

**Q45 series – Rectangular sensors**



**Q45 series**  
dc operation with transistor output

**Wave length**

IR (infrared) 880 nm  
 Red 680 nm  
 650 nm (Q45...FV)  
 660 nm (Q45...FP)

**Adjustments**

sensitivity  
 light or dark operate

**Timing function**

0...15 s (only with Q45LM5/8)

**Supply**

Supply voltage 10...30 V dc  
 Ripple  $V_{pp}$  10 %  
 No load current  $\leq$  50 mA  
 Delay upon power up 100 ms

**Protection**

reverse polarity  
 short-circuit (pulsed)

**Output**

Continuous load current  $\leq$  150 mA (250 mA at 50 °C)  
 Overload trip point  $\geq$  220 mA typical at 20 °C  
 Switching frequency 250 Hz

**Material**

Housing PBT  
 Lens acrylic  
 Cover Lexan® (PC)  
 Protection class IP67  
 (IEC 60529/EN 60529)  
 Temperature range -40...+70 °C  
 Cable 2 m, PVC, 4 x 0,34 mm<sup>2</sup>  
 2 m, PVC, 2 x 0,5 mm<sup>2</sup> (Q45...E)  
 eurocon (M12 x 1)

**Connector**

**Indicator LED's**

Red light sensed  
 (AID, alignment indicating device)  
 Green supply voltage  
 Green flashing output overload  
 Yellow output load status  
 7-segment red bargraph signal strength  
 (Q45LM...D only)

**Accessories**

**Plug-in modules for timing functions and LED-display**

45LM5	30 354 95	ON and OFF-delay
45LM8	30 354 96	one-shot
45LM5D	30 365 91	ON and OFF-delay, display
45LM8D	30 365 93	one-shot display
45LMD	30 354 97	display

**Brackets**

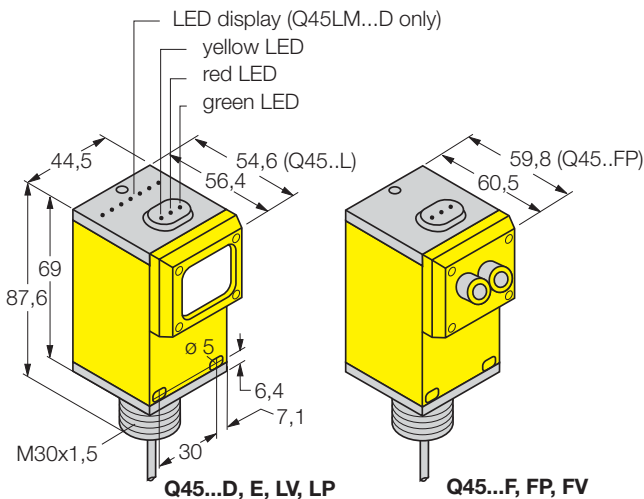
SMB30A	34 703 00	angle bracket
SMB30SC	30 525 21	swivel mount bracket
SMB30C	34 701 00	split clamp bracket

**Connectors**

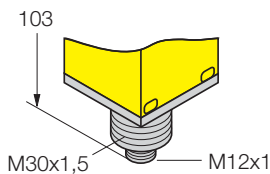
WAK4-2/P00	80 070 46	eurocon straight type
WWAK4-2/P00	80 071 48	eurocon right-angled type

**Dimensions [mm]**

● **Cable**



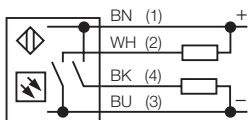
● **Connector**



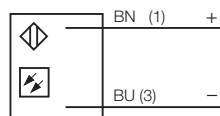
M30, AF 36 mounting nut included

**Wiring**

all types except emitter



emitter

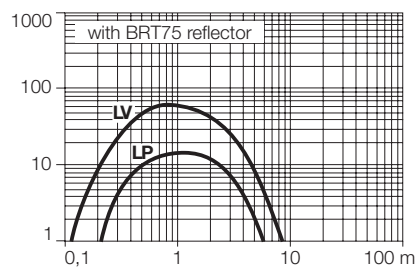


# Q45 series

## dc operation with transistor output

Excess gain curve:  
Excess gain in relation to the distance

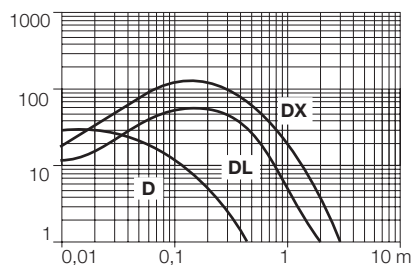
### — Retro-reflective



Max. range/Fibre type	Light source	Output function	Connection	Type	Ident number
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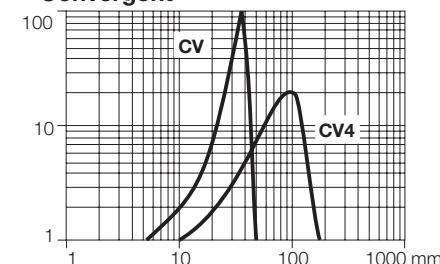
0,08...9 m	red	pnP, npn	cable	<b>Q45BB6LV</b>	30 365 57
0,08...9 m	red	pnP, npn	connector	<b>Q45BB6LVQ5</b>	30 386 65
0,15...6 m	red	pnP, npn	cable	<u>with polarising filter</u> <b>Q45BB6LP</b>	30 365 56
0,15...6 m	red	pnP, npn	connector	<b>Q45BB6LPQ5</b>	30 386 66

### — Diffuse



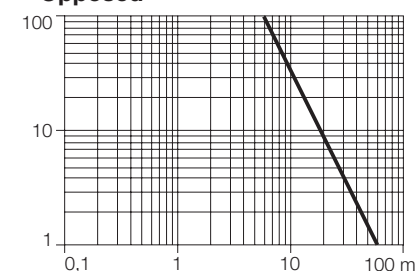
0,45 m	IR	pnP, npn	cable	<b>Q45BB6D</b>	30 365 58
0,45 m	IR	pnP, npn	connector	<b>Q45BB6DQ5</b>	30 386 63
1,8 m	IR	pnP, npn	cable	<b>Q45BB6DL</b>	30 365 59
1,8 m	IR	pnP, npn	connector	<b>Q45BB6DLQ5</b>	30 386 64
3 m	IR	pnP, npn	cable	<b>Q45BB6DX</b>	30 424 76
3 m	IR	pnP, npn	connector	<b>Q45BB6DXQ5</b>	30 471 38

### — Convergent\*



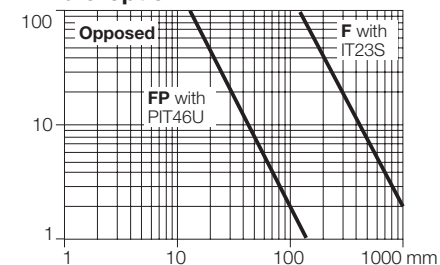
38 mm	red	pnP, npn	cable	<b>Q45BB6CV</b>	30 368 36
38 mm	red	pnP, npn	connector	<b>Q45BB6CVQ5</b>	30 386 61
100 mm	red	pnP, npn	cable	<b>Q45BB6CV4</b>	30 368 37
100 mm	red	pnP, npn	connector	<b>Q45BB6CV4Q5</b>	30 386 62

### — Opposed



60 m	IR	(emitter)	cable	<b>Q456E</b>	30 365 63
60 m	IR	pnP, npn	cable	<b>Q45BB6R</b>	30 365 62
60 m	IR	(emitter)	connector	<b>Q456EQ5</b>	30 386 59
60 m	IR	pnP, npn	connector	<b>Q45BB6RQ5</b>	30 386 60

### — Fibre-optic



glass	IR	pnP, npn	cable	<b>Q45BB6F</b>	30 365 60
glass	IR	pnP, npn	connector	<b>Q45BB6FQ5</b>	30 386 67
glass	red	pnP, npn	cable	<b>Q45BB6FV</b>	30 435 45
glass	red	pnP, npn	connector	<b>Q45BB6FVQ5</b>	30 435 46
plastic	red	pnP, npn	cable	<b>Q45BB6FP</b>	30 365 61
plastic	red	pnP, npn	connector	<b>Q45BB6FPQ5</b>	30 386 68

\* Spot size at focus (convergent mode): Q45BB6CV:  $\varnothing$  1,3 mm, Q45BB6CV4:  $\varnothing$  1,5 mm.

Subject to changes without notice • Edition 09.02 • P/N ED033 – excerpt from EC001/0102



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.