

Retro-Reflex Sensor

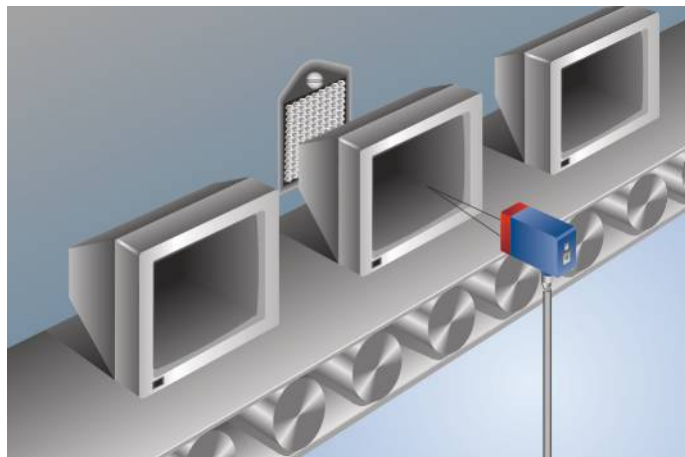
LM89NCT2

Part Number



- Low-cost
- Teach-in, external teach-in

A reflector must be used in combination with these sensors. They can be installed in all kinds of industrial environments thanks to ample functional reserve. Even reflective objects can be reliably recognized through the use of polarized light.



Technical Data

Optical Data

Range	6500 mm
Reference Reflector/Reflex Foil	RQ100BA
Switching Hysteresis	< 5 %
Light Source	Red Light
Wave Length	660 nm
Polarization Filter	yes
Service Life (T = +25 °C)	100000 h
Max. Ambient Light	10000 Lux
Opening Angle	5 °
Two-Lens Optic	yes

Electrical Data

Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	< 40 mA
Switching Frequency	2 kHz
Response Time	250 µs
On-/Off-Delay (RS-232)	0...5 s
Temperature Drift	< 5 %
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2,5 V
NPN Switching Output/Switching Current	100 mA
Residual Current Switching Output	< 50 µA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Lockable	yes
Teach Mode	NT, MT
Protection Class	III

Mechanical Data

Setting Method	Teach-In
Housing Material	Plastic
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 × 1; 4-pin

NPN NO/NC switchable

RS-232 with Adapterbox

Connection Diagram No.

Control Panel No.

Suitable Connection Technology No.

Suitable Mounting Technology No.

352

M3

2

360

Complementary Products

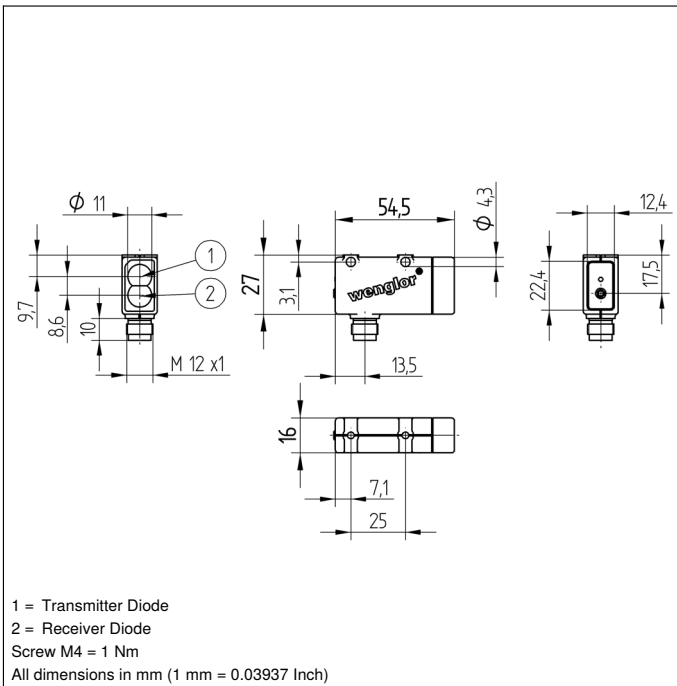
Adapterbox A232

Protection Housing Set ZSM-NN-02

Protection Housing ZSV-0x-01

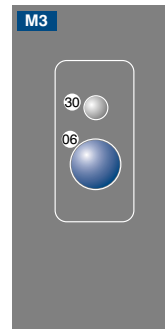
Reflector, Reflex Foil

wTeach2 software DNNF005

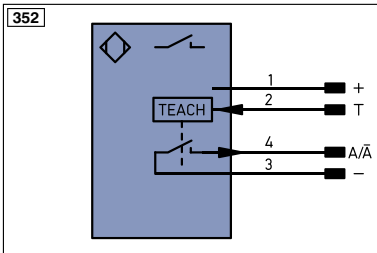


1 = Transmitter Diode
2 = Receiver Diode
Screw M4 = 1 Nm
All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel



06 = Teach Button
30 = Switching Status/Contamination Warning



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)	Ū	Test Input inverted
Ā	Switching Output (NC)	W	Trigger Input
V	Contamination/Error Output (NO)	O	Analog Output
Ū	Contamination/Error Output (NC)	O-	Ground for the Analog Output
E	Input (analog or digital)	BZ	Block Discharge
T	Teach Input	AWV	Valve Output
Z	Time Delay (activation)	a	Valve Control Output +
S	Shielding	b	Valve Control Output 0 V
RxD	Interface Receive Path	SY	Synchronization
TxD	Interface Send Path	E+	Receiver-Line
RDY	Ready	S+	Emitter-Line
GND	Ground	±	Grounding
CL	Clock	SnR	Switching Distance Reduction
E/A	Output/Input programmable	Rx+/-	Ethernet Receive Path
IO-Link		Tx+/-	Ethernet Send Path
PoE	Power over Ethernet	Bus	Interfaces-Bus A(+)/B(-)
IN	Safety Input	La	Emitted Light disengageable
OSSD	Safety Output	Mag	Magnet activation
Signal	Signal Output	RES	Input confirmation
BI-D+/-	Ethernet Gigabit bidirect. data line (A-D)	EDM	Contactur Monitoring
EN0 RS422	Encoder 0-pulse 0-0 (TTL)	ENAR5422	Encoder A/Ā (TTL)
		ENBR5422	Encoder B/B̄ (TTL)

ENa	Encoder A
ENb	Encoder B
AMIN	Digital output MIN
AMAX	Digital output MAX
AOK	Digital output OK
SY In	Synchronization In
SY OUT	Synchronization OUT
OLt	Brightness output
M	Maintenance

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
GNYE	Green/Yellow

Feasible reflector distance

Reflector type, mounting distance

RQ100BA	0,04...6,5 m	RR25KP	0,14...1 m
RE18040BA	0,12...3 m	RR21_M	0,14...1,9 m
RQ84BA	0,06...5 m	ZRAE02B01	0,15...2,5 m
RR84BA	0,06...4,5 m	ZRME01B01	0,2...0,9 m
RE9538BA	0,12...1,5 m	ZRME03B01	0,2...2,3 m
RE6151BM	0,14...4 m	ZRMR02K01	0,16...1 m
RR50_A	0,03...3,3 m	ZRMS02_01	0,2...1 m
RE6040BA	0,05...4 m	RF505	0,19...1,5 m
RE8222BA	0,08...2 m	RF508	0,21...1,4 m
RR34_M	0,16...2,2 m	RF258	0,31...1,4 m
RE3220BM	0,2...1,5 m	ZRDF03K01	0,16...4 m
RE6210BM	0,2...1,7 m	ZRDF10K01	0,16...4,5 m
RR25_M	0,15...1,8 m		

