

# S45



## HIGH PERFORMANCE EUROPEAN STYLE MINIATURE SENSOR ALL-IN-ONE FAMILY



- Red LED and Laser emissions
- Precise risk free laser class 1 emission
- Diffused LED proximity 800mm
- Background Suppression 400mm
- Retroreflective Class 1 Laser 15m/Red LED 7m
- Through beam Class 1 Laser 20m/Red LED 15m
- IP69K housing
- 2m Cable or metal M8 4 pole version
- PNP or NPN output with remote teach in input
- High speed RGB and white emission contrast sensor
- High precision distance sensor up to 200 mm



### APPLICATIONS

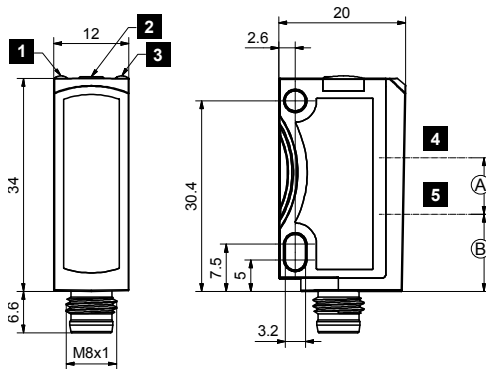
- Processing and Packaging machinery
- Cosmetic and Pharmaceutical industry
- Electronics assembling
- Conveyor lines, material handling
- Automotive industry
- Print and paper industry
- Small part detection with maximum accuracy

S45		
<b>Through beam</b>	20m. (Laser Class1) 15m. (Red Led)	
<b>Polarized Retroreflective</b>	15m. (Laser Class1) 7m. (Red Led)	
<b>Autocollimated Retroreflective for Transparent objects</b>	2m. (Red Led)	
<b>Autocollimated Retroreflective</b>	2m. (Red Led)	
<b>Diffused proximity</b>	250mm. (Laser Class1) 800mm. (Red Led)	
<b>Background suppressor</b>	120mm. (Laser Class 1) 200mm. (Red Led) 400mm. (Red Led)	
<b>Distance sensor</b>	80mm. (Red Led) 200mm. (Red Led)	
<b>Contrast Sensor</b>	12mm. (White) 12mm. (RGB)	
<b>Power Supply</b>	Vdc	10...30Vdc
	Vac	(13...30Vdc Y models)
	Vac/Vdc	
<b>Output</b>	PNP	•
	NPN	•
	NPN/PNP	
	relay	
	other	Push Pull (Wxx, Yxx), Analog 0...10 V (Yxx)
<b>Connection</b>	cable	•
	connector	•
	pig-tail	
<b>Approximate dimensions (mm)</b>	34mm. x 20mm. X 12mm.	
<b>Housing material</b>	ABS(Housing), PMMA (Optics)	
<b>Mechanical protection</b>	IP67 & IP69K	

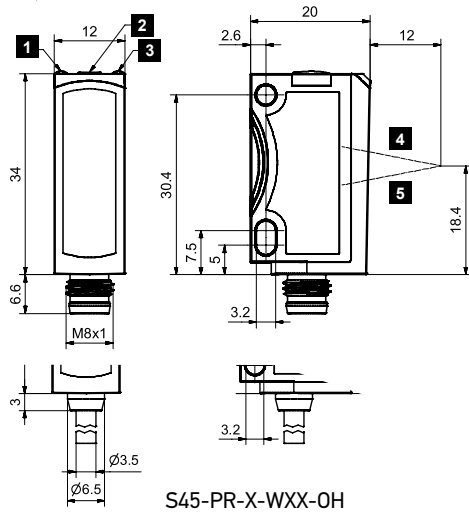
# TECHNICAL DATA

<b>Power supply</b>	10...30Vdc (13...30Vdc Y models)
<b>Ripple</b>	10% max.
<b>Consumption (Load current excluded)</b>	≤ 30 mA
<b>Light emission</b>	Red LED 632 nm, Red Laser 650 nm
<b>Setting</b>	Push Button TEACH-IN
<b>Indicators</b>	LED Green Operating Volatage LED Yellow Output Status
<b>Output</b>	NPN, PNP, Push Pull (Wxx, Yxx), Analog 0...10 V (Yxx)
<b>Output current</b>	100 mA
<b>Saturation voltage</b>	2 V max
<b>Response time</b>	500 μs 333 μs (C03 Laser) 250 μs (F/G Laser) 50 μs (W03, W33) 20 μs (W13, W43)
<b>Switching frequency</b>	≤ 1000Hz ≤ 1500Hz (C03 Laser) ≤ 2000 Hz (F/G Laser) ≤ 10 kHz (W03, W33) ≤ 25 kHz (W13, W43)
<b>Connection</b>	Plastic M8 4-pole connector, Metal M8 4-pole connector 2 m cable
<b>Dielectric strength</b>	500 Vac, 1min between electronic and housing
<b>Insulating resistance</b>	>20M OHM, 500 Vdc between electronic and housing
<b>Electrical protection</b>	class 2
<b>Mechanical protection</b>	IP67 & IP69K
<b>Ambient light rejection</b>	according to EN 60947-5-2
<b>Vibrations</b>	0,5mm amplitude, 10...55Hz frequency , for every axis (EN60068-2-6)
<b>Shock resistance</b>	11 ms (30G) 6 shock for every axis (EN60068-2-27)
<b>Housing material</b>	ABS
<b>Lens material</b>	PMMA
<b>Operating temperature</b>	-20...+60 °C
<b>Storage temperature</b>	-20...+80 °C
<b>Weight</b>	10g. with connector, 40g. with cable

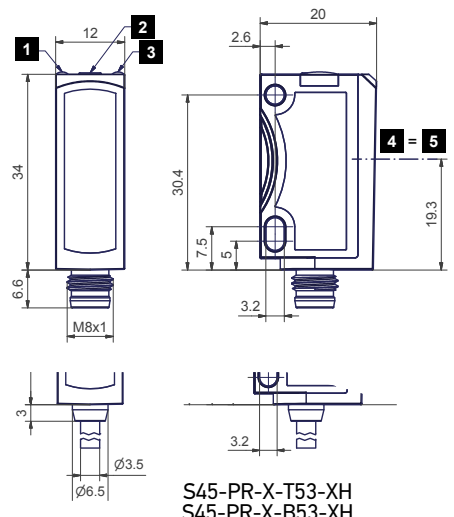
# DIMENSIONS



	S45-PR-2(5)-M03 S45-PR-5-Y03	S45-PR-2(5)-M13 S45-PR-5-Y13	S45-PR-2(5)-C03 S45-PR-B03	S45-PH-5-M03	S45-PH-5-C03 S45-PH-B03	S45-PR-G00	S45-PH-G00	S45-PR(PH)-F03
<b>A</b>	9	11.75	10.8	8.8	8.8	11.5	13.5	
<b>B</b>	12.3	11	11.5	12.5	13.5			22.3



S45-PR-X-WXX-OH



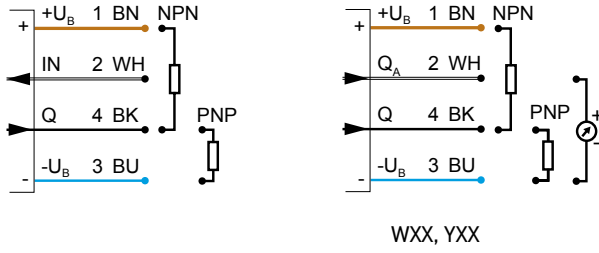
S45-PR-X-T53-XH  
S45-PR-X-B53-XH

- 1** Yellow LED 1)
- 2** Button
- 3** Green LED 2)
- 4** Receiver axis
- 5** Emitter axis

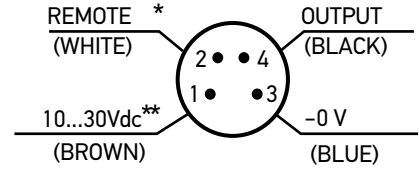
1) switching output indicator  
2) operating voltage indicator

# CONNECTIONS

## CABLE



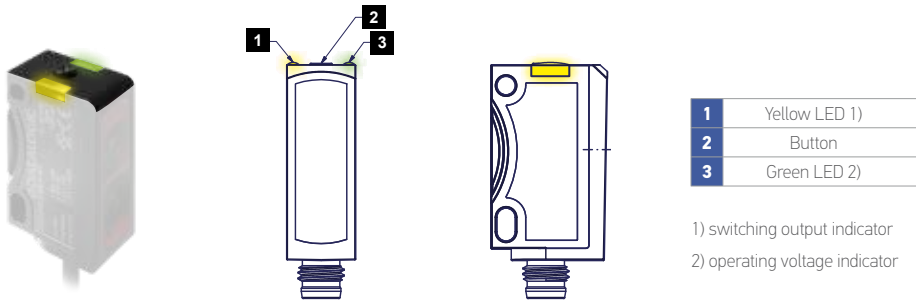
## M8 CONNECTOR



\* Analog out YXX

\*\* 13...30Vdc Y models

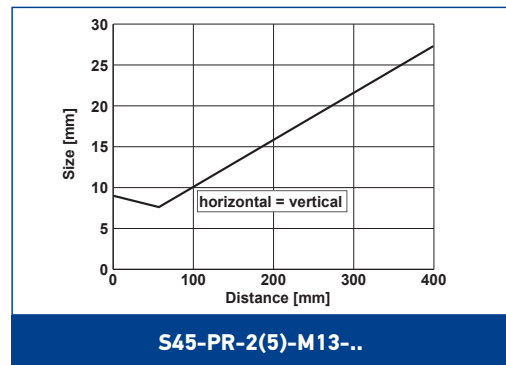
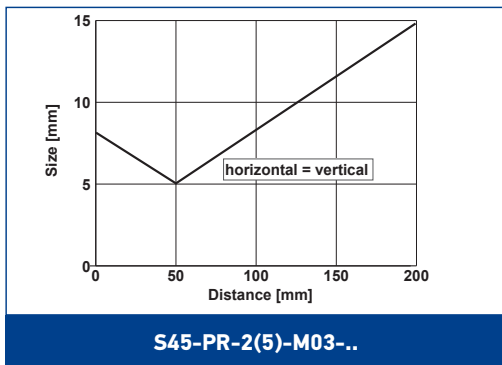
# INDICATORS AND SETTINGS



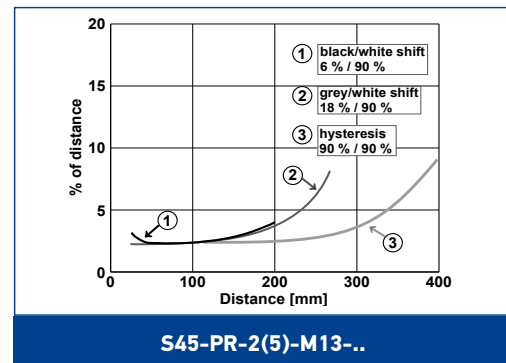
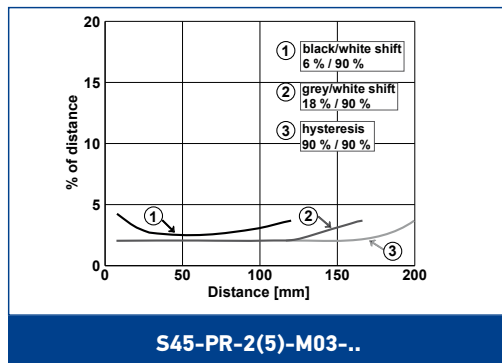
# DETECTION DIAGRAMS

## BACKGROUND SUPPRESSOR

### DETECTION SPOT SIZE

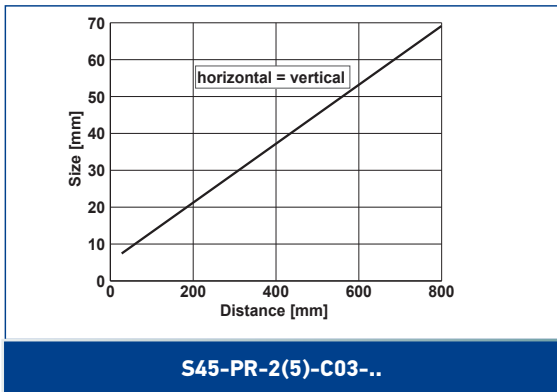


### B/W SHIFT

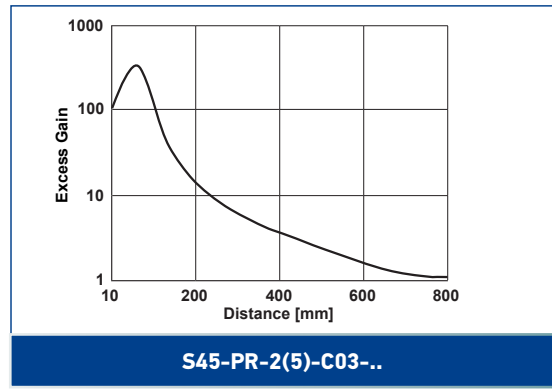


## ENERGETIC DIFFUSED

DETECTION SPOT SIZE

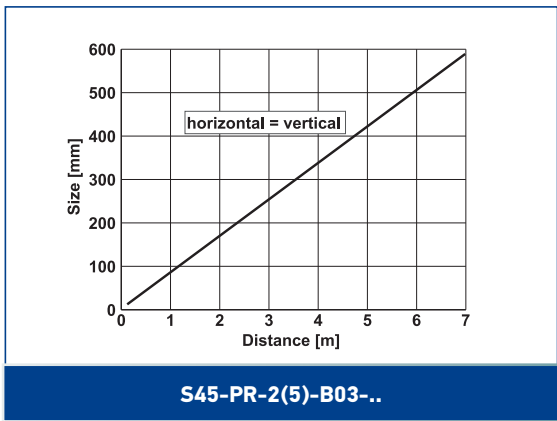


EXCESS GAIN

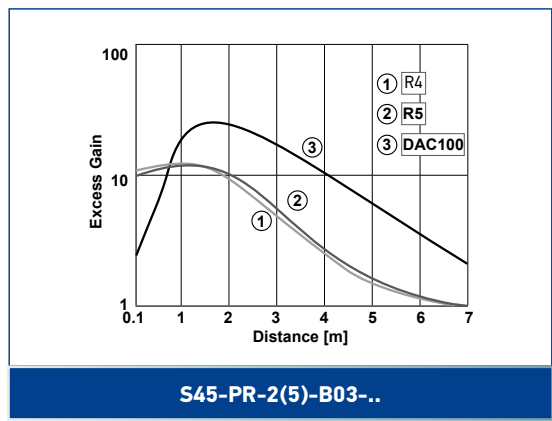


## RETROREFLECTIVE POLARIZED

DETECTION SPOT SIZE

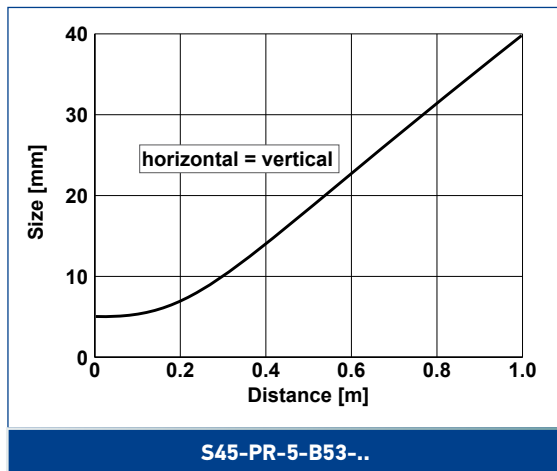


EXCESS GAIN



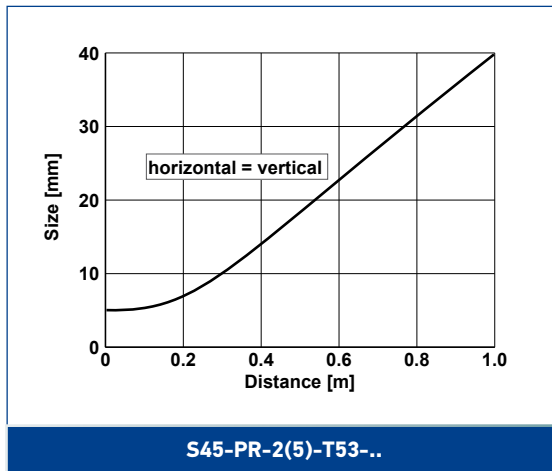
## COAXIAL RETROREFLECTIVE POLARIZED

DETECTION SPOT SIZE



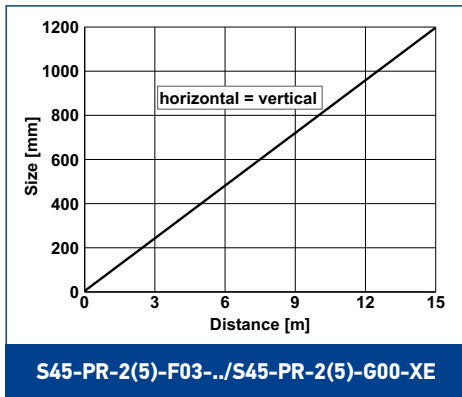
## RETROREFLECTIVE FOR TRANSPARENT

DETECTION SPOT SIZE

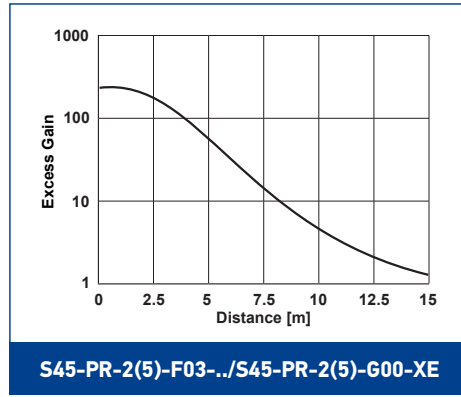


## THROUGH BEAM

DETECTION SPOT SIZE

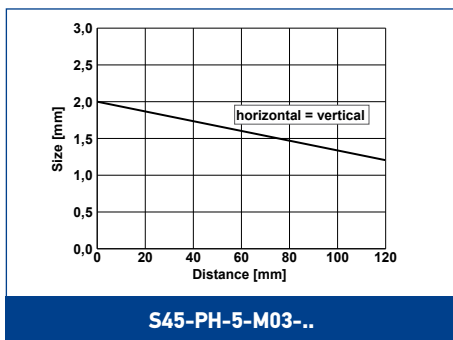


EXCESS GAIN

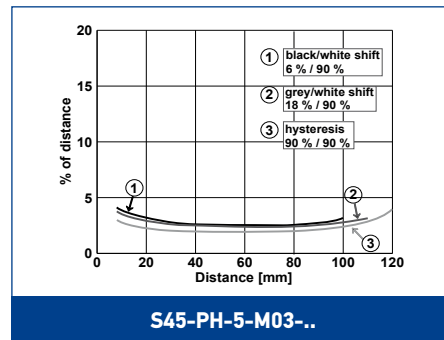


## LASER BACKGROUND SUPPRESSOR

DETECTION SPOT SIZE

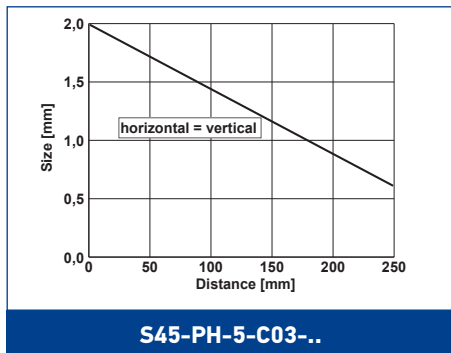


B/W SHIFT

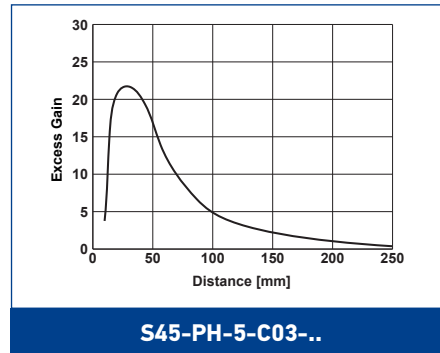


## LASER ENERGETIC DIFFUSED

DETECTION SPOT SIZE

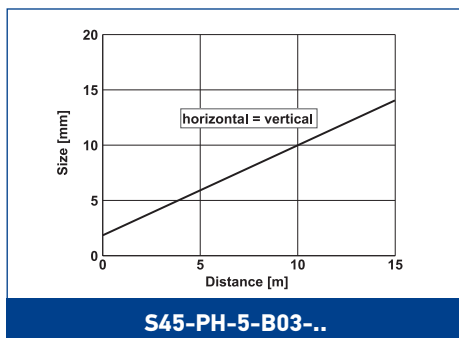


EXCESS GAIN

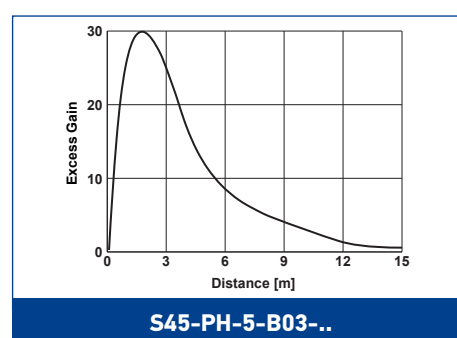


## LASER RETROREFLECTIVE POLARIZED

DETECTION SPOT SIZE

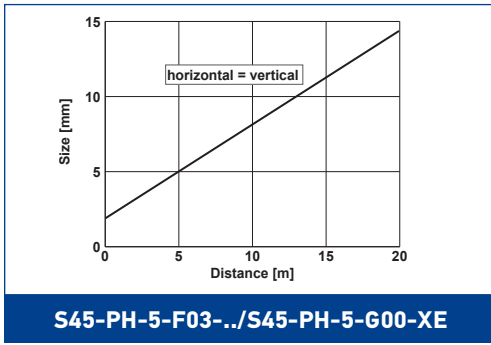


EXCESS GAIN

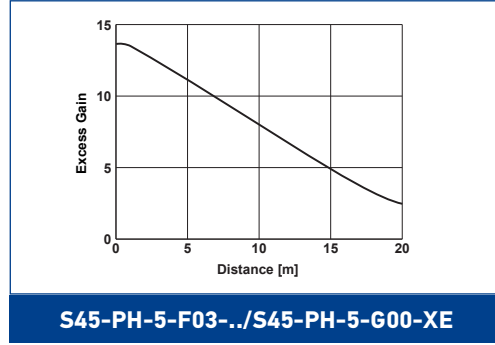


## LASER THROUGH BEAM

### DETECTION SPOT SIZE

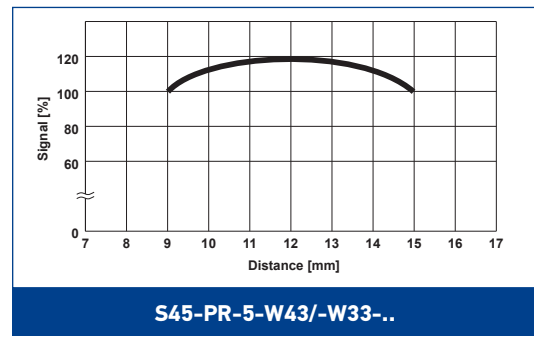
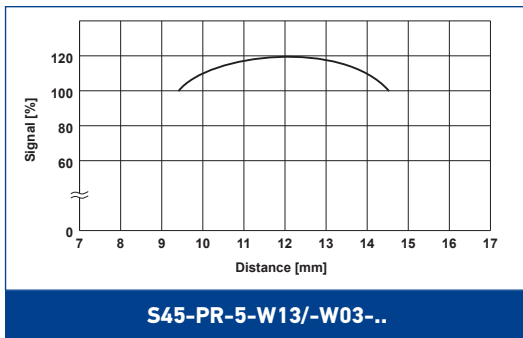


### EXCESS GAIN



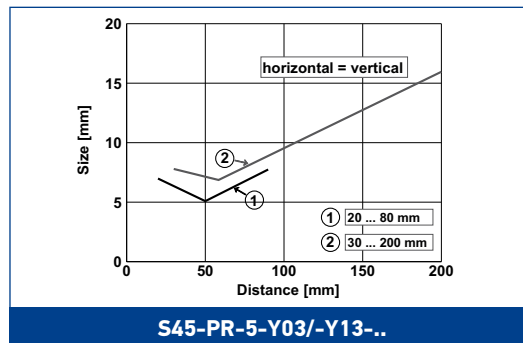
## CONTRAST SENSOR

### READING DIAGRAM

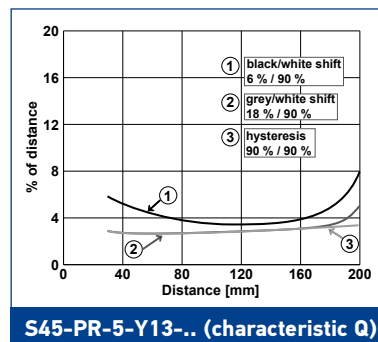
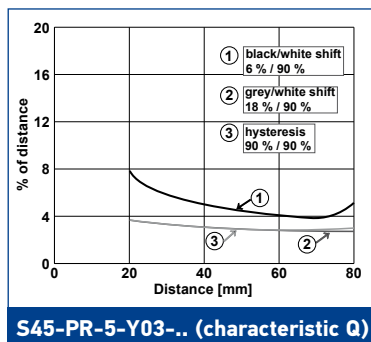


## DISTANCE SENSOR

### DETECTION SPOT SIZE



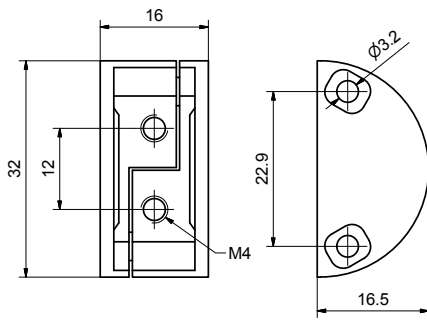
### READING DIAGRAM



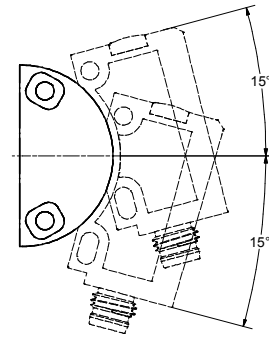
# MODEL SELECTION AND ORDER INFORMATION

OPTIC FUNCTION	EMISSION	CONNECTION	OUTPUT	MODEL	ORDER NO.
Diffused proximity	LED	2m Cable	PNP	S45-PR-2-C03-PH	950411220
			NPN	S45-PR-2-C03-NH	950411210
		M8	PNP	S45-PR-5-C03-PH	950411240
			NPN	S45-PR-5-C03-NH	950411230
	LASER	M8	PNP	S45-PH-5-C03-PH	950411260
			NPN	S45-PH-5-C03-NH	950411250
Polarized Retroreflective	LED	2m Cable	PNP	S45-PR-2-B03-PH	950411100
			NPN	S45-PR-2-B03-NH	950411090
		M8	PNP	S45-PR-5-B03-PH	950411120
			NPN	S45-PR-5-B03-NH	950411110
	LASER	M8	PNP	S45-PH-5-B03-PH	950411140
			NPN	S45-PH-5-B03-NH	950411130
Polarized retroreflective autocollimated for transparent	LED	2m Cable	PNP	S45-PR-2-T53-PH	950411160
			NPN	S45-PR-2-T53-NH	950411150
		M8	PNP	S45-PR-5-T53-PH	950411180
			NPN	S45-PR-5-T53-NH	950411170
Polarized retroreflective autocollimated	LED	M8	PNP	S45-PR-5-B53-PH	950411200
			NPN	S45-PR-5-B53-NH	950411190
Through beam	LED	2m Cable	-	S45-PR-2-G00-XE	950411000
			PNP	S45-PR-2-F03-PH	950411020
			NPN	S45-PR-2-F03-NH	950411010
		M8	-	S45-PR-5-G00-XE	950411030
			PNP	S45-PR-5-F03-PH	950411050
			NPN	S45-PR-5-F03-NH	950411040
	LASER	M8	-	S45-PH-5-G00-XE	950411060
			PNP	S45-PH-5-F03-PH	950411080
			NPN	S45-PH-5-F03-NH	950411070
Background suppressor 200mm	LED	2m Cable	PNP	S45-PR-2-M03-PH	950411280
			NPN	S45-PR-2-M03-NH	950411270
		M8	PNP	S45-PR-5-M03-PH	950411300
			NPN	S45-PR-5-M03-NH	950411290
Background suppressor 400mm	LED	2m Cable	PNP	S45-PR-2-M13-PH	950411320
			NPN	S45-PR-2-M13-NH	950411310
		M8	PNP	S45-PR-5-M13-PH	950411340
			NPN	S45-PR-5-M13-NH	950411330
Background suppressor laser	LASER	M8	PNP	S45-PH-5-M03-PH	950411360
			NPN	S45-PH-5-M03-NH	950411350
Distance sensor	LED	M8	PNP	S45-PR-5-Y03-PV	950411380
			NPN	S45-PR-5-Y03-NV	950411370
Distance sensor	LED	M8	PNP	S45-PR-5-Y13-PV	950411400
			NPN	S45-PR-5-Y13-NV	950411390
Contrast Sensor 10kHz	WHITE	M8	PUSH-PULL	S45-PR-5-W03-OH	950411420
	RGB		PUSH-PULL	S45-PR-5-W13-OH	950411410
Contrast Sensor 25kHz	WHITE	M8	PUSH-PULL	S45-PR-5-W33-OH	950411440
	RGB		PUSH-PULL	S45-PR-5-W43-OH	950411430

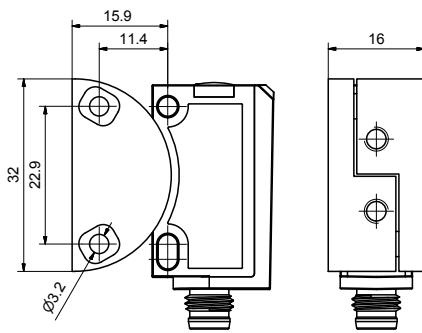
# ACCESSORIES



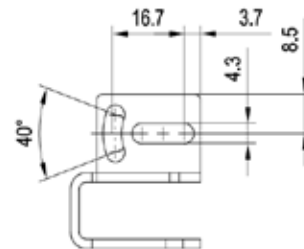
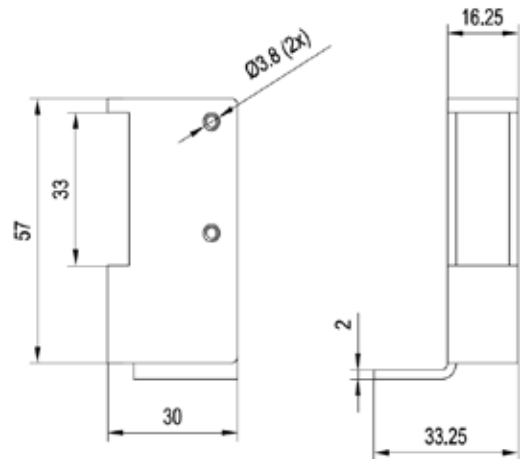
ST-S45-DVT



ST-S45-DVT



ST-S45-DVT



ST-MINI-PRO

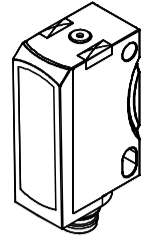
MODEL	DESCRIPTION	ORDER NO.
ST-S45-DVT	S45 DOVE TAIL BRACKET	95ACC7970
ST-MINI-PRO	MINI PROTECTIVE BRACKET	95ACC7980

# CABLES

TYPE	DESCRIPTION	LENGTH	MODEL	ORDER No.
Axial M8 Connector	4-pole, grey, P.V.C.	3 m	CS-B1-02-G-03	95A251420
		5 m	CS-B1-02-G-05	95A251430
		7 m	CS-B1-02-G-07	95A251440
		10 m	CS-B1-02-G-10	95A251480
	4-pole, P.U.R.	2 m	CS-B1-02-R-02	95A251620
		5 m	CS-B1-02-R-05	95A251640
Radial M8 Connector	4-pole, grey, P.V.C.	3 m	CS-B2-02-G-03	95A251450
		5 m	CS-B2-02-G-05	95A251460
		7 m	CS-B2-02-G-07	95A251470
		10 m	CS-B2-02-G-10	95A251530
	4-pole, P.U.R.	2 m	CS-B2-02-R-02	95A251630
		5 m	CS-B2-02-R-05	95A251650

Rev. 01, 07/2016





## S45-...-W13/-W03 S45-...-W43/-W33

Sensore di contrasto / Lettore di tacche  
Contrast sensor  
Capteur de contraste  
Kontrastsensor



821003900 Rev.01 X1610  
www.datalogic.com

### DATI TECNICI | TECHNICAL DATA | DONNÉES TECHNIQUES | TECHNISCHE DATEN (TYP.)

S45				-PR-5-W13-OH	-PR-5-W03-OH	-PR-5-W43-OH	-PR-5-W33-OH
Ⓛ Uscita di commutazione Q	Ⓜ Switching output Q	Ⓧ Sortie de commutation Q	Ⓝ Schaltausgang Q	Push-Pull			
Distanza di rilevamento (TW)	Scanning distance (TW)	Distance de détection (TW)	Tastweite (TW)	12 mm			
Tipo di emissione	Used light	Type de lumière	Lichtart	LED bianca   white   blanche   weiß		LED rosso, verde, blu   red, green, blue   rouge, verte, bleue   rot, grün, blau	
Dimensione dello spot <sup>3)</sup>	Size of light spot <sup>3)</sup>	Taille du spot de détection <sup>3)</sup>	Lichtfleckgröße <sup>3)</sup>	1 x 4 mm			
Tensione di alimentazione +V <sup>4)</sup>	Operating voltage +V <sup>4)</sup>	Tension d'alimentation +V <sup>4)</sup>	Betriebsspannung +V <sup>4)</sup>	10 ... 30V DC			
Corrente di assorbimento I <sub>0</sub>	No-load supply current I <sub>0</sub>	Courant hors charge I <sub>0</sub>	Leerlaufstrom I <sub>0</sub>	≤ 30 mA			
Corrente di uscita I <sub>o</sub>	Output current I <sub>o</sub>	Courant de sortie I <sub>o</sub>	Ausgangsstrom I <sub>o</sub>	≤ 100 mA			
Ingresso di Teach in IN <sup>5)</sup>	Control input IN <sup>5)</sup>	Entrée de contrôle IN <sup>5)</sup>	Steuereingang IN <sup>5)</sup>	+V = Teach in / -V =  / non connesso = funzionamento normale			
Frequenza operativa (ti/tp 1:1)	Switching frequency (ti/tp 1:1)	Fréquence de commutation (ti/tp 1:1)	Schaltfrequenz (ti/tp 1:1)	25000 Hz	10000 Hz	25000 Hz	10000 Hz
Grado di protezione <sup>6)</sup>	Enclosure rating <sup>6)</sup>	Degré de protection <sup>6)</sup>	Schutzart <sup>6)</sup>	IP 67 / IP 69K			
Temperatura di funzionamento <sup>2)</sup>	Ambient air temperature: operation <sup>2)</sup>	Température ambiante : fonctionnement <sup>2)</sup>	Umgebungstemperatur: Betrieb <sup>2)</sup>	-20 ... +55 °C			
Temperatura di immagazzinamento	Ambient air temperature: storage	Température ambiante : stockage	Umgebungstemperatur: Lager	-20 ... +80 °C			
Peso con connettore / con cavo	Weight plug-/ cable device	Poids Capteur avec connecteur/câble	Gewicht Stecker-/ Kabelgerät	10 g / 40 g			
Configurazione di fabbrica	Factory setting	Configuration d'origine	Werkseinstellung	L/D via Teach-in   LO / DO via teach-in   LO / DO via Teach-in   LO / DO a través de Teach-in			

<sup>1)</sup> Ⓛ eccetto i tipi: S45-PR-5-W13/-W43  
<sup>2)</sup> UL: -20 ... +50 °C  
<sup>3)</sup> = 1 / (T x Nyq x 2)  
<sup>4)</sup> massima variazione residua del 10% della tensione di alimentazione, ~50Hz/100Hz  
<sup>5)</sup> vedere il grafico I; sul retro  
<sup>6)</sup> con connettore inserito IP 67 / IP 69K

<sup>1)</sup> Ⓜ except for types S45-PR-5-W13/-W43  
<sup>2)</sup> UL: -20 ... +50 °C  
<sup>3)</sup> = 1 / (T x Nyq x 2)  
<sup>4)</sup> max. residual ripple 10%, within U<sub>B</sub>, approx. 50Hz/100Hz  
<sup>5)</sup> see illustration I; back  
<sup>6)</sup> with connected IP 67 / IP 69K plug

<sup>1)</sup> Ⓧ sauf les types S45-PR-5-W13/-W43  
<sup>2)</sup> UL: -20 ... +50 °C  
<sup>3)</sup> = 1 / (T x Nyq x 2)  
<sup>4)</sup> Ondulation résiduelle maxi 10 % à l'intérieur de U<sub>B</sub>, env. 50Hz/100Hz  
<sup>5)</sup> voir illustration I; verso  
<sup>6)</sup> avec connecteur IP 67 / IP 69K raccordé

<sup>1)</sup> Ⓝ ausgenommen Typen S45-PR-5-W13/-W43  
<sup>2)</sup> UL: -20 ... +50 °C  
<sup>3)</sup> = 1 / (T x Nyq x 2)  
<sup>4)</sup> max. 10% Restwelligkeit, innerhalb U<sub>B</sub>, ~50Hz/100Hz  
<sup>5)</sup> siehe Grafik I; Rückseite  
<sup>6)</sup> mit angeschlossenem IP 67 / IP 69K Stecker

= Tasto bloccato   = button locked   = bouton verrouillée   = Taste verriegelt

### INDICAZIONI SDI SICUREZZA

Leggere attentamente le istruzioni prima della messa in servizio del sensore.  
Connessione, Montaggio e messa in servizio devono essere eseguite da personale qualificato.  
Non è un dispositivo di sicurezza in accordo con la direttiva macchine EU (non deve essere utilizzato per la protezione delle persone).  
Non utilizzare in ambiente esterno.  
Per l'uso dei sensori con connettore: Connettore M8 metallico dritto o 90° Zoccolo di connessione R/C (CYJV2).  
ATTENZIONE - tutto ciò che riguarda l'utilizzo nel controllo o regolazione eseguito diversamente da quanto descritto in questo manuale può provocare una esposizione pericolosa alla radiazione del laser.  
**USO CORRETTO**  
Questo sensore è utilizzato per la rilevazione ottica di oggetti e non a contatto.  
**MONTAGGIO**  
Montare il sensore con accessori compatibili. (vedere il sito www.datalogic.com).  
**CONNESSIONE**  
Inserire il connettore senza alimentazione ed avvitarlo fino in fondo.  
Connettere il cavo come in figura B.  
Vedere figura C per connessione PNP/NPN.  
Tensione presente → LED Verde acceso.  
Logica di uscita L ↔ D (vedi figura H sul retro).  
LO = uscita attiva in Luce ; DO = uscita attiva in buio.  
**POSIZIONAMENTO (VEDI FIGURA D)**  
Allineare correttamente il sensore con la tacca da rilevare.  
Posizionare correttamente il sensore secondo la distanza, l'orientamento e l'allineamento (vedi figura D).

### SAFETY INSTRUCTIONS

Read operating instructions before start-up.  
Connection, assembly, setting and start-up only by trained personnel.  
No safety component according to EU machinery directives (not suited for the protection of personnel).  
Not for outdoor use.  
For use with sensors with connector: Straight or L-shaped M8 metal connector, connector base is made of R/C (CYJV2).  
CAUTION - Use of Controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.  
**INTENDED USE**  
Sensor is implemented for optical contact-free recognition of contrasts.  
**ASSEMBLY**  
Fix sensor on suitable mounting component (bracket see www.datalogic.com).  
**CONNECTION**  
Insert plug tension-free and screw it tightly.  
Connect cable according to the connection diagram (see illustration B).  
For PNP/NPN (see illustration C).  
Apply voltage → green LED lights up.  
Switching LO ↔ DO (see illustration H; back).  
LO = light on; DO = dark on.  
**ADJUSTMENT (SEE ILLUSTRATION D)**  
Align the sensor to the mark to be recognized.  
Observe the distance, orientation and alignment (see illustration D).

### INSTRUCTIONS DE SÉCURITÉ

Lire les instructions de service avant mise en service.  
Raccordement, assemblage, réglage et mise en service ne doivent être effectués que par du personnel qualifié.  
Il ne s'agit pas de pièces de sécurité selon les directives européennes en vigueur concernant les machines (inappropriées à la protection de personnes).  
Nepas utiliser à l'extérieur.  
Pour une utilisation avec capteurs avec connecteur : Connecteur métallique M8 droit ou en forme de " L ", socle de raccordement en R/C (CYJV2).  
ATTENTION - L'utilisation de commandes, de réglages ou de consignes autres que ceux spécifiés présente un risque d'exposition dangereuse aux radiations.  
**UTILISATION CONFORME**  
Le capteur est utilisé pour la détection optique sans contact des contrastes.  
**MONTAGE**  
Monter le capteur sur une équerre de fixation appropriée (support voir www.datalogic.com).  
**RACCORDEMENT**  
Insérer le connecteur hors tension et visser.  
Connecter le câble selon le schéma de raccordement (voir illustration B).  
Pour PNP/NPN (voir illustration C).  
Mettre sous tension → LED verte est allumée.  
Inversion LO ↔ DO (voir illustration H ; verso).  
LO = allumée éteint ; DO = sombre.  
**AJUSTEMENT (VOIR ILLUSTRATION D)**  
Aligner le capteur sur le repère à saisir.  
Observer la distance, l'orientation et l'alignement (voir illustration D).

### SICHERHEITSHINWEISE

Vor Inbetriebnahme die Betriebsanleitung lesen.  
Anschluss, Montage, Einstellung und Inbetriebnahme nur durch Fachpersonal.  
Kein Sicherheitsbauteil gemäß EU-Maschinenrichtlinie (nicht zum Schutz von Personen geeignet).  
Einsatz nicht im Aussenbereich.  
Zur Verwendung mit Sensoren mit Stecker: Gerader oder L-förmiger M8 Metallstecker, Anschlusssockel aus R/C (CYJV2).  
ACHTUNG - Durch Verwendung von Bedienelementen oder Einstellungen sowie Durchführung von Verfahren, die nicht hier angegeben sind, kann es zum Austritt gefährlicher Strahlung kommen.  
**BESTIMMUNGSGEMÄSSE VERWENDUNG**  
Sensor wird zum optischen berührungslosen Erkennen von Kontrasten eingesetzt.  
**MONTAGE**  
Sensor an geeignetem Halter befestigen (Halter s. www.datalogic.com).  
**ANSCHLUSS**  
Stecker spannungsfrei aufstecken und festschrauben.  
Leitung anschliessen. Es gilt das Anschlusschema (s. Grafik B).  
Für PNP/NPN gilt (s. Grafik C).  
Spannung anlegen → LED grün leuchtet.  
Umschaltung LO ↔ DO (s. Grafik H; Rückseite).  
LO = hellschaltend; DO = dunkelschaltend.  
**JUSTAGE (S. GRAFIK D)**  
Sensor auf die zu erfassende Marke ausrichten.  
Abstand, Orientierung und Ausrichtung beachten (s. Grafik D).

### A. DIMENSIONI DI INGOMBRO | DIMENSIONAL DRAWING | PLAN COTES | MASSBILD

Ⓛ	Ⓜ	Ⓧ	Ⓝ
1 LED Giallo <sup>1)</sup>	Yellow LED <sup>1)</sup>	LED jaune <sup>1)</sup>	LED gelb <sup>1)</sup>
2 Tasto	Button	Bouton	Taste
3 LED Verde <sup>2)</sup>	Green LED <sup>2)</sup>	LED verte <sup>2)</sup>	LED grün <sup>2)</sup>
4 Asse di ricezione	Receiver axis	Axe de récepteur	Empfängerachse
5 Asse di emissione	Emitter axis	Axe d'émetteur	Senderachse

<sup>1)</sup> Indicatore dello stato di uscita | switching output indicator  
afficheur sortie de commutation | Schaltausgangsanzeige

<sup>2)</sup> Indicatore della tensione di alimentazione attiva | operating voltage indicator  
afficheur tension de service | Betriebsspannungsanzeige

### B. CONNESSIONE | CONNECTION | RACCORDEMENT | ANSCHLUSS

S45	-	PR	-	5	-	W13	-	OH	Example
S45	-	xx	-	5	-	xxx	-	OH	4-pin

### C. MODALITA' DI COMMUTAZIONE | SWITCHING MODE | TYPE DE COMMUTATION | SCHALTART

PNP		LED giallo
DO	+V	
LO	-V	
DO	+V	
LO	-V	

NPN		LED giallo
DO	+V	
LO	-V	
DO	+V	
LO	-V	

### D. POSIZIONAMENTO | ADJUSTMENT | AJUSTEMENT | JUSTAGE

Distanza | Distance | Distance | Abstand

Orientamento | Orientation | Orientation | Orientierung

Allineamento | Alignment | Alignement | Ausrichtung

### I CONFIGURAZIONE

Il sensore ha due metodi differenti di Regolazione.  
**Metodo Standard con Teach-in (STI):** utilizzato nella maggior parte delle applicazioni. La regolazione viene eseguita apprendendo prima la tacca poi lo sfondo (vedi figura F). L'uscita sarà attiva a seconda in relazione a cosa è stato appreso al primo passo (tacca o sfondo), la configurazione di fabbrica è L/D via teach-in.  
**Apprendimento Dinamico (DTI):** è utilizzato per regolare il sensore durante il funzionamento delle macchina (vedi figura G).  
**Selezione L/D:** Il sensore ha tre modi di selezione Buio/Luce (L/D).  
 1. L/D via Teach-in  
 2. Sensore sempre in L (Luce)  
 3. Sensore sempre in D (Buio)  
**MANUTENZIONE**  
 Il sensore è libero da manutenzione.

### GB SETTING

The sensor has 2 different Teach-in modes.  
**Standard Teach-in (STI):** is suited for nearly all applications. Setting is performed for the mark and the background (see illustration F). The switching output will be active for the first taught attribute (mark or background), for the factory setting LO / DO via teach-in.  
**Dynamic Teach-in (DTI):** is suited for setting the sensor in the running process (see illustration G).  
**Switching LO / DO:** The sensor has three setting options.  
 1. LO / DO via teach-in in series  
 2. Sensor always LO  
 3. Sensor always DO  
**MAINTENANCE**  
 Sensors are maintenance-free. We recommend to cyclically clean the optical surfaces and check the screw connections and plug connections.

### F RÉGLAGE

Le capteur a 2 modes différents d'apprentissage (Teach-in).  
**Standard Teach-in (STI) :** est adapté à presque toutes les applications. Alignement sur le repère et l'arrière-plan (voir illustration F). La sortie de commutation répond au premier critère appris (repère ou arrière-plan); en cas de réglage LO / DO selon Teach-in (configuration d'origine).  
**Dynamic Teach-in (DTI) :** est approprié pour régler le capteur pendant qu'il est en service (voir illustration G).  
**Inversion LO / DO :** Le capteur offre trois possibilités de réglage.  
 1. LO / DO selon l'ordre de Teach-in  
 2. Capteur toujours LO  
 3. Capteur toujours DO  
**ENTRETIEN**  
 Les capteurs ne demandent aucun entretien. Nous recommandons de nettoyer les surfaces optiques et vérifier les raccordements et les fixations régulièrement.

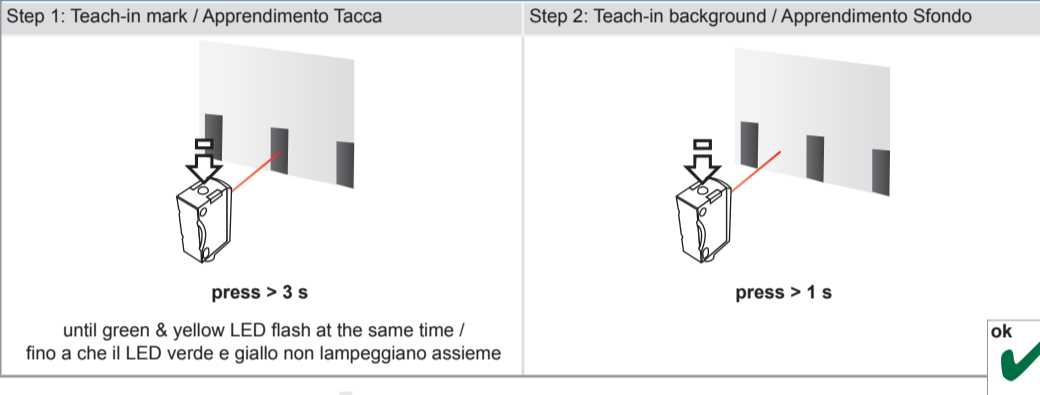
### D EINSTELLUNG

Der Sensor verfügt über 2 unterschiedliche Teach-in-Modi.  
**Standard Teach-in (STI):** ist für nahezu jede Anwendung geeignet. Einstellung erfolgt auf die Marke und den Hintergrund (s. Grafik F). Der Schaltausgang ist aktiv auf das zuerst eingelesene Merkmal (Marke oder Hintergrund), bei Einstellung LO / DO via Teach-in (Werkseinstellung).  
**Dynamic Teach-in (DTI):** ist geeignet den Sensor im laufenden Prozess einzustellen (s. Grafik G).  
**Umschaltung LO / DO:** Der Sensor verfügt über 3 Einstellmöglichkeiten.  
 1. LO / DO via Teach-in Reihenfolge  
 2. Sensor immer LO  
 3. Sensor immer DO  
**WARTUNG**  
 Sensoren sind wartungsfrei. Es wird empfohlen in regelmäßigen Intervallen die optischen Flächen zu reinigen und Verschraubungen und Steckverbindungen zu überprüfen.

### E SEGNALAZIONI ALL'UTENTE DOPO L'APPRENDIMENTO | FEEDBACK AFTER TEACH-IN | INFORMATION D'EXÉCUTION APRÈS APPRENTISSAGE | RÜCKMELDUNG NACH TEACH-IN

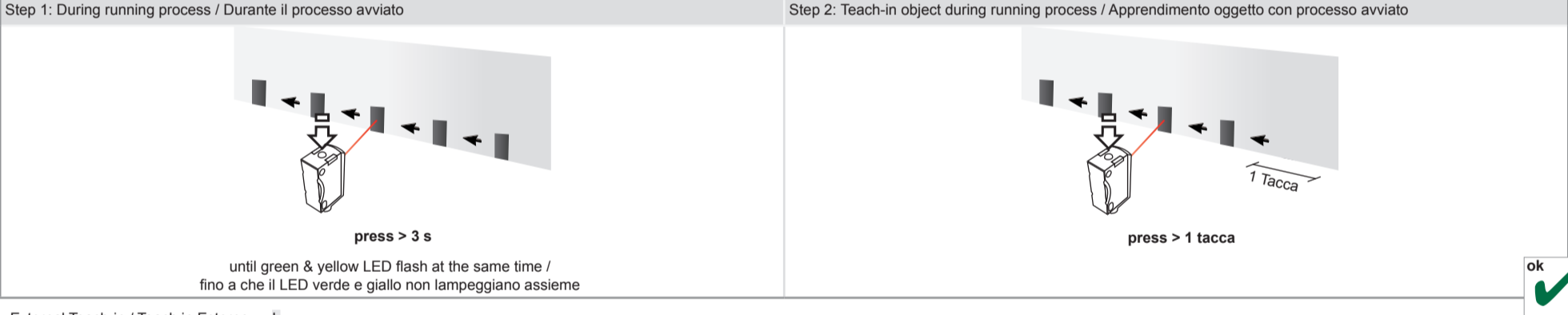
	S45...-W13 / S45...-W03			S45...-W43 / S45...-W33		
I Lo spot di emissione lampeggia	1x	3x	5 s	3x verde	3x blu	5 s rosso
Light spot flashes	1x	3x	5 s	3x green	3x blue	5 s red
F Le spot de détection clignote	1x	3x	5 s	Contrast good	Contrast low, readjustment recommended	Contrast not sufficient
Lichtfleck blinkt	1x	3x	5 s	3x verte	3x bleue	5 s rouge
	Bon contraste	Faible contraste, rajustage conseillé	Contraste non	Bon contraste	Faible contraste, rajustage conseillé	Contraste non
	Kontrast gut	Kontrast gering, Nachjustierung empfohlen	Kontrast nicht ausreichend	Kontrast gut	Kontrast gering, Nachjustierung empfohlen	Kontrast nicht ausreichend

### F STANDARD TEACH-IN (STI) | TEACH IN STANDARD



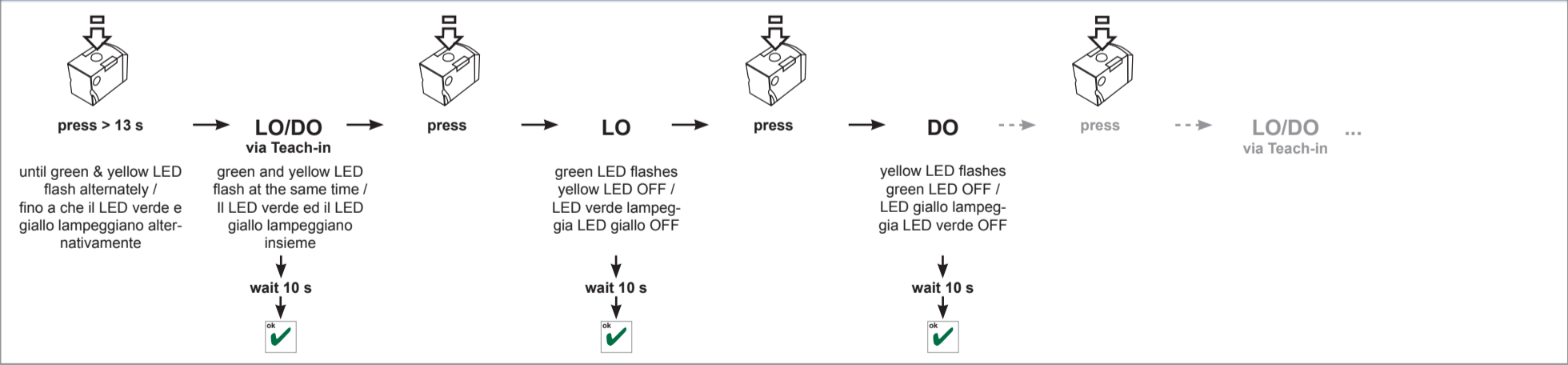
External Teach-in / Teach in Esterno → I.

### G DYNAMIC TEACH-IN (DTI) | APPRENDIMENTO DINAMICO

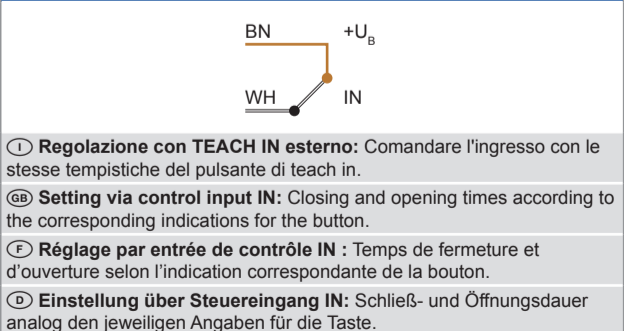


External Teach-in / Teach in Esterno → I.

### H SELEZIONE LO / DO | SWITCHING LO / DO | INVERSION LO / DO | UMSCHALTUNG LO / DO



### I EXTERNAL TEACH-IN | TEACH IN ESTERNO



### DIAGRAMMA DI RILEVAZIONE | SIGNAL PROCESS | COURBE DU SIGNAL | SIGNAL VERLAUF (TYP.)

