CYLINDRICAL PROTECTIVE HOUSING FOR SAFETY LIGHT CURTAIN EOS2 / EOS4 FOR USE IN SEVERE ENVIRONMENTAL CONDITIONS

USE
Ideal for external use
Resistant to pressurised water jets
Resistant to highly humid environments
Saline environments / food industry
Resistant to cold temperatures *(WTHF only)*

WT - IP69K

https://www.reersafety.com/it/en/products/watertight-enclosures

INTRODUCTION

WT/WTHF is a **cylindrical protective housing for safety light curtain** designed to secure operators working on dangerous machines for use in severe environmental conditions.

WT/WTHF is particularly suitable for applications in the food industry using inert materials (non-toxic) in contact with the food.

Thanks to its features, **WTF/WTHF** is also the ideal solution for all uses in external environments (rain, sun, environments that generate condensation).

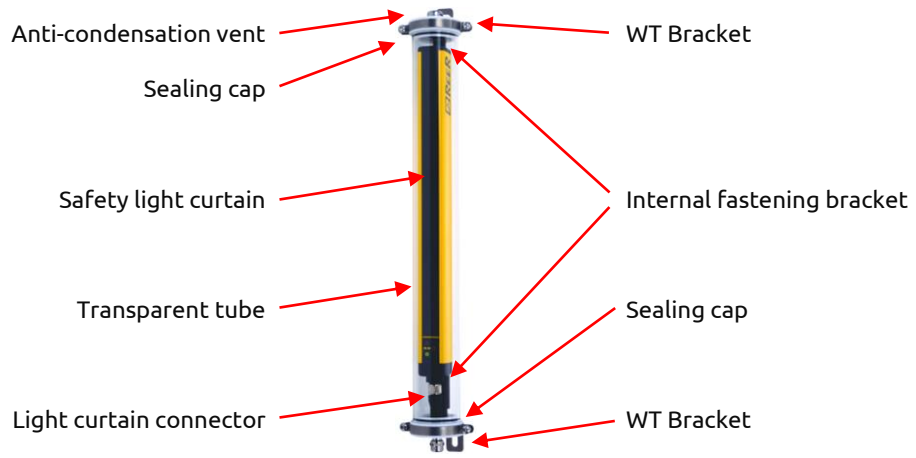
WTHF can work with extremely low temperature.

GENERAL CHARACTERISTICS

- Resistant to pressurised water streams of up to 100 bar.
- Integrated anti-condensation system through the GORE™ vent.
- Operating temperature from -10° to 55°C ***(WTF)***.
- Operating temperature from -25° to 55°C ***(WTHF)***.
- Thermostatic heating control system power supplied with 24V AC/DC ***(WTHF)***.
- Degree of protection IP69K.
- CE certified.

Cable length TX (m): 50, 15, 10 *(standard)*, 6
Cable length RX (m): 50, 15, 10 *(standard)*, 6
Ø Max (mm) = 5,8

PRODUCT STRUCTURE



DIMENSIONS (mm)

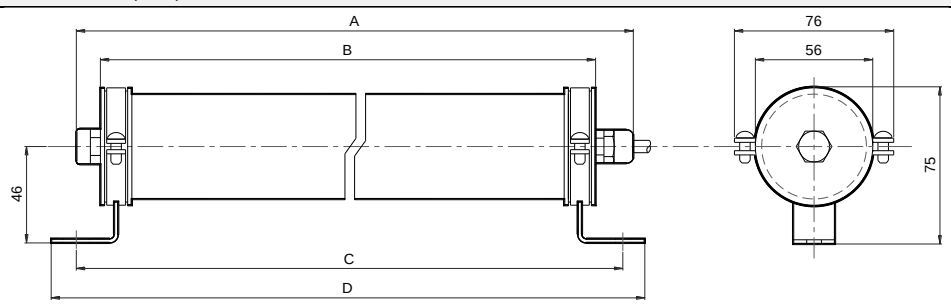


Figure 1 - Housing dimensions

	MODEL															
	150	**300**	**450**	**600**	**750**	**900**	**1050**	**1200**	**1350**	**1500**	**1650**	**1800**	**1950**	**2B**	**3B**	**4B**
A	*320*	*470*	*620*	*770*	*920*	*1070*	*1220*	*1370*	*1520*	*1670*	*1820*	*1970*	*2120*	*760*	*1060*	*1160*
B	*290*	*440*	*590*	*740*	*890*	*1040*	*1190*	*1340*	*1490*	*1640*	*1790*	*1940*	*2090*	*730*	*1030*	*1130*
C (±3)	*315*	*465*	*615*	*765*	*915*	*1065*	*1215*	*1365*	*1515*	*1665*	*1815*	*1965*	*2115*	*755*	*1055*	*1155*
D	*337*	*487*	*637*	*787*	*937*	*1087*	*1237*	*1387*	*1537*	*1687*	*1837*	*1987*	*2137*	*777*	*1077*	*1177*

PROTECTIVE HOUSING ELECTRICAL CONNECTIONS WTF

EMITTER			
PIN	**COLOR**	**NAME**	**DESCRIPTION**
1	*Brown*	**24VDC**	+24VDC power supply
2	*White*	**RANGE0**	Barrier configuration
3	*Blue*	**0VDC**	0VDC power supply
4	*Black*	**RANGE1**	Barrier configuration
5	*Grey*	**PE**	Ground connection

RECEIVER			
PIN	**COLOR**	**NAME**	**DESCRIPTION**
1	*White*	**OSSD1**	Safety static outputs
2	*Brown*	**24VDC**	+24VDC power supply
3	*Green*	**OSSD2**	Safety static outputs
4	*Yellow*	**K1_K2**	External contactors Feedback
5	*Grey*	**SEL_A**	Barrier configuration
6	*Pink*	**SEL_B**	
7	*Blue*	**0VDC**	0VDC power supply
8	*Red*	**PE**	Ground connection

PROTECTIVE HOUSING ELECTRICAL CONNECTIONS WTHF

EMITTER			
PIN	**COLOR**	**NAME**	**DESCRIPTION**
1	*Brown*	**24VDC**	+24VDC power supply
2	*White*	**RANGE0***	Barrier configuration
3	*Blue*	**0VDC**	0VDC power supply
4	*Green*	**RANGE1***	Barrier configuration
5	*Grey*	**PE**	Ground connection
-	*Yellow*	**0VDC**	**HEATING SYSTEM**
-	*Red*	**24 AC/DC**	
-	*Pink*	*n.c.*	*Not connected*

**Refer to EOS manual for safety light curtain connection*

RECEIVER			
PIN	**COLOR**	**NAME**	**DESCRIPTION**
1	*White*	**OSSD1**	Safety static outputs
2	*Brown*	**24VDC**	+24VDC power supply
3	*Green*	**OSSD2**	Safety static outputs
4	*Yellow*	**K1_K2**	External contactors Feedback
5	*Grey*	**SEL_A**	Barrier configuration
6	*Pink*	**SEL_B**	
7	*Blue*	**0VDC**	0VDC power supply
8	*Red*	**PE**	Ground connection
-	*Black*	**0VDC**	**HEATING SYSTEM**
-	*Violet*	**24 AC/DC**	

PROTECTIVE HOUSING TECHNICAL CHARACTERISTICS

Fastenings		Via 2 WT circular brackets	
Operating temperature (°C)		**WTF** -10 ÷ 55	**WTHF** -25 ÷ 55
Operating temperature with pressurised water (°C)		10 ÷ 55 *(max. water pressure = 100 bar)*	
Material	**Transparent tube**	PMMA *(Polymethylmethacrylate)* Ø 50mm	
	Sealing caps	POM C Ø 56mm / Silicone O-RING	
	WT EOS Brackets	Stainless steel *(AISI 316L)*	
Degree of protection		IP 69K	

MODEL *(WTHF only)*	**150**	**300**	**450**	**600**	**750**	**900**	**1050**	**1200**	**1350**	**1500**	**1650**	**1800**	**1950**	**2B**	**3B**	**4B**
Heating system power consumption (W)	2	4	6	8	9	10	10	10	10	10	10	10	10	8	10	10

WT EOS FASTENING BRACKET

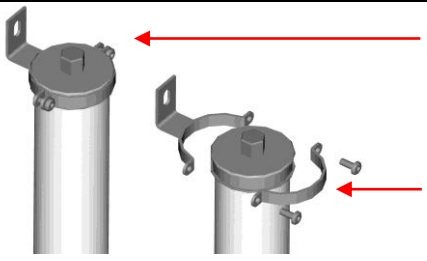


Figure 2 - WT Bracket

The figure illustrates the assembly of the brackets for the top and bottom caps of the housing.

During the alignment of the barrier models 1350 and up, take care not to over-tighten the upper and lower brackets to avoid abnormal rotations of the barrier inside the container WT.

DISTANCE FROM REFLECTIVE SURFACES

- The presence of reflective surfaces close to the light curtain may cause occasional reflections that prevent sensing. Referring to Figure t, object **A** is not detected due to surface **S** that, reflecting the beam, closes the optical path between the Emitter and Receiver. Therefore, a minimum distance **d** must be maintained between any reflecting surfaces and the guarded area.
- The characteristics of polycarbonate tube can cause a slight increase in the divergence of optical beams. Therefore, we recommend calculating the minimum distance **d** using the values for Type 2 devices according the standard IEC/EN 61496-2.

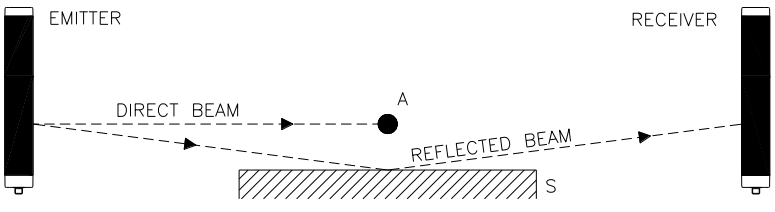
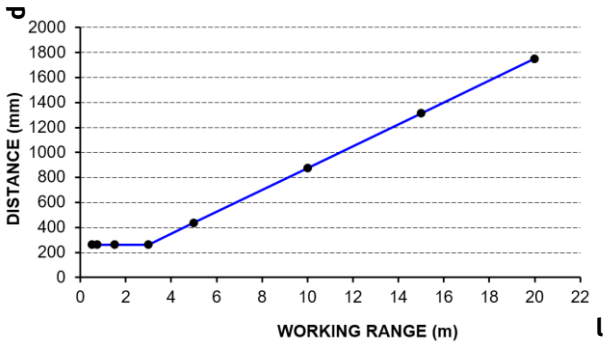


Figure 3 - Reflective surfaces

In Figure 8 these values are shown as a function of the distance **l** between the emitter and the receiver.



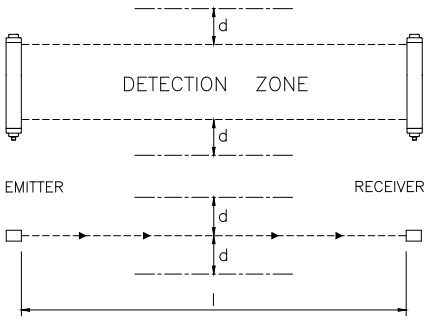


*Figure 4 - Minimum distance **d***

After installing the system, check for any reflective surface that intercept the beams, first of all at the centre and then close to the Emitter and Receiver.
During this procedure, the red led on the Receiver must never switch off.