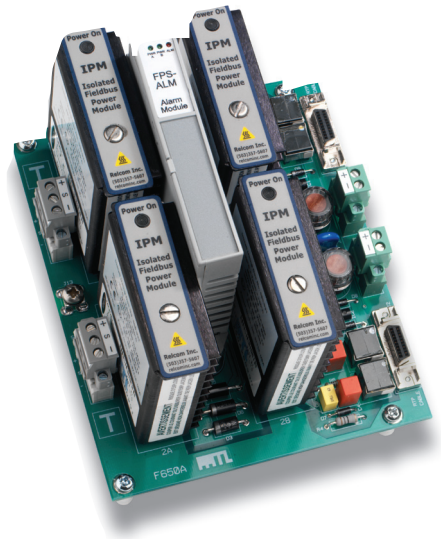
technical datasheet

F650A

redundant power system for use with Honeywell Experion PKS FIM

- Integrated redundant fieldbus power system for Honeywell control systems
- Replace power modules without interrupting the fieldbus
- High power output
- Two levels of power redundancy
- Component failure alarm
- Integrated fieldbus terminators



The F650A is designed to provide redundant fieldbus power conditioners for the Honeywell Experion PKS Fieldbus Interface Module (FIM), supporting two H1 fieldbus segments. Each F650A includes two FPS-IPM plug-in power modules for each of the fieldbus segments. These modules function as power conditioners, providing impedance between the input DC power supply and the fieldbus. This impedance is necessary to prevent the input DC power supply from degrading the digital fieldbus signal. One fieldbus segment terminator is permanently connected in each segment.

A separate alarm module monitors the state of each of the four power conditioning modules and the redundant power inputs. If a fault is detected on any of these components, a red alarm LED provides visual indication of the fault and an alarm signal is sent to the Honeywell control system via the multi-way connnectors. This allows failed components to be replaced so that power system integrity is maintained. The alarm circuitry is galvanically isolated from the fieldbus segments and input power supplies. Green LEDs on each power module and two input power supply LEDs on the alarm module give clear visual indication that components are functioning properly.

The F650A has the same dimensions as a size A Honeywell Remote Termination Panel (RTP), and is suitable for the standard mounting channel. Alternatively, the panel may be mounted on DIN rail using the DMK-HONA mounting plate, available from MTL.

The F650A provides connections to redundant Honeywell Experion PKS FIM's using standard Remote Termination Panel cables from Honeywell (type TC-FFC0XX). Field connections are via pluggable screw terminal connectors. For redundant operation, two separate DC power supplies should be connected to each F650A. A separate terminal is also provided to connect the fieldbus and host cable screens to a common point, such as the local cabinet ground.

SPECIFICATION

Location of equipment
Safe area

OUTPUT

Number of channels
Two

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 (2 segments each with 350mA output load)
1.7A (typical)at 18V
1.2A (typical) at 24V
1.1A (typical) at 28V

Power dissipation (2 segments each with 350mA output load)
10.7W (typical)

ALARMS

Alarm threshold:

Either 24V DC input	<18V DC
Either IPM output to fieldbus	<22V DC

Alarm signalled to Honeywell control system via RTP cables. (No separate alarm wiring necessary)

MECHANICAL

Mounting method
Standard Honeywell channel (size A) or DIN rail using DMK-HONA mounting plate

DIN-rail types
'Top hat', 35mm x 7.5mm or 35mm x 15mm to EN50022

Alarm Contact Terminals
Fixed rising cage clamp screw terminals
Conductor size: 0.14 to 2.5mm^2

Fieldbus Terminals
Two-part pluggable connector with fixed rising cage clamp screw terminals
Conductor size: 0.14 to 2.5mm^2

Power Input Connections
Standard Honeywell FTA power connectors

System Connections

Redundant Connections:	standard cables to Experion Fieldbus Interface Module.
Screen Ground:	to connect all fieldbus cable screens to a common point (cabinet earth).

Terminators
Fixed 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 RTP 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 F650A-LS Redundant fieldbus power supply system includes the following component parts: (see component part numbers below):

4 x **FPS-IPM**
1 x **FPS-ALM**
1 x **F650A-CL-PS**

COMPONENTS AND ACCESSORIES

PART No	DESCRIPTION
FPS-IPM	Power Module
FPS-ALM	Alarm Module
F650A-CL-PS	F650A Carrier, Screw Terminals
DMK-HONA	Size A FTA mounting plate
FPS-BLK10	Blanking Module (pack of 10)

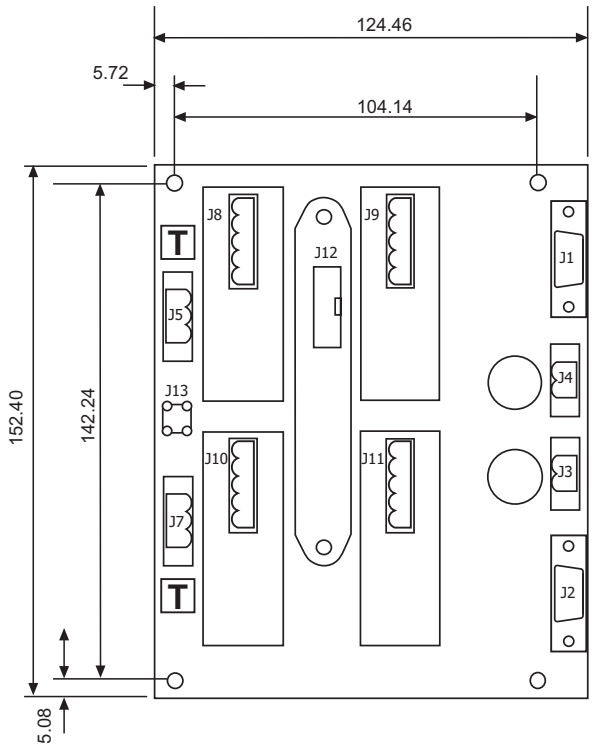
EUROPE (EMEA): +44 (0)1582 723633
enquiry@mtl-inst.com

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

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

F650A REDUNDANT POWER SYSTEM

F650A 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