TDD-BAC-BBA-TF LED TOF DISTANCE SENSOR

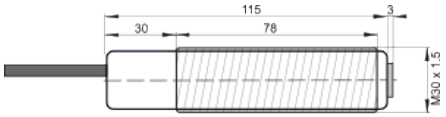
Zones 1, 2, 21, 22

ATEX INSTRUMENTATION | ZONES 1, 2 (gas) & 21, 22 (dust)

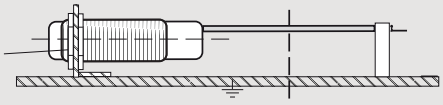
The TDD-BAC-BBA-TF LED TOF distance sensor is a compact and rugged solution designed for reliable distance measurement in hazardous environments. Using 860nm infrared light, it measures distances from 100mm to 1000mm independently of object reflectance. Housed in a flameproof M30 metal enclosure and certified for use in gas and dust Ex zones, it offers high durability, IP67 protection, featuring RS485 communication together with a 4–20 mA analogue output.

EU-Type Examination Certificate

ITEM REFERENCES

Designation:	Measuring range:	Dimensions:	Item No.:
TDD-BAC-BBA-TF	10cm to 1m		

TECHNICAL SPECIFICATIONS

Marking:	II 2G Ex db IIC T6 Gb II 2D Ex tb IIIC T100°C Db
Certificate:	EU-Type Examination Certificate
Operating temperature:	-10°C to +50°C
Storage temperature range:	-20°C to +80°C
Housing:	M30, brass Ms 58, nickel plated
Ingress protection:	IP67
Light Source:	860nm (LED)
Absolute measuring accuracy:	±10%
Response time:	100ms
Output type:	RS485 + 4-20mA
Device designation:	D3ASS1, according to EN 60947-5-1/2
Supply voltage, U_e:	24 VDC ± 10%
Absolute maximum supply voltage, U_m:	30 VDC
Current consumption:	< 50mA
Power consumption:	1.2 W
Power up delay time:	3s
Connection cable:	TPU insulation, AWM 20236, 5+PE x 0.5mm², halogen free, shielded, leads numbering marked, oil resistant cable for trailing, length: 10m
Safe equipotential bonding for Ex devices:	Ensure local equipotential bonding by means of a corrosion-resistant PE connection. The end of the cable must be connected outside the hazardous locations. 
Wiring and Connection:	

Lead-No	Function
1	+24V
2	0V
3	4 - 20mA PNP
4	RS485: A (D+)
5	RS485: B (D-)