

ISO 9001:2015



TDD-BAD-BBB-TF LED TOF Distance Sensor



Date IS production indegradium II. 20 Ex to ICT, 1007C 0. Date IS production indegradium II. 20 Ex to ICT, 1007C 0. Standard Transmission (LED) III. 12, (20), 21 How 22 Light Source 800m (LED) Standard Transmission (LED) III. 12, (20), 21 How 22 Standard Transmission (LED) III. 12, (20), 21 How 22 Standard Transmission (LED) III. 12, (20), 21 How 22 Standard Transmission (LED) III. 12, (20), 21 How 22 Standard Transmission (LED) III. 12, (20), 21 How 22 Standard Transmission (LED) III. 12, (20), 21 How 22 Standard Transmission (LED) III. 12, (20), 21 How 22 Standard Transmission (LED) III. 12, (20), 21 How 22 Standard Transmission (LED) III. 12, (20), 21 How 22 Standard Transmission (LED) III. 12, (20), 21 How 22 Standard Transmission (LED) III. 12, (20), 21 How 22 Standard Transmission (LED) III. 12, (20), 21 How 22 Standard Transmission (LED) III. 12, (20), 21 How 22 Standard Transmission (LED) III. 12, (20), 21 How 22 Standard Transmission (LED) III. 12, (20), 21 How 22 Standard Transmission (LED) III. 12, (20), 21 How 22 Standard Transmission (LED) III. 12, (20), 21 How 22 Standard Transmission (LED) III. 12, (20), 21 How 22 <	echnical Data as Ex protection designation			D-BBB-TF	_	
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Advance of the second sec	aht Source		860nm	(LED)		
Ubackue measuring accuracy 1:10% Segona 6 min 100m Oblegen 6 win 10m O	Measuring range		10cm	to 1m		
September Inter	bsolute measuring accuracy		+11)%		
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Device description DAASS I Device description	Output type		RS485 + push-pull max 100mA short circuit protected + I ED		_	
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4 IS348: A (D+) Potentiometer 5 RS485: B (D-) Potentiometer rigital output function State IED/Output Target available LED green = Output + 24V Object detected = = = -1 No reflection LED binking red = Output tOV No object detected = = = -1 No reflection LED binking red = Output tOV No object detected = = = -1 No reflection LED binking red = Output tOV No object detected = = = -1 No reflection LED binking red = Output tOV No object detected = = = -1 No reflection LED orange = +24V Image: transmitter tool Image: transmitte		circuit protected		 		
5 RS485: B (D-) Foundations rigital output function State LED/Output Target available LED green = Output + 24V Object detected Image: Comparison of the cable in the	4	RS485: A (D+)	Potentiometer			
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otentiometer adjustment otentiometer adjustment	No target available No reflection Saturation	LED dark/off = Output 0V LED blinking red = Output 0V LED orange = +24V	No object detected —			
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Operating Manual / EU-declaration of conformity

- Product description LED (860nm) TOF distance sensor proximity switch Switching distance controlled by potentiometer Distance reasing over RS-485

 Digital output (push-pull)
 Measurement range: 10cm to 1m
 General installation prescriptions
 The electrical connections must be exactly as shown in the connection diagram. The cable shield must be connected short. The cable shield should be connected to protection earth. large-surfaced. Do not exceed the maximum ratings. Connection cables must not be installed parallel to high voltage cables.

large-surfaced, be the parallel to high voltage cables. **Ex installation prescriptions** It is necessary to take into consideration the valid international and national rules and regula-tions (IEC 60079-14). The maximum ratings must not be exceeded. The electrical connections must be done according to the wiring diagram. The local equipotential bonding must be con-nected corrosion resistant and permanentely. The protective earth (PE) is solidly connected with the housing.

The cable shield must be solidly connected to protective early (FL) is solidly connected with the housing. The cable shield must be solidly connected to protection earth. The cable have to be installed and protected against damages. The cable with termination fittings, or in cable tray systems and installed in a manner to avoid tensile stress at the termination fittings. To connect cables inside hazardous locations only use certificated Ex housings. All cable terminals must be connected outside hazardous locations.

Other then original manufacturer, additional optical lenses are not allowed in hazardous locations. The product TDD-BAD-BBB-TF may only be installed and operated within Ex zones 1, 2, 21

and 22. The limited optical radiation may operate inside Ex zones 0 and 20.

RS-485 protocol (9600/8/1/no parity): ASCII-transfer • Format: <xxxxx> <CR>+<LF> (xxxxx=Distnace in mm)

- Signal overvlow indication: "overfl <CR>+<LF>"
 Signal underflow indication: "no sig <CR>+<LF>"

General safety

The sensor must not be used for Accident-Prevention! In worst case the output can change to any state! When installing and operating the product, it is necessary to take into consideration all relevant international and other national regulations, especially those regarding explosion protection.

Maintenance

No special maintenance is required. Protect the product and any optical ports (if applicable) from pollution. Clean with **non-aggressive** solvents only. Strong solvents may damage certain fibre optics. The equipment must only be repaired or serviced by the manufacturer.

General notes and disposal We reserve the right to modify our products. Our products are designed in such a way, that it has the least possible adverse effect on the environment. It neither emits or contains any dam-aging or siliconized substances and use a minimum of energy and resources. No longer usable or irreparable units must be disposed of in accordance with local waste disposal regulations.

or irreparable units must be disposed of in accordance with local waste disposal regulations. EU-Declaration of Conformity The product meets the requirements of the following standards and directives: IEC 60079-0:2017, EN IEC 60079-0:2018, IEC/EN 60079-1:2014, IEC/EN 60079-28:2015, IEC 60079-31:2013, EN 60529:2014, EN 60950-1:2006, EN 61000-4-2 to EN 61000-4-6, EN 61000-6-1/-2, EN 61000-6-4, ATEX directive 2014/34/EU, Machine directive 2006/42/EC, EMC directive 2014/30/EU, RoHS directive 2011/65/EU

directive 2014/30/EU, KOHS directive 2011/05/EU ATEX/IECEX-Designation: Gas: II 2G Ex db IIC 16 Gb Dust: II 2D Ex tb IIIC T100°C Db ATEX EU-type examination certificate No.: BVS 10 ATEX E130 X IECEX CoC No.: IECEX BVS 14.0108X Ex CB IECEX: DEKRA Testing and Certification GmbH, Carl-Beyling-Haus, Dinen-dahlstrasse 9, D-44809 Bochum. ATEX certification of ruality management system. type production of Ex devices, in accordance

ATEX certification of quality management system, type production of Ex devices, in accordance to the directive 2014/34/EU: Certification No.: SEV 21 ATEX 4580, QAR No.: CH/SEV/QAR21.0009/01, CB: Eurofins Elec-tric & Electronic Product Testing AG, Luppmenstrasse 3, CH-8320 Fehraltorf CE 1258 Ident. Number: 1258

Pablo Ledergerber, Matrix Elektronik AG, is authorized to generation of documentation.

The conformity of the devices with all used standards and directives and the EC-type exami-nation certificate and the observation of the Quality Management System ISO 9001:2015, declares:

Ehrendingen, 27.6.2023

for the

Pablo Ledergerber, Matrix Elektronik AG