



## QMT42 series diffuse mode sensor

### Wave length

IR (infrared) 880 nm

### Supply

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

### Protection

reverse polarity  
short-circuit (pulsed)

### Output

Complementary light and dark operate  
Continuous load current  $\leq 100$  mA  
Overload trip point  $\geq 150$  mA typical at 20 °C  
Switching frequency 500 Hz

### Material

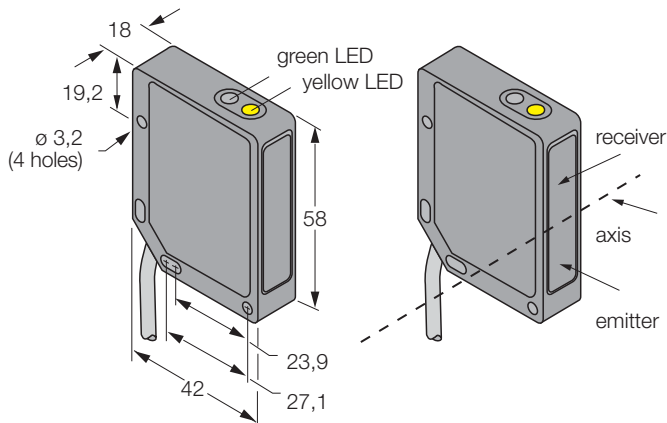
Housing zinc die-cast (black finish)  
Lens acrylic  
Protection class IP67  
(IEC 60529/EN 60529)  
Temperature range -20...+55 °C  
Cable 2 m, PVC, 4 x 0,5 mm<sup>2</sup>  
Connector *eurocon* (M12 x 1)

### Indicator LED's

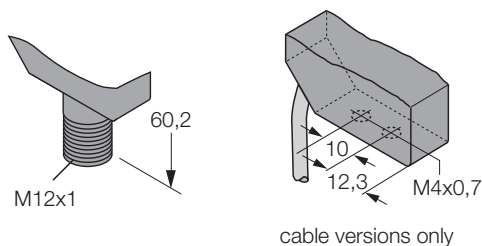
Yellow light sensed  
Green supply voltage  
Yellow flashing low gain  
Green flashing output overload

## Dimensions [mm]

### ● Cable

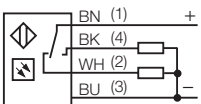


### ● Connector

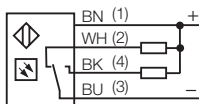


## Wiring

pnp complementary



nnp complementary



## Accessories

### Brackets

SMB46L	30 487 47	protective bracket
SMB46S	30 487 48	protective bracket
SMB30SK	30 525 23	swivel mount bracket

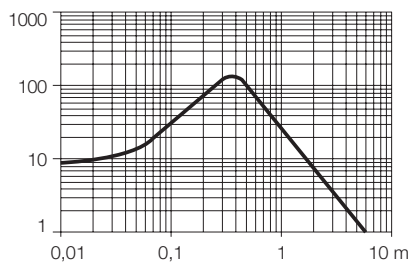
### Connectors

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

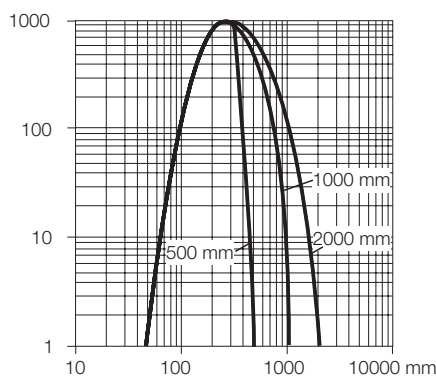
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Excess gain curve:  
Excess gain in relation to the distance

## Diffuse



## Fixed-field



	Cut-off point	Light source	Output function	Connection	Type	Ident number
Diffuse	6 m	IR	pnp	cable	<b>QMT42VP6DX</b>	30 568 96
	6 m	IR	pnp	connector	<b>QMT42VP6DXQ</b>	30 568 97
	6 m	IR	nnp	cable	<b>QMT42VN6DX</b>	30 568 94
	6 m	IR	nnp	connector	<b>QMT42VN6DXQ</b>	30 568 95
Fixed-field	500 mm	IR	pnp	cable	<b>QMT42VP6FF500</b>	30 492 29
	500 mm	IR	pnp	connector	<b>QMT42VP6FF500Q</b>	30 492 30
	500 mm	IR	nnp	cable	<b>QMT42VN6FF500</b>	30 492 27
	500 mm	IR	nnp	connector	<b>QMT42VN6FF500Q</b>	30 492 28
	1000 mm	IR	pnp	cable	<b>QMT42VP6FF1000</b>	30 492 33
	1000 mm	IR	pnp	connector	<b>QMT42VP6FF1000Q</b>	30 492 34
	1000 mm	IR	nnp	cable	<b>QMT42VN6FF1000</b>	30 492 31
	1000 mm	IR	nnp	connector	<b>QMT42VN6FF1000Q</b>	30 492 32
	2000 mm	IR	pnp	cable	<b>QMT42VP6FF2000</b>	30 492 37
	2000 mm	IR	pnp	connector	<b>QMT42VP6FF2000Q</b>	30 492 38
	2000 mm	IR	nnp	cable	<b>QMT42VN6FF2000</b>	30 492 35
	2000 mm	IR	nnp	connector	<b>QMT42VN6FF2000Q</b>	30 492 36

## Interpretation of the cut-off deviation table

The excess gain curves relate to a 90 % reflection white card. An important parameter is how the cut-off distance is affected by the colour of the object. The deviation value indicates the degree of change in the cut-off distance when a test card, other than white, is used. The deviation value is expressed as a percentage of the cut-off distance.

Sensor	Grey object, 18 % reflectance	Black object, 6 % reflectance
FF500	-0,25 %	-0,75 %
FF1000	-1,5 %	-3 %
FF2000	-6 %	-10 %

## Example

When the cut-off point is 2000 mm (for a 90 % reflectance white card), the cut-off point decreases 10 % if the object has a reflectance of only 6 %. In other words, the cut-off point for the black target is 1800 mm.



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.