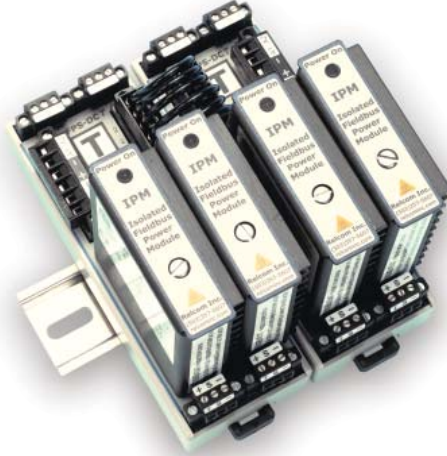




FPS-D / FPS-DT

dual power supplies for fieldbus network segments

- High power output
- Component failure alarm
- Integrated fieldbus terminator (-DT model)
- Simplified power wiring
- Pluggable connectors
- Host and field connections
- Redundant power feeds



The **MTL-Relcom dual fieldbus power supplies** provide power conditioning for two fieldbus network segments and facilitate the connection of input power supplies. An alarm circuit provides warning in case of a power conditioning module or input power supply failure. The system is designed so that power for several fieldbus segments can be provided from a single cabinet with minimal wiring.

Two fieldbus segment terminators are built into each FPS-DT power supply. Each FPS includes two plug-in Isolated Power Modules, or IPM's. 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.

Each isolated power module provides galvanic isolation of 250V ac between the fieldbus segment and the input power supplies. Each IPM, supplies 350mA at 25V dc to the fieldbus segment. This level of

output power allows for construction of very long fieldbus segments with a large number of bus-powered field devices.

LED indicators on each IPM and near each of the two input power supply connections give clear visual indication that components are functioning properly. To minimize system downtime, an alarm circuit provides notification if any of the power supply components fail. 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. The two IPM's plug into a DIN rail mounted Dual Coupler Base that contains one segment terminator per IPM (-DT model) and provides connections to the two input power supplies, two H1 host systems, two fieldbus trunk cables, and alarm circuitry.

A bus configuration is used for input power and alarm connections to multiple FPS power supplies. Up to five power supplies can be

connected together by the bus. Input 24 VDC power is fed to both ends of the interconnected group so that if a power supply needs to be added or changed, this can be done without disrupting the other power supplies. The connections between the power supplies use a jumper cable assembly (FPS-A04), supplied with each dual power system.

Each power supply has a normally-closed relay contact for the alarm circuit. The bus provides a common circuit for all the relays in series. If there is a failure in any of the supplies, the relay is opened to signal an alarm.

An alarm condition will be generated if FPS-IPM power modules are not installed in all available slots of the FPS carrier(s), e.g. on an unused segment. To prevent the alarm a blanking module can be fitted. These modules are available in packs of ten as part number FPS-BLK10.

SPECIFICATION

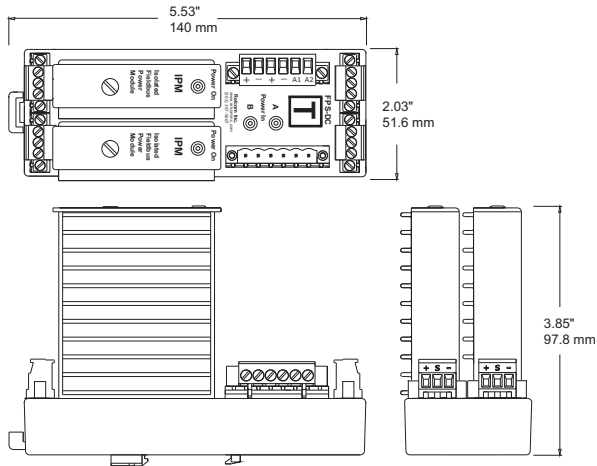
MECHANICAL

Mounting method
DIN-rail

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

Terminals
Rising cage clamp screw terminals

Physical Dimensions



ENVIRONMENTAL

As FPS-I

ELECTRICAL

EMC compliance

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

Electrical safety

EN 61010-1

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

With 2 segments at 350mA load: 1.37A (typ) at 20V
1.14A (typ) at 24V
0.98A (typ) at 28V

Power dissipation with 350mA output load

10.2W (max) at rated output

Maximum number of cascaded FPS modules

5 units (10 Isolated Power Modules)

Alarm

Alarm contact rating: 1.0A max @ 30V dc max
Alarm contact status: Normally closed
Alarm threshold: input: <18V dc output: <22V dc

HAZARDOUS AREA APPROVALS

Location of module

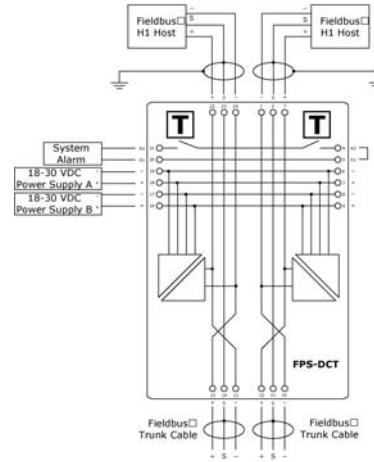
Safe area, Zone 2, IIC T4 hazardous area or Class 1, Div 2, Groups A, B, C, D T4 hazardous location

Location of field wiring

Zone 2, IIC hazardous area or Class 1, Div 2, Groups A, B, C, D hazardous location

Field wiring protection

Normally non-arcing/Ex nA



CERTIFICATION

Region	Europe (ATEX)	USA	Canada
Authority	Relcom	FM	CSA
Standard	EN50021	3611	C22.2 No.213
Approval	Ex II 3 G EEx nA IIC T4 T _a = -40°C to +60°C	Class1, Div 2 Grps A-D, Temperature Class T4, T _a = 60°C	Class1, Div 2 Grps A-D; Ex nA IIC T4 T _a = -40°C to +60°C
Cert no.	500-463	3021700	1279454

PHYSICAL NETWORKS

IEC61158-2
Foundation Fieldbus H1

ORDERING INFORMATION

Description

Redundant Fieldbus Power System

Includes: 2 x FPS-IPM, 1 x FPS-RCT, 4 x FPS-A05, 1 x FPS-A03, 1 x FPS-A04

Redundant Fieldbus Power System (no terminator)

Includes: 2 x FPS-IPM, 1 x FPS-RC, 2 x FPS-A01, 1 x FPS-A03, 1 x FPS-A04

Components and Accessories

Isolated Power Module
Dual Power Back-Plane with Terminator
Dual Power Back-Plane no Terminator
3-pin Fieldbus Connector (3.5mm)
5-pin Power and Alarm Connector
Power and Alarm Jumper Assembly
Blanking module (pack of 10)
Heavy Duty DIN Rail End Stop
35mm DIN Rail, 1m Length

Part Number

FPS-I

FPS-2

Part Number

FPS-IPM

FPS-DCT

FPS-RC

FPS-A05

FPS-A03

FPS-A04

FPS-BLK10

ETL 7000

THR 7000

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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EPS-FPSD RevC 310310