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Safety Instructions
RMA42, ORMA42

ATEX: II (1)G [Ex ia Ga] IIC
II (1)D [Ex ia Da] IIIC

Safety instructions for electrical apparatus
in explosion-hazardous areas

Endress+Hauser
People for Process Automation

RMA42, ORMA42

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About this document

This document has been translated into several languages. Legally determined is solely the English source text.

The document translated into EU languages is available:
- In the download area of the Endress+Hauser website: www.endress.com -> Downloads -> Manuals and Datasheets -> Type: Ex Safety Instruction (XA) -> Text Search: ...
- In the Device Viewer: www.endress.com -> Product tools -> Access device specific information -> Check device features

If not yet available, the document can be ordered.

Associated documentation

This document is an integral part of the following Operating Instructions:

- Operating instructions: BA00278R
- Brief operating instructions: KA00286R
- Technical information: TI00150R

Supplementary documentation

Explosion-protection brochure: CP00021Z/11

The Explosion-protection brochure is available:
- 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

ATEX certificate

Certificate number: PTB 10 ATEX 2001

Affixing the certificate number certifies conformity with the following standards (depending on the device version)

- EN IEC 60079-0 : 2018
- EN 60079-11 : 2012

EU Declaration of Conformity

Declaration number: EC_00184

UKCA certificate

Certificate number: CML 21UKEX2996

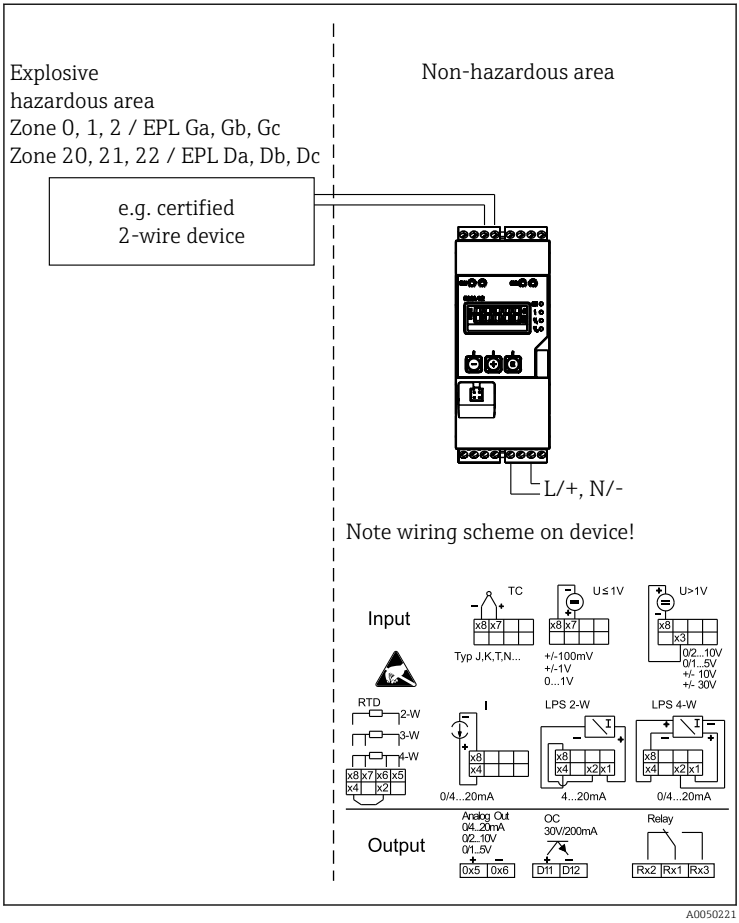
UKCA Declaration of Conformity

Declaration number: UK_00402

Manufacturer address

Endress+Hauser Wetzer GmbH + Co. KG
Obere Wank 1
87484 Nesselwang, Germany

Safety instructions:



Safety instructions: Installation

- Install the device according to the manufacturer's instructions and any other valid standards and regulations.
- The unit is an associated electrical apparatus and can only be installed outside the hazardous area.
- The unit must be installed in such a way that a minimum ingress protection of IP 20 is achieved.
- When installing the unit care must be taken that there must be a spacing of at least 50 mm (zone radius) to the intrinsically safe terminals.
- In applications for Zone 20/EPL Da or 21/EPL Db only sensors that fulfill the requirements for category 1D or 2D can be connected to the instrinsically safe input circuit.

Temperature tables

RMA42, ORMA42	II (1)G [Ex ia Ga] IIC II (1)D [Ex ia Da] IIIC
Temperature range	Ta = –20 to 60 °C

Electrical connection data

RMA42, ORMA42		II (1)G [Ex ia Ga] IIC II (1)D [Ex ia Da] IIIC	
Supply circuit Terminals L/+, N/-, PE		U_m = 20 to 253 V AC/DC 50/60 Hz	
Pulse and current output Terminals O15, O16 Terminals O25, O26 (optional)		0/4 to 20 mA U_m = 250 V	
Open Collector Terminals D11, D12		U_m = 30 V Imax = 200 mA	
Relay output Terminals R11, R12, R13 Terminals R21, R22, R23		 Umax ≤ 250 V_{AC} Umax ≤ 30 V_{DC}	 Imax ≤ 3 A Imax ≤ 3 A
Interfaces CDI		U = 5 V U_m = 250 V	
2-wire loop-power-supply (intrinsically safe) Terminals 11, 14, 12, 18 Terminals (optional) 21, 24, 22, 28		Uo ≤ 27.3 V Io ≤ 96.5 mA Po ≤ 659 mW	
Inner capacities Inner inductances		Ci = 8 nF Li = 75 µH	
Max. connection values	Ex ia IIC Ex ia IIB Ex ia IIA	Co ≤ 88 nF Co ≤ 683 nF Co ≤ 2 280 nF	Lo ≤ 4 mH Lo ≤ 17 mH Lo ≤ 34 mH
4-wire loop-power-supply (intrinsically safe) Terminals 11, 12 Terminals (optional) 21, 22		Uo ≤ 27.3 V Io ≤ 91.1 mA Po ≤ 622 mW	
Inner capacities Inner inductances		Ci = 8 nF Li = 75 µH	
Max. connection values	Ex ia IIC Ex ia IIB Ex ia IIA	Co ≤ 70 nF Co ≤ 310 nF Co ≤ 460 nF	Lo ≤ 500 µH Lo ≤ 2 mH Lo ≤ 20 mH
4-wire loop-power-supply (intrinsically safe) Terminals 14, 18 Terminals (optional) 24, 28		Uo ≤ 27.3 V Io ≤ 5 mA Po ≤ 34.2 mW Ui ≤ 28 V Ii ≤ 100 mA Pi ≤ 650 mW	

RMA42, ORMA42		**II (1)G [Ex ia Ga] IIC II (1)D [Ex ia Da] IIIC**	
Inner capacities Inner inductances		Ci = 8 nF Li = 75 µH	
Max. connection values	Ex ia IIC Ex ia IIB Ex ia IIA	Co ≤ 88 nF Co ≤ 380 nF Co ≤ 540 nF	Lo ≤ 500 µH Lo ≤ 2 mH Lo ≤ 100 mH
RTD temperature input (intrinsically safe) Terminals 15, 16, 17, 18 and 12, 14 Terminals (optional) 25, 26, 27, 28 and 22, 24		Uo ≤ 27.3 V Io ≤ 22.1 mA Po ≤ 151 mW	
Inner capacities Inner inductances		Ci = 8 nF Li = 75 µH	
Max. connection values	Ex ia IIC Ex ia IIB Ex ia IIA	Co ≤ 85 nF Co ≤ 360 nF Co ≤ 530 nF	Lo ≤ 500 µH Lo ≤ 2 mH Lo ≤ 5 mH
Thermocouple temperature input (intrinsically safe) Terminals 17, 18 Terminals (optional) 27, 28		Uo ≤ 27.3 V Io ≤ 15.5 mA Po ≤ 105.8 mW Ui ≤ 28 V Ii ≤ 100 mA Pi ≤ 650 mW	
Inner capacities Inner inductances		Ci = 8 nF Li = 75 µH	
Max. connection values	Ex ia IIC Ex ia IIB Ex ia IIA	Co ≤ 74 nF Co ≤ 370 nF Co ≤ 530 nF	Lo ≤ 1 mH Lo ≤ 2 mH Lo ≤ 100 mH
Current input (intrinsically safe) Terminals 14, 18 Terminals (optional) 24, 28		Uo ≤ 27.3 V Io ≤ 5 mA Po ≤ 34.2 mW Ui ≤ 28 V Ii ≤ 100 mA Pi ≤ 650 mW	
Inner capacities Inner inductances		Ci = 8 nF Li = 75 µH	
Max. connection values	Ex ia IIC Ex ia IIB Ex ia IIA	Co ≤ 88 nF Co ≤ 380 nF Co ≤ 540 nF	Lo ≤ 500 µH Lo ≤ 2 mH Lo ≤ 100 mH
Voltage input (intrinsically safe) Terminals 13, 18 Terminals (optional) 23, 28		Uo ≤ 27.3 V Io ≤ 5 mA Po ≤ 34.2 mW Ui ≤ 28 V Ii ≤ 100 mA Pi ≤ 650 mW	

RMA42, ORMA42		**II (1)G [Ex ia Ga] IIC II (1)D [Ex ia Da] IIIC**	
Inner capacities Inner inductances		Ci = 8 nF Li = 75 µH	
Max. connection values	Ex ia IIC Ex ia IIB Ex ia IIA	Co ≤ 88 nF Co ≤ 380 nF Co ≤ 540 nF	Lo ≤ 500 µH Lo ≤ 2 mH Lo ≤ 100 mH

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