INSTALLATION INSTRUCTIONS FOR THE

FDVMI100 INPUT MINI-MODULE, **FDVMC100**,
FDVMC120 OUTPUT MINI-MODULES, **FDVMM100** AND
FDVMM120 INPUT / OUTPUT MINI-MODULES

KM518520

This manual is intended as a quick reference installation guide. Please refer to the manufacturer's control panel installation manual for detailed system information.

GENERAL DESCRIPTION

The mini-module series is a family of microprocessor controlled interface devices permitting the monitoring and/or control of auxiliary devices. The digital communication protocol utilised by the monitoring control panel provides for high rates of information exchange in combination with particular features that ensure fast and secure responses. A bi-colour LED indicator (red/green), one per single channel, is activated by the control panel. The mini-modules are powered by the loop.

SHORT CIRCUIT ISOLATORS

All series mini-modules are provided with short-circuit monitoring isolators installed on the intelligent loop circuitry and can be activated by the control panel.

INSTALLATION

The mini-modules must be used in combination with compatible control panels employing the communication protocol for monitoring and control. The location of mini-modules should follow recognised national or international installation codes of practice. Connections to the terminals are polarity sensitive thus, please, check them by referring to the wiring diagrams and tables for each model. Mini-modules are provided with female terminal blocks, a 27 Kohm end of line resistor and a 10 Kohm alarm resistor, depending on the model.

COMMON TECHNICAL SPECIFICATIONS

Loop's voltage range	From 15 V (min) to 40 V (max)
Average current consumption	120 uA (@ 24 V)
LED's current consumption	6 mA (@ 24 V)
Operating temperature range	From -30 °C (min) to +70 °C (max)
Humidity	95% RH (no condensation)
Dimensions	75 x 52 x 28 mm (w/o brackets)
Weight	180 grams
Maximum wire gauge	2.5 mm^2

CAUTION

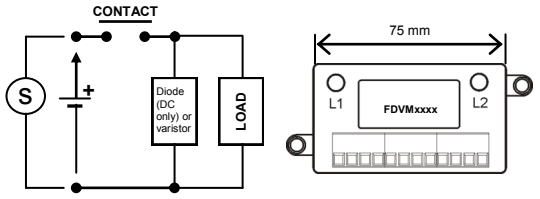
Disconnect loop power before installing the mini-modules.

CAUTION

Electrostatic Sensitive Device.
Observe precautions when handling and making connections.

WARNING

When switching an inductive load, in order to protect the mini-module from surges caused by counter-EMF, it is important to protect the relay contacts. A diode with a reverse breakdown voltage of at least ten times the circuit voltage (DC applications only) or a varistor (AC or DC applications) should be connected in parallel to the load.



SETTING THE ADDRESS

Mini-modules can be addressed by using a special hand-held programming unit (**FDP100**) . Addresses may be selected over the range from 1 to 240, although, of course, each device on the loop must have a unique address.

- Connect the programmer to the module using the proper cable (refer to the **FDP100** instruction manual).
- After installing all modules and other loop devices, apply power to the loop in accordance with the panel's installation instructions.

The input / output mini-module holds two addresses. The address assigned by the **FDP100** always relates to the input channel; the output channel is automatically assigned the consecutive address.

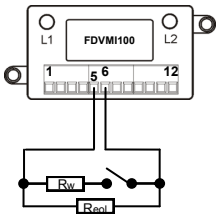
DEVICE'S MOUNTING

Mount securely within an electrical box or enclosure according to local electrical regulations.

MAINTENANCE

Test the mini-modules periodically according to local codes of practice. Those devices contain no serviceable parts, so, should a fault develop, return them to your system supplier for exchange or disposal, according to warranty conditions.

INPUT mini-module

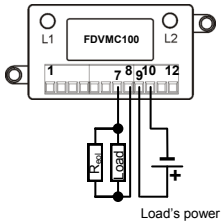


The **FDVMI100** single channel supervised input mini-module provides monitoring of normally open contact fire alarm and supervisory devices.

End of line resistor (R_{eol}):27 Kohm.
Alarm resistor (R_w):10 Kohm.

	Terminal	Description
1	Loop line IN (+)	Loop positive input
2	Loop line OUT (+)	Loop positive output
3	Loop line IN (-)	Loop negative input
4	Loop line OUT (-)	Loop negative output
5	Input (+)	Supervised input (+)
6	Input (-)	Supervised input (-)
7	Not used	
8	Not used	
9	Not used	
10	Not used	
11	Not used	
12	Not used	

OUTPUT supervised mini-module



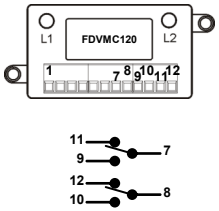
The **FDVMC100** single channel supervised output mini-module provides control, by closing contacts, of auxiliary devices such as fire shutters.

End of line resistor (R_{eol}):27 Kohm.

Relay contact ratings are:
30 V_{dc}, 2 A or 30 V_{ac}, 2 A
(resistive load).

	Terminal	Description
1	Loop line IN (+)	Loop positive input
2	Loop line OUT (+)	Loop positive output
3	Loop line IN (-)	Loop negative input
4	Loop line OUT (-)	Loop negative output
5	Not used	
6	Not used	
7	Load (+)	Supervised output (+)
8	Load (-)	Supervised output (-)
9	Load power (+)	Load's power supply (+)
10	Load power (-)	Load's power supply (-)
11	Not used	
12	Not used	

OUTPUT free contacts mini-module



The **FDVMC120** single channel relay output mini-module provides pole changeover contacts for the control of auxiliary devices such as fire shutters.

Relay contact ratings are:
30 V_{dc}, 2 A or 30 V_{ac}, 2 A
(resistive load).

	Terminal	Description
1	Loop line IN (+)	Loop positive input
2	Loop line OUT (+)	Loop positive output
3	Loop line IN (-)	Loop negative input
4	Loop line OUT (-)	Loop negative output
5	Not used	
6	Not used	
7	Common 1	Relay contact terminal
8	Common 2	Relay contact terminal
9	Normally open 1	Relay contact terminal
10	Normally open 2	Relay contact terminal
11	Normally closed 1	Relay contact terminal
12	Normally closed 2	Relay contact terminal

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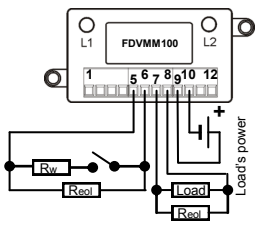
INPUT / OUTPUT supervised mini-module



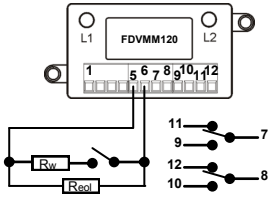
The **FDVMM100** input and output supervised mini-module combine in a single device supervised input and output characteristics.

End of line resistor (R_{eol}):27 Kohm.
Alarm resistor (R_w):10 Kohm.

Relay contact ratings are:
30 V_{dc}, 2 A or 30 V_{ac}, 2 A
(resistive load).

Terminal		Description
1	Loop line IN (+)	Loop positive input
2	Loop line OUT (+)	Loop positive output
3	Loop line IN (-)	Loop negative input
4	Loop line OUT (-)	Loop negative output
5	Input (+)	Supervised input (+)
6	Input (-)	Supervised input (-)
7	Load (+)	Supervised output (+)
8	Load (-)	Supervised output (-)
9	Load power (+)	Load's power supply (+)
10	Load power (-)	Load's power supply (-)
11	Not used	
12	Not used	

INPUT / OUTPUT free contacts mini-module



The **FDVMM120** input and output free contacts mini-module combine in a single device supervised input and relay output characteristics.

End of line resistor (R_{eol}):27 Kohm.
Alarm resistor (R_w):10 Kohm.

Relay contact ratings are:
30 V_{dc}, 2 A or 30 V_{ac}, 2 A
(resistive load).

Terminal		Description
1	Loop line IN (+)	Loop positive input
2	Loop line OUT (+)	Loop positive output
3	Loop line IN (-)	Loop negative input
4	Loop line OUT (-)	Loop negative output
5	Input (+)	Supervised input (+)
6	Input (-)	Supervised input (-)
7	Common 1	Relay contact terminal
8	Common 2	Relay contact terminal
9	Normally open 1	Relay contact terminal
10	Normally open 2	Relay contact terminal
11	Normally closed 1	Relay contact terminal
12	Normally closed 2	Relay contact terminal

CE

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BS EN 54-17, BS EN 54-18

Supervised input mini-module - FDVMI100

Supervised output mini-module - FDVMC100

Form C contacts output mini-module - FDVMC120

Supervised I/O mini-module - FDVMM100

Form C contacts I/O mini-module - FDVMM120