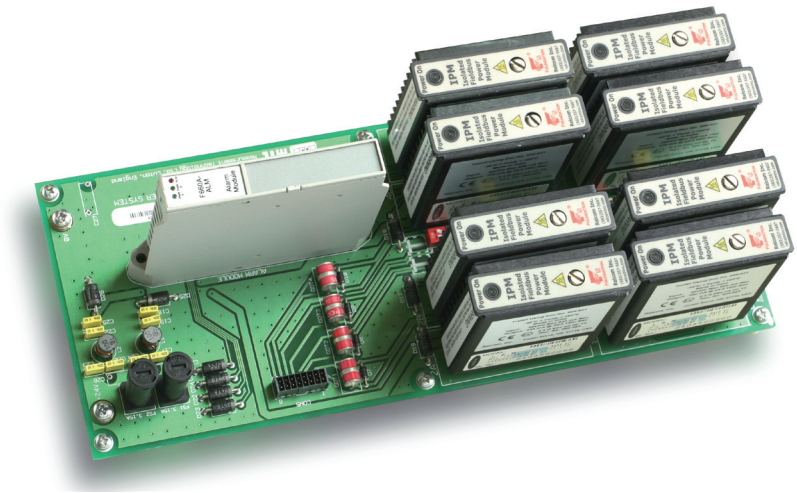
technical datasheet

F660A

redundant power for Honeywell Experion PKS FIM "Series C" 4-link FIM

- Size B IOTA format
- Redundant power for 4 fieldbus links
- Component failure alarms
- Integrated, switchable terminators
- Replace power modules without interrupting the fieldbus



The F660A is designed to provide redundant power for four H1 fieldbus links when used with Honeywell Experion "Series C" Fieldbus Interface Modules (FIMs). The module carrier complies with the mechanical and electrical requirements of Size B I/O Termination Panels (IOTAs), for direct fitting into Honeywell mounting channel. The F660A includes two FPS-IPM plug-in power modules for each of the four fieldbus links. These modules function as power conditioners, providing impedance between the input DC power supply and the fieldbus. A switchable fieldbus segment terminator is provided for each fieldbus link.

MTL-Relcom redundant fieldbus power supplies (FPS-Series) form the basis of the F660A and provide redundant power conditioning for the fieldbus network segments. The system is fully 'hot-swappable' meaning that individual power conditioning modules can be replaced without interrupting power or communication on the fieldbus segment.

Each power module provides galvanic isolation of 250V AC between the fieldbus segment and the input power supplies. Each segment is supplied with 350mA at 25V DC. This output is maintained, even if only one power module is installed per segment. This level of output power allows for construction of very long fieldbus segments with a large number of bus-powered transmitters.

Power for the IOTA is picked up via mounting screws from 24V DC busbars that are embedded in the mounting channel. Two separate 24V DC power trains are derived on the IOTA, each protected by a replaceable fuse, to provide reliable bulk power to the redundant conditioning modules.

A separate alarm module monitors the state of each of the eight power conditioning modules and the 24V DC power input. In the event of a failed conditioning module, the FIM receives a signal indicating which segment is affected, and a red LED on the alarm module illuminates. Failure of either of the power supply fuses initiates an alarm across all four fieldbus segments. Green LEDs on each power module, and two input power supply LEDs on the alarm module give clear visual indication of the health of each system component.

The F660A has a multi-pin connector for direct connection to the FIM IOTA by means of a standard system cable, available from MTL. Different lengths are available to accommodate mounting of the F660A, and its respective FIM IOTA, in various locations within a Series C I/O cabinet. Field wiring is connected at the FIM IOTA.

For fieldbus segments that do not require the high availability provided by redundant power conditioning, the F660A-NR should be specified. Each segment of the F660A-NR is powered by a single IPM module. Unwanted alarm signals are suppressed by blanking modules that are installed in the unused module slots. Alternatively, individual segments of an F660A system may be operated in non-redundant mode by replacing one IPM per segment with a blanking module. These are obtainable in a pack of 10 as part number FPS-BLK10.

SPECIFICATION

Location of equipment
Safe area
Zone 2, IIC T4 hazardous area (approval pending)
Class I, Division 2, Gps A-D T4 hazardous area (approval pending)

OUTPUT

Number of channels
Four
Voltage
Minimum 25.0V DC
Current
0 to 350mA
Output ripple
Complies with clause 22.6.2 of the fieldbus standard
Minimum load
No load
Isolation
Fieldbus to power supply: 250V AC rms withstand

INPUT

Input voltage
19.2 - 30V DC
Current consumption (4 segments each with 350mA output load)
3.4A (typical) at 18V
2.4A (typical) at 24V
2.2A (typical) at 28V

ALARMS

Failure alarm signal (per link) via system connector

MECHANICAL

Mounting method
Standard Honeywell channel (size B)
Power Input Connections
Via mounting screws onto bus bar
Terminators
Switchable terminator for each fieldbus segment

ENVIRONMENTAL

Ambient temp
Operating, optimum orientation*
–40°C to +65°C
Storage
–40°C to +85°C
Ingress Protection
IP20 to BS EN 60529 (Additional protection by means of enclosure)

**Optimum orientation is when the IOTA is mounted on a vertical surface with the IPM modules in a vertical orientation*

ELECTRICAL

EMC compliance
To EN61326:1998 Electrical equipment for measurement, control and laboratory use - EMC requirements

PHYSICAL NETWORKS

IEC61158-2
FOUNDATION™ Fieldbus H1

ORDERING INFORMATION

The F660A Redundant fieldbus power supply IOTA includes the following component parts: (see component part numbers below):

8 x **FPS-IPM**
1 x **F660A-ALM**
1 x **F660A-C**

The F660A-NR Non-Redundant fieldbus power supply IOTA includes the following component parts: (see component part numbers below):

4 x **FPS-IPM**
1 x **F660A-ALM**
1 x **F660A-C**
4 x **FPS-BLK**

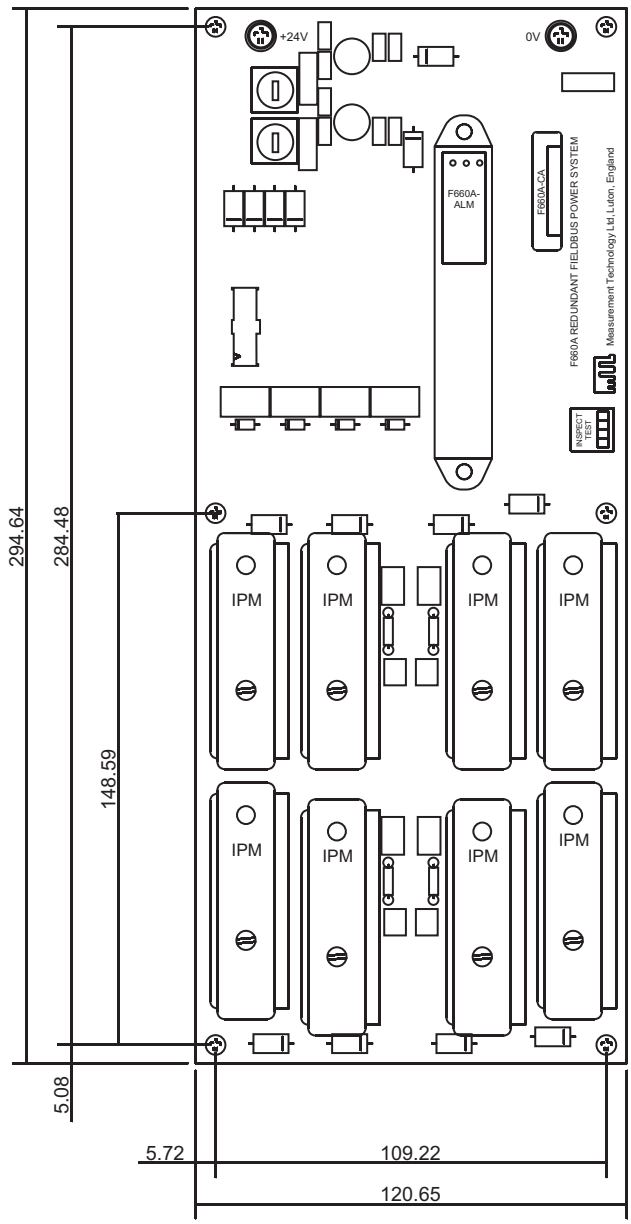
COMPONENTS AND ACCESSORIES

Part No	Description
FPS-IPM	Power module
F660A-ALM	Alarm module
F660A-C	F660A IOTA, unpopulated
FPS-BLK10	Blanking module type FPS-BLK, pack of 10
FCAB-05	IOTA power cable, 30cm
FCAB-06	IOTA power cable, 1m
FCAB-07	IOTA power cable, 2m
FCAB-08	IOTA power cable, 4m

EUROPE (EMEA): +44 (0)1582 723633
enquiry@mtl-inst.com
THE AMERICAS: +1 800 835 7075
csinfo@mtl-inst.com
ASIA-PACIFIC: +65 6 487 7887
sales@mtlsing.com.sg

F660A
IOTA

IOTA DIMENSIONS (mm)



EUROPE (EMEA): +44 (0)1582 723633
enquiry@mtl-inst.com

THE AMERICAS: +1 800 835 7075
csinfo@mtl-inst.com

ASIA-PACIFIC: +65 6 487 7887
sales@mtlsing.com.sg