



# INSTALLATION INSTRUCTIONS FOR THE HFI-IM-SM-01 INPUT MINI-MODULE, HFI-OM-SM-01, HFI-OM-RM-01 OUTPUT MINI-MODULES, HFI-IO-SM-01 AND HFI-IO-RM-01 INPUT / OUTPUT MINI-MODULES



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 Vega mini-module series is a family of microprocessor controlled interface devices permitting the monitoring and/or control of auxiliary devices. The Vega 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 Vega series mini-modules are provided with short-circuit monitoring isolators installed on the intelligent loop circuitry and can be activated by the control panel.

## COMMON TECHNICAL SPECIFICATIONS \*\*

Loop's voltage range *	From 18 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 <sup>2</sup>

\*Product operates down to 15 V, but without LED indication.  
\*\*Check latest version of document TDS-VMXXX for further data, obtainable from your supplier.

## INSTALLATION

The Vega mini-modules must be used in combination with compatible control panels employing the Vega 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.

## CAUTION

Disconnect loop power before installing the mini-modules.

## WARNING

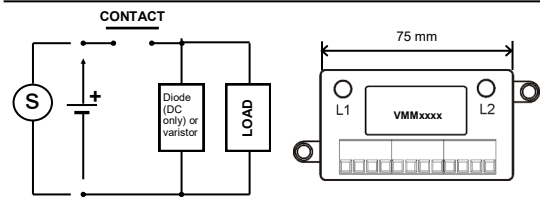
When switching an inductive load, in order to protect the mini-module from surges caused by counter-EMF, it is important to protect the relay contacts. A diode with a reverse breakdown voltage of at least ten times the circuit voltage (DC applications only) or a varistor (AC or DC applications) should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



## CAUTION

Electrostatic Sensitive Device.

Observe precautions when handling and making connections.



## SETTING THE ADDRESS

Mini-modules can be addressed by using a special hand-held programming unit or they can be auto-addressed by the control panel after they have been installed (the implementation of the auto-addressing feature depends on the control panel's manufacturer). 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 programmer's instruction manual).
- After installing all modules and other loop devices, apply power to the loop in accordance with the panel's installation instructions.

**NOTE:** The HFI-IO-SM-01 and HFI-IO-RM-01 input/output mini-modules hold two addresses. The address assigned by the programmer always relates to the input channel; the output channel is automatically assigned the consecutive address.

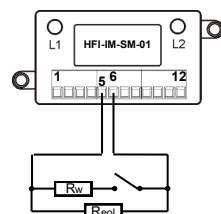
## DEVICE'S MOUNTING

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 part, so, should a fault develop, return them to your system supplier for exchange or disposal, according to warranty conditions.

## INPUT mini-module

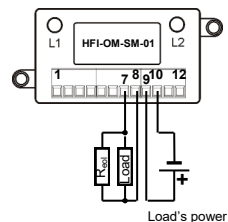


The HFI-IM-SM-01 single channel supervised input mini-module provides monitoring of normally open contact fire alarm and supervisory devices.

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

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

## OUTPUT supervised mini-module



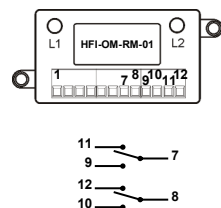
The HFI-OM-SM-01 single channel supervised output mini-module provides control, by closing contacts, of auxiliary devices such as fire shutters.

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

Relay contact ratings are:  
30 V<sub>ac</sub>, 2 A or 30 V<sub>ac</sub>, 2 A (resistive load).

Terminal	Description
1	Loop line IN (+)
2	Loop line OUT (+)
3	Loop line IN (-)
4	Loop line OUT (-)
5	Not used
6	Not used
7	Load (+)
8	Load (-)
9	Load power (+)
10	Load power (-)
11	Not used
12	Not used

## OUTPUT relay mini-module



The HFI-OM-RM-01 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<sub>ac</sub>, 2 A or 30 V<sub>ac</sub>, 2 A (resistive load).

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

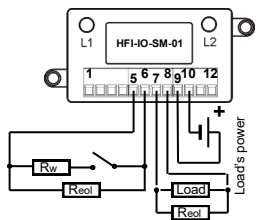
## WARNINGS AND LIMITATIONS

Our devices use high quality electronic components and plastic materials that are highly resistant to environmental deterioration. However, after 10 years of continuous operation, it is advisable to replace the devices in order to minimize the risk of reduced performance caused by external factors. Ensure that these mini-modules are only used with compatible control panels. Detection systems must be checked, serviced and maintained on a regular basis to confirm correct operation. Refer to and follow national codes of practice and other internationally recognized fire engineering standards. Appropriate risk assessment should be carried out initially to determine correct design criteria and updated periodically.

## WARRANTY

All devices are supplied with the benefit of a limited 5 years warranty relating to faulty materials or manufacturing defects, effective from the production date indicated on each product. This warranty is invalidated by mechanical or electrical damage caused in the field by incorrect handling or usage. Product must be returned via your authorized supplier for repair or replacement together with full information on any problem identified. Full details on our warranty and products returns policy can be obtained upon request.

### INPUT / OUTPUT supervised mini-module



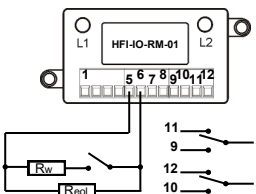
The **HFI-IO-SM-01** input and output supervised mini-module combine in a single device supervised input and output characteristics.

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

Relay contact ratings are:  
30 V<sub>dc</sub>, 2 A or 30 V<sub>ac</sub>, 2 A  
(resistive load).

Terminal	Description
1	Loop line IN (+)
2	Loop line OUT (+)
3	Loop line IN (-)
4	Loop line OUT (-)
5	Input (+)
6	Input (-)
7	Load (+)
8	Load (-)
9	Load power (+)
10	Load power (-)
11	Not used
12	Not used

### INPUT / OUTPUT relay mini-module



The **HFI-IO-RM-01** input and output relay mini-module combine in a single device supervised input and relay output characteristics.

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

Relay contact ratings are:  
30 V<sub>dc</sub>, 2 A or 30 V<sub>ac</sub>, 2 A  
(resistive load).

Terminal	Description
1	Loop line IN (+)
2	Loop line OUT (+)
3	Loop line IN (-)
4	Loop line OUT (-)
5	Input (+)
6	Input (-)
7	Common 1
8	Common 2
9	Normally open 1
10	Normally open 2
11	Normally closed 1
12	Normally closed 2



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EN 54-17:2005 + AC:2007  
EN 54-18:2005 + AC:2007

HFI-IM-SM-01  
HFI-OM-SM-01  
HFI-OM-RM-01  
HFI-IO-SM-01  
HFI-IO-RM-01

For use in compatible fire detection and alarm  
system