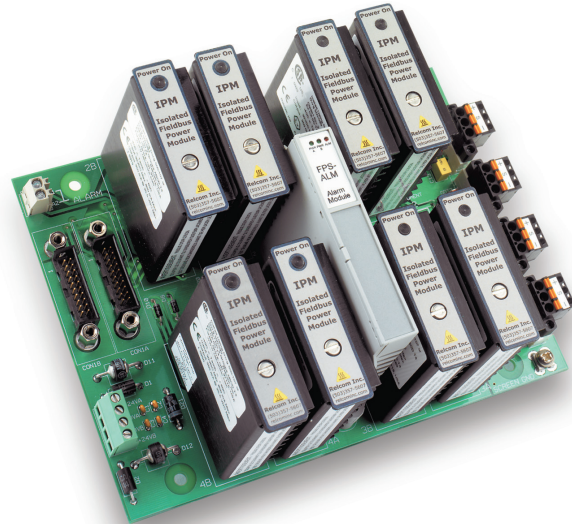




F600A

redundant fieldbus power system for Yokogawa ALF111 card

- Integrated redundant fieldbus power for Yokogawa control system
- Left- and right-hand versions
- Screw terminal and spring clamp wiring options
- High power output
- Two levels of power redundancy with component failure alarm
- Integrated fieldbus terminator



The **F600A** is designed to provide **redundant fieldbus power conditioners** for the Yokogawa ALF111 card, supporting four H1 fieldbus segments. Each F600A 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 built into each segment.

A **separate alarm module** monitors the state of each of the eight power conditioning modules and the redundant power inputs. If a fault is detected on any of these components, the alarm relay opens and an LED provides visual indication of the fault. 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 **F600A** is available in **left- and right-hand versions** to allow flexibility in cabinet design; the F600A-Lx provides field connections on the left side of the carrier whilst the F600A-Rx provides field connections on the right side of the carrier. Field wiring connections are available with pluggable screw terminals (-PS), pluggable spring terminals (-PC and -PC2) and fixed screw terminals (-ST). Accessories are available for T-section and G-section DIN rail or surface mounting.

For testing the fieldbus segments, the Relcom FCS-A11 test probe accessory is designed for use with the pluggable screw terminal versions (-PS). Standard test probes are used with the pluggable spring clamp terminals (-PC, -PC2) and separate fixed screw terminals for + and - connections are provided on the -ST versions.

SPECIFICATION

Location of equipment
Safe area

OUTPUT

Number of channels
Four

Voltage
Minimum 25.0V DC

Current
0 to 350mA

Output ripple
Complies with clause 22.6.2 of IEC 61158-2

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 19.2V
2.4A (typical) at 24V
2.1A (typical) at 28V

Power dissipation (4 segments each with 350mA output load)
20.3W (typical)

ALARMS

Alarm contact rating: 1A max @ 30V DC max
Alarm contact status: Normally closed
Alarm threshold: Input <18V DC Output <22V DC

MECHANICAL

Mounting method
DIN-rail or surface mounting kit

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

Mounting - (vertical surface recommended)

Power Input and Alarm Contact Terminals
Fixed rising cage clamp screw terminals (-ST, -PC & -PS)
Pluggable spring clamp terminals (-PC2)

Fieldbus Terminals
Fixed rising cage clamp screw terminals (-ST)
Pluggable spring clamp terminals (-PC & -PC2)
Pluggable rising cage clamp screw terminals (-PS)

Terminal capacities
Screw terminals conductor size: 0.14 to 2.5mm²
Spring clamp conductor size: 0.2 to 2.5mm² flexible or rigid

System Connections

Redundant connectors: CONIA and CONIB via AKB336 cables to ALF111 cards.
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

*Optimum orientation is when the DIN rail is mounted horizontally on a vertical surface

Ingress Protection

IP20 to BS EN 60529 (Additional protection by means of enclosure)

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

COMPONENTS AND ACCESSORIES

PART No	DESCRIPTION
FPS-IPM	Power Module
FPS-ALM	Alarm Module
F600A-CL-ST	F600A carrier, left hand, screw terminals
F600A-CR-ST	F600A carrier, right hand, screw terminals
F600A-CL-PC	F600A carrier, left hand, pluggable spring clamp
F600A-CR-PC	F600A carrier, right hand, pluggable spring clamp
F600A-CL-PS	F600A carrier, left hand, pluggable screw terminals
F600A-CR-PS	F600A carrier, right hand, pluggable screw terminals
F600A-CL-PC2	F600A carrier, left hand, pluggable spring clamp
F600A-CR-PC2	F600A carrier, right hand, pluggable spring clamp
DMK01	DIN-rail mounting kit, T or G section (pack of 40)†
SMS01	Surface mounting kit, (pack of 40)†
BMK08	Mounting kit for one F600A
FPS-BLK10	Blanking Module (pack of 10)

† Sufficient to mount 10 x F600A systems

Redundant fieldbus power supply systems include the following parts: (see component part numbers below)

Power and alarms	Fixed screw terminal						Pluggable spring clamp	
	Screw terminal		Pluggable spring clamp		Pluggable screw terminal		Pluggable spring clamp	
	Left hand	Right hand	Left hand	Right hand	Left hand	Right hand	Left hand	Right hand
Fieldbus terminals	F600A-L	F600A-R	F600A-LC	F600A-RC	F600A-LS	F600A-RS	F600A-LC2	F690A-RC2
FPS-IPM	x 8	x 8	x 8	x 8	x 8	x 8	x 8	x 8
FPS-ALM	x 1	x 1	x 1	x 1	x 1	x 1	x 1	x 1
F600A-CL-ST	x 1							
F600A-CR-ST		x 1						
F600A-CL-PC			x 1					
F600A-CR-PC				x 1				
F600A-CL-PS					x 1			
F600A-CR-PS						x 1		
F600A-CL-PC2							x 1	
F600A-CR-PC2								x 1

The given data is only intended as a product description and should not be regarded as a legal warranty of properties or guarantee. In the interest of further technical developments, we reserve the right to make design changes.



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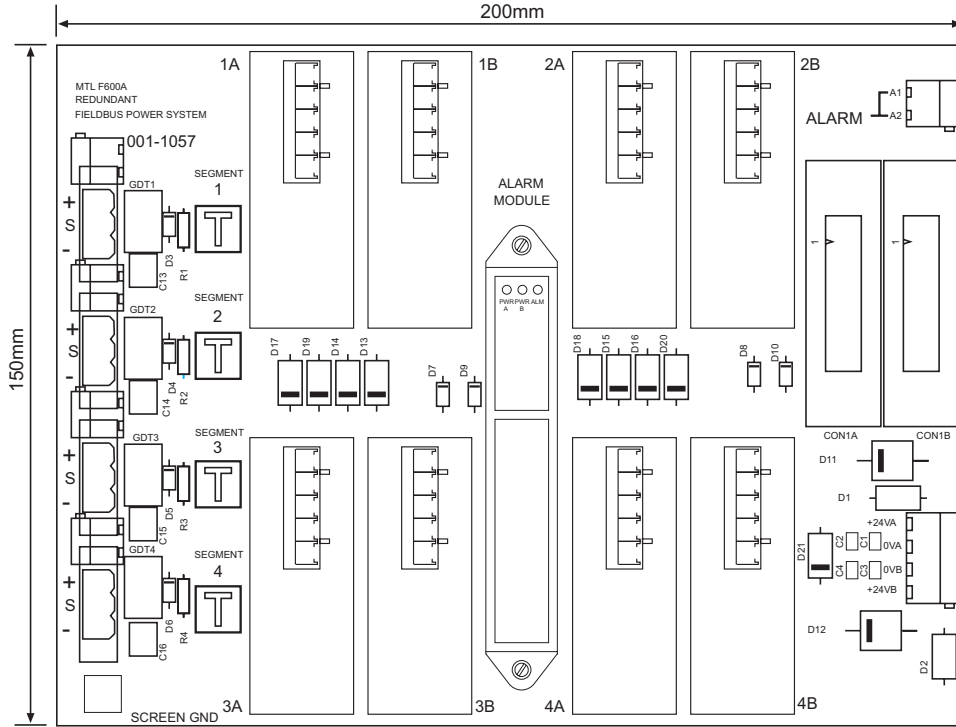
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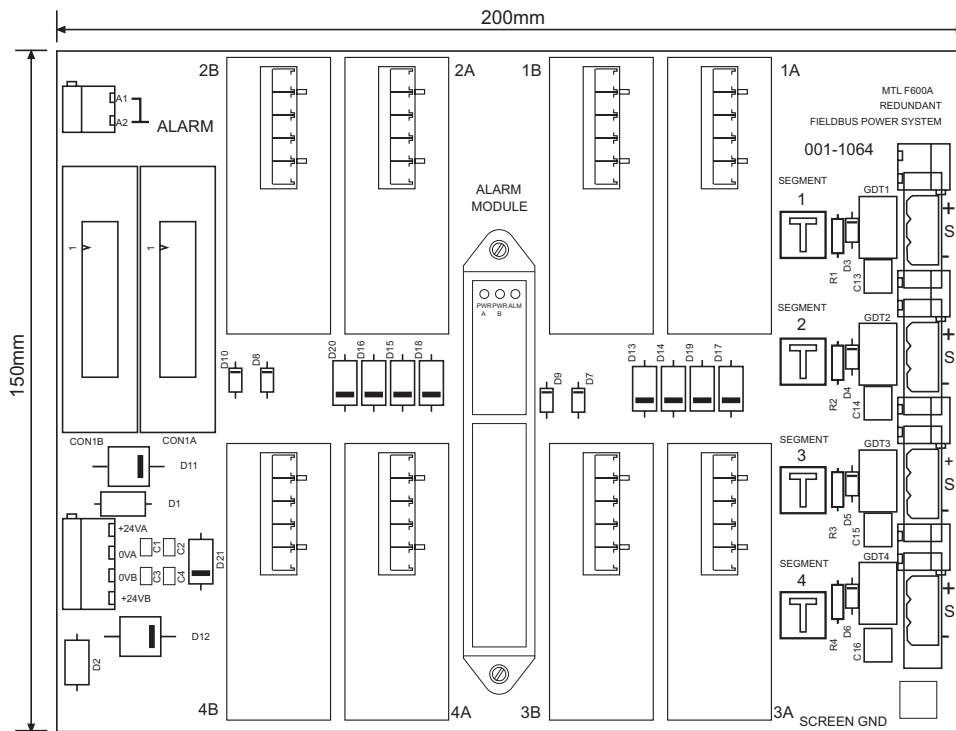
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F600A REDUNDANT FIELDBUS POWER SYSTEM

F600A-LX



F600A-RX



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