Through-Beam Sensor

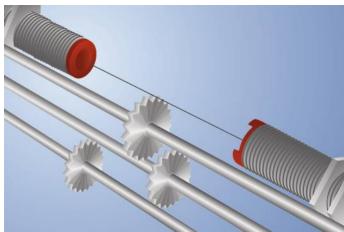
OED000C0003

Part Number



- Smallest recognizable part: 0,25 mm
- Special coated optics
- Teach-in
- Time delay

These through-beam sensors are best suited for use in industrial environments. Thanks to their large working range, the devices demonstrate excellent functional reliability in highly contaminated environments. The sensors can be checked for correct functioning via the test input.



Technical Data

LASER

Smallest Recognizable Part $250 \ \mu m$ Switching Hysteresis< 15 %Light SourceLaser (red)Service Life (T = +25 °C)100000 hLaser Class (EN 60825-1)1Max. Ambient Light10000 LuxOpening Angle12 °Electrical DataSensor TypeSensor TypeReceiverSupply Voltage1030 V DCCurrent Consumption (Ub = 24 V)< 15 mASwitching Frequency3 kHzResponse Time166 μ sTemperature Drift< 10 %Temperature Range-2560 °CSwitching Output Voltage Drop< 2,5 VSwitching Output Voltage DropyesReverse Polarity ProtectionyesReverse Polarity ProtectionyesTeach ModeNT, MTProtection ClassIIIMechanical DataStainless SteelCoated OpticsyesFull EncapsulationyesDegree of ProtectionIP67ConnectionM12 × 1; 4-pinSafety-relevant DataImage: Stainless SteelControl No.154Connection Diagram No.154Connection Diagram No.2Suitable Connection Equipment No.2Suitable Mounting Technology No.150	Optical Data					
Light SourceLaser (red)Service Life (T = +25 °C)100000 hLaser Class (EN 60825-1)1Max. Ambient Light10000 LuxOpening Angle12 °Electrical DataSensor TypeSensor TypeReceiverSupply Voltage1030 V DCCurrent Consumption (Ub = 24 V)< 15 mA	Smallest Recognizable Part	250 <i>µ</i> m				
Service Life (T = +25 °C) 100000 h Laser Class (EN 60825-1) 1 Max. Ambient Light 10000 Lux Opening Angle 12 ° Electrical Data	Switching Hysteresis	< 15 %				
Laser Class (EN 60825-1)1Max. Ambient Light10000 LuxOpening Angle12 °Electrical DataSensor TypeReceiverSupply Voltage1030 V DCCurrent Consumption (Ub = 24 V)< 15 mA	Light Source	Laser (red)				
Max. Ambient Light10000 LuxOpening Angle12 °Electrical Data2Sensor TypeReceiverSupply Voltage1030 V DCCurrent Consumption (Ub = 24 V)< 15 mA	Service Life (T = +25 °C)	100000 h				
Opening Angle12 °Electrical DataSensor TypeReceiverSupply Voltage1030 V DCCurrent Consumption (Ub = 24 V)<15 mA	Laser Class (EN 60825-1)	1				
Electrical DataSensor TypeReceiverSupply Voltage1030 V DCCurrent Consumption (Ub = 24 V)< 15 mA	Max. Ambient Light	10000 Lux				
Sensor TypeReceiverSupply Voltage1030 V DCCurrent Consumption (Ub = 24 V)< 15 mA	Opening Angle	12 °				
Supply Voltage1030 V DCCurrent Consumption (Ub = 24 V)< 15 mA	Electrical Data					
Current Consumption (Ub = 24 V)< 15 mASwitching Frequency3 kHzResponse Time166 µsTemperature Drift< 10 %	Sensor Type	Receiver				
Switching Frequency3 kHzResponse Time166 µsTemperature Drift< 10 %	Supply Voltage	1030 V DC				
Response Time166 µsTemperature Drift< 10 %	Current Consumption (Ub = 24 V)	< 15 mA				
Temperature Drift< 10 %	Switching Frequency	3 kHz				
Temperature Range-2560 °CSwitching Output Voltage Drop< 2,5 V	Response Time	166 μs				
Switching Output Voltage Drop< 2,5 VSwitching Output/Switching Current200 mAShort Circuit and Overload ProtectionyesReverse Polarity ProtectionyesTeach ModeNT, MTProtection ClassIIIMechanical DataStainless SteelSetting MethodTeach-InHousing MaterialStainless SteelCoated OpticsyesFull EncapsulationyesDegree of ProtectionIP67ConnectionM12 × 1; 4-pinSafety-relevant DataMTTFd (EN ISO 13849-1)2409,91 aContamination OutputPNP NO/NC switchableConnection Diagram No.154Control Panel No.D7Suitable Connection Equipment No.2	Temperature Drift	< 10 %				
Switching Output/Switching Current200 mAShort Circuit and Overload ProtectionyesReverse Polarity ProtectionyesTeach ModeNT, MTProtection ClassIIIMechanical DataStainless SteelSetting MethodTeach-InHousing MaterialStainless SteelCoated OpticsyesFull EncapsulationyesDegree of ProtectionIP67ConnectionM12 × 1; 4-pinSafety-relevant DataMTTFd (EN ISO 13849-1)2409,91 aContamination OutputPNP NO/NC switchableConnection Diagram No.154Control Panel No.Suitable Connection Equipment No.2	Temperature Range	-2560 °C				
Short Circuit and Overload Protection yes Reverse Polarity Protection yes Teach Mode NT, MT Protection Class III Mechanical Data Stainless Steel Setting Method Teach-In Housing Material Stainless Steel Coated Optics yes Full Encapsulation yes Degree of Protection IP67 Connection M12 × 1; 4-pin Safety-relevant Data MTTFd (EN ISO 13849-1) 2409,91 a Contamination Output PNP NO/NC switchable Connection Diagram No. 154 Control Panel No. D7 Suitable Connection Equipment No. 2	Switching Output Voltage Drop	< 2,5 V				
Reverse Polarity ProtectionyesTeach ModeNT, MTProtection ClassIIIMechanical DataIIISetting MethodTeach-InHousing MaterialStainless SteelCoated OpticsyesFull EncapsulationyesDegree of ProtectionIP67ConnectionM12 × 1; 4-pinSafety-relevant DataImage: Contamination OutputMTTFd (EN ISO 13849-1)2409,91 aContamination OutputImage: Contamination OutputPNP NO/NC switchableImage: Control Panel No.Suitable Connection Equipment No.2	Switching Output/Switching Current	200 mA				
Teach ModeNT, MTProtection ClassIIIMechanical DataIIISetting MethodTeach-InHousing MaterialStainless SteelCoated OpticsyesFull EncapsulationyesDegree of ProtectionIP67ConnectionM12 × 1; 4-pinSafety-relevant DataImage: Contamination OutputMTTFd (EN ISO 13849-1)2409,91 aContamination OutputImage: Contamination OutputPNP NO/NC switchableImage: Control Panel No.Suitable Connection Equipment No.2	Short Circuit and Overload Protection	yes				
Protection ClassIIIMechanical DataTeach-InSetting MethodTeach-InHousing MaterialStainless SteelCoated OpticsyesFull EncapsulationyesDegree of ProtectionIP67ConnectionM12 × 1; 4-pinSafety-relevant DataMTTFd (EN ISO 13849-1)2409,91 aContamination OutputPNP NO/NC switchableConnection Diagram No.154Control Panel No.Suitable Connection Equipment No.2	Reverse Polarity Protection	yes				
Mechanical DataSetting MethodTeach-InHousing MaterialStainless SteelCoated OpticsyesFull EncapsulationyesDegree of ProtectionIP67ConnectionM12 × 1; 4-pinSafety-relevant DataMTTFd (EN ISO 13849-1)2409,91 aContamination OutputPNP NO/NC switchableConnection Diagram No.154Control Panel No.2	Teach Mode	NT, MT				
Setting MethodTeach-InHousing MaterialStainless SteelCoated OpticsyesFull EncapsulationyesDegree of ProtectionIP67ConnectionM12 × 1; 4-pinSafety-relevant DataMTTFd (EN ISO 13849-1)2409,91 aContamination OutputImage: Connection Diagram No.PNP NO/NC switchableImage: Connection Diagram No.Control Panel No.Image: DrSuitable Connection Equipment No.2	Protection Class	III				
Housing MaterialStainless SteelCoated OpticsyesFull EncapsulationyesDegree of ProtectionIP67ConnectionM12 × 1; 4-pinSafety-relevant DataMTTFd (EN ISO 13849-1)2409,91 aContamination OutputPNP NO/NC switchableConnection Diagram No.154Control Panel No.Suitable Connection Equipment No.2	Mechanical Data					
Coated OpticsyesFull EncapsulationyesDegree of ProtectionIP67ConnectionM12 × 1; 4-pinSafety-relevant DataMTTFd (EN ISO 13849-1)2409,91 aContamination OutputPNP NO/NC switchableConnection Diagram No.154Control Panel No.Suitable Connection Equipment No.2	Setting Method	Teach-In				
Full EncapsulationyesDegree of ProtectionIP67ConnectionM12 × 1; 4-pinSafety-relevant DataMTTFd (EN ISO 13849-1)2409,91 aContamination OutputImage: Contamination OutputPNP NO/NC switchableImage: Connection Diagram No.Control Panel No.Image: D7Suitable Connection Equipment No.Image: Connection Conne	Housing Material	Stainless Steel				
Degree of ProtectionIP67ConnectionM12 × 1; 4-pinSafety-relevant DataMTTFd (EN ISO 13849-1)2409,91 aContamination OutputPNP NO/NC switchableConnection Diagram No.154Control Panel No.Suitable Connection Equipment No.2	Coated Optics	yes				
ConnectionM12 × 1; 4-pinSafety-relevant DataMTTFd (EN ISO 13849-1)2409,91 aContamination OutputImage: Connection Diagram No.PNP NO/NC switchableImage: Connection Diagram No.Control Panel No.Image: D7Suitable Connection Equipment No.Image: Connection Equipment No.	Full Encapsulation	yes				
Safety-relevant Data MTTFd (EN ISO 13849-1) Contamination Output PNP NO/NC switchable Connection Diagram No. Control Panel No. Suitable Connection Equipment No. 2	Degree of Protection	IP67				
MTTFd (EN ISO 13849-1) 2409,91 a Contamination Output Image: Control Panel No. PNP NO/NC switchable Image: Connection Diagram No. Control Panel No. Image: D7 Suitable Connection Equipment No. 2	Connection	M12 × 1; 4-pin				
Contamination Output Image: Control Panel No. PNP NO/NC switchable Image: Control Panel No. Control Panel No. Image: Control Panel No. Suitable Connection Equipment No. Image: Control Panel No.	Safety-relevant Data					
PNP NO/NC switchable Image: Connection Diagram No. Control Panel No. Image: D7 Suitable Connection Equipment No. Image: 2	MTTFd (EN ISO 13849-1)	2409,91 a				
Connection Diagram No. 154 Control Panel No. D7 Suitable Connection Equipment No. 2	Contamination Output					
Control Panel No. D7 Suitable Connection Equipment No. 2	PNP NO/NC switchable					
Suitable Connection Equipment No. 2	Connection Diagram No.	154				
	Control Panel No.	D7				
Suitable Mounting Technology No. 150	Suitable Connection Equipment No.	2				
	Suitable Mounting Technology No.	150				

Suitable Emitter

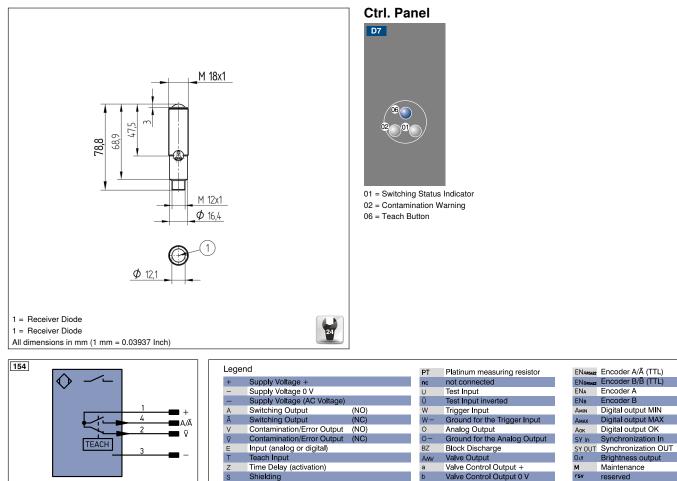
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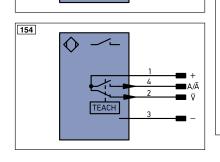
Complementary Products

Dust Extraction Tube STAUBTUBUS-01 Lens LA7 PNP-NPN Converter BG2V1P-N-2M

Photoelectronic Sensors







	3			PI	Flatinum measuring resistor		EINARS622	Encoder A/A (TTL)
	+	Supply Voltage +		nc	not connected	1	ENBR5422	Encoder B/B (TTL)
l	-	Supply Voltage 0 V		U	Test Input	E	ENa	Encoder A
	~	Supply Voltage (AC Voltage)		Ū	Test Input inverted		ЕΝв	Encoder B
l	А	Switching Output	(NO)	W	Trigger Input	,	Амін	Digital output MIN
	Ā	Switching Output	(NC)	W -	Ground for the Trigger Input	,	Амах	Digital output MAX
	V	Contamination/Error Output	(NO)	0	Analog Output	,	Аок	Digital output OK
	V	Contamination/Error Output	(NC)	0-	Ground for the Analog Output		SY In	Synchronization In
	E	Input (analog or digital)		BZ	Block Discharge		SY OUT	Synchronization OUT
	Т	Teach Input		Awv	Valve Output	(Dut	Brightness output
	Z	Time Delay (activation)		а	Valve Control Output +	P	м	Maintenance
	S	Shielding		b	Valve Control Output 0 V		rsv	reserved
1	RxD	Interface Receive Path		SY	Synchronization	١	Wire Co	lors according to DIN IEC 757
	TxD	Interface Send Path		SY-	Ground for the Synchronization		BK	Black
	RDY	Ready		E+	Receiver-Line		BN	Brown
	GND	Ground		S+	Emitter-Line		RD	Red
	CL	Clock		÷	Grounding	_	OG	Orange
	E/A	Output/Input programmable		SnR	Switching Distance Reduction		YE	Yellow
	0	IO-Link		Rx+/-	Ethernet Receive Path		GN	Green
	PoE	Power over Ethernet		Tx+/-	Ethernet Send Path		BU	Blue
- 1	IN	Safety Input		Bus	Interfaces-Bus A(+)/B(-)		VT	Violet
	OSSD	Safety Output		La	Emitted Light disengageable		GY	Grey
- 1	Signal	Signal Output		Mag	Magnet activation		WH	White
	BI_D+/-	Ethernet Gigabit bidirect, data	line (A-D)	RES	Input confirmation		PK	Pink
1	ENO RS422	Encoder 0-pulse 0-0 (TTL)		EDM	Contactor Monitoring		GNYE	Green/Yellow
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