

The ISN Advantage

Field Input Module (FIM)

Part Number: 071-04141-000

The Field Input Module (FIM) allows four digital signals (volt-free MADE or OPEN) to be connected to a single analog input on an ISN controller. This increases the point count for digital inputs, extending the capability of the controller. Remote DIN rail or flat surface mounting is available.

Using software algorithms, a single MADE or OPEN signal is translated into the analog input. Each of the four digital signals are assigned a set resistance level. The software then associates the given resistance level with the assigned FIM channel separating the analog signal back to the four digital channels.

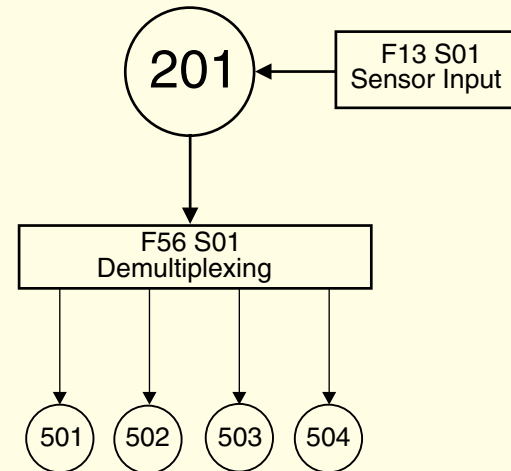
OPERATION

The MADE or OPEN state of the volt-free contacts connected to the FIM control on-board relays. By connecting the contacts of the interface relays across individual resistors daisy-chained together, the input state determines a certain resistance value.

A resistance table is constructed in F13 Sensor Input to provide input values to F02 Analog Input.

By using F56-Demultiplexing, the MADE or OPEN state of the inputs is directly reflected in the appropriate sections of F05-Status Values. The software inputs can then be used in place of hard-wired digital inputs as part of a control strategy or to generate alarms.

There is no delay in processing the inputs. They are all monitored in a single time cycle.



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The FIM card is shipped in a plastic housing with a DIN rail mounting clip.

Shielded/screened cable must be used for the inputs to the FIM, 24 VDC power supply and the ISN controller to FIM connection. The shields should be connected to the ground/earth at the controller end only. Refer to the ISN wiring specification for specific recommendations.

Be sure the controller is set to receive a resistance input. This typically requires setting a jumper (link) to R.



Power:
24 VDC from ISN Controller
110 mA Current Draw

Dimensions on DIN rail (H x W x D):
3.78 x 1.97 x 1.57 in. (96 x 50 x 40 mm)

Cable:
22 to 16 AWG (0.325 to 1.5 mm²)
Shielded, Twisted-pair (Belden 8761 or better)
Maximum distance from controller is 213 ft. (65 m)

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Form 450.20-N24 (203)
Supersedes 450.20-N24 (702)

Software Setups

F02 Measure Values

P01 Text/Menu
P03 Sensor Input Section
P04 Source

F05 Status Value

P01 Text
P02 Made/Open
P03 Source

F13 Sensor Input

P01 Text/Menu
P02 Point 01
P03 Point 02
P04 Point 03
P05 Point 04
P06 Point 05
P07 Point 06
P08 Point 07
P09 Point 08
P10 Point 09
P11 Point 10

F47 I/O Configuration

F63 Input Configuration

P01 I/O Card
P02 Input 01

F56 Demultiplexing

P01 Text
P02 In Addr Val
P08 Out Addr Val 5
P09 Out Addr Val 6
P10 Out Addr Val 7
P11 Out Addr Val 8

S01

FIM Input/Blank
1
Physical

S01

FIM Input
On/Off
Demultiplex
FIM Range

Input 6.1 Output 232
Input 16.1 Output 200
Input 23.0 Output 184
Input 38.1 Output 136
Input 44.0 Output 120
Input 49.1 Output 104
Input 54.0 Output 88
Input 59.1 Output 72
Input 66.0 Output 56
Input 76.0 Output 24

S01 (Rev. 7 and earlier Firmware)

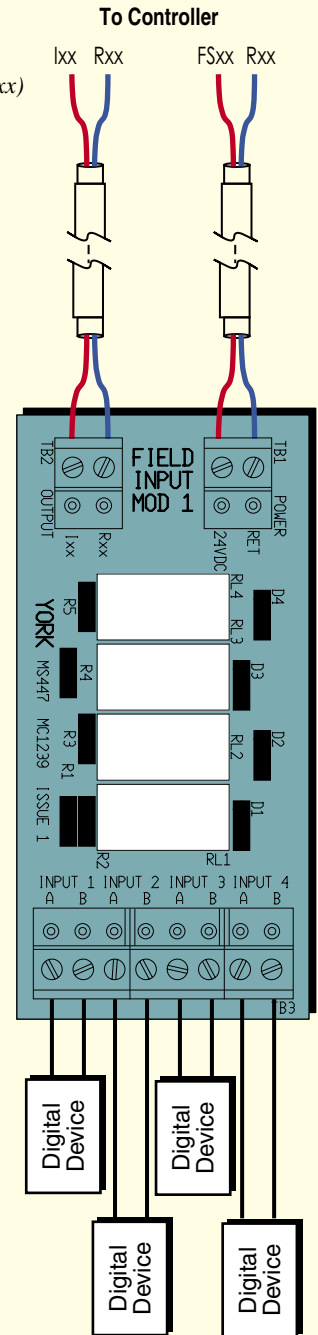
S01 (UCS Firmware)

Enabled
201

S01

FIM Input
201
501
502
503
504

CAUTION: Do not link the Returns (Rxx) on the FIM board. The Returns must be linked at the controller input or on the controller board.



Contact:

YORK Controls Group (U.K. Office)
Unit 1, Red Shute Hill, Hermitage,
Newbury, Berks RG18 9QL
Telephone: +44 (0)1635-202200
Fax: +44 (0)1635-202222
e-mail: controls.sales@uk.york.com

YORK Controls Group (U.S. Office)
P.O. Box 1592, York, PA, USA 17405-1592
Telephone: 800-861-1001
Fax: (717) 771-7640
www.york.com
e-mail: isncontrols@york.com