

## SAFETY INFORMATION

### 1 About this document

- This document is valid for the FLPS Multibarrier.
- This document contains a summary of safety information and warning notices for the respective device.
- If you do not understand a safety notice: Refer to the applicable Section in the Operating Instructions. The Operating Instructions are available on [www.endress.com/downloads](http://www.endress.com/downloads).
- ▶ Only put your device into operation after having read this document and the Operating Instructions.

#### WARNING:


- ▶ This document is only valid in connection with the Operating Instructions of the device concerned.
  - ▶ You must have read and understood the respective Operating Instructions.
  - ▶ Observe applicable documents and Operating Instructions of the devices to be connected.
- 
- ▶ Refer to [www.endress.com/downloads](http://www.endress.com/downloads) for further documents.
  - ▶ Observe all safety information and additional information in the Operating Instructions for the device concerned.
  - ▶ If you do not understand something: Do not put the device into operation and contact Endress+Hauser Customer Service.
  - ▶ The manufacturer assumes no liability for damage due to incorrect or unallowed use as well as noncompliance with these Operating Instructions.
  - ▶ Keep this document, together with the Operating Instructions, available for reference and pass these on to a new owner.

### 2 For your safety

#### 2.1 Intended use

The FLPS Multibarrier is a multichannel feed and input isolator amplifier to provide intrinsically safe installation of FLOWSIC gas measuring devices.

- ▶ Always contact Endress+Hauser for operating conditions which deviate from the technical data.

-  ▶ Valid identification, see imprint on the FLPS Multibarrier and EU declaration of conformity.
- ▶ Do not remove, add or modify any components to or on the device unless described and specified in the official manufacturer information. Otherwise the approval for use in potentially explosive atmospheres becomes void.
- ▶ The FLPS Multibarrier may not be modified. Any modification to the device voids the Ex certification.

#### 2.2 Operation in potentially explosive atmospheres

- ▶ Install the device outside of hazardous areas only.

#### WARNING: Risk of explosion

- ▶ The FLPS Multibarrier is an [Ex ia] associated equipment that provides intrinsically safe wiring with intrinsically safe devices installed in Zone 1 or Zone 0.
- ▶ Substitution of components may impair Intrinsic Safety.

#### Specific conditions of use (denoted by X after the certificate number)

The value of  $U_m$  for all Non intrinsically safe terminals is lower than 250 V due to circuits which are connected with Non intrinsically safe terminals have to be SELV or PELV and is necessary to accept a measures which are listed in the user manual.

#### 2.3 Requirements on the personnel's qualification

- ▶ Only authorized and adequately trained personnel may perform work on the device (installation, maintenance, service, troubleshooting).
- ▶ The FLPS Multibarrier may only be installed by persons trained in the standards used (e.g. EN/IEC 60079-11 and EN/IEC60079-14).
- ▶ The current national assembly and installation regulations (e.g. IEC/EN 60079-14) shall apply.

## 3 Installation

#### WARNING: Risk of explosion

- ▶ When the device is used in non-intrinsically safe power circuits, it no longer may be used in intrinsically safe power circuits.
- ▶ Then, clearly mark the device as non-intrinsically safe.

- ▶ Disconnect the device from all effective power sources except the intrinsically safe power circuits to the gas flow meter for installation, maintenance and service work.
- ▶ Install the device outside of hazardous areas only.
- ▶ Provide a switch/circuit breaker near the device and mark it as disconnecting device for this device (or the whole control cabinet).
- ▶ Provide an overcurrent protective device ( $I \leq 16$  A) during assembly.
- ▶ The enclosure of the device provides an ingress protection degree of IP20 according to IEC/EN60529 and is suitable for indoor installation only. If required this device is to be installed in an additional enclosure suitable for the existing environmental conditions. Outdoor installation requires IP54 or higher.
- ▶ In particular for interconnection with a device in Zone 0 the requirements in IEC/EN 60079-14 have to be observed.
- ▶ For safe operation connect the grounding terminal of the device with the potential equalization (PE). All intrinsically safe circuits of the FLPS Multibarrier must be considered as grounded circuits.
- ▶ Two (2) connectors with a cross-section of minimum 1.5 mm<sup>2</sup> up to maximum 2.5 mm<sup>2</sup> (stranded/ rigid ) are recommended to connect the ground terminal. Alternatively a single stranded wire with a cross-section of 4 mm<sup>2</sup> only with a crimping cable lug may be used.
- ▶ Conductors with a minimum cross-section of 0.2 mm<sup>2</sup> and a maximum cross-section of 2.5 mm<sup>2</sup> (fine-stranded/rigid) may be connected to the connection terminals. The tightening torque is 0.5 – 0.8 Nm. In case of stranded wires use wire end ferrules.
- ▶ Connect the device only to equipment, which does not carry voltage higher than 30 V AC or 60 V DC. Use SELV power supplies and equipment that meets the requirements of IEC/EN 60950 or IEC/EN 61010-1.
- ▶ The safety-related technical values of the connected field devices must be conform with the specifications of the Data Sheet and/or the EU Type Examination Certificate.
- ▶ Interconnection of several active operating resources in an intrinsically safe circuit may result in different safety-related technical values. This can endanger the intrinsic safety! The intrinsically safe RS485 interface of the FLPS Multibarrier is only permissible for point to point connections. Connection to a FISCO system is not permitted.
- ▶ Modifications and alterations on the device are not permitted.
- ▶ Only install and operate the device in an undamaged, dry and clean state.
- ▶ When the device is not used according to the documentation, the designated protection can be impaired.

## 4 Troubleshooting

#### 4.1 Replacing the fuse

- ▶ Repairs may only be performed by the manufacturer. The manufacturer is not liable for damages due to violation.

#### WARNING: Risk of explosion

- ▶ The FLPS Multibarrier is an [Ex ia] associated equipment that provides intrinsically safe wiring with intrinsically safe devices installed in Zone 1 or Zone 0.
- ▶ Substitution of components may impair Intrinsic Safety.

#### 4.2 Malfunction

The FLPS Multibarrier is maintenance-free.

When the device is operated with too high voltage or connected to the wrong polarity, the interchangeable back-up fuse will be triggered and protect the internal circuit. The fuse can be replaced without opening the enclosure.

#### CAUTION: Danger due to wrong spare parts

- ▶ Fuses may only be replaced with an original spare part; Endress+Hauser order No. 2085302 (Littlefuse Type O273.200 (200 mA, 125 V)).