



# BS - BV series

Cubic photoelectric sensors  
DECOUT® output - DC or AC



## features

- Wide range of models: diffuse, retro-reflective, polarized
- Multifunctional DECOUT® output and logic connection possibilities (DC types)
- Multivoltage 20-253 Vac and T<sub>RIAC</sub> output with NO/NC selectable (AC types)
- Sensitivity adjustment
- Standard cable exit or M12 plug exit
- LED status indicator
- Completely filled with resin
- High sensing range



## web content



- Application notes
- Photos
- Catalogue / Manuals



Cubic DECOUT®  
DC or AC

## code description

BS 2 / 0 0 - 0 C

series	BS	DC - rectangular photoelectric sensor
	BV	AC - rectangular multivoltage photoelectric sensor
type	2	100 mm diffuse reflection
	4	200 mm diffuse reflection
	6	400 mm diffuse reflection
	8	1600 mm diffuse reflection
	C	8 m retro-reflective
NO / NC	0	NO / NC selectable output
NPN / PNP	0	NPN / PNP selectable output DC Triac output AC
housing	0	Plastic housing
cable / plug output	C	Right angle cable exit
	E	Right angle M12 plastic plug cable exit



## available models

Cubic DECOUT®  
DC or AC

model	distance	output	DC - DECOUT®	AC - TRIAC
diffuse reflection	100 mm	cable	BS2/00-0C	BV2/00-0C
		M12	BS2/00-0E	BV2/00-0E
	200 mm	cable	BS4/00-0C	BV4/00-0C
		M12	BS4/00-0E	BV4/00-0E
	400 mm	cable	BS6/00-0C	BV6/00-0C
		M12	BS6/00-0E	BV6/00-0E
1.600 m	cable	BS8/00-0C	-	
	M12	BS8/00-0E	-	
retroreflective	8 m	cable	BSC/00-0C	BVC/00-0C
		M12	BSC/00-0E	BVC/00-0E

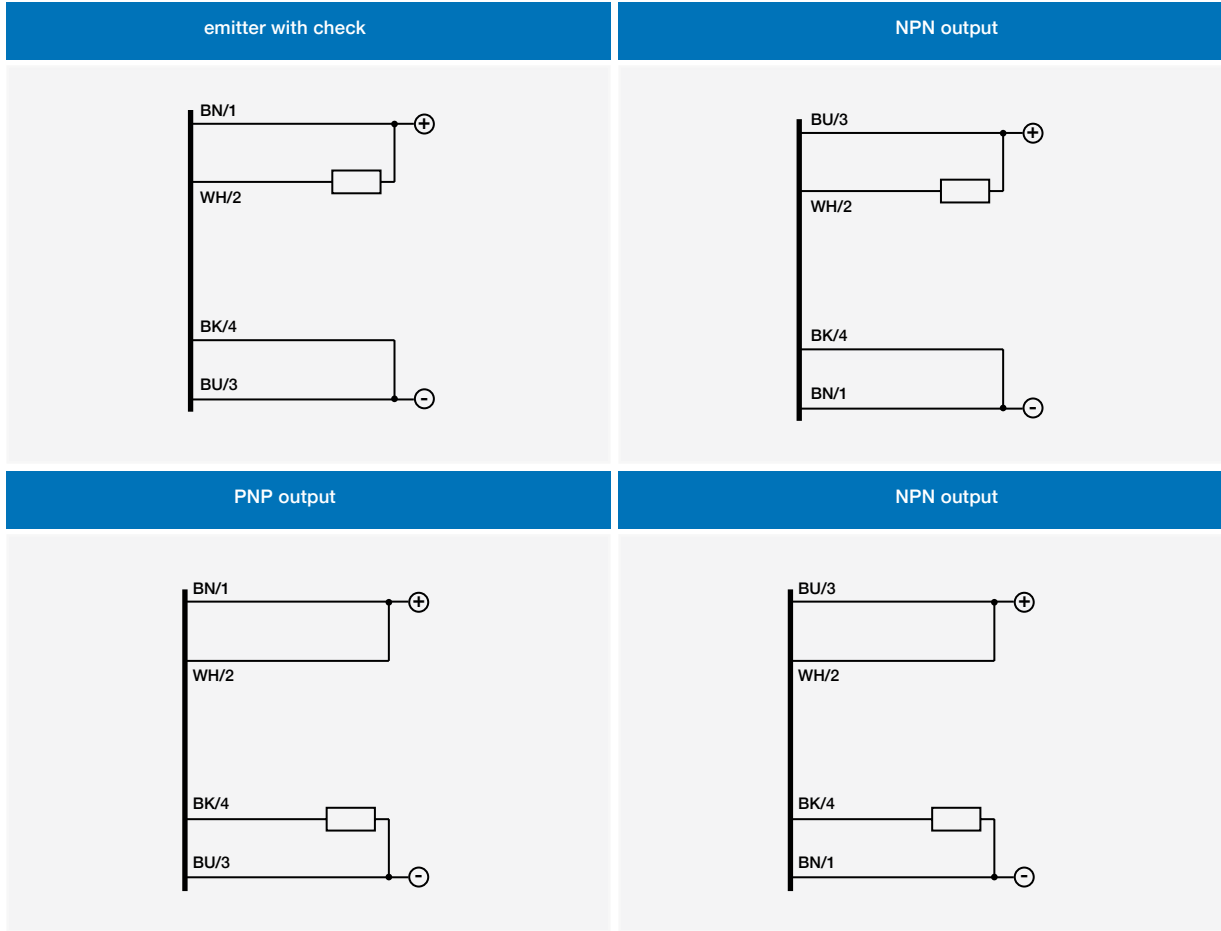
## technical specification

	diffuse reflection				retrorefl.	diffuse reflection			retrorefl.
	BS2/00-0*	BS4/00-0*	BS6/00-0*	BS8/00-0*	BSC/00-0*	BV2/00-0*	BV4/00-0*	BV6/00-0*	BVC/00-0*
nominal sensing distance	100 mm <sup>(1)</sup>	200 mm <sup>(1)</sup>	400 mm <sup>(2)</sup>	1.600 mm <sup>(2)</sup>	8 m <sup>(3)</sup>	100 mm <sup>(1)</sup>	200 mm <sup>(1)</sup>	400 mm <sup>(2)</sup>	8 m <sup>(3)</sup>
emission	infrared (880 nm)								
tolerance	+ 15 / - 5 % Sn								
corsa differenziale	5 %				10 %	5 %			10 %
repeatability	5 %								
operating voltage	10...30 Vdc				20...253 Vac / 50...60 Hz				
ripple	10 % max				-				
no-load supply current	25 mA				1,5 W				
load current	100 mA				5 mA / 300 m ARMS				
inrush current	-				6 A (ton = 10 ms)				
leakage current	≤ 10 µA				1,5 m ARMS max (supply V = 253 Vac)				
output voltage drop	1,2 Vmax				2,5 Vmax				
output type	DECOUT® (PNP, NPN, N0, NC selectable)				TRIAC (N0, NC selectable)				
switching frequency	80 Hz				25 Hz				
power on delay	200 ms								
temperature range	- 25°C...+ 70°C (without freeze)								
power supply protections	transient								
supply electrical output	short circuit (autoreset)				-				
temperature drift	≥ 10 % Sr								
protection degree	IP65 (EN60529) <sup>(4)</sup>								
EMC	in conformity with the EMC Directive according to EN 60947-5-2								
external light interference	3,000 lux (incandescent lamp), 10,000 lux (sunlight)								
LEDs	red (output energized)								
housing material	ABS polyetilene (cable exit)								
optic material	PMMA								
weight (approximate)	185 g (50 g mounting bracket ST01)								

<sup>(1)</sup> With 100x100 mm white matt paper <sup>(2)</sup> With 200x200 mm white matt paper <sup>(3)</sup> With standard reflector Ø80 mm (RL110 supplied separately) <sup>(4)</sup> Protection guaranteed only with plug cable well mounted

# electrical diagrams of the connections

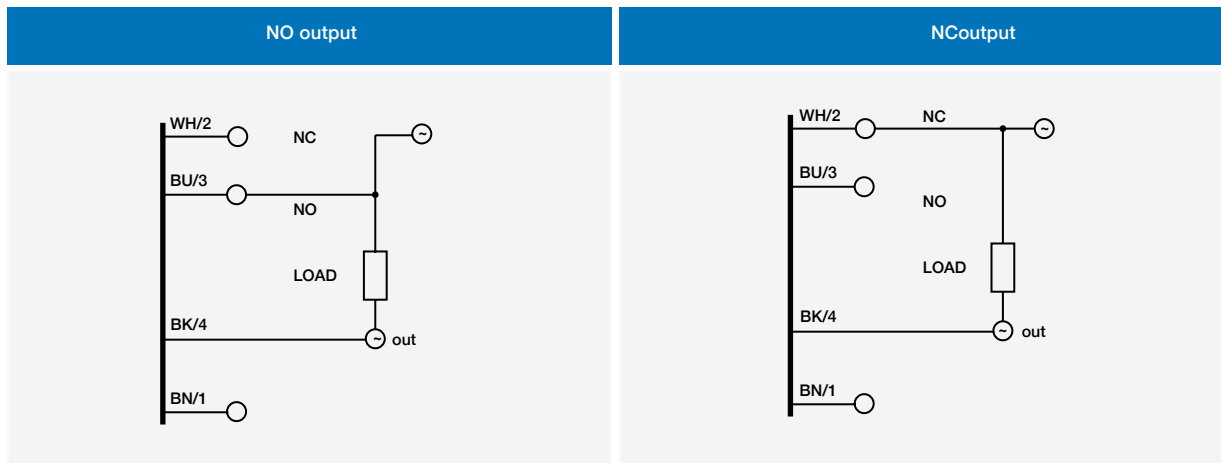
BS\*/00-0\* DECOU exit ® <sup>(1)</sup>



**BN** brown  
**BU** blue  
**BK** black  
**WH** white

# electrical diagrams of the connections

BV\*/00-0\* T<sub>RIAC</sub> exit <sup>(2)</sup>



**BN** brown  
**BU** blue  
**BK** black  
**WH** white

**Notes:**

<sup>(1)</sup> In case of combined load, resistive and capacitive, the maximum admissible capacity C = 0,2 µF, for maximum output voltage and current.

<sup>(2)</sup> Through proper wiring for the connection cable BV models in AC permit one to select the output state.

Output state NO:

BLUE = power supply

WHITE = disconnected (isolate on a terminal)

Output state NC:

WHITE = power supply

BLUE = disconnected (isolate on a terminal)



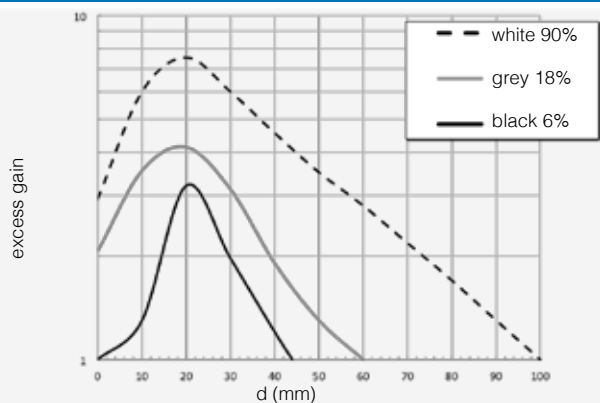
M12



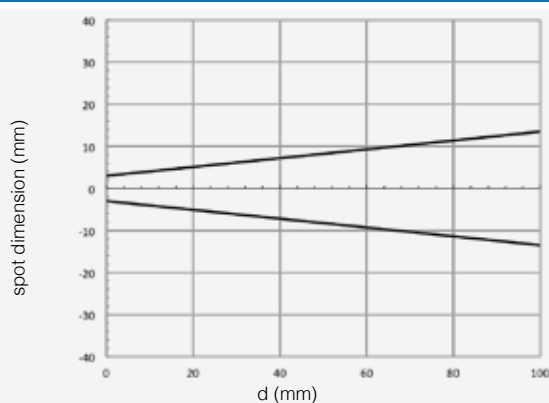
## response diagrams

direct diffuse models

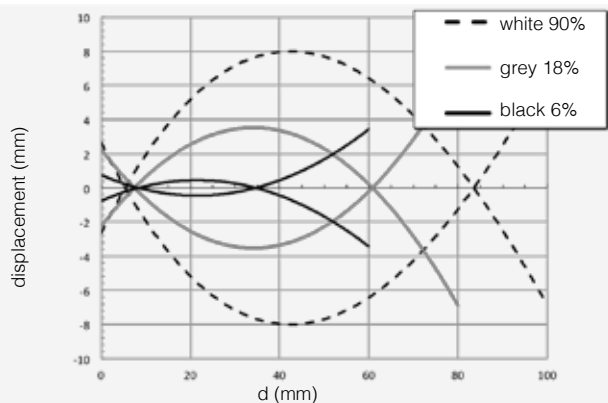
B\*2/00-\*\* excess gain



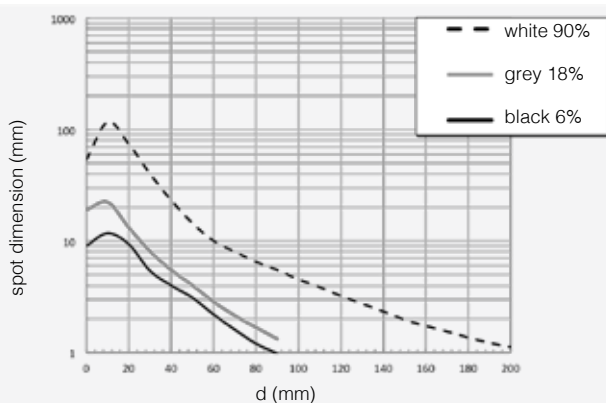
B\*2/00-\*\* spot dimension



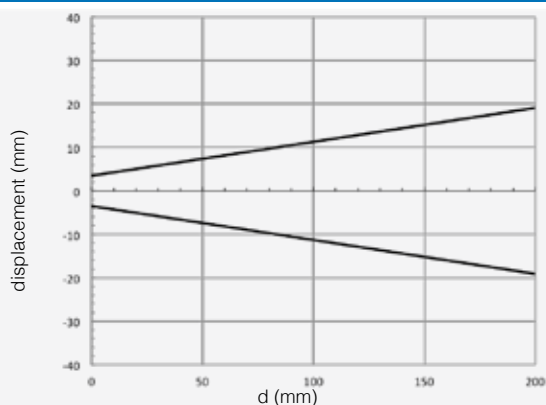
B\*2/00-\*\* parallel displacement



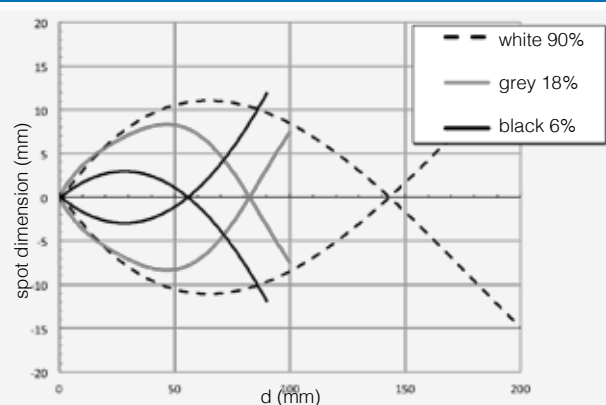
B\*4/00-\*\* spot dimension



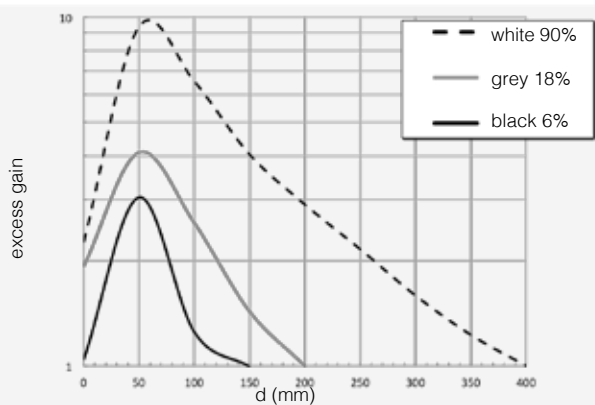
B\*4/00-\*\* parallel displacement



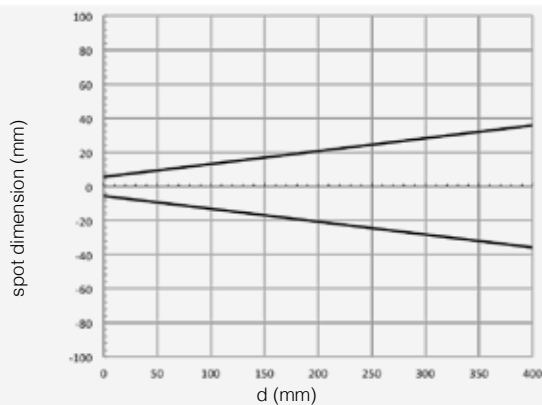
B\*4/00-\*\* spot dimension



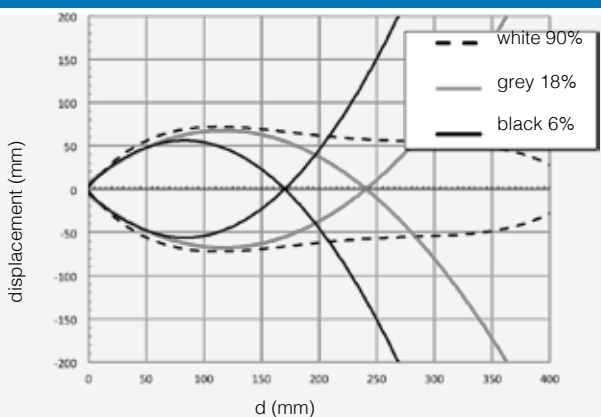
B\*6/00-\*\*-\*\* excess gain



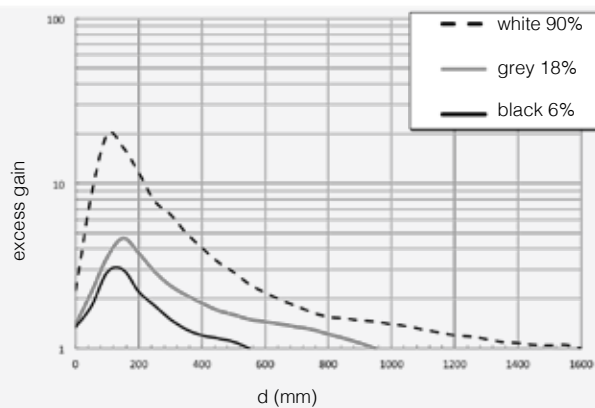
B\*6/00-\*\*-\*\* spot dimension



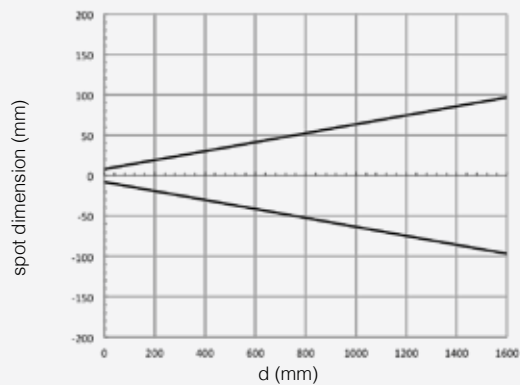
B\*6/00-\*\*-\*\* parallel displacement



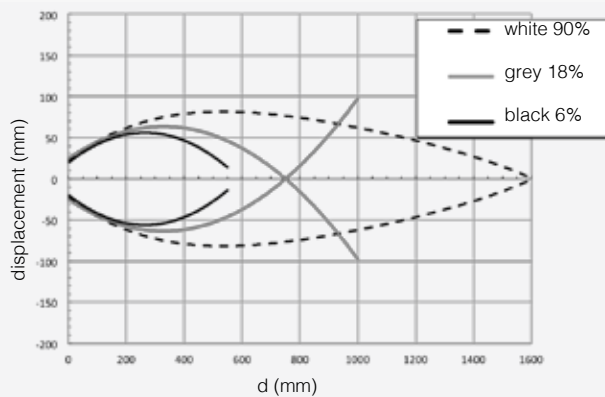
B\*8/00-\*\*-\*\* excess gain



B\*8/00-\*\*-\*\* spot dimension



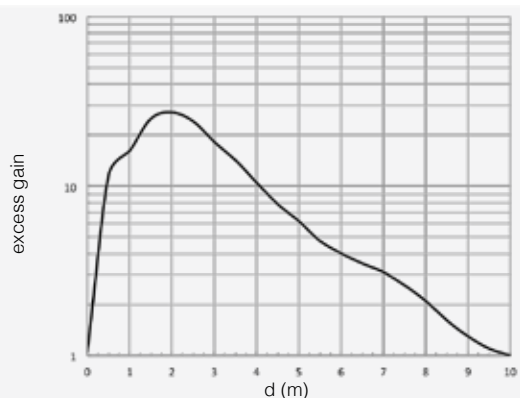
B\*8/00-\*\*-\*\* parallel displacement



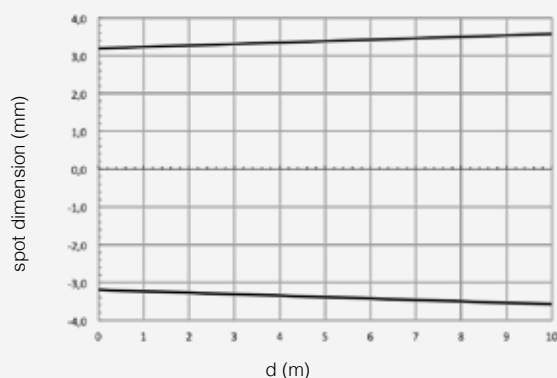
## response diagrams

retro-reflective models (diagrams detected with RL110)

B\*C/0\*-\*\*-\*\* excess gain



B\*C/0\*-\*\*-\*\* spot dimension



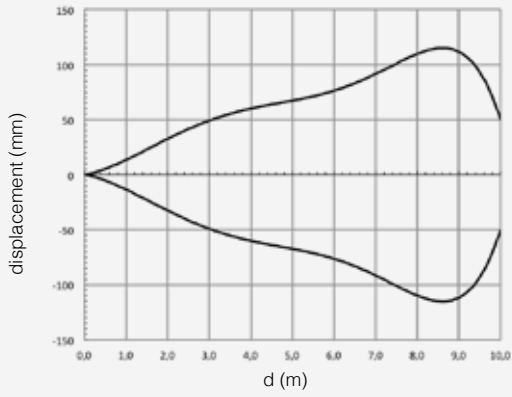


Cubic DECOUT®  
DC or AC

# response diagrams

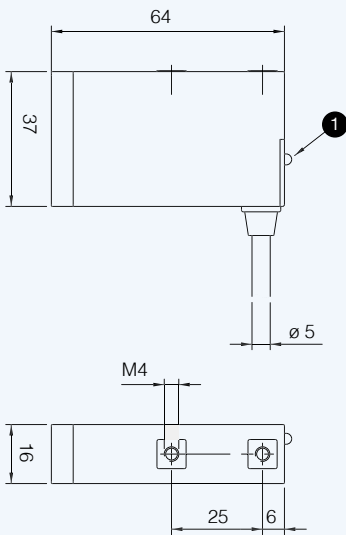
retro-reflective models

B\*C/0\*-\*\* parallel displacement

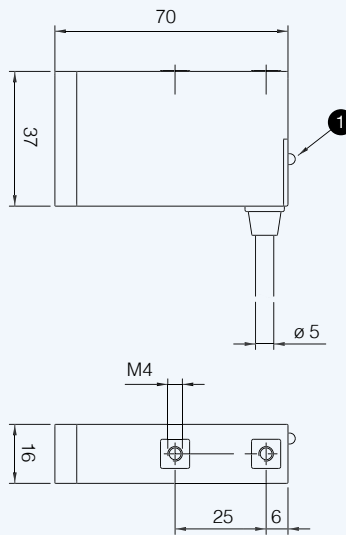


## dimensions (mm)

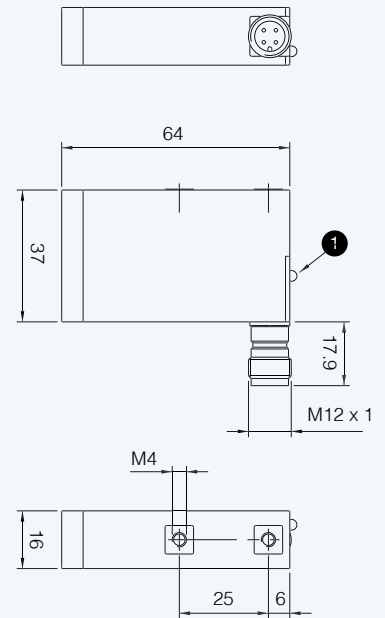
B\*2/00-0C - B\*4/00-0C - B\*6/00-0C - B\*8/00-0C



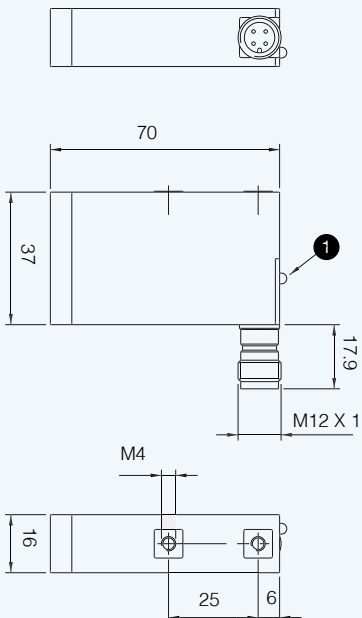
B\*C/00-0C



B\*2/00-0E-B\*4/00-0E-B\*6/00-0E-B\*8/00-0E



B\*C/00-0E



1 red LED (output state)

Plugs CD series - Accessories ST series

BS - BV