

# FR 85 Rail Pilot

Distance sensor for collision prevention



## PRODUCT HIGHLIGHTS

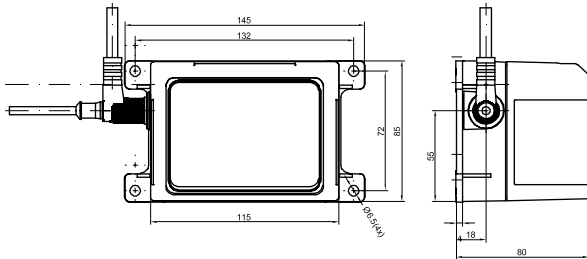
- Measurement range: 0 ... 6 m
- Wide detection cone
- Switching point accuracy  $\pm 10$  cm
- 2x2 detection zones
- 1 input
- 2 PNP outputs
- RS485 interface
- Detection zone adjustable externally
- Reliable suppression of foreign objects (girders, pillars)

Optical data		Functions	
Scanning distance	0 ... 6 m <sup>1</sup>	Indicator LED, green	Operating voltage indicator
Type of light	Infrared, 905 nm	Indicator LED, red	Switching output indicator
Laser Class (IEC 60825-1)	1	Scanning distance adjustment	Via control wire
Resolution	~ 16 mm		
Repeatability	$\pm 100$ mm		
Electrical data		Mechanical data	
Operating voltage, +U <sub>B</sub>	18 ... 30V DC <sup>2</sup>	Dimensions	145 x 85 x 80 mm
No-load current, I <sub>0</sub>	$\leq 200$ mA	Enclosure rating	IP 54 <sup>4</sup>
Output current, I <sub>e</sub>	$\leq 200$ mA	Material, housing	ABS
Protective circuits	Reverse-polarity protection, U <sub>B</sub> / short-circuit protection (Q)	Material, front screen	PMMA
Protection Class	2	Type of connection	See selection table
Power On Delay	< 300 ms	Ambient temperature: operation	0 ... +50 °C
Switching output, Q	See selection table	Ambient temperature: storage	-20 ... +70 °C
Output function	See selection table	Weight	340 g
Serial interface	RS485 / R = 1 K $\Omega$ <sup>3</sup>		
Control input E1 / banking	Close and remote switching -U <sub>B</sub> (low) Q1 = switching point 1; Q2 = switching point 2 +U <sub>B</sub> (high) Q1 = switching point 3; Q2 = switching point 4		

<sup>1</sup> Reference material: R10/2 reflector    <sup>2</sup> 10 % ripple, within U<sub>B</sub>    <sup>3</sup>Type FR85 ... S1L5    <sup>4</sup>With connected IP 54 plug

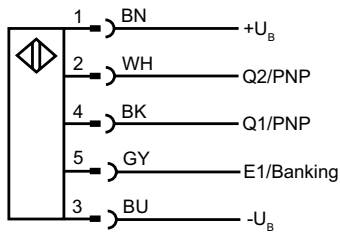
Interface	Baud rate	Suitable for control	Type of connection	Part number	Article number
RS485	57,6 kB	Lenze / DETO	Plug, M12x1, 5-pin	FR 85-2 ILLG-S1L5	529-11008
RS485	62,5 kB	LJU	Plug, M12x1, 5-pin	FR 85-2 ILLG-S1L5-62,5 kB	529-11014
2 switching points Q (PNP) N.C.	-	-	Plug, M12x1, 5-pin	FR 85-2 ILLG-POL5	529-11010

Plug connection



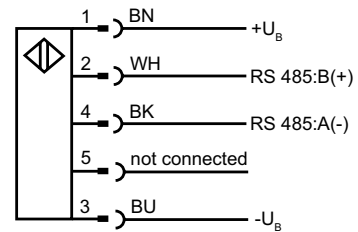
153-00349

Connection, 5-pin: FR 85-2 ILLG-POL5



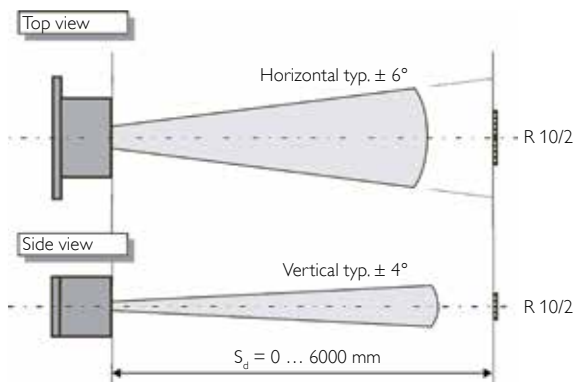
154-00325

Connection, 5-pin: FR 85-2 ILLG-S1L5



154-00478

Detection cone



155-00202

Reflector	Article number	Accessories	
R10 / 2 (2xR10)	904-51636	Reflectors	From Page A-18
		Connection cables	From Page A-38
		Setup Box FR 85-2 ILLX 533-11016	From Page A-38