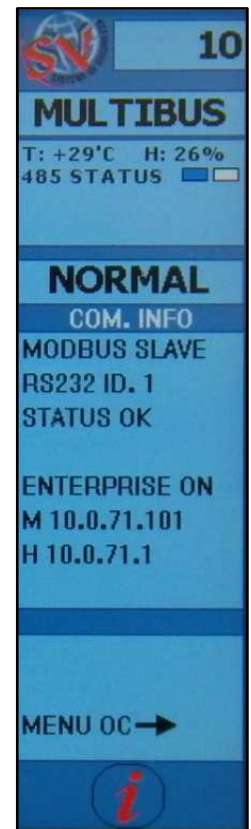
EXMULTIBUS is a communication card that interfaces EXFIRE360 control panel with third-parties' devices; the available protocols are:

- Enterprise: provides an Ethernet link to a host PC equipped with the supervision software SV Enterprise. Information about the state of devices connected to the panel are shown on graphical pages and silencing, reset or disablement commands can be sent by the operator to the panel;
- EXFIRE360: shares information between multiple EXFIRE360 control panels connected to an Ethernet network;
- MODBUS: sends/receives information to/from third-parties' equipment using the standard Modbus RTU protocol, configurable for Master or Slave mode on RS485 or RS232 serial port (functions 01, 02, 03, 04, 15, 16).

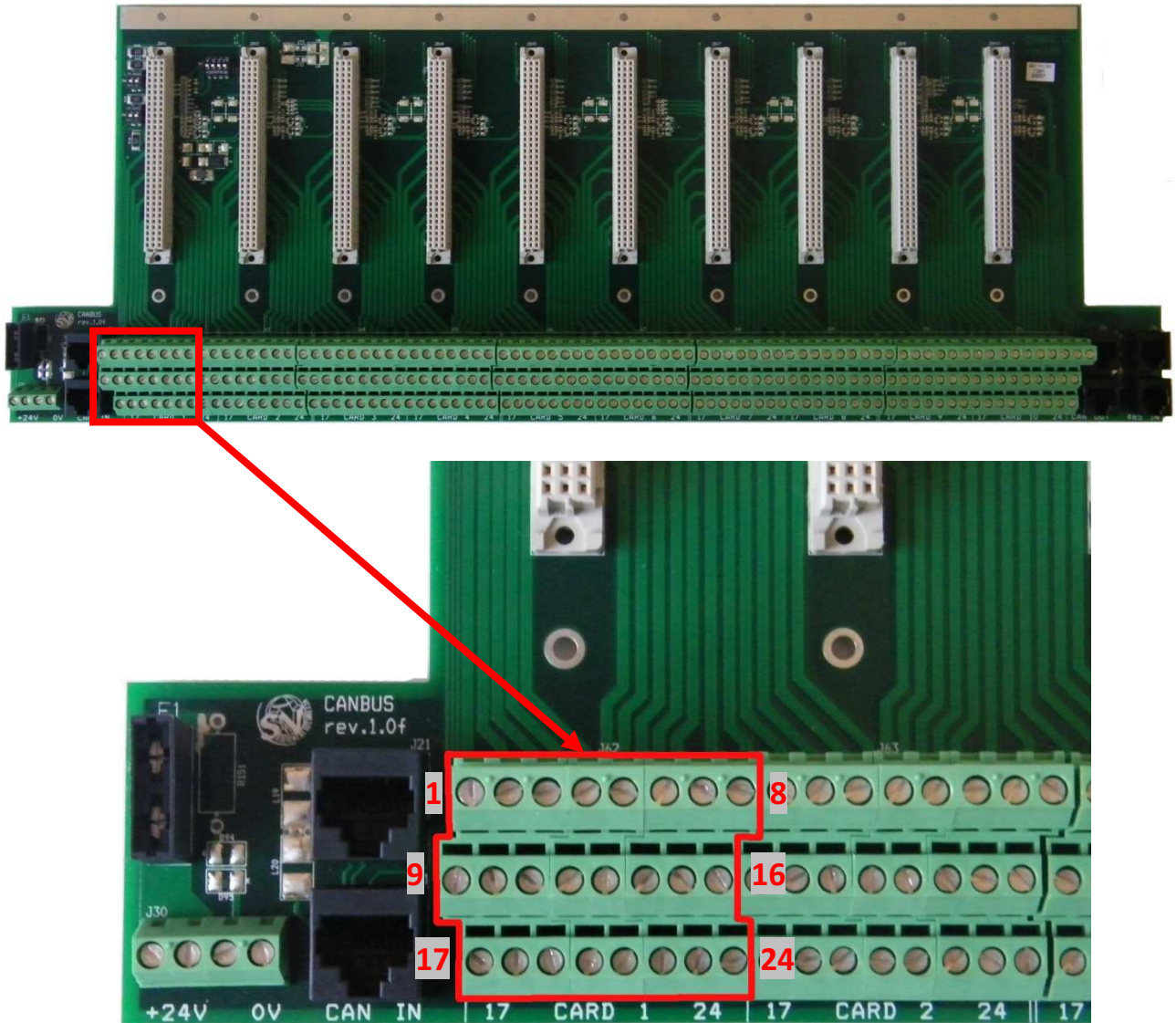
Communication options can be configured in the programming software SV Protection or through the MODLCD display. Please refer to the "TM-0006 Programming manual" and "TM-0001 Operator manual" for further details.

2.1 MAIN FEATURES

- "hot-swap" insertion in a CANBUS slot;
- automatic card addressing;
- execution of diagnostic functions;
- Enterprise protocol connecting to the Ethernet port on the front;
- EXFIRE360 protocol connecting to the Ethernet port on the front;
- MODBUS RTU protocol (Master or Slave) connecting to the RS485 or RS232 serial port (see Terminals section);
- control of seven Open Collectors (max. 500 mA);
- monitoring of card temperature;
- monitoring of card humidity;
- monitoring of CANbus communication;
- monitoring of supply voltages (24 Vdc/ 5 Vdc / 3.3 Vdc);
- supply voltage: 21÷30 Vdc;
- standby current consumption: 200 mA;
- working temperature: -5 to +40°C;
- storage temperature: -10 to +50°C;
- humidity range (UR): ≤ 95% non-condensing;
- dimensions: standard Eurocard 160 mm x 100 mm;
- five LEDs on card.



3 WIRING DETAILS



All the terminals must have a limited power to avoid dangerous conditions caused by over-heating or short conditions. Here below the characteristics of CANBUS terminals:

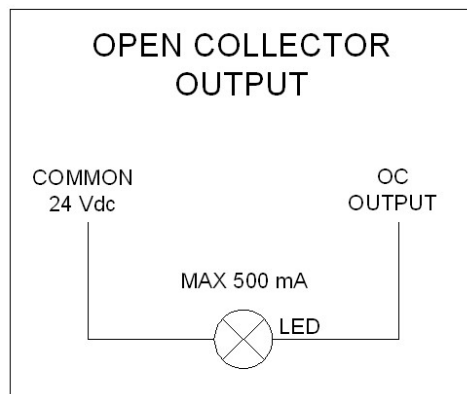
- Angle of cable entry: horizontal;
- Maximum operational temperature: 110° C;
- Admitted sections of the wire: AWG 12, 14, 16, 18, 20, 22, 24 – mm² 0.05 - 2.50;
- Maximum admitted current: 17,5A;
- Maximum admitted voltage: 300V.

3.1 TERMINALS

CARD	TERM.	ROW	DESCRIPTION
EXMULTIBUS	1	1	CAN 1 - High
	2		CAN 1 - Low
	3		RS485 1 – A
	4		RS485 1 – B
	5		RS485 1 – Shield
	6		RS485 2 – A
	7		RS485 2 – B
	8		RS485 2 – Shield
	9	2	CAN 2 - High
	10		CAN 2 - Low
	11		RS232 1 - TX
	12		RS232 1 - RX
	13		RS232 1 - GND
	14		RS232 2 - TX
	15		RS232 2 - RX
	16		RS232 2 - GND
	17	3	Open Collector 1
	18		Open Collector 2
	19		Open Collector 3
	20		Open Collector 4
	21		Open Collector 5
	22		Open Collector 6
	23		Open Collector 7
	24		Open Collectors – common negative

NOTE: all Open Collectors **HAVE NOT TO** be used for connecting fire alarm sounders (type C), fire alarm or fault routing equipment (type E and J) or automatic fire protection equipment (type G).

3.2 WIRING DETAILS



4 MAINTENANCE

EXMULTIBUS can be connected or disconnected when desired; in case of removal, panel will display the message "CARD XXX MISSING". Please wait 30 seconds before inserting the card again, to let the card electronic discharge completely. Once the card will be connected anew the panel will cancel the fault indication.