



Model Number

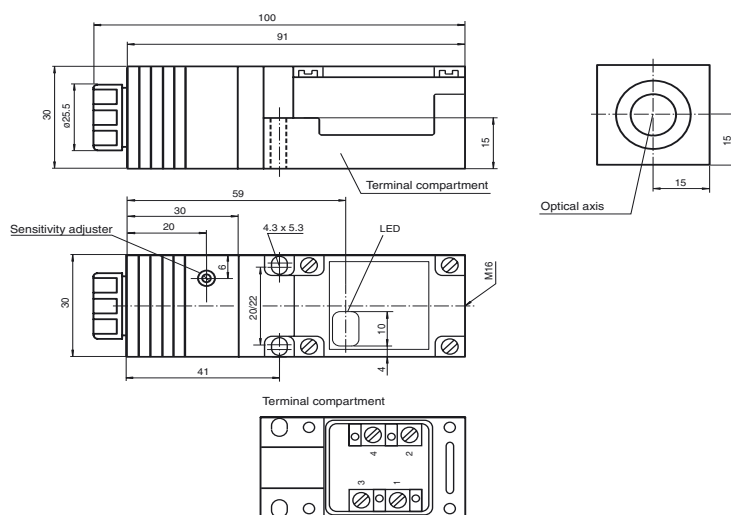
OCT300-M1K-N2

Diffuse mode sensor, NAMUR, special design, 300 mm detection range, infra-red light, light/dark on, DC version, NAMUR output, terminal compartment

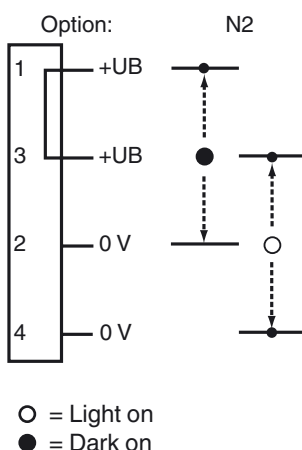
Features

- ATEX-, IECEx approval for zone 20 (Dust) and zone 1 (Gas)
- Intrinsically safe, Ex op is ia IIC T6 Gb/IIIC T 135 °C Da
- Adjustable sensor head
- Scratch resistant mineral glass lens

Dimensions



Electrical connection



Technical data

General specifications

Detection range	0 ... 300 mm
Adjustment range	70 ... 300 mm
Reference target	standard white 200 mm x 200 mm
Light source	IRED , 880 nm
Light type	modulated infrared light
Ambient light limit	≤ 40000 Lux sun light ≤ 30000 Lux halogen light
Temperature influence	≤ 0.5 mm/K

Functional safety related parameters

MTTF _d	1319 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Function indicator	LED yellow: switching state
Control elements	Sensing range adjuster

Electrical specifications

Operating voltage	U _B	6 ... 20 V DC (R _i approx. 0 Ohm)
Ripple		5 %
Time delay before availability	t _v	20 ms

Output

Switching type	light/dark on, programmable	
Signal output	1 NAMUR output NC/NO programmable	
Switching voltage	8 V DC (R _i approx. 1 kΩ)	
Switching frequency	f	≤ 100 Hz

Current consumption

Reference target detected	connection 1, 2: ≤ 1 mA connection 3, 4: ≥ 2.7 mA
Reference target not detected	connection 1, 2: ≥ 2.7 mA connection 3, 4: ≤ 1 mA

Response time		5 ms
Repeat accuracy	R	≤ 0.5 % of the sensing range

Conformity

Product standard	EN 60947-5-2
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Ambient conditions

Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Storage temperature	-40 ... 80 °C (-40 ... 176 °F)

Mechanical specifications

Housing width	30 mm
Housing height	30 mm
Housing depth	102 mm
Degree of protection	IP67
Connection	M16 terminal compartment, core cross section ≤ 2.5 mm ²
Material	
Housing	PBT
Optical face	Scratch resistant mineral glass lens
Mass	100 g

Compliance with standards and directives

Standard conformity	
Standards	EN 60947-5-6:2000

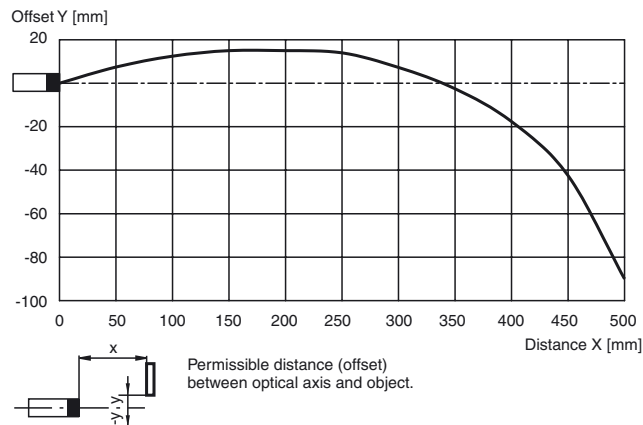
Approvals and certificates

FM approval	
Approved for	IS / I,II,III / 1 / ABCDEFG / T5 - 116-0110; Entity NI / I / 2 / ABCD / T6 Entity Parameters: V _{Max} = 12.6 V, I _{Max} = 20 mA, C _i = 1.11 μF, L _i = 0 mH (Groups A, B, C, D, E, F, G). V _{Max} = 15.5 V, I _{Max} = 52 mA, C _i = 1.11 μF, L _i = 0 mH (Groups C, D, E, F, G).
CSA approval	
Approved for	Class I, Division 2, Groups A, B, C and D Rated 20V (max), 50mA. These sensors are suitable for installation in (or through the wall of) a suitable enclosure with provision for connection of rigid metal conduit, as acceptable to the local inspection authority having jurisdiction.
CCC approval	CCC approval / marking not required for products rated ≤36 V

Curves / Diagrams

Characteristic response curve

OCT300-M1K-N2



Detection ranges

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