

## Technical data sheet Magnetically coded sensor

Part no.: 63001104

MC330-S1R5-A

### Contents

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Figure can vary



## Technical data

### Basic data

Series	MC330
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### Functions

Functions	Integration in control circuits up to category 4 in accordance with EN ISO 13849-1 Safety system in combination with an evaluation unit such as the MSI-MC310 safety relay or the MSI 400 safety controller.
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### Characteristic parameters

Mission time $T_M$	20 years, EN ISO 13849-1
Category	Up to 4, depending on evaluation, 1 sensor connected, EN ISO 13849-1
$B10_a$	20,000,000 number of cycles

### Electrical data

Protective circuit	Current limitation Short circuit protected, Via e.g. MSI-MC310, MSI 400
Contact allocation	1NC + 1NO
Contact type	Reed contacts (magnetically sensitive)
Requirement on the voltage supply when used acc. to cULus (UL 508)	Class 2 Circuits

### Outputs

Max. switching voltage	27 V AC/DC
Switching current, max.	500 mA

### Timing

Response time	3 ms
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### Connection

Number of connections	1 Piece(s)
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### Connection 1

Function	Contact connection
Type of connection	Cable with wire-end sleeves
Cable length	5,000 mm
Sheathing material	PUR
Cable color	Black
Number of conductors	4 -wire

### Mechanical data

Design	Cylindrical
Thread size	M30
Length	36 mm
Housing material	Plastic
Plastic housing	Glass fiber reinforced (PPS), self-extinguishing
Net weight	298 g
Housing color	Red
Type of fastening	Mounting thread
Installation position	Arbitrary, provided housing markings are aligned
Switch type	Type 4 interlock device, contactless actuation, EN ISO 14119
Approach actuation directions	3-dimensional
Mechanical life time	10,000,000 actuation cycles
External actuator	Magnetically coded
Cut-out point (OFF), min.	12 mm
Assured cut-out distance ( $S_{ar}$ ), min.	14 mm
Assured cut-in distance ( $S_{ao}$ ), max.	6 mm
Switching tolerance (without ferromagnetic materials in immediate vicinity)	-1 ... 1 mm
Distance to other magnetic sensors, min.	50 mm
Approach speed, min.	0.05 m/s

### Environmental data

Ambient temperature, operation	-20 ... 70 °C
Degree of contamination, external	3, EN 60947-1

### Certifications

Degree of protection	IP 67
Certifications	c UL US TÜV Süd
Test procedure for EMC in accordance with standard	EN 60947-5-3 EN 61000-6-2 EN 61000-6-3
Test procedure for oscillation in accordance with standard	EN 60947-5-3
Test procedure for shock in accordance with standard	EN 60947-5-3

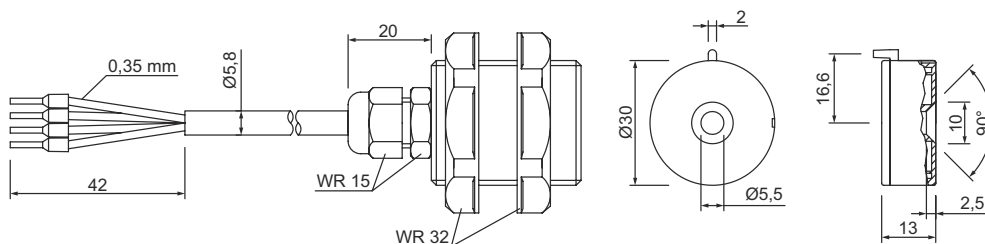
### Classification

Customs tariff number	90328900
eCl@ss 5.1.4	27272402
eCl@ss 8.0	27272402
eCl@ss 9.0	27272402
eCl@ss 10.0	27272402
eCl@ss 11.0	27272402
ETIM 5.0	EC002544
ETIM 6.0	EC002544
ETIM 7.0	EC002544

## Dimensioned drawings

All dimensions in millimeters

### Dimensions of sensor and actuator



## Electrical connection

### Connection 1

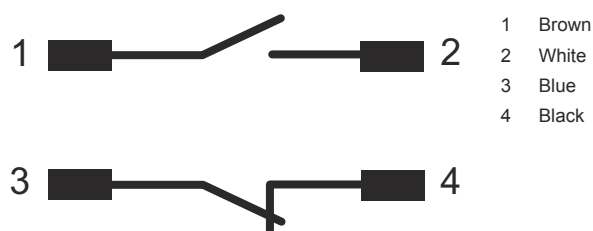
Function	Contact connection
Type of connection	Cable with wire-end sleeves
Cable length	5,000 mm
Sheathing material	PUR
Cable color	Black
Number of conductors	4 -wire
Wire cross section	0.35 mm <sup>2</sup>
Assignment	Representation of contacts without activation by actuator

### Conductor color

### Conductor assignment

Brown	NO
White	NO
Blue	NC
Black	NC

## Circuit diagrams



## Notes



### Observe intended use!



- ↪ The product may only be put into operation by competent persons.
- ↪ Only use the product in accordance with its intended use.

### ATTENTION!



- ↪ The sensor has no internal error detection and cannot assume a safe state in the case of failure.
- ↪ To use the sensor in accordance with DIN EN 60947-5-3, a suitable evaluation unit must be connected.
- ↪ In combination with a suitable evaluation unit, the sensor can be integrated in the control technology of safety systems up to Cat. 4 / PL e in accordance with EN ISO 13849-1 and SIL CL3 in accordance with IEC 62061.