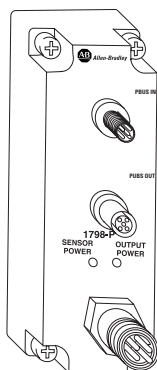




Installation Instructions

FlexArmor PROFIBUS Field Termination Plug

Catalog Number 1798-PFTP1



42637

The FlexArmor PROFIBUS Field Termination Plug (Cat. No. 1798-PFTP1) serves as the user connection point for the two field power busses (sensor power and output power) as well as the fieldbus network.

The connection point for the field power is capable of conducting a maximum of 2.5A for the Sensor Power Bus and a maximum of 10A for the Output Power Bus.

Package Contents

Your package contains:

- 1 FlexArmor PROFIBUS Field Termination Plug (PFTP1)
- installation instructions

(Note: Baseplates and other components are ordered and shipped separately.)

Important User Information

Because of the variety of uses for the products described in this publication, those responsible for the application and use of these products must satisfy themselves that all necessary steps have been taken to assure that each application and use meets all performance and safety requirements, including any applicable laws, regulations, codes and standards. In no event will Allen-Bradley be responsible or liable for indirect or consequential damage resulting from the use or application of these products.

Any illustrations, charts, sample programs, and layout examples shown in this publication are intended solely for purposes of example. Since there are many variables and requirements associated with any particular installation, Allen-Bradley does not assume responsibility or liability (to include intellectual property liability) for actual use based upon the examples shown in this publication.

Allen-Bradley publication SGI-1.1, *Safety Guidelines for the Application, Installation and Maintenance of Solid-State Control* (available from your local Allen-Bradley office), describes some important differences between solid-state equipment and electromechanical devices that should be taken into consideration when applying products such as those described in this publication.

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Throughout this publication, notes may be used to make you aware of safety considerations. The following annotations and their accompanying statements help you to identify a potential hazard, avoid a potential hazard, and recognize the consequences of a potential hazard:

ATTENTION



Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss.

IMPORTANT

Identifies information that is critical for successful application and understanding of the product.

Environment and Enclosure

This equipment is intended for use in a Pollution Degree 2 industrial environment, in overvoltage Category II applications (as defined in IEC publication 60664-1), at altitudes up to 2000 meters without derating.

This equipment is considered Group 1, Class A industrial equipment according to IEC/CISPR Publication 11. Without appropriate precautions, there may be potential difficulties ensuring electromagnetic compatibility in other environments due to conducted as well as radiated disturbance.

ATTENTION

This equipment is supplied as "enclosed" equipment. It should not require additional system enclosure when used in locations consistent with the enclosure type ratings stated in the Specifications section of this publication. Subsequent sections of this publication may contain additional information regarding specific enclosure type ratings, beyond what this product provides, that are required to comply with certain product safety certifications.

See NEMA Standards publication 250 and IEC publication 60529, as applicable, for explanations of the degrees of protection provided by different types of enclosure. Also, see the appropriate sections in this publication, as well as the Allen-Bradley publication 1770-4.1 ("Industrial Automation Wiring and Grounding Guidelines"), for additional installation requirements pertaining to this equipment.

Related Publications

- For software configuration information, refer to the 1798-APB User Manual, publication no. 1798-UM002.
- For installation instructions for the 1798-APB, see publication no. 1798-IN011.

Install Your FlexArmor Field Termination Plug

To install the module:

- Mount the PFTP1
- Connect external wiring

These steps are explained in more detail in the following procedures.

For instructions on how to mount the FlexArmor Baseplate, refer to publication no. 1798-IN003.

Preventing Electrostatic Discharge

This equipment is sensitive to electrostatic discharge, which can cause internal damage and affect normal operation. Follow these guidelines when you handle this equipment:

ATTENTION



- Touch a grounded object to discharge potential static.
 - Wear an approved grounding wriststrap.
 - Do not touch connectors or pins on component boards.
 - Do not touch circuit components inside the equipment.
 - If available, use a static-safe workstation.
 - When not in use, store the equipment in appropriate static-safe packaging.
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Mount the Field Termination Plug

To mount the Field Termination Plug:

1. Place the PFTP1 on the left-most slot of the Baseplate.

2. Screw down the module retaining screws to ensure IP67 compliance.

IMPORTANT

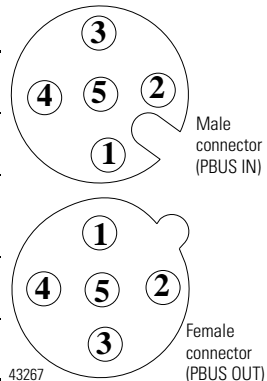
Torque the screws to 0.5-0.7 Nm. (4.43 - 6.2 inch pounds).

Connect External Wiring

Connect external wiring to the PROFIBUS adapter as shown below.

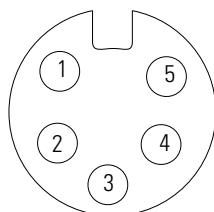
1. Connect the PROFIBUS in-going cable to the 12 mm male connector labeled PBUS IN.

Name	Pin Number	Description
+5VBUS	1	Supply voltage of the terminating resistance
A-Line	2	Negative RxD/TxD according to PROFIBUS specification
GND BUS	3	Supply voltage of the terminating resistance (GND)
B-Line	4	Positive RxD/TxD according to PROFIBUS specification
Shield	5	Connected to Protective Ground



2. Connect the PROFIBUS out-going cable to the 12 mm female connector labeled PUBS OUT.
3. Connect 24V dc power to sensor voltage for adapter and input module power.
4. Connect 24V dc power to output voltage for output module power.

Pin	Function
1	Output Power -
2	Sensor Power -
3	Protective Gnd
4	Sensor Power +
5	Output Power +



Male Connector

43268

Troubleshooting with the Indicators

The following table describes status indicators on the Field Termination Plug.

Indicator	Status
Green	Power ON
Off	Power OFF or reverse polarity

PROFIBUS Field Termination Plug Specifications

Following are specifications for the PROFIBUS Field Termination Plug.

1798-PFTP1 Specifications	
Voltage Rating	28.8V dc maximum
Sensor and Adapter Power Current	2.5A
Output Power Current	10A
Sensor/Output Voltage	10-28.8V dc
Sensor/Output Power Connector	0.875 in male
PROFIBUS Connector	M12 male and female
PROFIBUS Cable	Use appropriate cable
Dimensions (H x W x D)	1.5in x 4.5in x 1.0in

1798-PFTP1 Specifications (continued)

Operational Temperature	IEC 60068-2-1 (Test Ad, Operating Cold), IEC 60068-2-2 (Test Bd, Operating Dry Heat), IEC 60068-2-14 (Test Nb, Operating Thermal Shock): -20 to 60°C (-4 to 140°F)
Storage Temperature	IEC 60068-2-1 (Test Ab, Un-packaged Non-operating Cold), IEC 60068-2-2 (Test Bb, Un-packaged Non-operating Dry Heat), IEC 60068-2-14 (Test Na, Un-packaged Non-operating Thermal Shock): -40 to 85°C (-40 to 185°F)
Shock	IEC60068-2-27 (Test Ea, Unpackaged shock): Operating 30g Non-operating 50g
Emissions	CISPR 11: Group 1, Class A
ESD Immunity	IEC 61000-4-2: 4kV contact discharges
Radiated RF Immunity	IEC 61000-4-3: 10V/m with 1kHz sine-wave 80%AM from 80MHz to 1000MHz
EFT/B Immunity	IEC 61000-4-4: ±2kV at 5kHz on power ports ±1kV at 5kHz on signal ports
Surge Transient Immunity	IEC 61000-4-5: ±1kV line-line(DM) and ±2kV line-earth(CM) on power ports ±1kV line-earth (CM) on shielded ports
Conducted RF Immunity	IEC 61000-4-6: 10Vrms with 1kHz sine-wave 80%AM from 150kHz to 80MHz
Vibration	IEC60068-2-6 (Test Fc, Operating): 5g @ 10-500Hz

1798-PFTP1 Specifications (continued)

ConductorsWire Size Category	16 AWG stranded wire 2 ^{1, 2}
Enclosure Type Rating	Meets IP67
Agency Certification (When product is marked)	c-UL-us UL Listed Industrial Control Equipment, certified for US and Canada UL UL Listed Industrial Control Equipment CE ³ European Union 89/336/EEC EMC Directive, compliant with: EN 50081-2; Industrial Emissions EN 50082-2; Industrial Immunity EN 61326; Meas./Control/Lab., Industrial Requirements EN 61000-6-2; Industrial Immunity C-Tick ³ Australian Radiocommunications Act, compliant with: AS/NZS 2064; Industrial Emissions

1. You use this conductor category information for planning conductor routing as described in the system level installation manual.
 2. See pub. 1770-4.1, Programmable Controller Wiring and Grounding Guidelines.
 3. See the Product Certification link at www.ab.com for Declarations of Conformity, Certificates, and other certification details.
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