

SICK

1202 GO

SENSICK V 12(T)-2...

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Inbetriebnahme

V 12(T)-2. Reflexions-Lichttaster energetisch:

Sensor montieren, kontaktieren und auf Tastobjekt ausrichten.

Empfindlichkeitseinstellung:

Sie haben zwei Optionen für die Empfindlichkeitseinstellung zur Verfügung:

- manuell per Teach-in-Taste und
- elektronisch, extern über Controll-Eingang C.

Einfachste Programmierung: Teach-in-Taste 1 x drücken oder Controll-Eingang C (0 V) 1 x aktivieren; Empfindlichkeitseinstellung ist beendet.

Feedback: Anzeige-LED gelb. Dauerhafte Speicherung der „eingelernten Schaltschwelle und Hysterese“, auch bei beliebig langer Spannungsunterbrechung.

Tastobjekt immer im Lichtweg in der Sollposition positionieren.

Zwei Teach-in-Modi stehen für Ihre optimal angepasste Empfindlichkeits-Einstellung zur Verfügung:

Mode 1; große Funktionsreserve; Applikationen:

Standard-Empfindlichkeit; empfohlen für alle Standard-Applikationen.

Funktionsreserve Faktor > 2 über Schaltschwelle; kurze „Teach-in-Zeit“ (> 2 s ... < 7 s).

Teach-in-Taste drücken oder Controll-Eingang C (0 V) aktivieren (> 2 s ... < 7 s); Anzeige-LED gelb – erlischt – leuchtet nach > 2 s wieder auf – Teach-in-Signal deaktivieren. Empfindlichkeits-Einstellung beendet. Anzeige-LED gelb leuchtet nach abgeschlossenem Teach-in-Prozess in Mode 1.

A) Applikation überprüfen:

Tastobjekt entfernen. Die gelbe LED erlischt? OK. Gelbe LED leuchtet (Hintergrundeinfluss?): hohe Empfindlichkeit einstellen, siehe Mode 2.

Mode 2; exakter Schalterpunkt, hohe Empfindlichkeit; Applikationen:

geeignet für geringe Unterschiede Tastobjekt/Hintergrund, für Positionieraufgaben, für einfache Kontrast-Erkennung.

Kleine Schalthysterese und geringere Funktionsreserve, Faktor > 1 < 2 über Schaltschwelle; lange „Teach-in-Zeit“ (> 8 s).

Teach-in-Taste drücken oder Controll-Eingang C (0 V) aktivieren (> 8 s): Anzeige-LED gelb – erlischt – leuchtet nach > 2 s wieder auf – blinkt nach > 8 s – Teach-in-Signal deaktivieren – Empfindlichkeits-Einstellung beendet! Anzeige-LED gelb blinkt permanent nach abgeschlossenem Teach-in-Prozess in Mode 2.

Applikation überprüfen: siehe A).

VL 12-2...; Reflexions-Lichtschranke mit Polarisationsfilter, Rotlicht

Durch den integrierten Polarisationsfilter können Objekte mit glänzender Oberfläche zuverlässig erkannt werden. Sensor montieren, kontaktieren und Senderstrahl auf den Reflektor ausrichten bis die gelbe LED ständig leuchtet (Datenblattwerte beachten). Der rote Sender-Lichtstrahl dient als Hilfe. Sichern Sie den Sensor. Kontrollieren Sie ob die LED erlischt, wenn das Tastobjekt den Lichtstrahl unterbricht. Leuchtet die gelbe LED am VL 12-2... weiter, ist die Objekterfassung durch transparente oder kleine Objekte beeinflusst. In diesem Fall benötigen Sie einen Sensor mit einstellbarer Empfindlichkeit (wenden Sie sich an Ihren SICK-Partner).

VS/VE 12-2...; Einweg-Lichtschranke

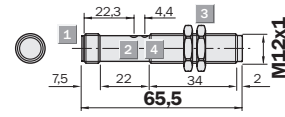
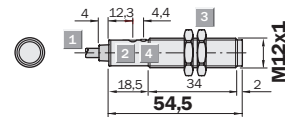
Die Sensoren Sender VS 12-2... und Empfänger VE 12-2... montieren und kontaktieren. Sender VS 12-2 und Empfänger VE 12-2 aufeinander ausrichten bis die gelbe LED ständig leuchtet (Datenblattwerte beachten). Sichern Sie die Sensoren, kontrollieren Sie ob die gelbe LED erlischt, wenn das Tastobjekt den Lichtstrahl unterbricht. Leuchtet die gelbe LED am VE 12-2... weiter, ist die Objekterfassung durch transparente oder kleine Objekte beeinflusst. In diesem Fall benötigen Sie einen Sensor mit einstellbarer Empfindlichkeit (wenden Sie sich an Ihren SICK-Partner).

Wartung

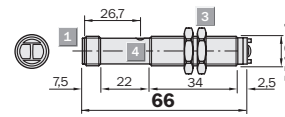
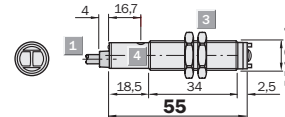
SICK-Lichtschranken sind wartungsfrei. Wir empfehlen, in regelmäßigen Abständen

- die optischen Grenzflächen zu reinigen,
- Verschraubungen und Steckverbindungen zu überprüfen.

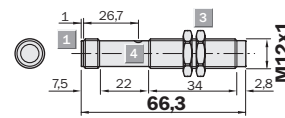
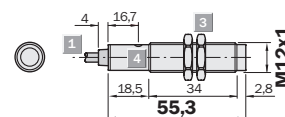
VT 12(T)-2...



VL 12-2...



VS/VE 12-2...



- 1 Leitung oder Stecker M 12, 4-polig
- 2 Empfindlichkeits-Einsteller (Teach-in-Taste)
- 3 Befestigungs-Mutter (2x); SW 17, Metall
- 4 Anzeige-LED gelb *)

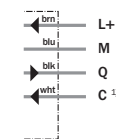
*) VL 12(T)-2... und VL 12-2...:
leuchtet permanent: Empfangssignal > Reservefaktor 2
blinkt: Empfangssignal < Reservefaktor 2, aber > Schaltschwelle 1
VS 12-2...: Power On – Sender aktiv
VE 12-2...: Lichttempfang > Schaltschwelle 1

Lieferumfang: Betriebsanleitung, zwei M-12-Metallmuttern

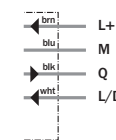
V 12T-2_1
V 12-2_1



VT 12T-2_112
VT 12T-2_132



VL 12-2_132
VE 12-2_132



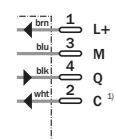
VS 12-2D 132



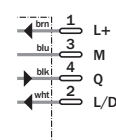
V 12T-2_4
V 12-2_4



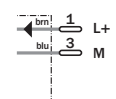
VT 12T-2_410
VT 12T-2_430



VL 12-2_430
VE 12-2_430



VS 12-2D 430



Adernfarben: 1/bm = braun; 2/wht = weiß; 3/blu = blau; 4/blk = schwarz

- 1) Controll-Eingang C, Programmierung: Schaltart L.ON/D.ON und extern Teach-in
C = offen (nicht belegt); hellschaltend L.ON
C = + U; dunkelschaltend D.ON
C = 0 V; Empfindlichkeits-Einstellung per „extern Teach-in“ aktiv
- 2) L/D Steuerleitung Schaltart
L/D = offen (nicht belegt); dunkelschaltend D.ON
L/D = + U; hellschaltend L.ON
L/D = 0 V; dunkelschaltend D.ON

V 12(T)-2	VT 12T-2..1	VT 12T-2..3	VL 12-2	VS 12-2D...	VE 12-2
Typ	Reflexions-Lichttaster ¹⁾		Reflexions-Lichtschranken	Einweg-Lichtschranken	
Betriebsreichweite	100 mm	300 mm	2,3 m (PL 80A)	4m	
Lichtfleckdurchmesser/Distanz	~20 mm/100 mm	~28 mm/300 mm	~80 mm/2 m	~100 mm/4 m	
Lichtsender ²⁾ , Lichtart	LED, Infrarotlicht	LED, Infrarotlicht	LED, Rotlicht ³⁾	LED, Infrarotlicht	–
Empfindlichkeitseinstellung	Teach-in ⁴⁾	Nein			
Versorgungsspannung U _v	DC 10 ... 30 V ⁵⁾				
Ausgangsstrom I _A max.	≤ 100 mA				
Schaltausgang/-art ⁶⁾	NPN oder PNP – L.ON/D.ON (V 12-2P... = PNP; V 12-2N... = NPN)				
Schaltfrequenz ⁷⁾	400/s			250/s	
Stromaufnahme ⁸⁾	≤ 20 mA				
Schutzart	IP 67 (EN 60529)				
VDE Schutzklasse	III				
Betriebsumgebungstemperatur	–25 °C ... +70 °C				
Schutzschaltung ⁹⁾	A, B, C, D				
Gehäusematerial	Hülse: Messing vernickelt/PA; Optik: PC				

- 1) Tastgut 90 % Remission (bezogen auf Standard Weiß nach DIN 5033); 100 x 100 mm
- 2) Mittlere Lebensdauer 100.000 h bei T_a = +25 °C
- 3) Mit Polarisationsfilter

- 4) Controll-Eingang C
– Schaltart L.ON/D.ON und – extern Teach-in
C = offen: hellschaltend L.ON
C = + U; dunkelschaltend D.ON
C = 0 V: Empfindlichkeitseinstellung per „extern Teach-in“ aktiv
- 5) Grenzwerte
Restwelligkeit max. ±10 %

- 6) Wählbar per Steuerleitung (siehe Anschlusszeichnungen)
- 7) Signallaufzeit bei ohmscher Last; bei Hell-/Dunkelverhältnis 1:1
- 8) Ohne Last
- 9) A = U_v-Anschlüsse verpolsicher
B = Ein- und Ausgänge verpolsicher
C = Störpulsunterdrückung
D = Ausgänge kurzschlussfest (auto-reset)

GB 10.01/02 BZ. The specific product features and technical data do not represent any guarantee

Änderungen vorbehalten
Angেgebene Produkteigenschaften und technische Daten stellen keine
Garantieerklärung dar

DEUTSCH

Lichtschrankenfamilie 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

Die Lichtschranken V 12(T)-2... sind optoelektronische Sensoren und werden zum optischen, berührungslosen Erfassen von Sachen, Tieren und Personen eingesetzt.

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Starting Operation

V 12(T)-2, energetic photoelectric proximity switch:
Mount sensor, set contacts and align it to the object to be detected.

Sensitivity setting:

You have two options for setting the sensitivity:

- Manual per Teach-in button
 - Electronically, externally via control input C
- Very simple programming. Press the Teach-in button 1x or activate control input C (0 V) 1x. Sensitivity setting has been completed.
Feedback: Yellow LED indicator. Permanent storage of the "taught-in switching threshold and hysteresis," even if power is interrupted for longer times.

Always position the scanning object at the target position in the light path.

Two Teach-in modes are available for your optimally adjusted sensitivity setting.

Mode 1; large function reserves: applications:

Standard sensitivity; recommended for all standard applications.

Function reserve factor > 2 above switching threshold; short "Teach-in time" (> 2 s ... < 7 s).

Press the Teach-in button or activate control input C (0 V) (> 2 s ... < 7 s): Yellow LED indicator – goes off – lights after > 2 s again – deactivate Teach-in signal. Sensitivity setting completed. Yellow LED indicator lights after Teach-in process has been completed in mode 1.

A) Check application:

Remove the object to be scanned. Does the yellow LED go off? OK. Yellow LED lights (background influence?): set high sensitivity; see mode 2.

Mode 2; precise switching point, high sensitivity: applications:

suitable for slight differences between object to be scanned and background, for positioning tasks and for simple contrast detection. Small switching hysteresis and small function reserve factor > 1 < 2 above switching threshold; long "Teach-in time" (> 8 s). Press the Teach-in button or activate control input C (0 V) (> 8 s): Yellow LED indicator – goes off – lights after > 2 s again – blinks after > 8 s – deactivate Teach-in signal – sensitivity setting completed! Yellow LED indicator lights continuously after Teach-in process has been completed in mode 2.

Check application: see A).

VL 12-2...; photoelectric reflex switch with polarizing filter, red light

Objects with shiny surfaces can be detected reliably thanks to the integrated polarization filter. Mount sensor, set contacts and align the sender beam to the reflector until the yellow LED indicator lights continuously (pay attention to the specifications sheet). The red sender light beam serves as an aid. Secure the sensor. Check whether the LED goes off when the object to be detected interrupts the light beam. If the yellow LED on VL 12-2... continues to be lit, object detection is influenced by transparent or small objects. In this case, you need a sensor with adjustable sensitivity (contact your SICK partner).

VS/VE 12-2...; through-beam photoelectric switch

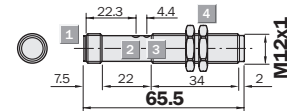
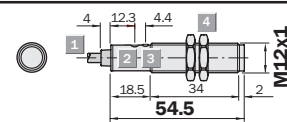
Mount and set the contacts for the sensor sender VS 12-2... and receiver VE 12-2... Align the sender VS 12-2 and receiver VE 12-2 to each other until the yellow LED indicator lights continuously (pay attention to the specifications sheet).

Secure the sensors, and check whether the LED goes off when the object to be detected interrupts the light beam. If the yellow LED on VE 12-2... continues to be lit, object detection is influenced by transparent or small objects. In this case, you need a sensor with adjustable sensitivity (contact your SICK partner).

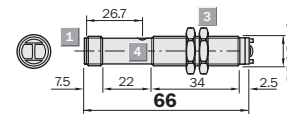
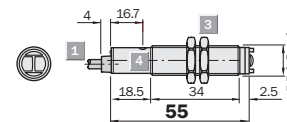
Maintenance

SICK photoelectric switches do not require any maintenance. We recommend that you clean the optical interfaces and check the screw connections and plug-in connections at regular intervals.

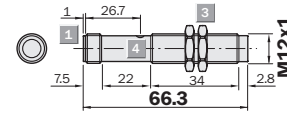
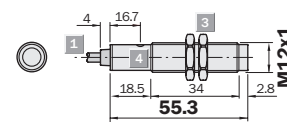
VT 12(T)-2...



VL 12-2...



VS/VE 12-2...



- 1 Cable or plug M 12, 4-pin
- 2 Sensitivity adjustment (Teach-in button)
- 3 Mounting nuts (2x); SW 17, metal
- 4 Yellow LED indicator: *)

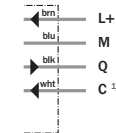
*) VT 12(T)-2... and VL 12-2...:
lights continuously: reception signal > reserve factor 2
blinks: reception signal < reserve factor 2, but > switching threshold 1
VS 12-2...: power on – sender active
VE 12-2...: light reception > switching threshold 1

Supplied material: Operating instructions, two M 12 metal ring nut

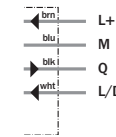
V 12T-2_1
V 12-2_1



VT 12T-2_112
VT 12T-2_132



VL 12-2_132
VE 12-2_132



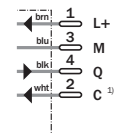
VS 12-2D 132



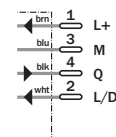
V 12T-2_4
V 12-2_4



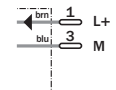
VT 12T-2_410
VT 12T-2_430



VL 12-2_430
VE 12-2_430



VS 12-2D 430



Wiring colors: 1/brn = brown; 2/wht = white; 3/blu = blue; 4/blk = black

- 1) Control input C, programming: Switching type LON/D.ON and external Teach-in
C = open (not assigned): light-switching LON
C = + V_s: dark-switching D.ON
C = 0 V: sensitivity setting per "external Teach-in" active
- 2) L/D switching type control line
L/D = open (not assigned): dark-switching D.ON
L/D = + V_s: light-switching LON
L/D = 0 V: dark-switching D.ON

V 12(T)-2	VT 12T-2..1	VT 12T-2..3	VL 12-2	VS 12-2D...	VE 12-2
Type	Photoelectric proximity switches ¹⁾		Photoelectric reflex switches	Through-beam photoelectric switches	
Operating range	100 mm	300 mm	2.3 m (PL 80A)	4m	
Light spot diameter/distance	~20 mm/100 mm	~28 mm/300 mm	~80 mm/2 m	~100 mm/4 m	
Light source ²⁾ , light type	LED, Infrarotlicht	LED, infrared light	LED, red light ³⁾	LED, infrared light –	
Sensitivity setting	Teach-in ⁴⁾	No			
Supply voltage V _s	DC 10 ... 30 V ⁵⁾				
Output current I _A max.	≤ 100 mA				
Switching output/-mode ⁶⁾	NPN or PNP – L.ON/D.ON (V 12-2P... = PNP; V 12-2N... = NPN)				
Switching frequency ⁷⁾	400/s				250/s
Current consumption ⁸⁾	≤ 20 mA				
Enclosure rating	IP 67 (EN 60529)				
VDE protection class	III				
Ambient operating temperature	–25 °C ... +70 °C				
Circuit protection ⁹⁾	A, B, C, D				
Housing material	Housing: Nickel-coated brass/PA; Optics: PC				

¹⁾ Object to be detected with 90 % remission (relating to standard white in acc. with DIN 5033); 100 x 100

²⁾ Average service life 100,000 h at T_a = +25 °C

³⁾ With polarizing filter

⁴⁾ Control input C
– Switching type L.ON/D.ON and – external Teach-in
C = open (not assigned): light-switching LON
C = + V_s: dark-switching D.ON
C = 0 V: sensitivity setting per "external Teach-in" active

⁵⁾ Limits
Ripple max. ± 10 %

⁶⁾ Selectable per control wire (see the connection drawings)

⁷⁾ Signal transit time with resistive load; with light/dark ratio 1:1

⁸⁾ Without load

⁹⁾ A = V_s connections reverse-polarity protected
B = Inputs and outputs reverse-polarity protected
C = Interference pulse suppression

We reserve the right to make changes without prior notification

ENGLISH

Photoelectric switches series 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 V 12(T)-2... photoelectric reflex switches are optoelectronic sensors and are used for detection of optical, non-contact detection of objects, animals, and people.

GB 10.01/02 BZ - The specific product features and technical data do not represent any guarantee

SICK

1202 GO

SENSICK V 12(T)-2...

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Mise en service

V 12(T)-2, Détecteur réflex énergétique.
Monter le capteur, établir les contacts et le diriger vers l'objet à détecter.
Réglage de la sensibilité :

Vous disposez de 2 options pour effectuer le réglage de la sensibilité :
– réglage manuel à l'aide de la touche Teach-in (Apprentissage) et
– réglage électronique externe par l'entrée de commande C.

Programmation extrêmement facile : appuyer 1x sur la touche Teach-in (Apprentissage) ou activer 1 x l'entrée de commande C (0 V) : le réglage de la sensibilité est terminé.

Réaction : LED témoin jaune. Mémorisation permanente du « seuil de commutation appris et de l'hystérésis », même en cas de coupure arbitrairement longue de la tension.

Toujours placer l'objet à détecter dans le trajet de la lumière, dans la position future prévue.

Vous disposez de deux modes d'apprentissage pour votre réglage optimal de la sensibilité :

Mode 1 ; grande réserve de fonctionnement ; Applications :
Sensibilité standard ; recommandée pour toutes les applications standards.
Réserve de fonctionnement d'un facteur > 2 au-dessus du seuil de commutation ; « Temps d'apprentissage » court (> 2 s et < 7 s).

Appuyer sur la touche Teach-in (Apprentissage) ou activer l'entrée de commande C (0 V) (> 2 s et < 7 s) : LED témoin jaune – elle s'éteint – puis s'allume de nouveau au bout de > 2 s – couper le signal d'apprentissage. Réglage de la sensibilité terminé. La LED témoin jaune est allumée lorsque le processus d'apprentissage en Mode 1 est terminé.

A) Contrôle de l'application :
Éloigner l'objet à détecter. La LED jaune s'éteint ? O.K. La LED est allumée (influence de l'arrière-plan ?) : régler une sensibilité élevée, voir Mode 2.

Mode 2 ; point de commutation exact, haute sensibilité ; applications :
convient aux faibles différences objet à détecter/arrière-plan, aux tâches de positionnement, à une détection aisée des contrastes.

Petite hystérésis de commutation et réserve de fonctionnement moindre, facteur > 1 et < 2 au-dessus du seuil de commutation ; « Temps d'apprentissage » long (> 8 s).

Appuyer sur la touche Teach-in (Apprentissage) ou activer l'entrée de commande C (0 V) (> 8 s) : LED témoin jaune – elle s'éteint – puis s'allume de nouveau au bout de > 2 s – et clignote après > 8 s – couper le signal d'apprentissage – réglage de la sensibilité terminé ! La LED témoin jaune clignote en permanence lorsque le processus d'apprentissage en Mode 2 est terminé.

Contrôle de l'application : (voir A).

VL 12-2... ; Barrière réflex avec filtre polariseur, lumière rouge
Le filtre polariseur intégré permet de détecter de façon fiable les objets présentant une surface brillante. Monter le capteur, établir les contacts et diriger le rayon émis vers le réflecteur jusqu'à ce que la LED jaune reste allumée (tenir compte des valeurs de la fiche technique). Le rayon rouge émis vous aidera dans cette tâche. Bloquez le capteur. Contrôlez que la LED s'éteint lorsque l'objet à détecter interrompt le rayon de lumière. Si la LED jaune au VL 12-2... reste allumée, c'est que la détection de l'objet est influencée par les objets petits ou transparents. Dans un tel cas, vous avez besoin d'un capteur à sensibilité réglable (adressez-vous à votre concessionnaire SICK).

VS/VE 12-2... ; Barrière unidirectionnelle

Monter les capteurs émetteur VS 12-2... et récepteur VE 12-2... puis établir les contacts. Diriger l'émetteur VS 12-2 et le récepteur VE 12-2 l'un vers l'autre jusqu'à ce que la LED jaune reste allumée (tenir compte des valeurs de la fiche technique).

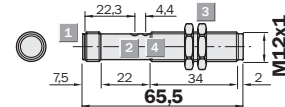
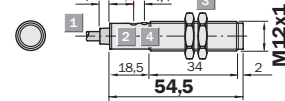
Bloquez les capteurs, contrôlez que la LED jaune s'éteint lorsque l'objet à détecter interrompt le rayon de lumière. Si la LED jaune au VE 12-2... reste allumée, c'est que la détection de l'objet est influencée par les objets petits ou transparents. Dans un tel cas, vous avez besoin d'un capteur à sensibilité réglable (adressez-vous à votre concessionnaire SICK).

Maintenance

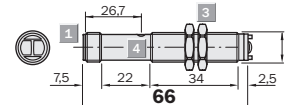
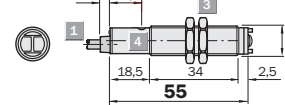
Les barrières lumineuses SICK ne nécessitent pas d'entretien. Nous recommandons, à intervalles réguliers

- de nettoyer les surfaces optiques,
- de contrôler les assemblages vissés et les connexions à fiche et à prise.

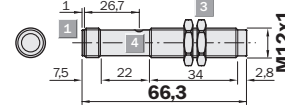
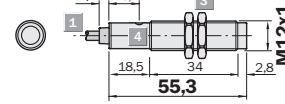
VT 12(T)-2...



VL 12-2...



VS/VE 12-2...



- 1 Conducteur ou fiche M 12, 4 pôles
- 2 Réglage de la sensibilité (Touche Teach-in)
- 3 Écrou de fixation (2x) ; clé de 17, métal
- 4 LED témoin jaune ¹⁾

- ¹⁾ VT 12(T)-2... et VL 12-2...:
Reste allumée en permanence : signal reçu > facteur de réserve 2
Clignote : signal reçu < facteur de réserve 2 mais > seuil de commutation 1
- VS 12-2... : Branché – émetteur actif
VE 12-2... : Lumière reçue > seuil de commutation 1

V 12(T)-2	VT 12T-2..1	VT 12T-2..3	VL 12-2	VS 12-2D...	VE 12-2
Type	Détecteur réflex ¹⁾		Barrières réflex	Barrières unidirectionnelles	
Portées pratiques	100 mm	300 mm	2,3 m (PL 80A)	4 m	
Diamètre du spot lumineux/Distance	~20 mm/100 mm	~28 mm/300 mm	~80 mm/2 m	~100 mm/4 m	
Émetteur de lumière ²⁾ , type de lumière	LED, lumière infrarouge	LED, lumière infrarouge	LED, lumière rouge ³⁾	LED, lumière infrarouge	–
Réglage de la sensibilité	Teach-in ⁴⁾	Non			
Tension d'alimentation U _v	DC 10 ... 30 V ⁵⁾				
Courant de sortie I _{maxi}	≤ 100 mA				
Sortie/Type de commutation ⁶⁾	NPN ou PNP – LON/D.ON (V 12-2P... = PNP; V 12-2N... = NPN)				
Fréquence de commutation ⁷⁾	400/s			250/s	
Consommation ⁸⁾	≤ 20 mA				
Type de protection	IP 67 (EN 60529)				
Classe de protection VDE	III				
Température ambiante	-25 °C ... +70 °C				
Circuits de protection ⁹⁾	A, B, C, D				
Matériau du boîtier	Manchon : laiton nickelé/PA ; Optique : PC				

¹⁾ Matériel à détecter à 90 % de luminance lumineuse (par rapport au blanc de référence selon DIN 5033) ; 100 x 100 mm

²⁾ Durée de vie moyenne 100.000 h à T_v = +25 °C

³⁾ Avec filtre polariseur

⁴⁾ Entrée de commande C – Type de commutation LON/D.ON et – Teach-in externe
C = vacant (non occupé) : commutation claire LON

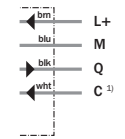
C = + UV : commutation sombre D.ON
C = 0 V : Réglage de la sensibilité par «Teach-in externe» actif

⁵⁾ Valeurs limites
Ondulation résiduelle maxi ±10 %
⁶⁾ Peut se sélectionner par le câble de commande (voir dessins de raccordement)

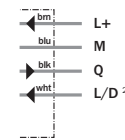
Fourniture: Notice d'emploi, deux écrous métalliques M12



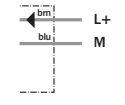
VT 12T-2_112
VT 12T-2_132



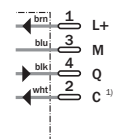
VL 12-2_132
VE 12-2_132



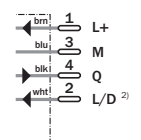
VS 12-2D 132



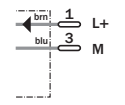
VT 12T-2_410
VT 12T-2_430



VL 12-2_430
VE 12-2_430



VS 12-2D 430



Couleurs des brins : 1/brn = brun ; 2/wht = blanc ; 3/blu = bleu ; 4/blk = noir

- ¹⁾ Entrée de commande C, programmation : type de commutation L.ON/D.ON et Teach-in externe
C = vacant (non occupé) : commutation claire L.ON
C = + UV : commutation sombre D.ON
C = 0 V : Réglage de la sensibilité par «Teach-in externe» actif
- ²⁾ L/D Câble de commande Type de commutation
L/D = vacant (non occupé) : commutation sombre D.ON
L/D = + UV : commutation claire L.ON
L/D = 0 V : commutation sombre D.ON

Sous réserve de modifications

FRANÇAIS

Famille de barrières photoélectriques Instructions de Service

Conseils de sécurité

- Lire les Instructions de Service avant la mise en marche.
- Installation, raccordement et réglage ne doivent être effectués que par du personnel qualifié.
- Lors de la mise en service, protéger l'appareil de l'humidité et des saletés.
- N'est pas un composant de sécurité au sens de la directive européenne concernant les machines.

Utilisation correcte

La barrière réflex V 12(T)-2... est un capteur optoélectronique qui s'utilise pour la saisie optique de choses, d'animaux et de personnes sans aucun contact. Pour son fonctionnement.

GB 10.01/02 BZ - The specified product features and technical data do not represent any guarantee

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Messa in esercizio

V 12(T)-2, tastatore a riflessione energetico.

Montare il sensore, realizzare i contatti e allinearli sull'oggetto.

Regolazione della sensibilità:

Per la regolazione della sensibilità potete scegliere tra due opzioni:

- regolazione manuale con tasto di Teach-in oppure
- regolazione elettronica, dall'esterno, tramite ingresso di controllo C.

Massima semplicità di programmazione: premere 1 volta il tasto di Teach-in o attivare 1 volta l'ingresso di controllo C (0 V): la regolazione della sensibilità è già completata.

Feedback: Spia gialla. Memorizzazione permanente della soglia di commutazione e dell'isteresi „imparate“, anche in caso di prolungate interruzioni dell'alimentazione elettrica.

Posizionare sempre l'oggetto nel fascio di luce nella posizione richiesta.

Per consentire una regolazione ottimale della sensibilità, sono disponibili due diverse modalità di Teach-in.

Modalità 1; grande riserva di funzionamento; applicazioni:

sensibilità standard; consigliata per tutte le applicazioni standard.

Fattore di riserva di funzionamento > 2 oltre soglia di commutazione; „tempo di Teach-in“ molto breve (> 2 s ... < 7 s).

Premere il tasto di Teach-in o attivare l'ingresso di controllo C (0 V) (> 2 s ... < 7 s): la spia gialla si spegne e si riaccende dopo > 2 s; disattivare il segnale di Teach-in. Termine della regolazione della sensibilità. La spia gialla rimane accesa dopo il processo di Teach-in in modalità 1.

A) Controllare l'applicazione:

Rimuovere l'oggetto. La spia gialla si spegne? OK. La spia gialla rimane accesa (influxo dello sfondo?): impostare alta sensibilità, v. modalità 2.

Modalità 2; punto di commutazione esatto, alta sensibilità; applicazioni: adatta per applicazioni con scarsa differenziazione tra oggetto e sfondo, applicazioni di posizionamento, riconoscimento semplice del contrasto.

Isteresi ridotta, riserva di funzionamento ridotta, fattore > 1 < 2 oltre soglia di commutazione. „Tempo di Teach-in“ più lungo (> 8 s).

Premere il tasto di Teach-in o attivare l'ingresso di controllo C (0 V) (> 8 s): la spia gialla si spegne, si riaccende dopo > 2 s e lampeggia > 8 s; disattivare il segnale di Teach-in. Termine della regolazione della sensibilità. La spia gialla lampeggia in modo permanente dopo il processo di Teach-in in modalità 2.

Controllare l'applicazione: v. A).

VL 12-2...; tastatore a riflessione con filtro di polarizzazione, luce rossa

Il filtro di polarizzazione integrato consente di riconoscere in modo affidabile gli oggetti con superficie lucida. Montare il sensore, realizzare i contatti e dirigere il fascio luminoso sul riflettore finché la spia gialla rimane accesa in modo permanente (attenersi ai valori della scheda tecnica). Il fascio di luce rossa dell'emettitore facilita il lavoro. Assicurare il sensore. Controllare che la spia si spenga non appena l'oggetto interrompe il fascio di luce. Se la spia del VL 12-2... rimane accesa, il riconoscimento è ostacolato dalla trasparenza o dalle piccole dimensioni dell'oggetto. In questo caso sarà necessario installare un sensore con sensibilità regolabile (per maggiori informazioni rivolgersi al rappresentante SICK).

VS/VE 12-2...; fotocellula unidirezionale

Montare l'emettitore VS 12-2... e il ricevitore VE 12-2... e realizzare i contatti. Allineare reciprocamente l'emettitore VS 12-2 e il ricevitore VE 12-2 finché la spia gialla rimane accesa in modo permanente (attenersi ai valori della scheda tecnica).

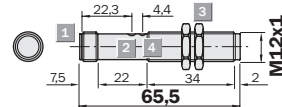
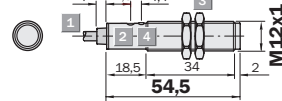
Assicurare i sensori. Controllare che la spia si spenga non appena l'oggetto interrompe il fascio di luce. Se la spia del VE 12-2... rimane accesa, il riconoscimento è ostacolato dalla trasparenza o dalle piccole dimensioni dell'oggetto. In questo caso sarà necessario installare un sensore con sensibilità regolabile (per maggiori informazioni rivolgersi al rappresentante SICK).

Manutenzione

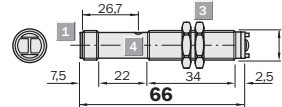
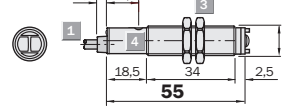
Le barriere luminose SICK non richiedono manutenzione. Si consiglia

- di pulire regolarmente le superfici limite ottiche,
- di controllare regolarmente gli avvitamenti e i collegamenti a spina.

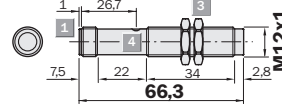
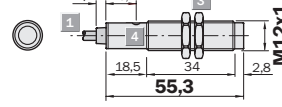
VT 12(T)-2...



VL 12-2...



VS/VE 12-2...



1 Cavo o connettore M 12, 4 poli

2 Regolatore di sensibilità (tasto di Teach-in)

3 Dado di fissaggio (2x); SW 17, metallo

4 Spia gialla ¹⁾

¹⁾ VT 12(T)-2... e VL 12-2...:

luce fissa: segnale di ricezione > fattore di riserva 2
lampeggiante: segnale di ricezione < fattore di riserva 2, ma > soglia di commutazione 1

VS 12-2...: Power On – sensore attivo

VE 12-2...: Ricezione luce > soglia di comm. 1

V 12(T)-2	VT 12T-2..1	VT 12T-2..3	VL 12-2	VS 12-2D...	VE 12-2
Tipo	Tastatori a riflessione ¹⁾		Fotocellule a riflessione	Fotocellule unidirezionali	
Distanze di lavoro	100 mm	300 mm	2,3 m (PL 80A)	4 m	
Diametro del punto luminoso/Distanza	~20 mm/100 mm	~28 mm/300 mm	~80 mm/2 m	~100 mm/4 m	
Emettitore di luce ²⁾ , tipo di luce	LED, luce infrarossa	LED, luce infrarossa	LED, luce rossa ³⁾	LED, luce infrarossa –	
Regolazione della sensibilità	Teach-in ⁴⁾	No			
Tensione di alimentazione U _V	DC 10 ... 30 V ⁵⁾				
Corrente di uscita max. I _{max}	≤ 100 mA				
Uscita/tipo di commutazione ⁶⁾	NPN o PNP – L.ON/D.ON (V 12-2P... = PNP; V 12-2N... = NPN)				
Frequenza di commutazione ⁷⁾	400/s			250/s	
Absorbimento di corrente ⁸⁾	≤ 20 mA				
Tipo di protezione	IP 67 (EN 60529)				
Classe di protezione VDE	III				
Temperatura ambiente circostante	-25 °C ... +70 °C				
Commutazioni di protezione ⁹⁾	A, B, C, D				
Materiale del contenitore	Custodia: ottone nichelato/PA; ottica: PC				

¹⁾ Oggetto con remissione del 90 % (riferita a bianco standard a norma DIN 5033); 100 X 100 mm

²⁾ Durata media 100.000 h per T_p = +25 °C

³⁾ Con filtro di polarizzazione

⁴⁾ Ingresso di controllo C – tipo di commutazione L.ON/D.ON e Teach-in esterno
C = aperto (non collegato): comm. a chiaro L.ON
C = + U_i: comm. a scuro D.ON
C = 0 V: regolazione sensibilità tramite „Teach-in esterno“ attiva

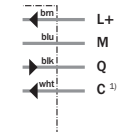
⁵⁾ Valori limite
Ondulazione residua max. ±10 %

Corredo di fornitura: manuale, due dadi in metallo M-12

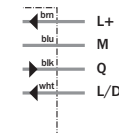
V 12T-2_1
V_12-2_1



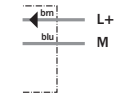
VT 12T-2_112
VT 12T-2_132



VL 12-2_132
VE 12-2_132



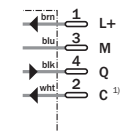
VS 12-2D 132



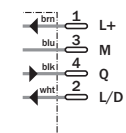
V 12T-2_4
V_12-2_4



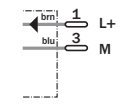
VT 12T-2_410
VT 12T-2_430



VL 12-2_430
VE 12-2_430



VS 12-2D 430



Colore fili: 1/bm = marrone; 2/wht = bianco; 3/blu = blu; 4/blk = nero

¹⁾ Ingresso di controllo C, programmazione: tipo di commutazione L.ON/D.ON e Teach-in esterno

C = aperto (non collegato): comm. a chiaro L.ON

C = + U_i: comm. a scuro D.ON

C = 0 V: regolazione sensibilità tramite „Teach-in esterno“ attiva

²⁾ L/D Cavo di comando/tipo di commutazione

L/D = aperto (non collegato): comm. a scuro D.ON

L/D = + U_i: comm. a chiaro L.ON

L/D = 0 V: comm. a scuro D.ON

Con riserva di modifiche

ITALIANO

Famiglia di fotocellule Istruzioni per l'uso

Avvertimenti di sicurezza

- ▶ Leggere prima della messa in esercizio.
- ▶ Allacciamento, montaggio e regolazione solo da parte di personale qualificato.
- ▶ Durante la messa in esercizio proteggere da umidità e sporizia.
- ▶ Non componente di sicurezza secondo la Direttiva macchine EN.

Impiego conforme allo scopo

La barriera luminosa a riflessione V 12(T)-2... è un sensore optoelettronico che viene impiegato per il rilevamento ottico a distanza di oggetti, animali e persone. Per l'esercizio necessario un riflettore.

GB 10.01/02 BZ - The specified product features and technical data do not represent any guarantee