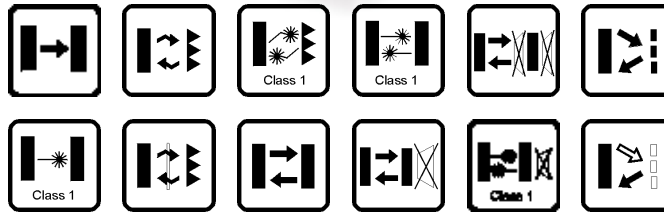


## S90 SERIES

The **S90** series, in a compact 41x49x15 mm metal housing, offers all the application and universal optic functions also with safety class 1 laser emission. The series includes polarised retroreflex models with coaxial optics for the detection of reflective and transparent objects, background and foreground suppression versions, contrast sensor with white light emission for colour mark detection, ultraviolet sensor for luminescent object detection. Basic models are available with class 1 laser emission for high-resolution detection. The **S90** models with universal proximity, retroreflex and through beam optic functions have trimmer sensitivity adjustment. More sophisticated models are microprocessor controlled and offer the patent-covered EASYtouch™ setting procedure for rapid and precise automatic setting of the switching threshold, with remote control, keyboard lock and output delay activation functions. NPN or PNP versions are available with standard M12 connector that can be rotated in 4 different positions.

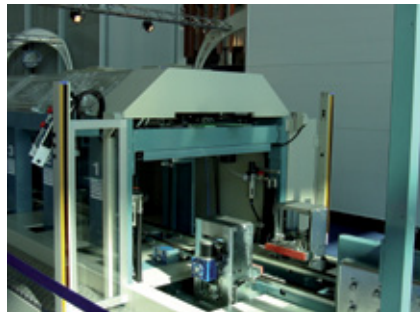


## HIGHLIGHTS

- Sturdy metal housing in a compact 41x49x15 mm format
- Complete range of universal, application and laser optic functions
- Trimmer or push-button setting with EASYtouch™ function
- NPN and PNP versions standard M12 rotatable connector

## APPLICATIONS

**Ceramics**



**Beverage & Bottling**



**Transportation lines**



**Packaging lines**



The polarised retroreflex model and the version for transparent object detection are available also with coaxial optics guaranteeing a more accurate axis detection as well as the elimination of the blank zone near to the sensor. The coaxial optics is also present in the contrast sensor with white light LED emission and in the luminescence sensor with ultraviolet light LED emission, improving the precision and depth of field. The biaxial optics which is present in the background suppression models, including laser versions, allows the triangulation for a precise detection.

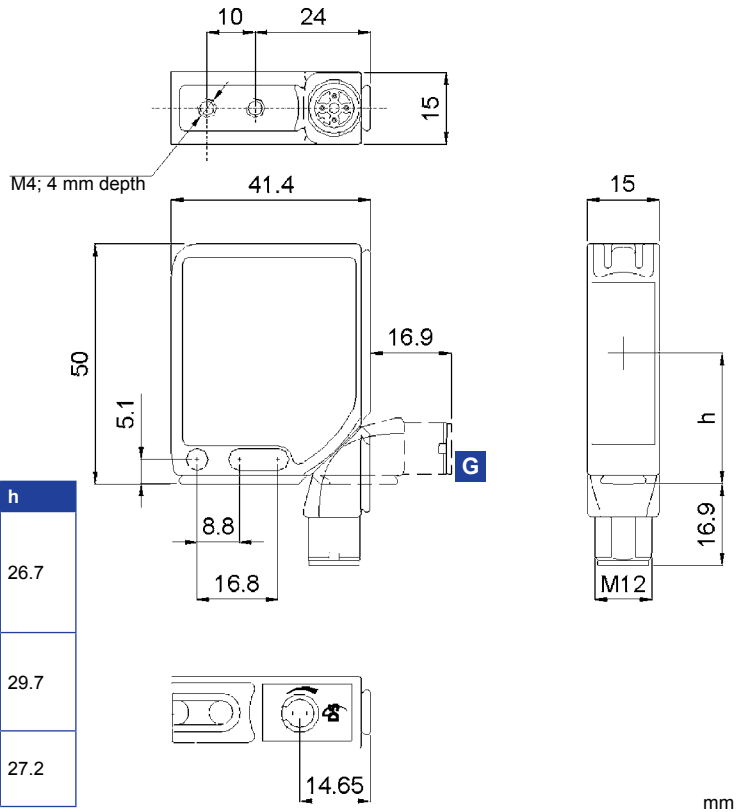


BIAXIAL OPTICS



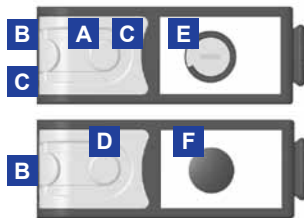
COAXIAL OPTICS

## DIMENSIONS



VERSIONS	h
B01 C01 C11 F01 G00	26.7
B51 T51 U W	29.7
M N ML	27.2

## INDICATORS AND SETTINGS



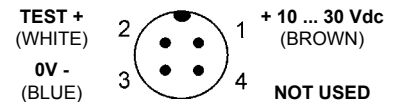
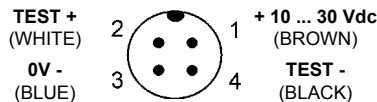
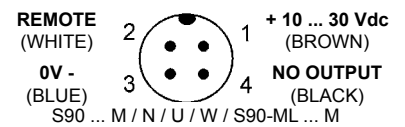
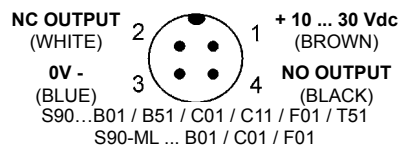
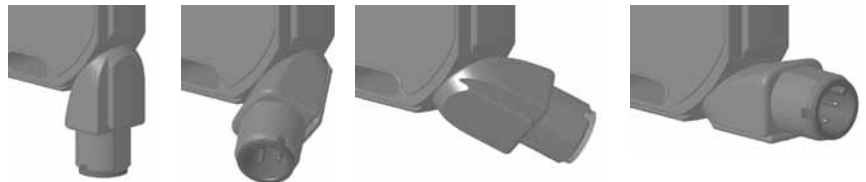
- A** STABILITY LED
- B** Output status LED
- C** POWER ON LED
- D** READY/ERROR LED
- E** Trimmer
- F** SET push-button \*
- G** M12 connector output, orientable in 4 positions

\* Teach-in push-button for setting.  
EASYtouch™ provides two setting modes: standard or fine.  
Please refer to instructions manual for operating details.

## ACCESSORIES

For dedicated accessories refer to the ACCESSORIES section of this catalogue. Refer also to Connectors (A.03) and Fixing Brackets (A.04) of the General Catalogue.

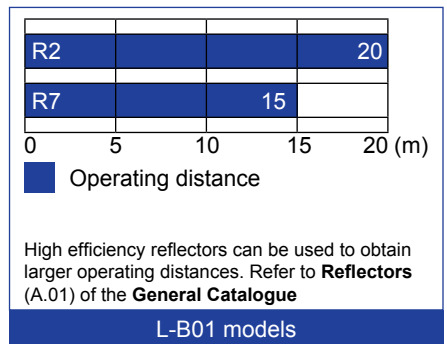
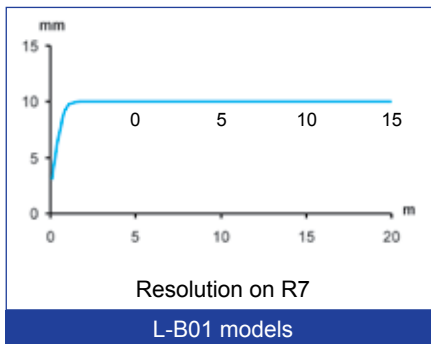
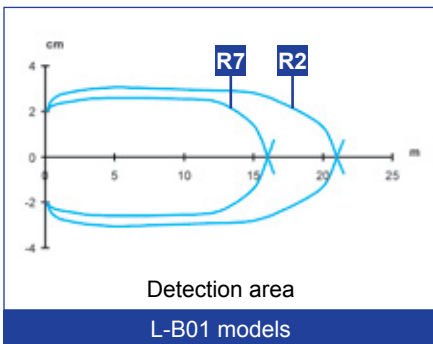
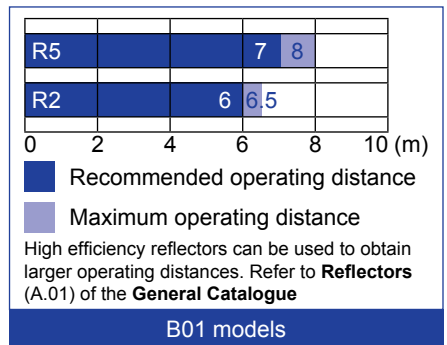
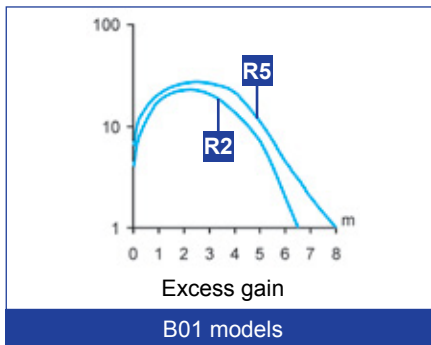
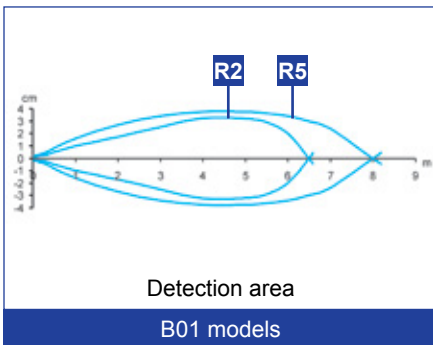
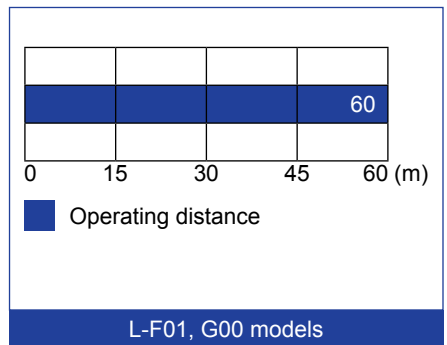
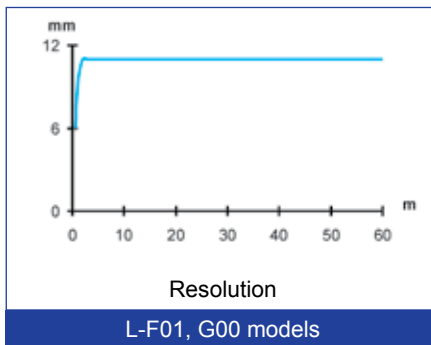
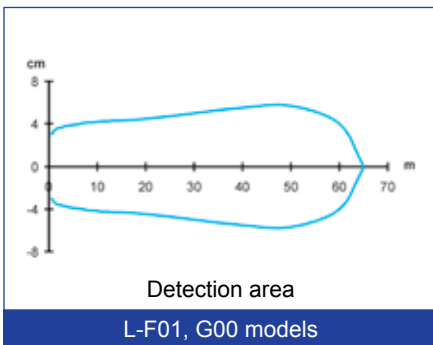
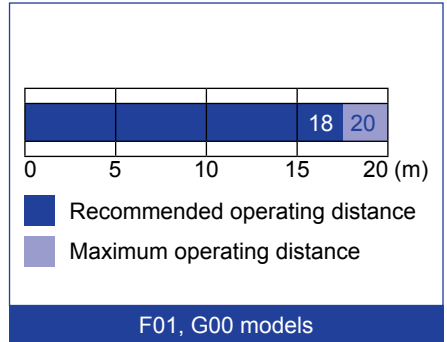
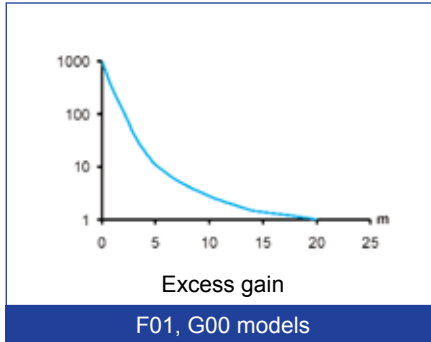
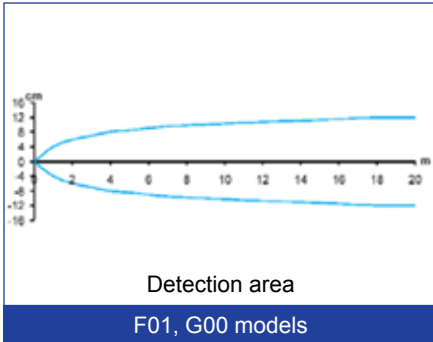
## CONNECTIONS



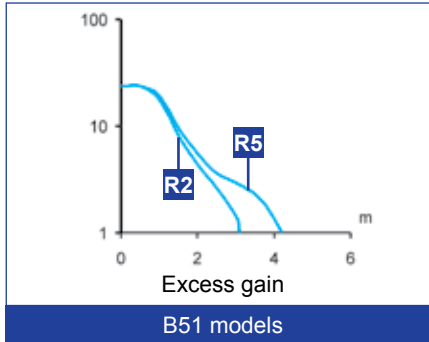
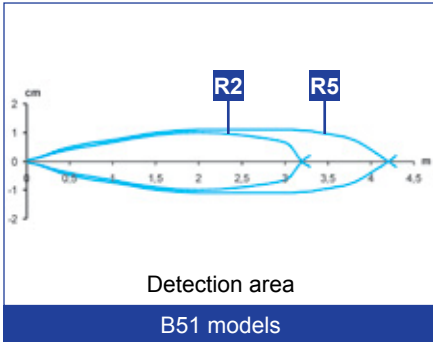
Versions and options: refer to **MODEL SELECTION TABLE**



## DETECTION DIAGRAMS



**DETECTION DIAGRAMS**



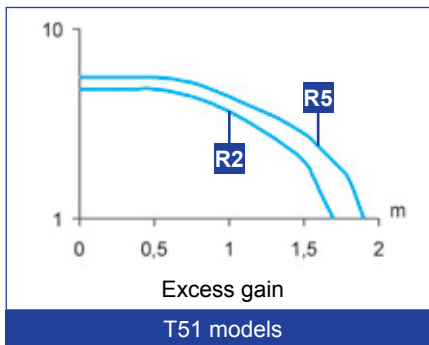
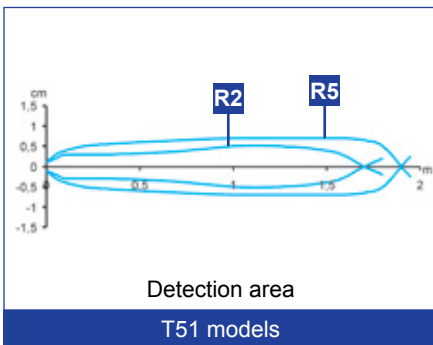
R5				4	5
R2			3	3.5	

0 1 2 3 4 5 (m)

■ Recommended operating distance  
■ Maximum operating distance

High efficiency reflectors can be used to obtain larger operating distances. Refer to **Reflectors (A.01)** of the **General Catalogue**

B51 models

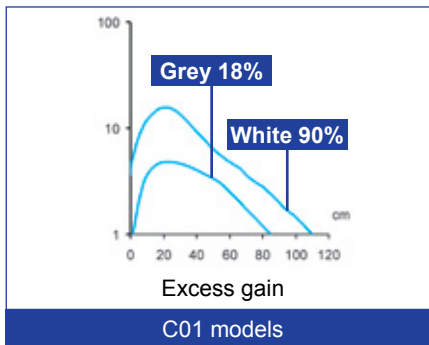
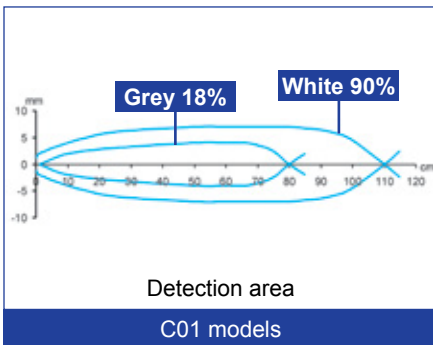


R5			1.7	2
R2			1.5	1.7

0 0.5 1 1.5 2 (m)

■ Recommended operating distance  
■ Maximum operating distance

T51 models

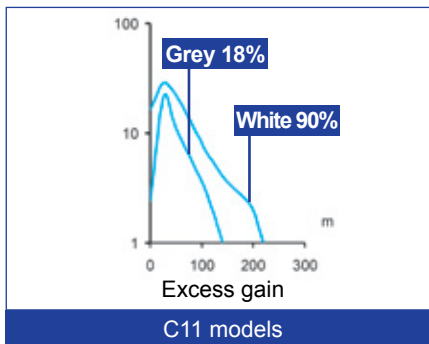
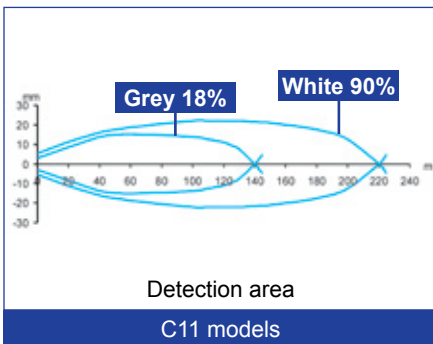


White			100	110
Grey			70	80

0 30 60 90 120 (cm)

■ Recommended operating distance  
■ Maximum operating distance

C01 models



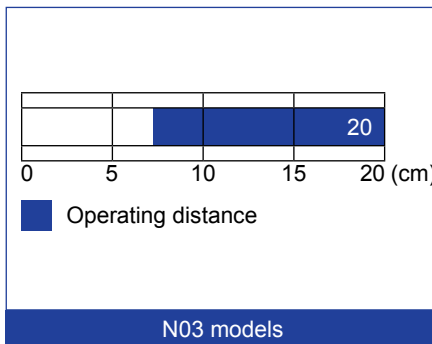
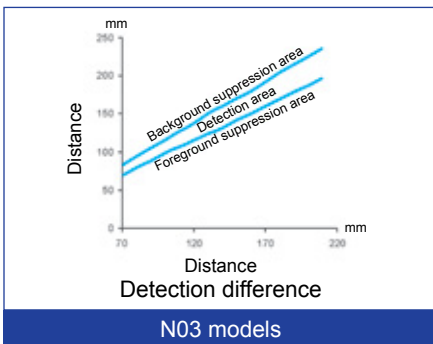
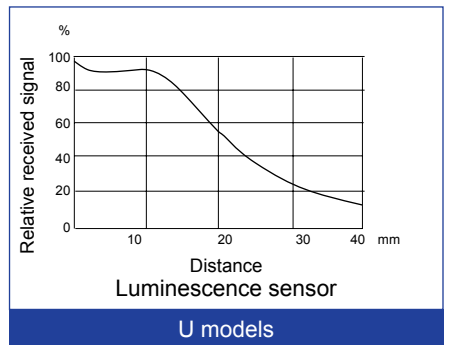
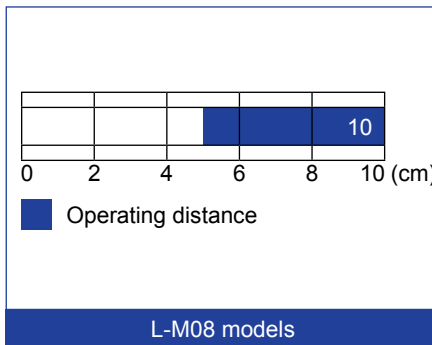
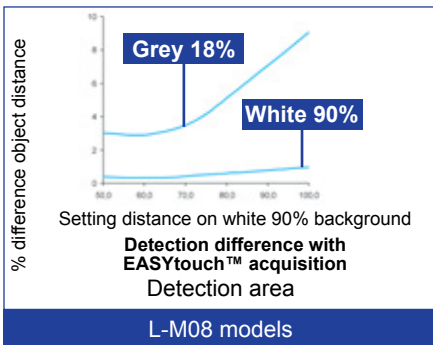
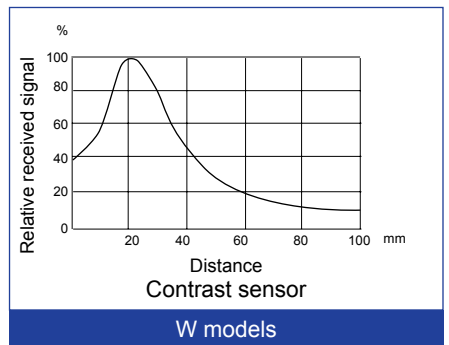
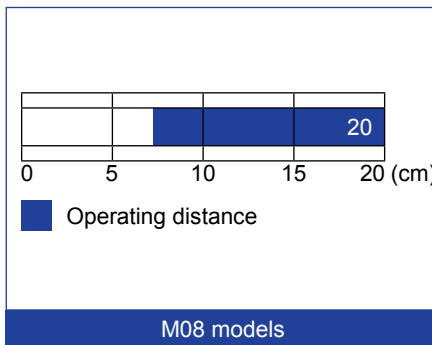
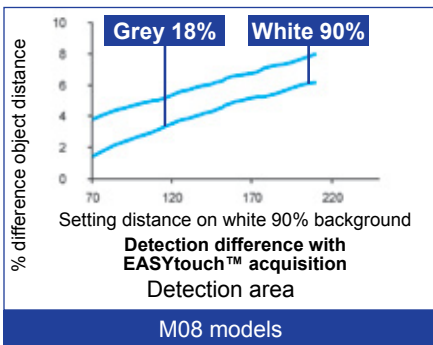
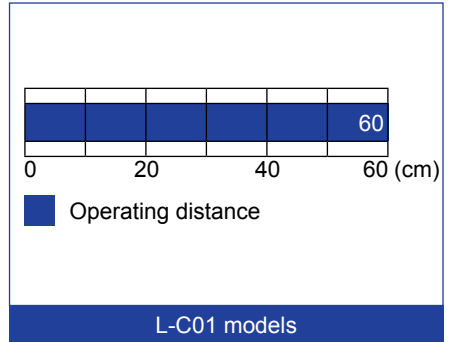
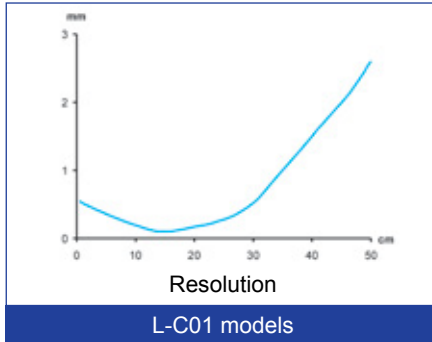
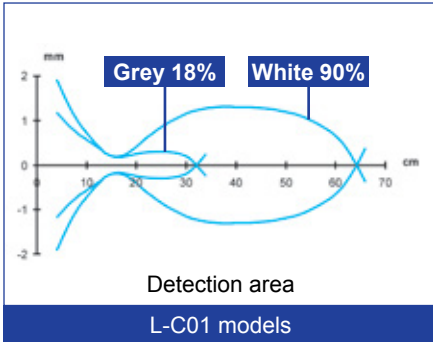
R5				2	2.2
R2			1.2	1.4	

0 0.5 1 1.5 2 2.5 (m)

■ Recommended operating distance  
■ Maximum operating distance

C11 models

# DETECTION DIAGRAMS

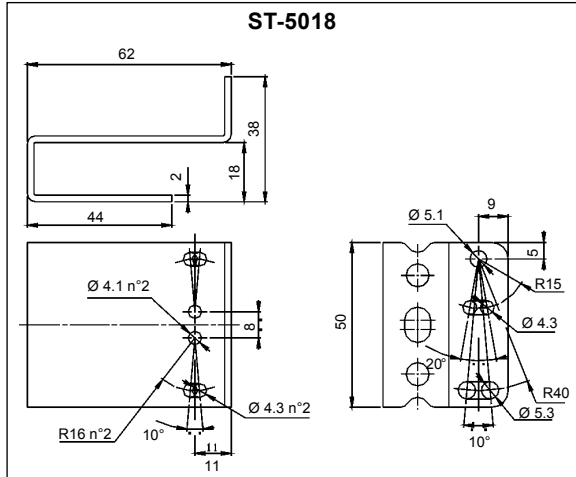


**ACCESSORY SELECTION AND ORDER INFORMATION**

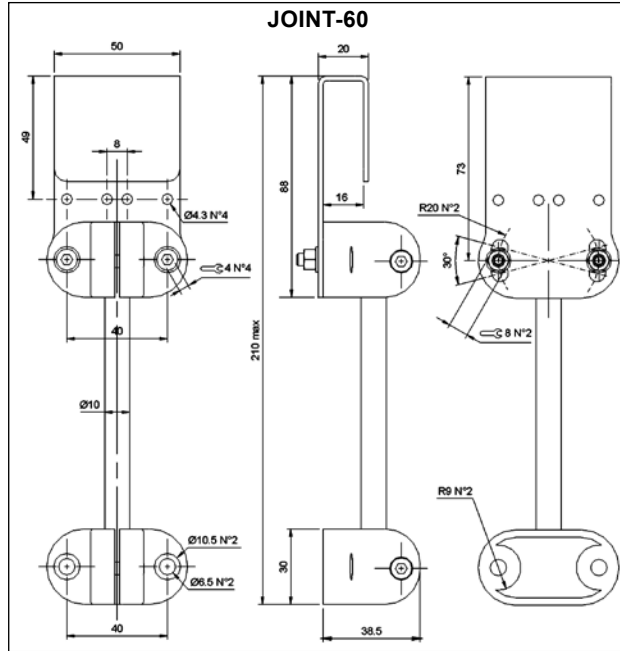
MODEL	DESCRIPTION	ORDER N°
ST-5018	protection bracket	95ACC5310
ST-5019	protection bracket	95ACC5320
ST-5020	fixing bracket	95ACC5330
ST-5021	fixing bracket	95ACC5340
ST-5041	short dove-tail fixing bracket	95ACC2300
ST-5042	long dove-tail fixing bracket	95ACC2310
JOINT-60	protection bracket with jointed support	95ACC5350

Refer also to Accessories for Sensors

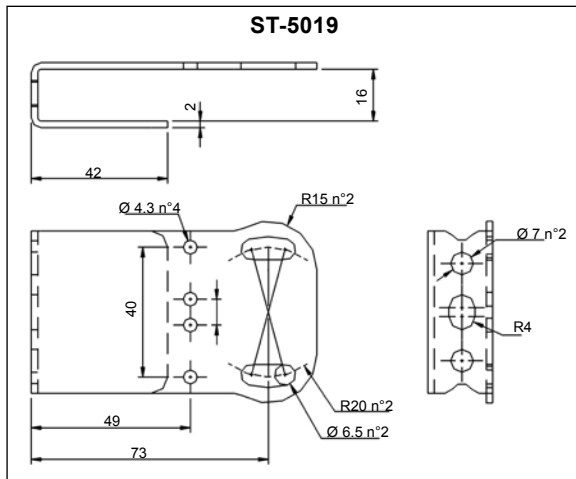
**ST-5018**



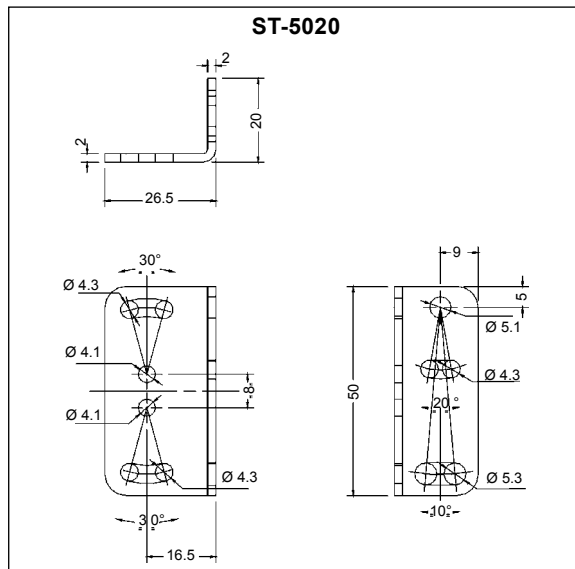
**JOINT-60**



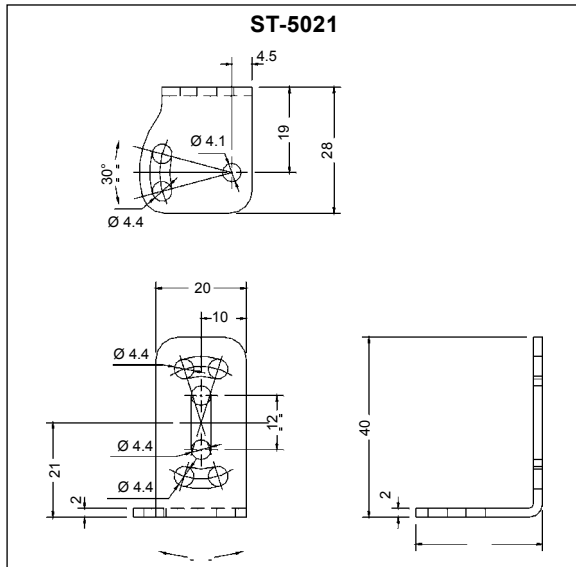
**ST-5019**



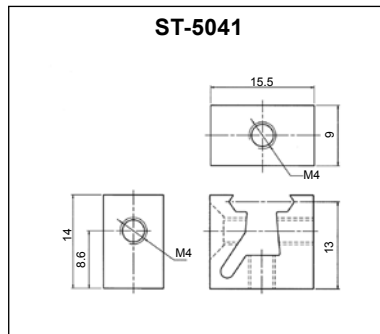
**ST-5020**



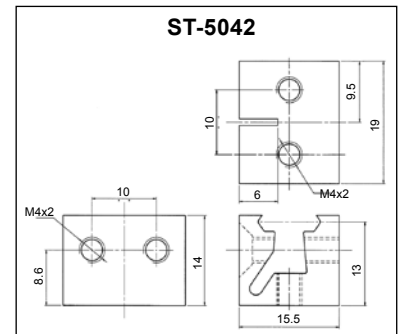
**ST-5021**



**ST-5041**



**ST-5042**



## MODEL SELECTION AND ORDER INFORMATION

MODEL	DESCRIPTION	OUTPUT	CONNECTION	ORDER N°
S90-MA-5-F01-PP	receiver	PNP NO-NC	M12 connector	956301050
S90-MA-5-F01-NN	receiver	NPN NO-NC	M12 connector	956301210
S90-ML-5-F01-PP	laser receiver	PNP NO	M12 connector	956301110
S90-ML-5-F01-NN	laser receiver	NPN NO	M12 connector	956301280
S90-MA-5-G00-XG	emitter	-	M12 connector	956301060
S90-ML-5-G00-XG	laser emitter	-	M12 connector	956301120
S90-MA-5-B01-PP	polarised retroreflex	PNP NO-NC	M12 connector	956301000
S90-MA-5-B01-NN	polarised retroreflex	NPN NO-NC	M12 connector	956301160
S90-ML-5-B01-PP	laser polarised retroreflex	PNP NO-NC	M12 connector	956301090
S90-ML-5-B01-NN	laser polarised retroreflex	NPN NO-NC	M12 connector	956301260
S90-MA-5-B51-PP	coaxial polarised retroreflex	PNP NO-NC	M12 connector	956301030
S90-MA-5-B51-NN	coaxial polarised retroreflex	NPN NO-NC	M12 connector	956301170
S90-MA-5-T51-PP	coaxial retroreflex for transparents	PNP NO-NC	M12 connector	956301040
S90-MA-5-T51-NN	coaxial retroreflex for transparents	NPN NO-NC	M12 connector	956301180
S90-MA-5-C01-PP	diffuse proximity	PNP NO-NC	M12 connector	956301010
S90-MA-5-C01-NN	diffuse proximity	NPN NO-NC	M12 connector	956301190
S90-ML-5-C01-PP	laser diffuse proximity	PNP NO-NC	M12 connector	956301100
S90-ML-5-C01-NN	laser diffuse proximity	NPN NO-NC	M12 connector	956301270
S90-MA-5-C11-PP	diffuse proximity	PNP NO-NC	M12 connector	956301020
S90-MA-5-C11-NN	diffuse proximity	NPN NO-NC	M12 connector	956301200
S90-MA-5-M08-PH	background suppression	PNP NO	M12 connector	956301070
S90-MA-5-M08-NH	background suppression	NPN NO	M12 connector	956301220
S90-ML-5-M08-PH	laser background suppression	PNP NO	M12 connector	956301130
S90-ML-5-M08-NH	laser background suppression	NPN NO	M12 connector	956301290
S90-MA-5-N03-PH	foreground suppression	PNP NO	M12 connector	956301080
S90-MA-5-N03-NH	foreground suppression	NPN NO	M12 connector	956301230
S90-MA-5-W08-PH	coaxial contrast sensor	PNP NO	M12 connector	956301150
S90-MA-5-W08-NH	coaxial contrast sensor	NPN NO	M12 connector	956301250
S90-MA-5-U08-PH	coaxial luminescence sensor	PNP NO	M12 connector	956301140
S90-MA-5-U08-NH	coaxial luminescence sensor	NPN NO	M12 connector	956301240



The company endeavours to continuously improve and renew its products; for this reason the technical data and contents of this catalogue may undergo variations without prior notice. For correct installation and use, the company can guarantee only the data indicated in the instruction manual supplied with the products.