S60
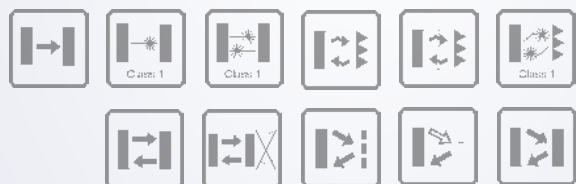
◆DATALOGIC

EXTENDED RANGE OF STANDARD "ONE FOR ALL" PHOTOELECTRIC COMPACT SENSORS

- Complete range of optic functions, basic, advanced and laser class 1
- Models with coaxial optics for polarized retroreflective, contrast and luminescence sensors
- Trimmer or EASY touchTM setting with
- Remote, Keylock and Delay functions
- Standard cable or M12 connection with standard NPN or PNP configuration

APPLICATIONS

- Automatic machines
- Packaging lines
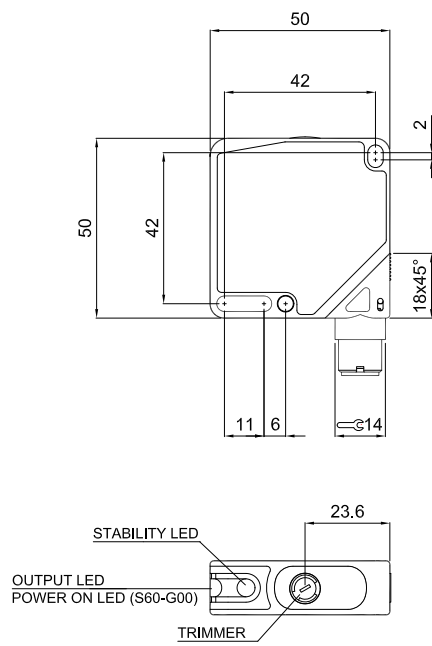- Transportation lines
- Automatic warehouses
- Pharma and bottling

S60		
Through beam		0...20 m 0...60 m (class 1 LASER)
Polarized retroreflective (on R5 reflector)		0.1...8 m 0.1...20 m (class 1 LASER)
Polarized retroreflective coaxial (on R5 reflector)		0...4 m
Polarized retroreflective coaxial transparent (on R5 reflector)		0...2 m
Diffuse proximity		0...100 cm 0...200 cm (long range) 0...60 cm (class 1 LASER)
Background suppression		7...20 cm 5...10 cm (class 1 LASER)
Contrast Sensor		19 mm ±2 m (white emission)
Luminescence Sensor		0...40 mm
Power supply	Vdc	10...30 V 18...30 V
	Vac	
	Vac/dc	
Output	PNP	•
	NPN	•
	NPN/PNP	
	relay	
	other	
Connection	cable	•
	connector	•
	pig-tail	
Approximate dimensions (mm)		50x50x15 mm
Housing material		ABS
Mechanical protection		IP67

TECHNICAL DATA

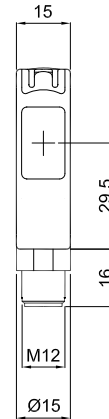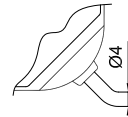|	
Power supply	10 ... 30 Vdc
Ripple	≤ 2 Vpp max.
Consumption (output current excluded)	≤ 40 mA max.
Light emission	red LED 660 nm (mod. S60...B01/B51/T51/C01) IR LED 880 nm (mod. S60...C11/G00) white LED 400-700 nm (mod. S60...W08) UV LED 370 nm (mod. S60...U08) red Laser 650 nm (mod. S60...G00/B01/C01/M08)
Setting	sensivity trimmer (mod. B01/B51/C01/C11/F01/T51)
Operating mode	LIGHT mode on N.O. output / DARK mode on N.C. output (mod.S60...C01/C11/M08/U08) DARK mode on N.O. output / LIGHT mode on N.C. output (mod.S60...B01/B51/F01/T51) LIGHT mode on N.O. output / remote input (mod.M08/W08/U08)
Indicators	yellow OUTPUT LED (S60 all models excluded G00) green STABILITY LED (mod. S60...F01/B01/B51/T51/C01/C11) POWER LED (mod. S60 LASER...F01/B01/C01) green/red READY/ERROR LED (mod. S60...M08/W08/U08)
Output	PNP or NPN; NO; NC (mod. S60)
Output current	100 mA max.
Saturation voltage	2 V max.
Response time	0,5 ms (mod. S60...A00/B01/T01/C10/C21/C01/D00/E01/U08) 2 ms (mod. S60...F01/G00) 1 ms (mod. S50...M08, A00/B01/C01/C10/G00) 4 ms (mod. S60) 100 μs (mod. S60...W08) 333 μs (Laser mod. S60)
Switching frequency	1 kHz (mod. S60...A00/B01/T01/C10/C21/C01/D00/E01/U08) 250 Hz (mod. S50...F01/G00) 500 Hz (mod. S60...M08, A00/B01/C01/C10/G00) 5 kHz (mod. S60...W08) 1,5 kHz (Laser mod. S60)
Connection	2 m Ø 4 mm cable / M12 4-pole connector
Dielectric strength	500 VAC, 1 min between electronic parts and housing
Insulating resistance	>20 MΩ, 500 VDC between electronic parts and housing
Electrical protection	Class 2
Mechanical protection	IP67
Ambient light rejection	according to EN 60947-5-2
Vibrations	0.5 mm amplitude, 10 ... 55 Hz frequency, for every axis (EN60068-2-6)
Shock resistance	11 ms (30 G) 6 shock for every axis (EN60068-2-27)
Housing material	ABS
Lens material	window in PMMA, lenses in glass and polycarbonate
Operating temperature	-10 ... 50 °C (Laser Models) -25 ... 55 °C (LED Models)
Storage temperature	-25 ... 70 °C
Weight	90 g. max. cable vers. / 40 g. max. connector vers.

DIMENSIONS
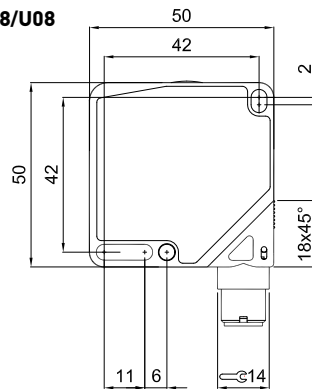
S60...B01/C01/C11/F01/G00
S60-PL...B01/C01/F01/G00

S60...B51/T51

50

42

42

50

2

18x45°

11 6

⊂14

15

26.5

16

M12

Ø15

15

29.5

16

M12

Ø15

CABLE VERSION

Ø4

STABILITY LED

OUTPUT LED
POWER ON LED (S60-G00)

TRIMMER

23.6

mm

S60...W08/U08

50

42

42

50

2

18x45°

11 6

⊂14

15

29.5

16

M12

Ø15

CABLE VERSION

Ø4

READY/ERROR LED

OUTPUT LED

SET PUSH-BUTTON

23.6

mm

S60...M08
S60-PL...M08

50

42

42

50

2

18x45°

8

11 6

⌀14

15

26.5

16

M12

Ø15

READY/ERROR LED

OUTPUT LED

SET PUSHBUTTON

23.6

SET

mm

CABLE VERSION

Ø4
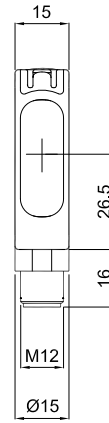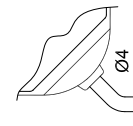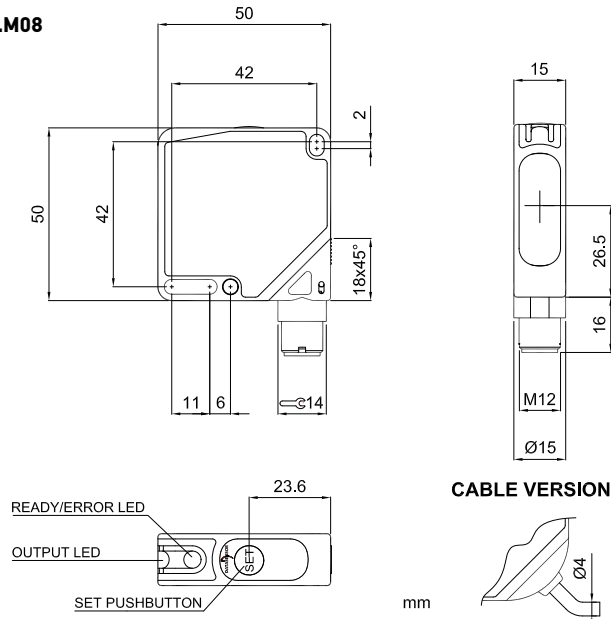
CONNECTIONS

S60-PA-2

S60-PA-5

BROWN 1 + 10 ... 30 Vdc
WHITE 2 TEST –
BLACK 4 TEST –
BLUE 3 – 0 V

TEST +
(W– TF)

0 V
(BLUE)

+ 10 ... 30 Vdc
(BROWN)

TEST –
(BLACK)

2 1
3 4

S60...G00
S60-PL...G00

BROWN + 10 ... 30 Vdc
WHITE NC OUTPUT
BLACK NC OUTPUT
BLUE – 0 V

NC OUTPUT
(W– TF)

0 V
(BLUE)

+ 10 ... 30 Vdc
(BROWN)

NO OUTPUT
(BLACK)

2 1
3 4
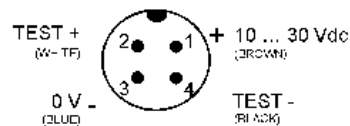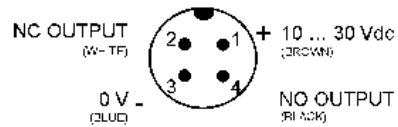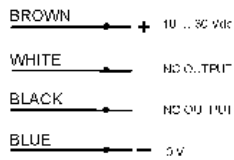
S60...B01,B51,C01,C11,T51,F01
S60-PL...B01,C01,F01

BROWN + 10 ... 30 Vdc
WHITE REMOTE *
BLACK NC OUTPUT
BLUE 0 V

REMOTE *
(WHITE)

0 V
(BLUE)

+ 10 ... 30 Vdc
(BROWN)

NO OUTPUT
(BLACK)

2 1
3 4
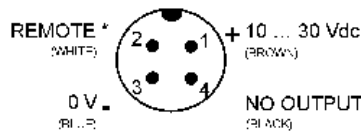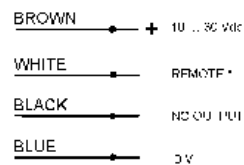
S60...W08,U08,M08
S60-PL...M08

INDICATORS AND SETTINGS

INFRARED EMISSION G00 - LASER RED EMISSION G00/F01

RECEIVER

A	Output status and stability LEDs (receiver); power on LED (emitter)
B	Adjustment trimmer (receiver)
C	M12 connector output
D	Cable output

EMITTER

Single-turn trimmer for sensitivity adjustment.
Rotate clockwise direction to increase the operating distance. Decrease sensitivity to increase resolution. Only for Receiver model

B01/B51/T51/C01/C11

A	Output status yellow LED and green Stability LED
B	Adjustment trimmer
C	M12 connector output
D	Cable output

Single-turn trimmer for sensitivity adjustment.
Rotate clockwise to increase the operating distance.

RED LASER MODEL B01/C01

A	Output status yellow LED and green Power LED
B	Teach-in push-button
C	M12 connector output
D	Cable output

Single-turn trimmer for sensitivity adjustment.
Rotate clockwise to increase the operating distance.

W08/U08/M08/M08 LASER

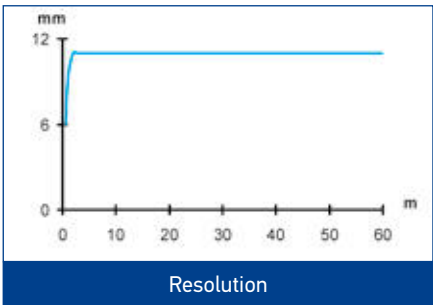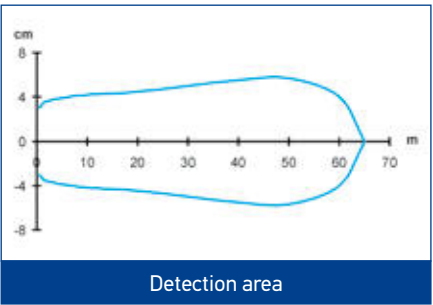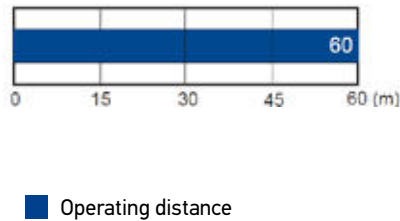| A	Output status and READY/ERROR LEDs
B	Teach-in push-button
C	M12 connector output orientable in two positions
D	Cable output

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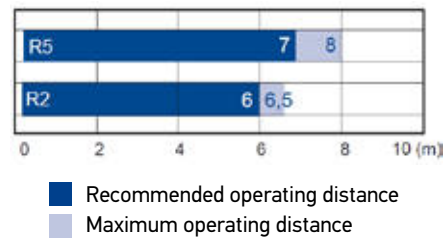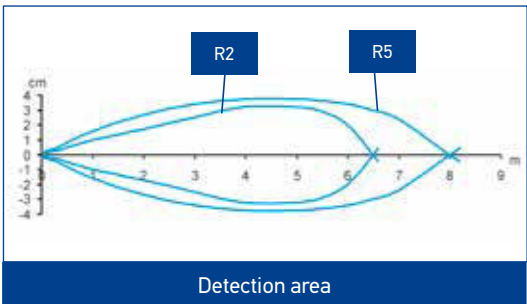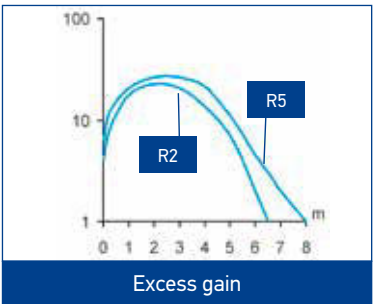
◇DATALOGIC

DETECTION DIAGRAMS

S60...F01,G00

Recommended operating distance
Maximum operating distance

Excess gain

Detection area

S60-PL...F01,G00

Operating distance

Detection area

Resolution

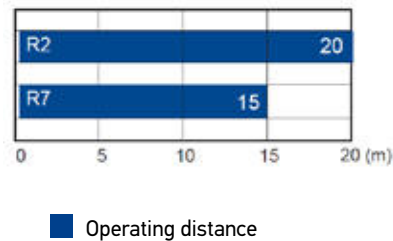## S60...B01
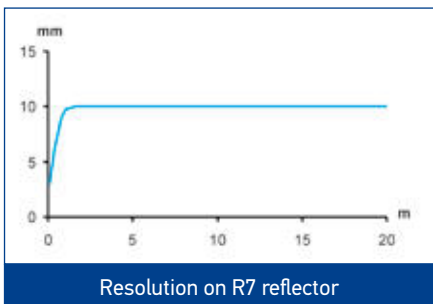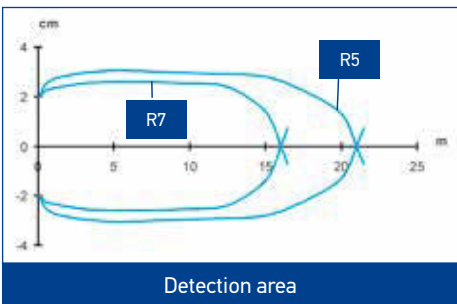

Recommended operating distance
Maximum operating distance

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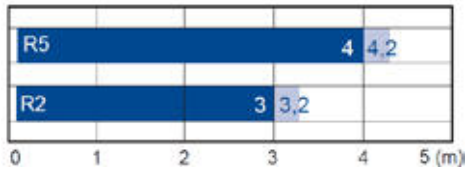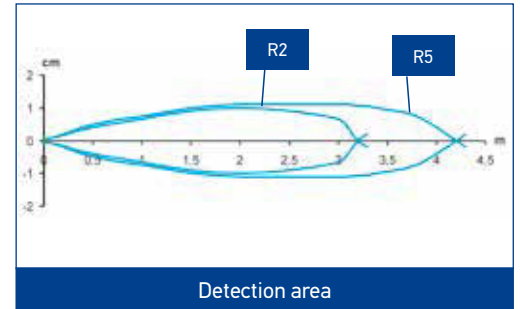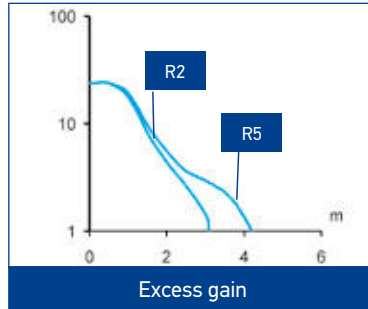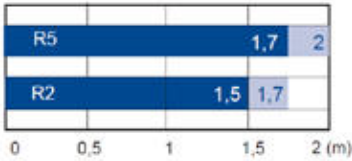Refer to **Reflectors** (A.01) of the **General Catalogue.**

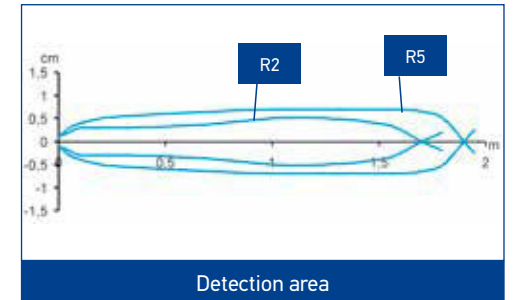Excess gain

Detection area

S60-PL...B01

Operating distance

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

Detection area

Resolution on R7 reflector

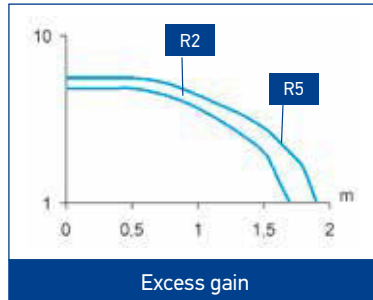## S60...B51

Recommended operating distance
Maximum operating distance

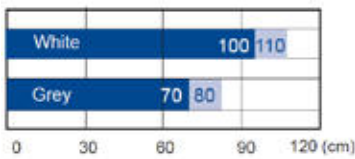High efficiency reflectors can be used to obtain larger operating distances. Refer to **Reflectors.**
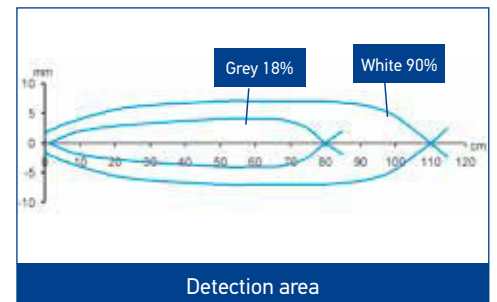
Excess gain

Detection area

S60...T51

Recommended operating distance
Maximum operating distance

Excess gain
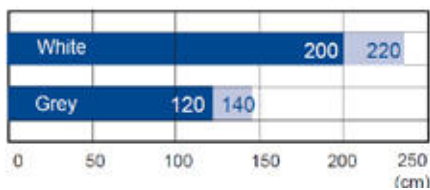
Detection area

S60...C01

Recommended operating distance
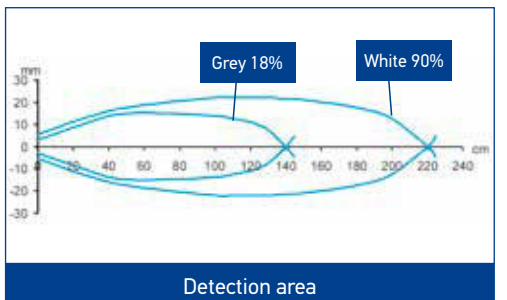Maximum operating distance

Excess gain

Detection area

S60...C11

Recommended operating distance
Maximum operating distance

Excess gain
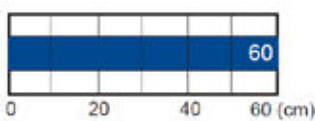
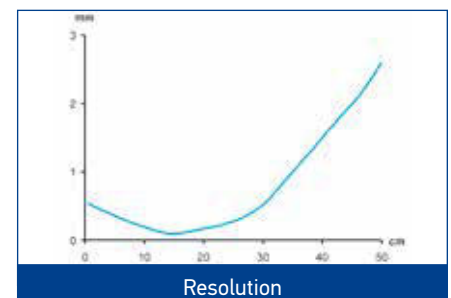Detection area

S60-PL...C01

Operating distance
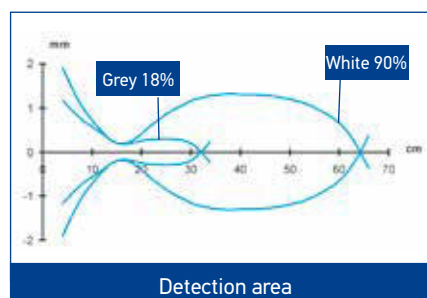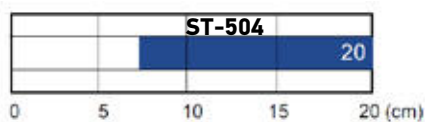
Detection area

Resolution

DATALOGIC

S60...M08

ST-504

■ Operating distance

ST-5018

White 90% / Black 6%

White 90% / Grey 18%

Setting distance on white 90% background

Detection difference with EASYtouch™ acquisition

S60-PL...M08

ST-5019

■ Operating distance

ST-5020

White 90% / Black 6%

White 90% / Grey 18%

Setting distance on white 90% background
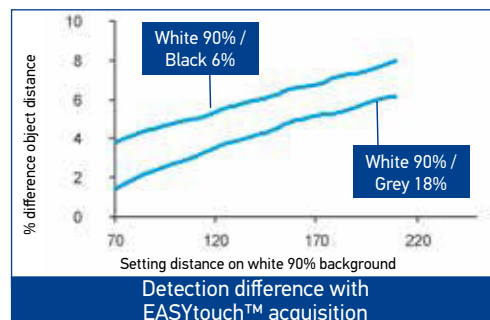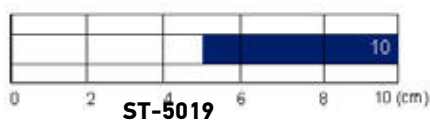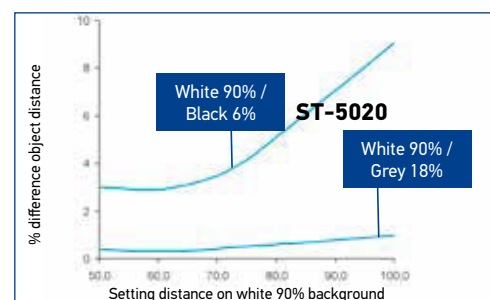
Detection difference with EASYtouch™ acquisition

S60...W08

ST-5021

Contrast sensor

JOINT-60
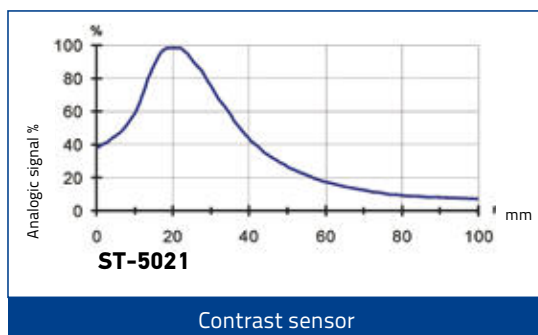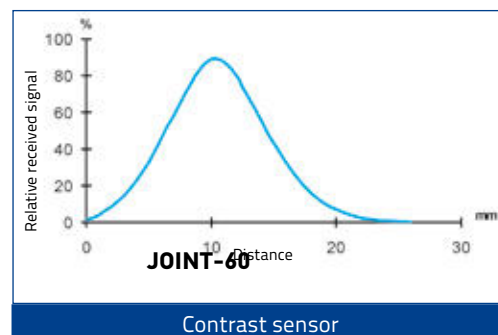
Contrast sensor

S60...U08

Contrast sensor

Luminescence sensor

MODEL SELECTION AND ORDER INFORMATION

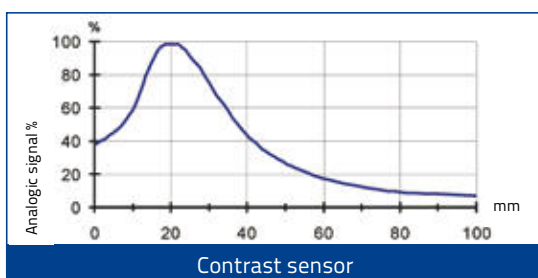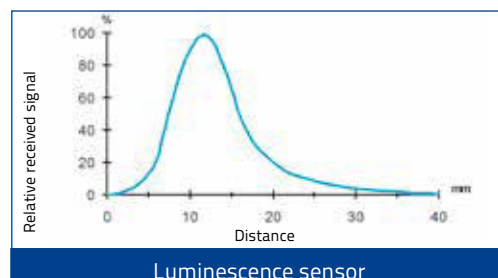| MODEL	FUNCTION	N° ORDER
S60-PA-2-B01-NN	polarized retroreflective	956201460
S60-PA-2-B01-PP	polarized retroreflective	956201300
S60-PA-2-C01-NN	diffuse proximity	956201470
S60-PA-2-C01-PP	diffuse proximity	956201310
S60-PA-2-C11-NN	long diffuse proximity	956201480
S60-PA-2-C11-PP	long diffuse proximity	956201320
S60-PA-2-F01-NN	receiver	956201490
S60-PA-2-F01-PP	receiver	956201330
S60-PA-2-G00-XG	emitter	956201340
S60-PA-2-T51-NN	retroreflective for transparents	956201530
S60-PA-2-T51-PP	retroreflective for transparents	956201380
S60-PA-2-U08-NH	luminescence sensor	956201540
S60-PA-2-U08-PH	luminescence sensor	956201390
S60-PA-2-W08-NH	contrast sensor	956201550
S60-PA-2-W08-PH	contrast sensor	956201400
S60-PA-5-B01-NN	polarized retroreflective	956201180
S60-PA-5-B01-PP	polarized retroreflective	956201040
S60-PA-5-B51-NN	coaxial polarized retroreflective	956201630
S60-PA-5-B51-PP	coaxial polarized retroreflective	956201620
S60-PA-5-C01-NN	diffuse proximity	956201190
S60-PA-5-C01-PP	diffuse proximity	956201050
S60-PA-5-C11-NN	long diffuse proximity	956201200
S60-PA-5-C11-PP	long diffuse proximity	956201110
S60-PA-5-F01-NN	receiver	956201210
S50-PA-5-F01-PP	receiver	956201060
S60-PA-5-G00-XG	emitter	956201070
S60-PA-5-M08-NH	background suppression	956201220
S60-PA-5-M08-PH	background suppression	956201080

MODEL	FUNCTION	N° ORDER
S60-PA-5-T51-NN	retroreflective for transparents	956201250
S60-PA-5-T51-PP	retroreflective for transparents	956201100
S60-PA-5-U08-NH	luminescence sensor	956201010
S60-PA-5-U08-PH	luminescence sensor	956201000
S60-PA-5-W08-NH	contrast sensor	956201030
S60-PA-5-W08-PH	contrast sensor	956201020
S60-PL-2-B01-NN	laser polarized retroreflective	956201560
S60-PL-2-B01-PP	laser polarized retroreflective	956201410
S60-PL-2-C01-NN	laser diffuse proximity	956201640
S60-PL-2-C01-PP	laser diffuse proximity	956201650
S60-PL-2-F01-NN	laser receiver	956201570
S60-PL-2-F01-PP	laser receiver	956201420
S60-PL-2-G00-XG	laser emitter	956201430
S60-PL-2-M08-NH	laser background suppression	956201580
S60-PL-2-M08-PH	laser background suppression	956201440
S60-PL-5-B01-NN	laser polarized retroreflective	956201260
S60-PL-5-B01-PP	laser polarized retroreflective	956201120
S60-PL-5-C01-NN	laser diffuse proximity	956201660
S60-PL-5-C01-PP	laser diffuse proximity	956201670
S60-PL-5-F01-NN	laser receiver	956201270
S50-PL-5-F01-PP	laser receiver	956201140
S60-PL-5-G00-XG	laser emitter	956201150
S60-PL-5-M08-NH	laser background suppression	956201280
S60-PL-5-M08-PH	laser background suppression	956201160

ACCESSORIES

The series is compatible with the following Datalogic Automation accessories
- CS connectors
- R reflectors

New accessories dedicated to the S60 series have been developed to cover all the fixing requirements and improve functioning.
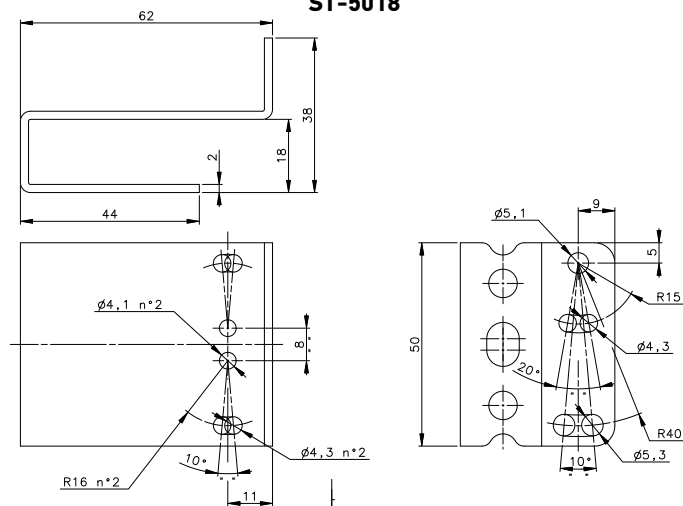
ACCESSORY SELECTION AND ORDER INFORMATION

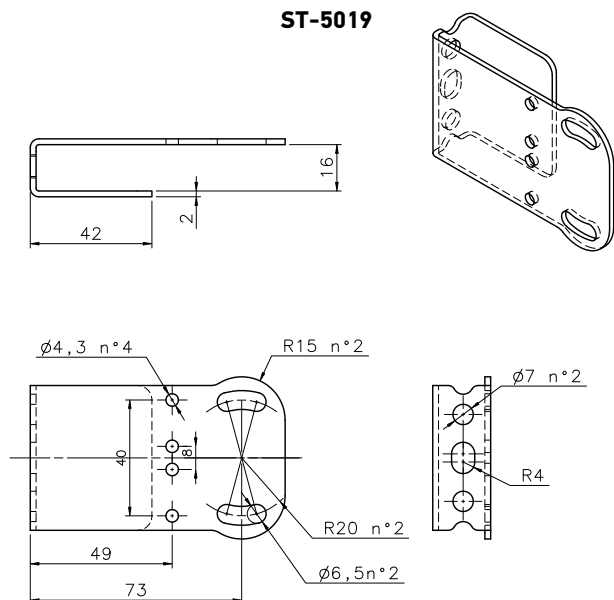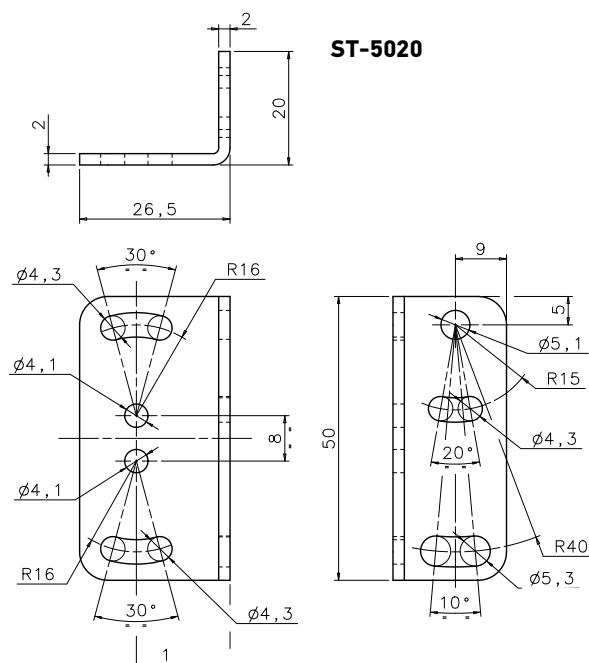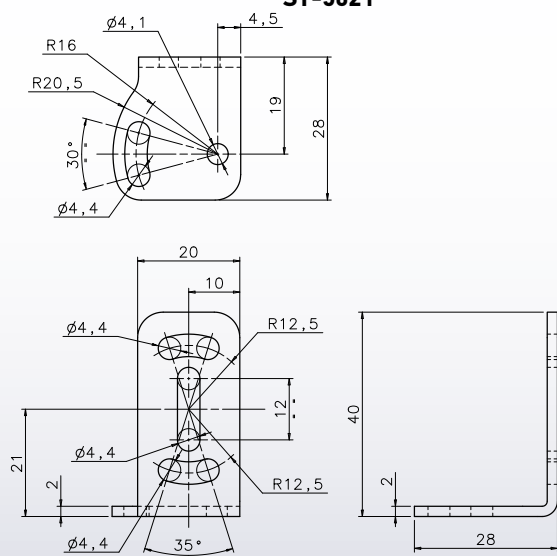| MODEL	DESCRIPTION	ORDER N°
ST-5018	protection bracket	95ACC5310
ST-5019	protection bracket	95ACC5320
ST-5020	fixing bracket	95ACC5330
ST-5021	fixing bracket	95ACC5340
JOINT-60	protection bracket with jointed support	95ACC5350
ST-504	S6/S60 fixing bracket	95ACC2820

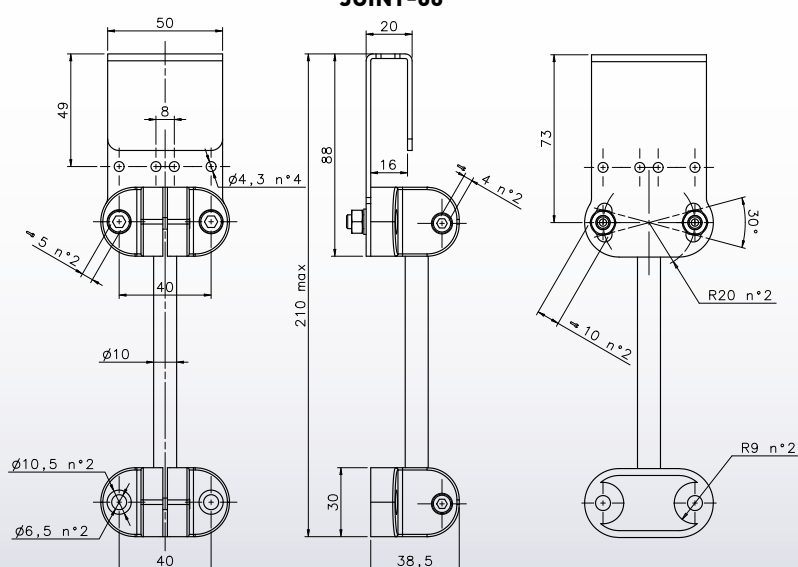# ACCESSORIES DIMENSIONS

ST-504
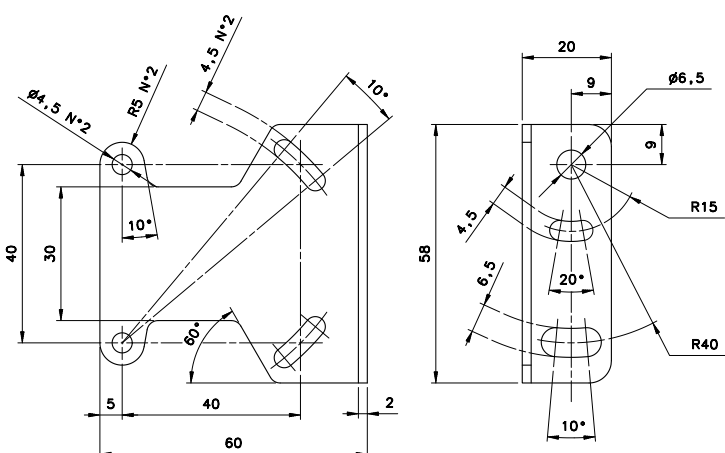
ST-5018

ST-5019

ST-5020

ST-5021

JOINT-60