BS - BV series

Cubic photoelectric sensors
DECOUT® output - DC or AC

features

- **Wide range of models: diffuse, retro-reflective, polarized**
- **Muntifunctional DECOUT® output and logic connection possibilities (DC types)**
- **Multivoltage 20-253 Vac and T_{RIAC} 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**

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

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

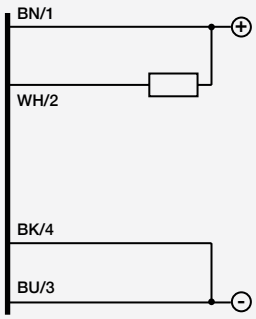
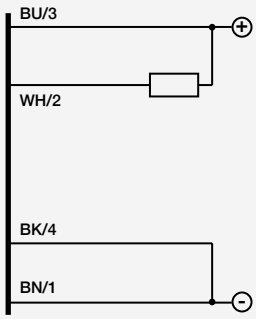
technical specification

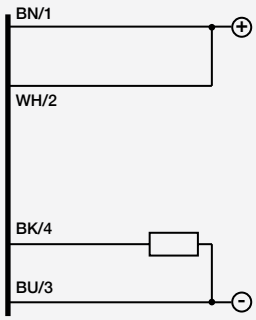
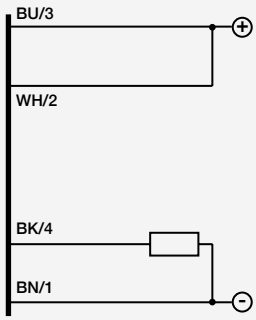
	diffuse reflection				retrorefl.	diffuse reflection			retrorefl.
	BS2/00-0*	BS4/00-0*	BS6/00-0*	BS8/00-0*	BSC/00-0*	BV2/00-0*	BV4/00-0*	BV6/00-0*	BVC/00-0*
									
nominal sensing distance	100 mm (1)	200 mm (1)	400 mm (2)	1.600 mm (2)	8 m (3)	100 mm (1)	200 mm (1)	400 mm (2)	8 m (3)
emission	infrared (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) (4)								
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)								

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

electrical diagrams of the connections

BS*/00-0* DECOUT exit ® (1)

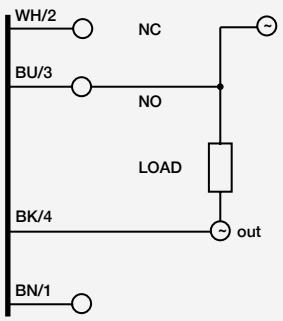
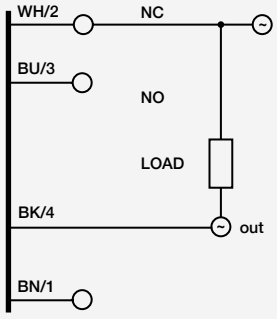
emitter with check	NPN output
	

PNP output	NPN output
	

BN	brown
BU	blue
BK	black
WH	white

electrical diagrams of the connections

BV*/00-0* T_{RIAC} exit (2)

NO output	NCoutput
	

BN	brown
BU	blue
BK	black
WH	white

Notes:

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

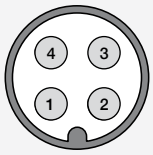
(2) Through proper wiring for the connection cable BV models in AC permit one to select the output state.

Output state NO:
BLUE = power supply
WHITE = disconnected (isolate on a terminal)

Output state NC:
WHITE = power supply
BLUE = disconnected (isolate on a terminal)

plug

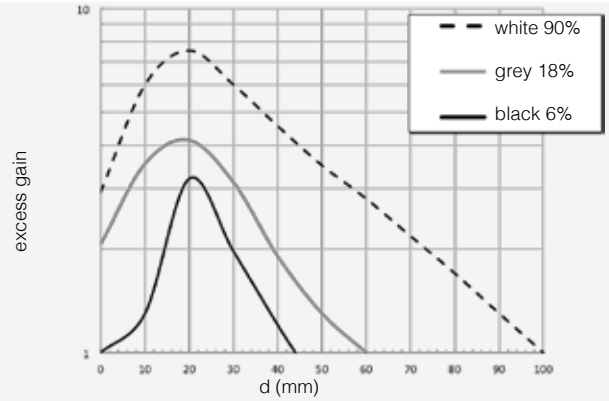
M12



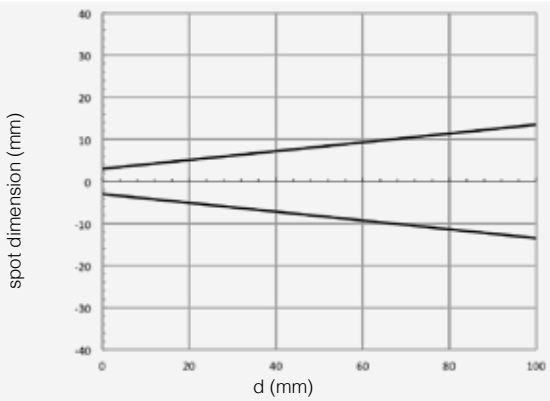
response diagrams

direct diffuse models

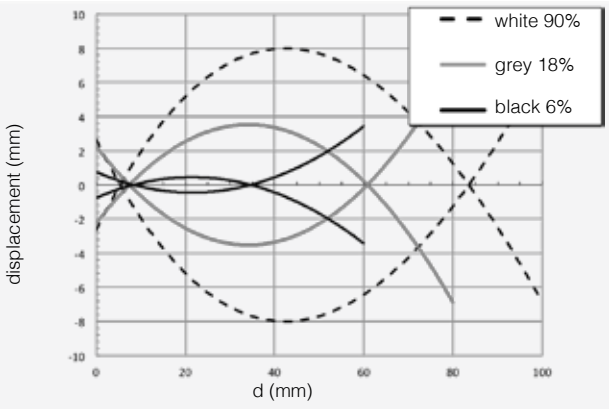
B*2/00-** excess gain



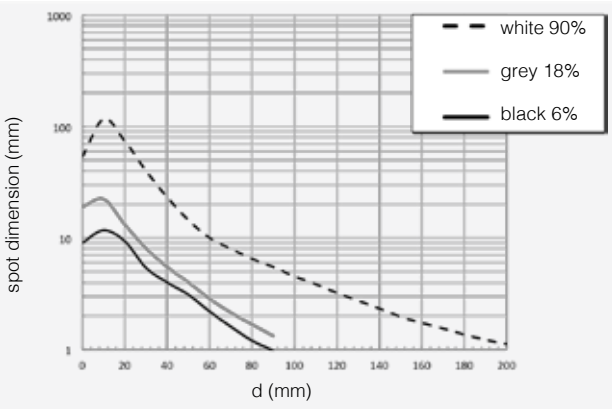
B*2/00-** spot dimension



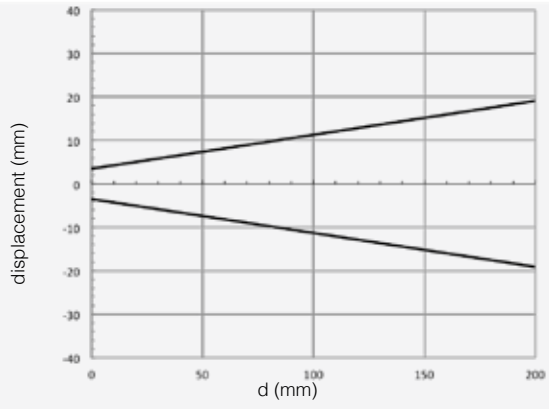
B*2/00-** parallel displacement



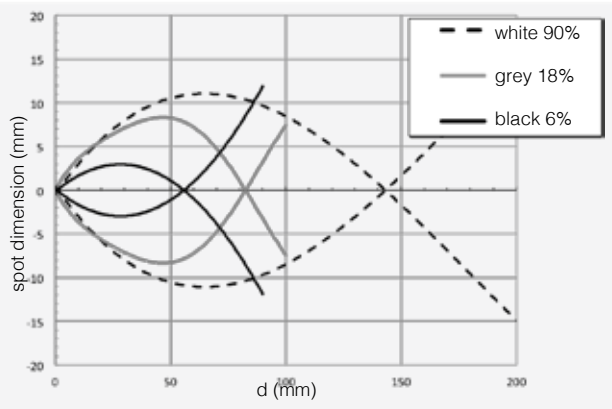
B*4/00-** spot dimension



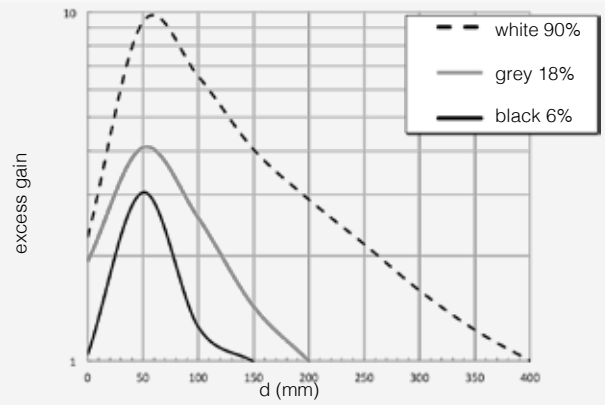
B*4/00-** parallel displacement



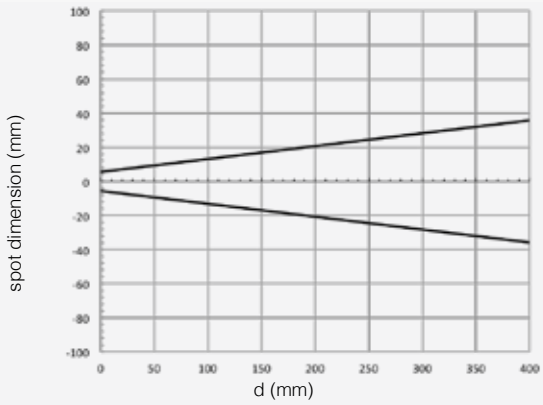
B*4/00-** spot dimension



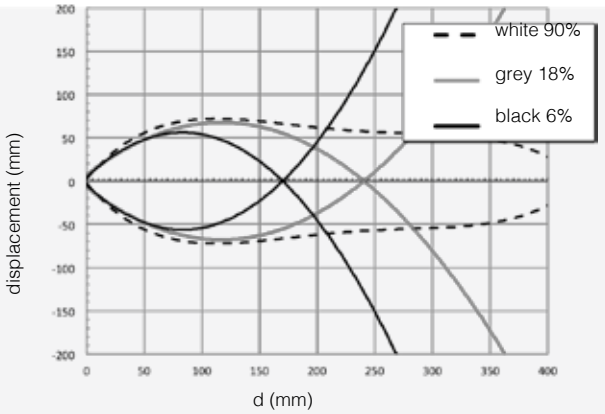
B*6/00-** excess gain



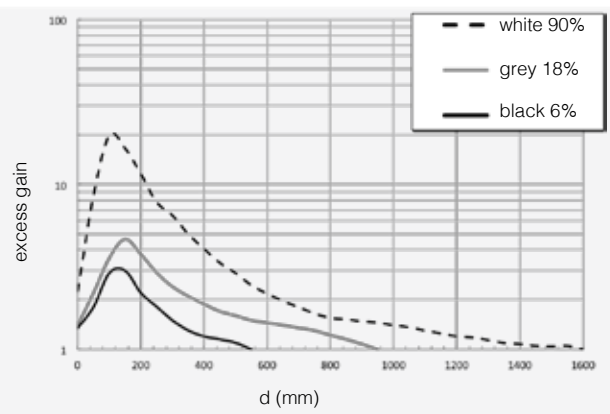
B*6/00-** spot dimension



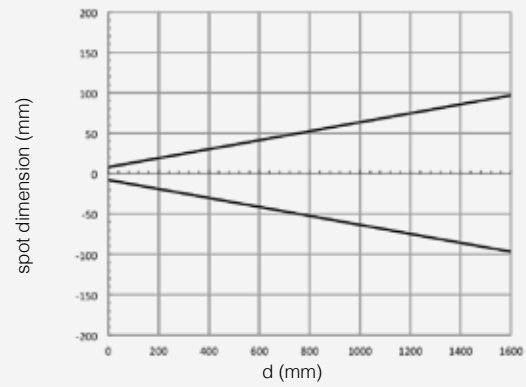
B*6/00-** parallel displacement



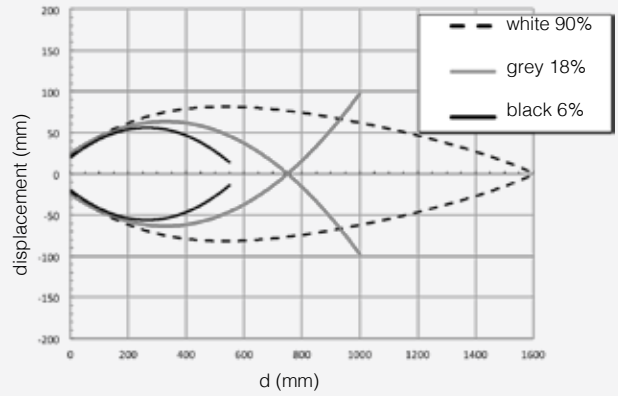
B*8/00-** excess gain



B*8/00-** spot dimension



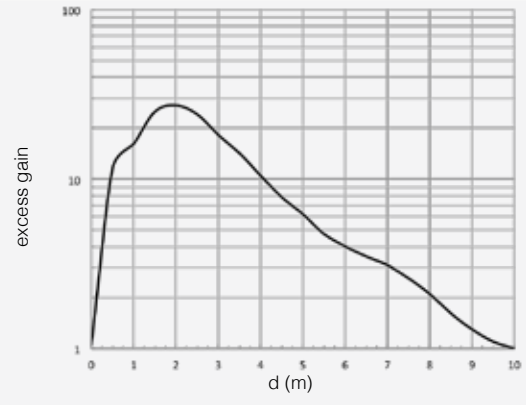
B*8/00-** parallel displacement



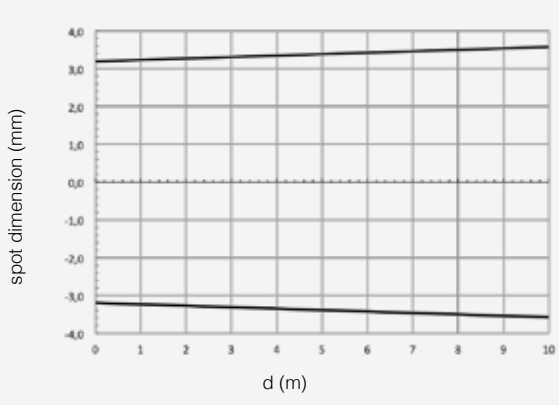
response diagrams

retro-reflective models (diagrams detected with RL110)

B*C/0*-** excess gain



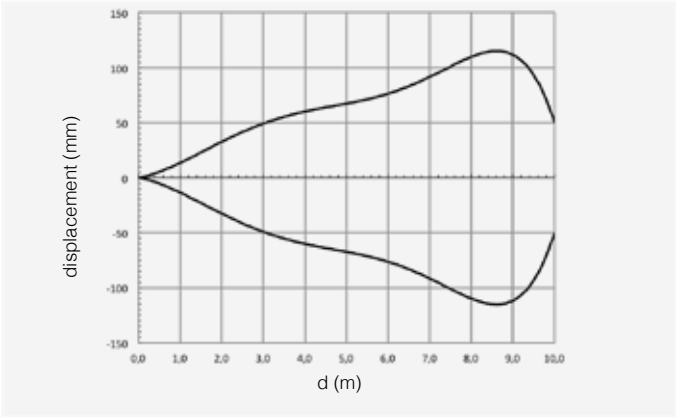
B*C/0*-** spot dimension



response diagrams

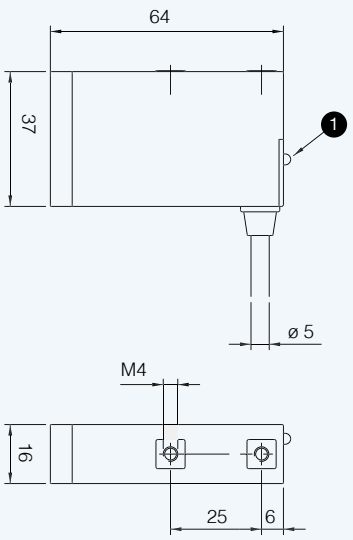
retro-reflective models

B*C/0*- parallel displacement**

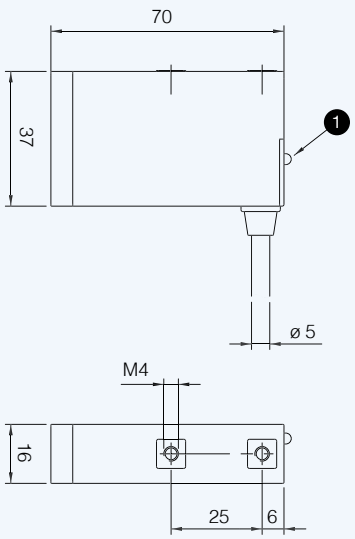


dimensions (mm)

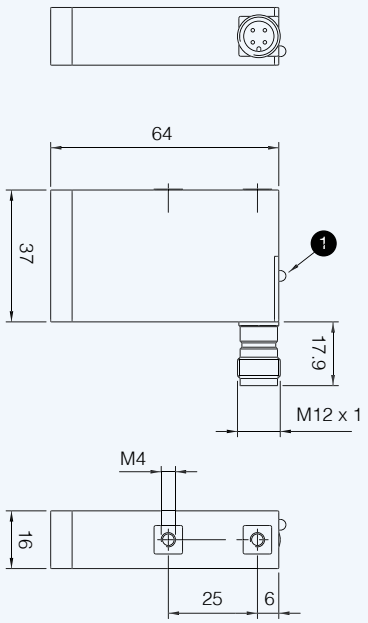
B*2/00-0C - B*4/00-0C - B*6/00-0C - B*8/00-0C



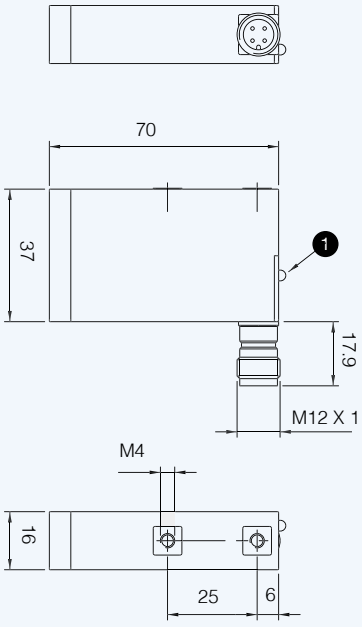
B*C/00-0C



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