

Reflex Sensor with Background Suppression

HD12NCT3

Part Number



- Electronic background suppression
- Red light
- Stainless steel housing
- Teach-in, external teach-in

Technical Data

Optical Data

Range	120 mm
Adjustable Range	35...120 mm
Switching Hysteresis	< 5 %
Light Source	Red Light
Service Life (T = +25 °C)	100000 h
Max. Ambient Light	10000 Lux
Light Spot Diameter	see Table 1

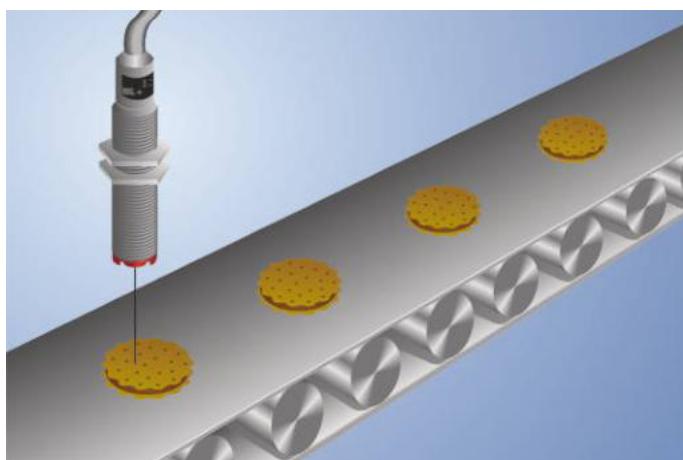
Electrical Data

Supply Voltage	10...30 V DC
Current Consumption (Ub = 24 V)	< 30 mA
Switching Frequency	750 Hz
Response Time	667 µs
On-/Off-Delay (RS-232)	0...1 s
Temperature Drift	< 5 %
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2,5 V
NPN Switching Output/Switching Current	100 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Teach Mode	HT, VT
Protection Class	III

Mechanical Data

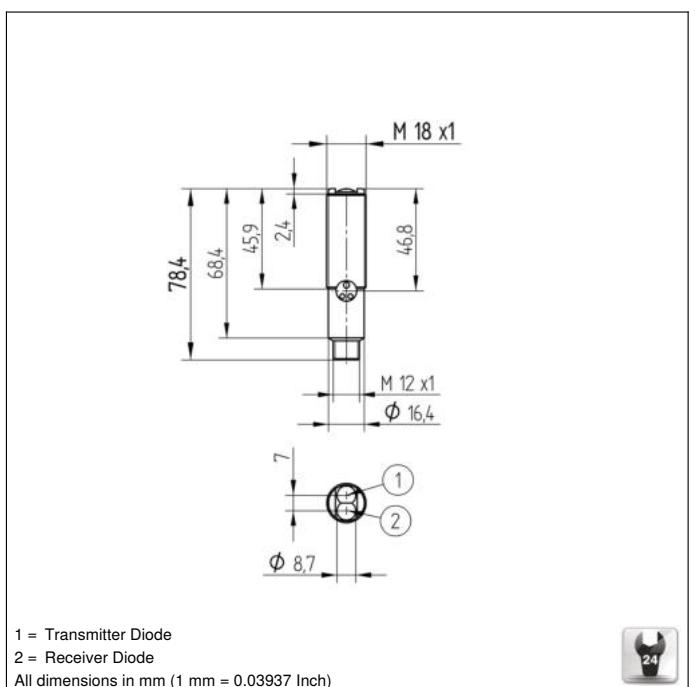
Setting Method	Teach-In
Housing Material	Stainless Steel
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 x 1; 4-pin
NPN NO/NC switchable	
RS-232 with Adapterbox	
Connection Diagram No.	352
Control Panel No.	D7
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	150

These sensors detect distance by measuring angles. They are particularly good at recognizing objects in front of any background. The color, shape and surface characteristics of the object have practically no influence on sensor switching performance.

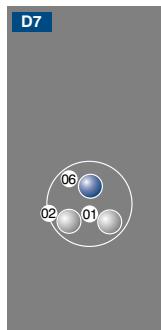


Complementary Products

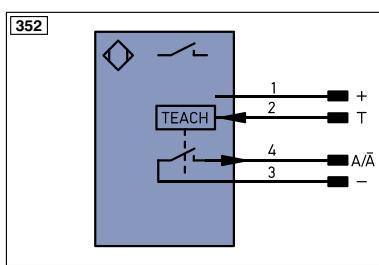
Adapterbox A232
Dust Extraction Tube STAUBTUBUS-01
Software



Ctrl. Panel



01 = Switching Status Indicator
02 = Contamination Warning
06 = Teach Button



Legend

+	Supply Voltage +	PT	Platinum measuring resistor
-	Supply Voltage 0 V	nc	not connected
~	Supply Voltage (AC Voltage)	U	Test Input
A	Switching Output (NO)	Ü	Test Input inverted
Ā	Switching Output (NC)	W	Trigger Input
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input
Ā	Contamination/Error Output (NC)	O	Analog Output
E	Input (analog or digital)	O-	Ground for the Analog Output
T	Teach Input	BZ	Block Discharge
Z	Time Delay (activation)	AVW	Valve Output
S	Shielding	a	Valve Control Output +
		b	Valve Control Output 0 V
RxD	Interface Receive Path	SY	Synchronization
TxD	Interface Send Path	SY-	Ground for the Synchronization
RDY	Ready	E+	Receiver-Line
GND	Ground	S+	Emitter-Line
CL	Clock	±	Grounding
E/A	Output/Input programmable	SnR	Switching Distance Reduction
IO-Link		Rx+/-	Ethernet Receive Path
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)
OSD	Safety Output	La	Emitted Light disengageable
Signal	Signal Output	Mag	Magnet activation
BL/D	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation
EN0RS422	Encoder 0-pulse 0-0 (TTL)	EDM	Contactor Monitoring

Wire Colors according to DIN IEC 757

BK	Black
BN	Brown
RD	Red
OG	Orange
YE	Yellow
GN	Green
BU	Blue
VT	Violet
GY	Grey
WH	White
PK	Pink
GN/YE	Green/Yellow

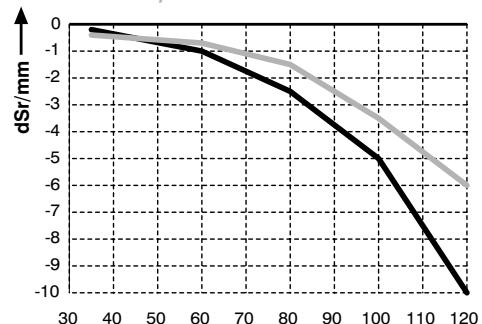
Table 1

Detection Range	60 mm	120 mm
Light Spot Diameter	2 mm	4 mm

Switching Distance Deviation

Typical characteristic curve based on white, 90 % remission

HD12 / HW12 Teach-In



Sr = Switching Distance

dSr = Switching Distance Change

black 6 % remission
grey 18 % remission

