

# Safety Instructions

## **RMA42, ORMA42**

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



# RMA42, ORMA42

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**About this document**

The document number of these Safety Instructions (XA) must match the information on the nameplate.

**Associated documentation**

All documentation is available on the Internet:  
[www.endress.com/Deviceviewer](http://www.endress.com/Deviceviewer)  
(enter the serial number from the nameplate).



If not yet available, a translation into EU languages can be ordered.

To commission the device, please observe the Operating Instructions pertaining to the device:  
[www.endress.com/<product code>](http://www.endress.com/<product code>), e.g. RMA42

**Supplementary documentation**

Explosion protection brochure: CP00021Z

The explosion protection brochure is available on the Internet:  
[www.endress.com/Downloads](http://www.endress.com/Downloads)

**Certificates and declarations****IECEX certificate**

Certificate number: IECEX EPS 25.0076

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

- IEC 60079-0: 2017
- IEC 60079-11: 2011

**ATEX certificate**

Certificate number: PTB 10 ATEX 2001

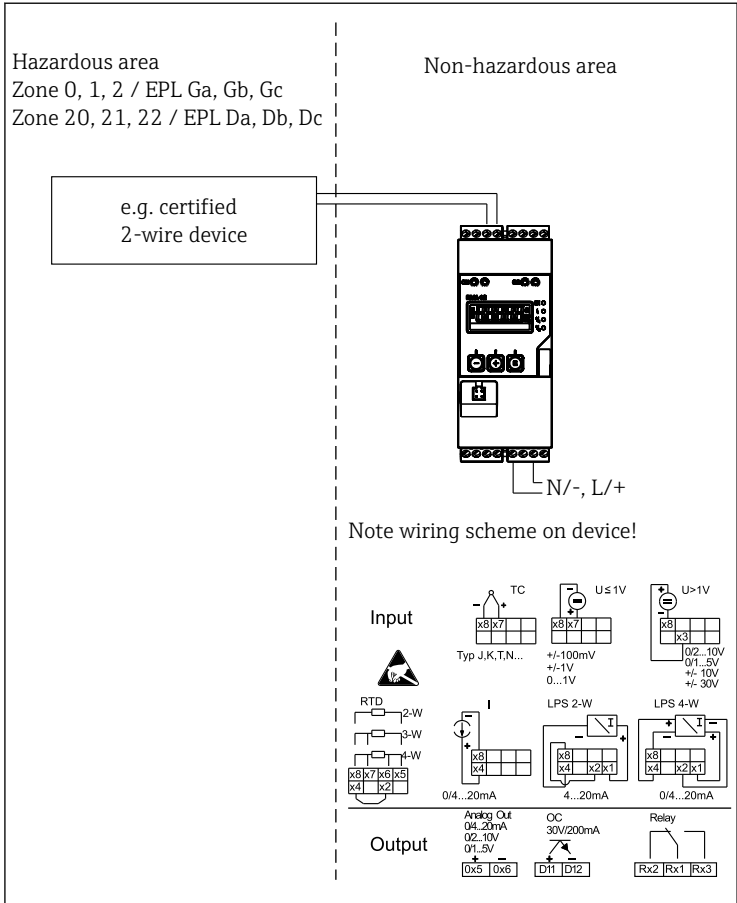
Affixing the certificate number certifies conformity with the following standards (depending on the device version)

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

**Manufacturer address**

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

**Safety instructions:**



A0050221

**Safety instructions:**  
**Installation**

- Comply with the installation and safety instructions in the Operating Instructions.
- Install the device according to the manufacturer's instructions and any other valid standards and regulations (e.g. EN/IEC 60079-14).
- 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.
- Screw tight the unused terminals for keeping the required distances between intrinsically safe circuits/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 intrinsically safe input circuit.

## Temperature tables

RMA42, ORMA42	II (1)G [Ex ia Ga] IIC II (1)D [Ex ia Da] IIIC
Ambient temperature	Ta = -20 to +60 °C

## Electrical connection data

RMA42, ORMA42			
Supply circuit Terminals N/-, L/+		20 to 253 V AC/DC 50/60 Hz U <sub>m</sub> = 250 V	
Output circuits, limit value relay Terminals R11, R12, R13 or Terminals R21, R22, R23 (optional)		U <sub>max</sub> = 250 V <sub>AC</sub> U <sub>max</sub> = 30 V <sub>DC</sub>	I <sub>max</sub> = 3 A I <sub>max</sub> = 3 A
Interface CDI (operational values)		U = 5 V U <sub>m</sub> = 250 V	
Pulse outputs and current outputs Terminals O15, O16 Terminals O25, O26 (optional)		0/4 to 20 mA U <sub>m</sub> = 250 V	
Open Collector Terminals D11, D12		U <sub>m</sub> = 30 V I = 200 mA	
2-wire loop-power-supply (intrinsically safe) Terminals 11, 14, 12, 18 Terminals (optional) 21, 24, 22, 28		U <sub>o</sub> = 27.3 V I <sub>o</sub> = 96.5 mA P <sub>o</sub> = 659 mW	
Linear characteristic		L <sub>i</sub> = 75 µH C <sub>i</sub> = 8 nF	
Max. connection values	Ex ia IIC Ex ia IIB/IIIC Ex ia IIA	Co = 88 nF Co = 683 nF Co = 2 280 nF	Lo = 4 µH Lo = 17 mH Lo = 34 mH
Combined values	Ex ia IIC Ex ia IIB/IIIC Ex ia IIA	Co = 62 nF Co = 262 nF Co = 532 nF	Lo = 425 µH Lo = 4.9 mH Lo = 100 mH
4-wire loop-power-supply (intrinsically safe) Terminals 11, 12 Terminals (optional) 21, 22		U <sub>o</sub> = 27.3 V I <sub>o</sub> = 91.1 mA P <sub>o</sub> = 622 mW	
Linear characteristic		L <sub>i</sub> = 75 µH C <sub>i</sub> = 8 nF	

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Combined values	Ex ia IIC Ex ia IIB/IIIC 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) or current input Terminals 14, 18 Terminals (optional) 24, 28		Uo = 27.3 V Io = 5 mA Po = 34.2 mW	
or voltage input Terminals 13, 18 Terminals (optional) 23, 28		Ui = 28 V Ii = 100 mA Pi = 650 mW	
Linear characteristic		Li = 75 µH Ci = 8 nF	
Combined values	Ex ia IIC Ex ia IIB/IIIC Ex ia IIA	Co = 88 nF Co = 380 nF Co = 540 nF	Lo = 500 µH Lo = 2 mH Lo = 100 mH
		Only one connection is possible.	
RTD temperature inputs (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	
Linear characteristic		Li = 75 µH Ci = 8 nF	
Combined values	Ex ia IIC Ex ia IIB/IIIC Ex ia IIA	Co = 85 nF Co = 360 nF Co = 530 nF	Lo = 500 µH Lo = 2 mH Lo = 5 mH
Thermocouple temperature inputs (intrinsically safe) or voltage input Terminals 17, 18 Terminals (optional) 27, 28		Uo = 27.3 V Io = 15.5 mA Po = 105.8 mW	
Linear characteristic		Ui = 28 V Ii = 100 mA Pi = 650 mW	
Combined values	Ex ia IIC Ex ia IIB/IIIC Ex ia IIA	Co = 74 nF Co = 370 nF Co = 530 nF	Lo = 1 mH Lo = 2 mH Lo = 100 mH
		Only one connection is possible.	

The intrinsically safe circuits are safety galvanically isolated from all other circuits up to a peak value of the nominal voltage of 375 V.





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[www.addresses.endress.com](http://www.addresses.endress.com)

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