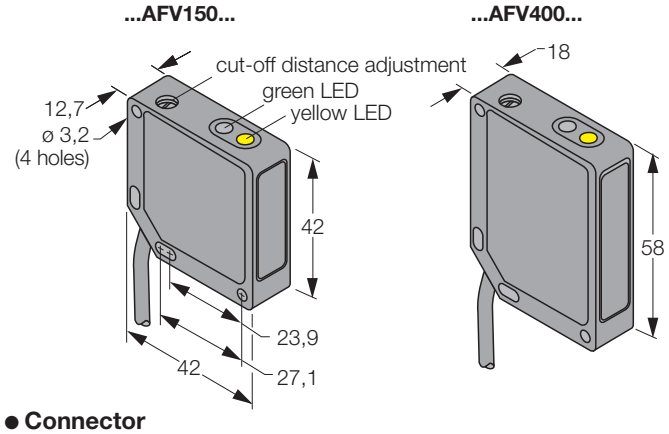
QM(T)42 series
with adjustable background suppression

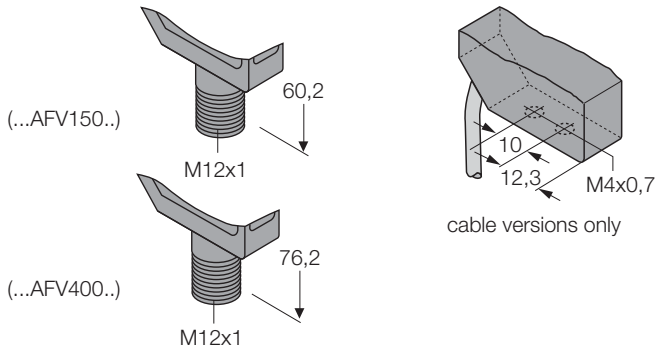
Wave length [1]	
Red	680 nm
Adjustment	range
Supply	
Supply voltage	10...30 V dc
Ripple V_{pp}	≤ 10 %
No load current	≤ 30 mA
Delay upon power up	100 ms
Protection	reverse polarity short-circuit (pulsed)
Output	
Complementary	light and dark operate
Continuous load current	≤ 100 mA
Overload trip point	≥ 150 mA typical at 20 °C
Switching frequency	500 Hz
Material	
Housing	zinc die-cast (black finish)
Lens	acrylic
Protection class (IEC 60529/EN 60529)	IP67
Temperature range	-20…+55 °C
Cable	2 m, PVC, 4 x 0,5 mm²
Connector	*eurocon* (M12 x 1)
Indicator LED's	
Yellow	light sensed
Green	supply voltage
Yellow flashing	low gain
Green flashing	output overload

Dimensions [mm]

● **Cable**

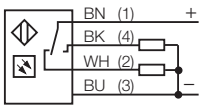


● **Connector**

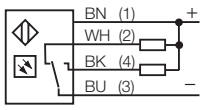


Wiring

pnp complementary



npn complementary



Accessories

Brackets		
SMB46L	30 487 47	protective bracket
SMB46S	30 487 48	protective bracket
SMB46U	30 487 46	protective bracket (QM42)
SMB30SK	30 525 23	swivel mount bracket
Connectors		
WAK4-2/P00	80 070 46	straight type
WWAK4-2/P00	80 071 48	right-angled type

[1] Models with infrared LED available on request.

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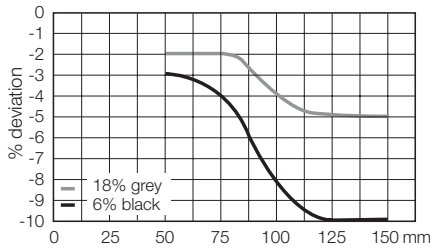
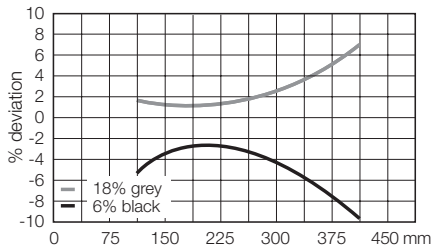
Cut-off point deviation curves

Adjustable field



Dead band [mm]	Cut-off point [mm]	Light source	Output function	Connection	Type	Ident number
5	50...150	red	pnp	cable	**QM42VP6AFV150**	30 486 95
5	50...150	red	pnp	connector	**QM42VP6AFV150Q**	30 486 97
5	50...150	red	npn	cable	**QM42VN6AFV150**	30 486 94
5	50...150	red	npn	connector	**QM42VN6AFV150Q**	30 486 96

Adjustable field



Dead band [mm]	Cut-off point [mm]	Light source	Output function	Connection	Type	Ident number
25	125...400	red	pnp	cable	**QMT42VP6AFV400**	30 468 56
25	125...400	red	pnp	connector	**QMT42VP6AFV400Q**	30 468 58
25	125...400	red	npn	cable	**QMT42VN6AFV400**	30 468 55
25	125...400	red	npn	connector	**QMT42VN6AFV400Q**	30 485 57

Interpretation of the cut-off deviation curves

The deviation in % is plotted as the nominal distance variation compared to a dark object (6 % reflectance) and a grey object (18 % reflectance), against a white card background (90 % reflectance).

Example

The cut-off point for the sensor QM42...AFV150 decreases by 3 % to 145,5 mm for a dark object with a 6 % reflectance when the cut-off point is set for 150 mm. This means that the white background should be at least 4,5 mm further away than the dark object to be detected.

Subject to changes without notice • Edition 02.02 • P/N ED028 – 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.