

Safety Instructions

Prosonic S FMU90, FMU95

II 3 D Ex tc III C Dc



Prosonic S FMU90, FMU95

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Associated documentation	<p>This document is an integral part of the following Operating Instructions:</p> <ul style="list-style-type: none">■ BA00288F/00, BA00289F/00, BA00290F/00, BA00292F/00, BA00293F/00 (FMU90)■ BA00344F/00, BA00345F/00 (FMU95)
Supplementary documentation	<p>Explosion-protection brochure: CP00021Z/11</p> <p>The Explosion-protection brochure is available:</p> <ul style="list-style-type: none">■ In the download area of the Endress+Hauser website: www.endress.com -> Downloads -> Brochures and Catalogs -> Text Search: CP00021Z■ On the CD for devices with CD-based documentation
Manufacturer's certificates	<p>UK Declaration of Conformity</p> <p>Declaration Number: UK_00122</p> <p>The UK Declaration of Conformity is available: In the download area of the Endress+Hauser website: www.endress.com -> Downloads -> Declaration -> Type: UKCA Declaration -> Product Code: ...</p> <p>UKCA type-examination certificate</p> <p>Certificate number: UK 00122 X</p> <p>List of applied standards: See UK Declaration of Conformity.</p>
Manufacturer address	<p>Endress+Hauser SE+Co. KG Hauptstraße 1 79689 Maulburg, Germany</p> <p>Address of the manufacturing plant: See nameplate.</p>
Other standards	<p>Among other things, the following standards shall be observed in their current version for proper installation:</p> <ul style="list-style-type: none">■ IEC/EN 60079-14: "Explosive atmospheres - Part 14: Electrical installations design, selection and erection"■ EN 1127-1: "Explosive atmospheres - Explosion prevention and protection - Part 1: Basic concepts and methodology"

Extended order code

The extended order code is indicated on the nameplate, which is affixed to the device in such a way that it is clearly visible. Additional information about the nameplate is provided in the associated Operating Instructions.

Structure of the extended order code

FMU9x	-	*****	+	A*B*C*D*E*F*G*..
<i>(Device type)</i>		<i>(Basic specifications)</i>		<i>(Optional specifications)</i>

* = Placeholder

At this position, an option (number or letter) selected from the specification is displayed instead of the placeholders.

Basic specifications

The features that are absolutely essential for the device (mandatory features) are specified in the basic specifications. The number of positions depends on the number of features available.

The selected option of a feature can consist of several positions.

Optional specifications

The optional specifications describe additional features for the device (optional features). The number of positions depends on the number of features available. The features have a 2-digit structure to aid identification (e.g. JA). The first digit (ID) stands for the feature group and consists of a number or a letter (e.g. J = Test, Certificate). The second digit constitutes the value that stands for the feature within the group (e.g. A = 3.1 material (wetted parts), inspection certificate).

More detailed information about the device is provided in the following tables. These tables describe the individual positions and IDs in the extended order code which are relevant to hazardous locations.

Extended order code: Prosonic S



The following specifications reproduce an extract from the product structure and are used to assign:

- This documentation to the device (using the extended order code on the nameplate).
- The device options cited in the document.

Device type

FMU90, FMU95

Basic specifications

Position 1 (Approval)		
Selected option		Description
FMU9x	3	UK Ex II 3 D Ex tc IIIC T 90 °C Dc

Position 5 (Power Supply)		
Selected option		Description
FMU9x	A	90-253VAC
	B	10.5-32VDC

Optional specifications

No options specific to hazardous locations are available.

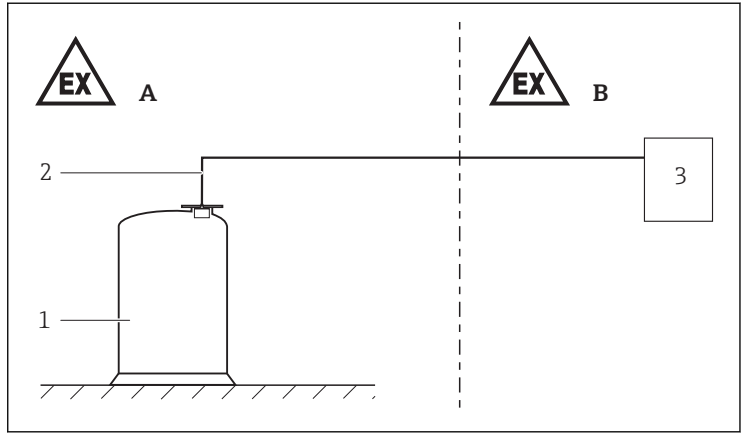
Safety instructions:
General

- Comply with the installation and safety instructions in the Operating Instructions.
- Staff must meet the following conditions for mounting, electrical installation, commissioning and maintenance of the device:
 - Be suitably qualified for their role and the tasks they perform
 - Be trained in explosion protection
 - Be familiar with national regulations
- Install the device according to the manufacturer's instructions and national regulations.
- Do not operate the device outside the specified electrical, thermal and mechanical parameters.
- Avoid electrostatic charging:
 - Of plastic surfaces (e.g. enclosure, sensor element, special varnishing, attached additional plates, ..)
 - Of isolated capacities (e.g. isolated metallic plates)

Safety instructions:
Special conditions

- The device corresponds to the "low" strain level. It must be mounted in a protected position, if mechanical stress is to be expected.
- In the event of additional or alternative special varnishing on the enclosure or other metal parts:
 - Observe the danger of electrostatic charging and discharge.
 - Do not rub surfaces with a dry cloth.

Safety instructions:
Installation



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- A Zone 1, Zone 2, Zone 20, Zone 21, Zone 22
- B Zone 22
- 1 Tank; Zone 1, Zone 2, Zone 20, Zone 21, Zone 22
- 2 Ultrasonic sensor FDU90, FDU91(F), FDU92, FDU93, FDU95
- 3 Analysing and controlling unit Prosonic S FMU90, FMU95

- To maintain the ingress protection of the enclosure IP66: Install the enclosure cover, cable glands and blind plugs correctly.
- Connect the device using suitable cable and wire entries of protection type "Equipment dust ignition protection by enclosure (Ex t)" or "Increased safety (Ex e)" (ingress protection of at least IP65). Lay connecting cable and secure.
- Replace fuses only with identical parts.
- Seal unused entry glands with approved sealing plugs that correspond to the type of protection.

Temperature tables

Maximum permissible ambient temperature	Maximum surface temperature
-10 to +60 °C	+90 °C ¹⁾

1) Measured at an ambient temperatur of +60 °C

Connection data

Supply voltage (observe nameplate)

Alternating current	
Max. voltage range	U = 90 to 253 V _{AC} , 50/60 Hz
Fuse (observe type)	400 mA
Max. power consumption	23 VA

Direct current	
Max. voltage range	$U = 10.5 \text{ to } 32 \text{ V}_{\text{DC}}$
Fuse (observe type)	2 A
Max. power consumption	14 W



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