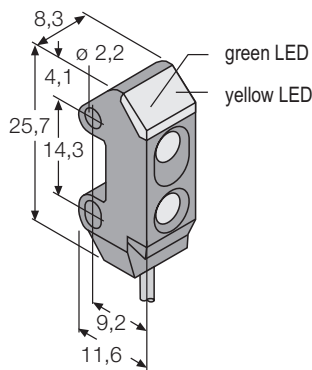


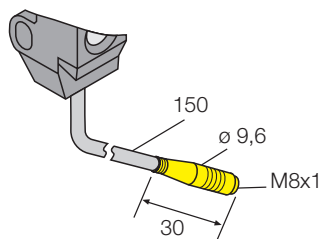


Dimensions [mm]

● Cable

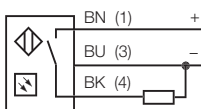


● Connector

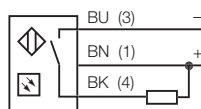


Wiring

pnp



npn



**VS1 Series
DC Operation**

Wave length

IR (infrared)	865 nm
Red	630 nm

Supply

Supply voltage	10...30 V dc
Ripple V_{pp}	$\leq 10\%$
No load current	≤ 25 mA
Delay upon power up	100 ms

Protection

Overload	reverse polarity ≤ 100 mA transient voltages short-circuit (pulsed)
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Output

Switching function	light or dark operate versions
Continuous load current	50 mA maximum
Switching frequency	≤ 500 Hz

Material

Housing	ABS
Lens	acrylic
Protection class (IEC 60529/EN 60529)	IP54
Temperature range	-20...+55 °C
Cable	2 m, PVC, 3 x 0,34 mm ²
Connector	Pico-style (M8 x 1)

Indicator LED's

Yellow	light sensed
Green	supply voltage
Yellow flashing	low gain
Green flashing	overload

Accessories

Brackets

SMBVS1S	30 555 54	short bracket (stainless steel)
SMBVS1T	30 554 96	tall bracket (stainless steel)
SMBVS1SC	30 567 97	short compact bracket (stainless steel)
SMBVS1TC	30 567 95	tall compact bracket (stainless steel)

Connector

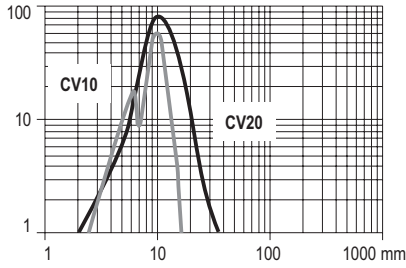
PKG3M-2	30 639 77	straight type 2 m
PKG3M-9	30 639 78	straight type 9 m

VS1 Series

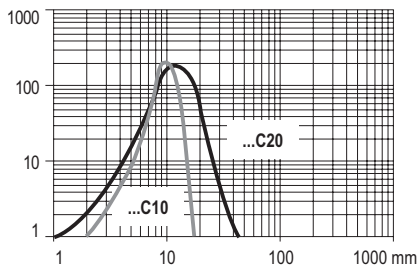
DC Operation

Excess gain curve:
Excess gain in relation to the distance

— Convergent Visual Red —



— Convergent – IR —



	Max. range [mm]	Light source	Output function	Connection	Type	Ident number
— Convergent Visual Red —	10 ± 5	red	pn-p light	cable	VS1AP5CV10	30 564 94
	10 ± 5	red	pn-p light	connector	VS1AP5CV10Q	30 591 77
	10 ± 5	red	pn-p dark	cable	VS1RP5CV10	30 564 95
	10 ± 5	red	pn-p dark	connector	VS1RP5CV10Q	30 630 88
	10 ± 5	red	np-n light	cable	VS1AN5CV10	30 564 92
	10 ± 5	red	np-n light	connector	VS1AN5CV10Q	30 630 83
	10 ± 5	red	np-n dark	cable	VS1RN5CV10	30 564 93
	10 ± 5	red	np-n dark	connector	VS1RN5CV10Q	30 630 85
	20 ± 10	red	pn-p light	cable	VS1AP5CV20	30 564 98
	20 ± 10	red	pn-p light	connector	VS1AP5CV20Q	30 591 78
	20 ± 10	red	pn-p dark	cable	VS1RP5CV20	30 564 99
	20 ± 10	red	pn-p dark	connector	VS1RP5CV20Q	30 630 95
	20 ± 10	red	np-n light	cable	VS1AN5CV20	30 564 96
	20 ± 10	red	np-n light	connector	VS1AN5CV20Q	30 630 90
	20 ± 10	red	np-n dark	cable	VS1RN5CV20	30 564 97
	20 ± 10	red	np-n dark	connector	VS1RN5CV20Q	30 630 92
— Convergent – IR —	10 ± 5	IR	pn-p light	cable	VS1AP5C10	30 552 95
	10 ± 5	IR	pn-p light	connector	VS1AP5C10Q	30 630 86
	10 ± 5	IR	pn-p dark	cable	VS1RP5C10	30 552 96
	10 ± 5	IR	pn-p dark	connector	VS1RP5C10Q	30 630 87
	10 ± 5	IR	np-n light	cable	VS1AN5C10	30 547 44
	10 ± 5	IR	np-n light	connector	VS1AN5C10Q	30 630 82
	10 ± 5	IR	np-n dark	cable	VS1RN5C10	30 552 94
	10 ± 5	IR	np-n dark	connector	VS1RN5C10Q	30 630 84
	20 ± 10	IR	pn-p light	cable	VS1AP5C20	30 552 99
	20 ± 10	IR	pn-p light	connector	VS1AP5C20Q	30 630 93
	20 ± 10	IR	pn-p dark	cable	VS1RP5C20	30 553 00
	20 ± 10	IR	pn-p dark	connector	VS1RP5C20Q	30 630 94
	20 ± 10	IR	np-n light	cable	VS1AN5C20	30 552 97
	20 ± 10	IR	np-n light	connector	VS1AN5C20Q	30 630 89
	20 ± 10	IR	np-n dark	cable	VS1RN5C20	30 552 98
	20 ± 10	IR	np-n dark	connector	VS1RN5C20Q	30 630 91



These sensors do not include the self-checking redundant circuitry necessary to allow their use in personnel safety applications. A sensor failure or malfunction can result in either an energised or de-energised output condition. These products should not be used as sensing devices for personnel safety.