



ENGLISH

Photoelectric Proximity Sensor with infrared light Operating Instructions

Safety Specifications

- ▶ Read the operating instructions before starting operation.
- ▶ Connection, assembly, and settings only by competent technicians.
- ▶ Protect the device against moisture and soiling when operating.
- ▶ No safety component in accordance with EU machine guidelines.

Proper Use

The WT34IR photoelectric proximity sensor is an optoelectronic sensor and is used for detection of optical, non-contact detection of objects, animals, and people.

Starting Operation

- 1 Open the cover and guard of the sensor; make sure that no dirt enters the device.
- 2 Select switching function;
H: light-switching; if light received, output (Q) switches.
D: dark-switching; if light interrupted, output (Q) switches;

WT34-B/-V only:
PNP=positive-switching and NPN=negative-switching.
WT34-R only:
Relay 1x u, separated galvanically.

With following connectors only:

Equipment plug horizontally (H) and vertically (V) adjustable. Connect and secure cable receptacle tension-free.
Caution with cable terminal box with display LEDs if TE is not used.

The following apply for connection in **B**: brn=brown, blu=blue, blk=black, gra=gray, wht=white.

Only for versions with terminal chamber:

Disconnect M16 cable, remove sealing plugs. Cable outlet can be swivelled down and back. Feed tension-free supply cable through and connect photoelectric proximity sensor as per connection diagram **B** and tighten again the M16 screw fixing together with the sealing gasket to ensure the protection class "IP" of the device.

- 4 **Close protective cover.** Mount photoelectric proximity sensor to suitable holders (e.g. SICK mounting bracket). Maintain direction in which object moves relative to sensor. Connect photoelectric proximity sensor to operating voltage (see type label).

- 5 Check application conditions such as scanning distance, size and reflectance of object to be detected as well as of background, and compare with characteristic in diagram. (x=scanning distance, y=transition range between set scanning distance and reliable background suppression(z) in % of scanning distance, Ro=reflectance of object, Rh=reflectance of background).

Reflectance: 6%=black, 18%=gray, 90%=white (based on standard white to DIN 5033).

- 6 Scanning range setting:
Position object. Position light spot on object. Signal strength indicator should light up. If it does not light up or if it flashes, readjust and/or clean photoelectric proximity sensor and/or check application conditions.

- 7 **Options**
WT34-B 420/-V 220/-R 220:
Preselect time delays (t1=switch-on delay, t2=switch-off delay); see below for precise adjustment.
After setting the time delay, make fine adjustments at the respective control knobs. The possible settings range from 0,5 to 10 sec.
Check sealing faces, seals, and screwed joints, then replace and screw down cover.
The devices WT34-B/-V have a **test input (TE)**, with which proper functioning of the device can be checked. When the light path is clear between the photoelectric sensor and the object (the LED signal strength indicator lights), activate the test input (see the **B** connection diagram); this switches off the transmitter. At the same time, the LED signal strength control must switch off, and the switching state at the output must change.
The WT34-V devices have a **contamination signalling output (alarm)**, that indicates when the optimum light reception is no longer guaranteed (e.g., due to soiling or adjustment problems).

Maintenance

SICK photoelectric sensor do not require any maintenance. We recommend that you clean the external lens surfaces and check the screw connections and plug-in connections at regular intervals.

DEUTSCH

Reflexions-Lichttaster mit Infrarotlicht Betriebsanleitung

Sicherheitshinweise

- ▶ Vor der Inbetriebnahme die Betriebsanleitung lesen.
- ▶ Anschluss, Montage und Einstellung nur durch Fachpersonal.
- ▶ Gerät bei Inbetriebnahme vor Feuchte und Verunreinigung schützen.
- ▶ Kein Sicherheitsbauteil gemäß EU-Maschinenrichtlinie.

Bestimmungsgemäße Verwendung

Der Reflexions-Lichttaster WT34IR ist ein optoelektronischer Sensor und wird zum optischen, berührungssensitiven Erfassen von Sachen, Tieren und Personen eingesetzt.

Inbetriebnahme

- 1 Deckel und Schutzhaube des Sensors öffnen; darauf achten, dass kein Schmutz in das Gerät gelangt.
- 2 Schaltfunktion wählen;
H: hellerschaltend, bei Lichtempfang schaltet Ausgang (Q);
D: dunkelschaltend, bei Lichtunterbrechung schaltet Ausgang (Q).

Nur WT34-B/-V:
PNP=plusschaltend und NPN=minusschaltend.

Nur WT34-R:
Relais 1x u, galvanisch getrennt.

SICK

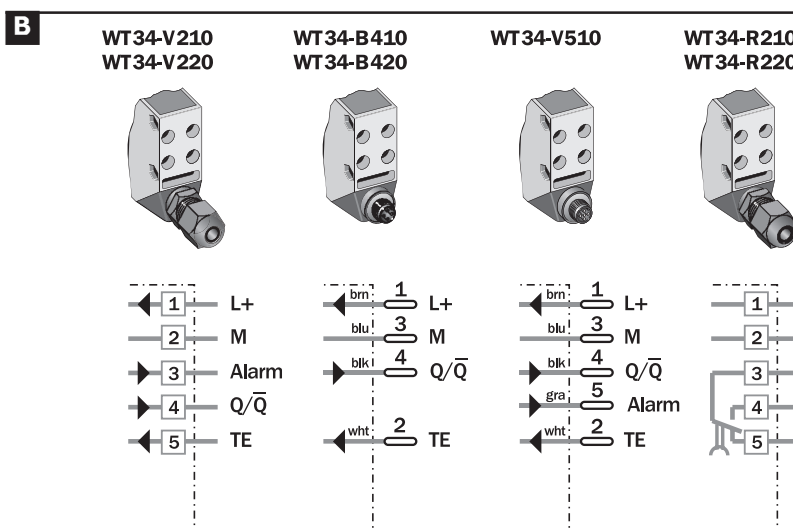
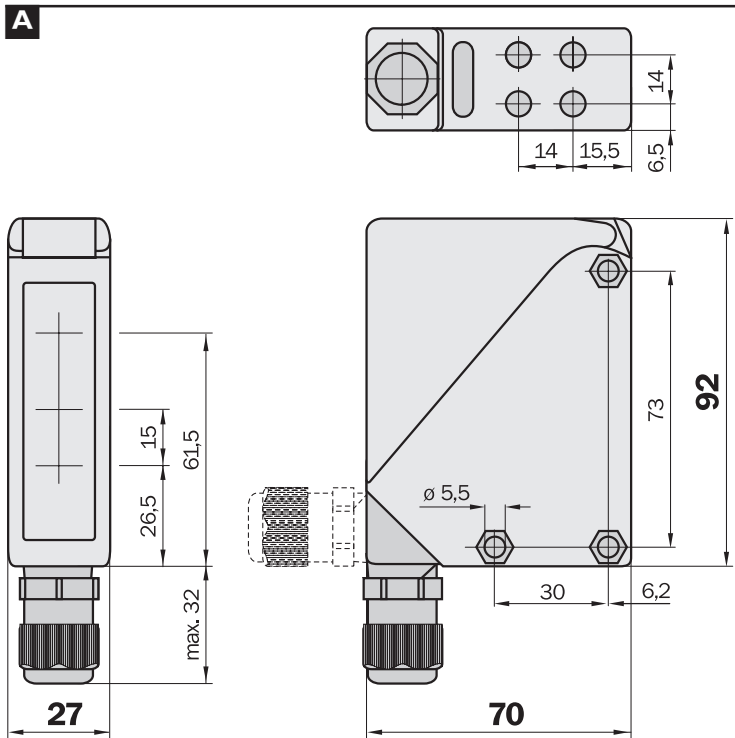
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Sujet à modification sans préavis
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Med forbehold for ændringer og fejl
Contenuti soggetti a modifiche senza preavviso
Wijzigingen en correcties voorbehouden
Sujeeto a cambio sin previo aviso
如有更改, 不另行通知



WT34

	-B	-V	-R
Scanning distance SD ¹⁾	Tastweite TW ¹⁾	Distance de détection TW ¹⁾	Campo de exploração TW ¹⁾
Light spot diameter/ distance	Lichtfleckdurchmesser/ Entfernung	Diamètre de la tache lumineuse/ distance	Diâmetro do ponto de luz/ distância
Supply voltage V _S	Versorgungsspannung U _V	Tension d'alimentation U _V	Tensão de força U _V
Output current I _{max}	Ausgangsstrom I _{max}	Courant de sortie I _{max}	Corrente de saída I _{max}
Max. switching frequency ⁴⁾	Schaltfolge max. ⁴⁾	Sortie logique max. ⁴⁾	Saída de circuito max. ⁴⁾
Response time max.	Ansprechzeit max.	Temps de réponse maxi	Tempo de reação max.
Enclosure rating (IEC 60529)	Schutzart (IEC 60529)	Type de protection (IEC 60529)	Tipo de proteção (IEC 60529)
VDE protection class	VDE-Schutzklasse	Classe de protection VDE	Classe de proteção VDE
Circuit protection ⁵⁾	Schutzschaltungen ⁵⁾	Circuits de protection ⁵⁾	Circuitos protetores ⁵⁾
Ambient operating temperature	Betriebsumgebungstemperatur	Température ambiante	Temperatura ambiente de operação
1) Object 90% reflectance according to DIN 5033	1) Objekt 90 % Remission nach DIN 5033	1) Objet réémission de 90% selon DIN 5033	1) Objeto 90 % Remissão segundo DIN 5033
2) Limit values	2) Grenzwerte	2) Valeur limite	2) Valores limite
3) Residual ripple max. 5 V _{FP} ± 10%	3) Restwelligkeit max. 5 V _{SS} ± 10%	3) Ondulation résiduelle maxi 5 V _{SS} ± 10%	3) Ondulação residual máx. 5 V _{SS} ± 10%
4) With light/dark ratio 1:1	4) Bei Hell-/Dunkelverhältnis 1:1	4) Pour un rapport clair/sombre de 1:1	4) Com relação claro/escuro 1:1
5) A = V connections reverse polarity protected	5) A = U _V -Anschlüsse verpolsicher	5) A = Raccordements U _V protégés contre les inversions de polarité	5) A = Conexões U _V protegidas contra inversão de polos
B = Output Q and Q-bar short-circuit protected	B = Ausgang Q und Q-bar kurzschlussgeschützt	B = Sorties Q et Q-bar protégées contre les courts-circuits	B = Saída Q e Q-bar protegida contra curto-circuito
C = Interference pulse suppression	C = Störimpulsunterdrückung	C = Suppression des impulsions parasites	C = Supressão de impulsos parasitas

WT34

	-B	-V	-R
Portata di ricezione TW ¹⁾	Impulslänge TW ¹⁾	Alcance de palpación TW ¹⁾	感知距离 TW ¹⁾
Diametro punto luminoso/ distanza	Lichtvekleidiameter/ Bereich	Diámetro/ distancia de mancha de luz	光点直径 / 距离
Tensione di alimentazione U _V	Voedingsspanning U _V	Tensión de alimentación U _V	电源电压 U _V
Corrente di uscita max. I _{max}	Uitgangsstroom I _{max}	Corriente de salida I _{max}	输出电流 I _{max}
Uscita di commutazione max. ⁴⁾	Schakeluitgang max. ⁴⁾	Salida de conexión max. ⁴⁾	信号流 max. ⁴⁾
Tempo di risposta max.	Aanspreektijd max.	Tiempo de reacción max.	触发时间 max
Tipo di protezione (IEC 60529)	Beveiligingswijze (IEC 60529)	Tipo de protección (IEC 60529)	保护种类 (IEC 60529)
Classe di protezione VDE	VDE Beveiligingsklasse	Protección clase VDE	VDE 保护级别
Commutazioni di protezione ⁵⁾	Beveiligingsschakelingen ⁵⁾	Circuitos de protección ⁵⁾	保护电路 ⁵⁾
Temperatura ambiente	Bedrijfsomgevingstemperatuur	Temperatura ambiente	工作环境 温度
1) Oggetto remissione del 90% a norma DIN 5033	1) Object 90 % remissie volgens DIN 5033	1) Objeto reflectancia de un 90 % según DIN 5033	1) 放置 DIN 5033, 物件的发射比为90%
2) Valori limite	2) Grenswaarden	2) Valores li mite	2) 极限值
3) Ondulazione residua max. 5 V _{SS} ± 10%	3) Rimpel max. 5 V _{SS} ± 10%	3) Ondulación residual max. 5 V _{SS} ± 10%	3) 剩余波纹度 max. 5 V _{SS} ± 10 %
4) Con rapporto chiaro/scuro 1:1	4) Bij licht-/donkerverhouding 1:1	4) Con una relación claro/oscuro 1:1	4) 光暗比为1:1
5) A = U _V -collegamenti con protez. contro inversione di poli	5) A = U _V -aansluitingen beveiligd tegen verkeerd polen	5) A = Conexiones U _V a prueba de inversión de polaridad	5) A = U _V -接头防反接
B = Uscita Q e Q-bar a prova di corto circuito	B = Uitgang Q en Q-bar kortsluitbeveiligd	B = Salida Q y Q-bar protegida contra cortocircuito	B = 输出端 Q 和 Q-bar 短路保护装置
C = Soppressione impulsi di disturbo	C = Störingsimpulsunderdrukking	C = Represión de impulso de interferencia	C = 消除干扰脉冲

