

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

TURCK

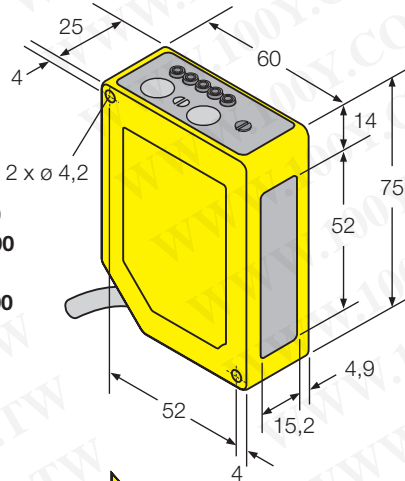
BANNER



Q60 series Adjustable Field

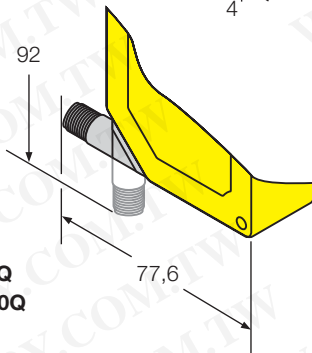
Dimensions [mm]

● Cable



Types: **Q60BB6AF2000**
Q60BB6AFV1000
Q60VR3AF2000
Q60VR3AFV1000

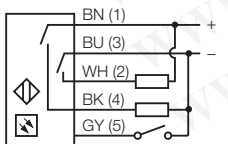
● Connector



Types: **Q60BB6AF2000Q**
Q60BB6AFV1000Q

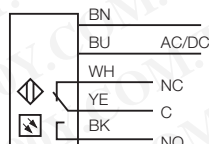
Wiring

Q60BB6AF2000(Q)
 Q60BB6AFV1000(Q)



remote programming

Q60VR3AF2000
 Q60VR3AFV1000



5 A max. load

Wave length

Infrared 880 nm
 Visible red 665 nm

Adjustment

Cut-off point type AF 200...2000 mm
 Cut-off point type AFV 200...1000 mm
 ON and OFF delay 8 ms...16 s
 Output light or dark operate

Supply

Supply voltage 10...30 VDC (Q60BB6...)
 12...250 VDC or
 24...250 VAC (Q60VR3...)
 Ripple V_{pp} $\leq 10\%$
 No load current ≤ 50 mA
 Delay upon power up 150 ms

Protection

reverse polarity
 transient voltages
 false pulse on power-up
 continuous overload &
 short-circuit (Q60BB6...
 only)

Output

Q60BB6... 1 npn and 1 pnp (bipolar)
 Q60VR3AF2000/Q60VR3AFV1000 E/M relay (SPDT),
 NO & NC contacts
 Load current 150 mA max. at 25 °C
 (Q60BB6... only)
 (Q60VR3... see 2nd page)
 Switching frequency 250 Hz (Q60BB6...)
 33 Hz (Q60VR3...)

Material

Housing ABS polycarbonate blend
 Lens acrylic
 Cover clear ABS
 Protection class IP67

-20...+55 °C

2 m, PVC, 5 x 0,5 mm²

eurocon (M12 x 1)

Indicator LEDs

see second page

Accessories

Brackets

SMBQ60 30 675 92 mounting bracket

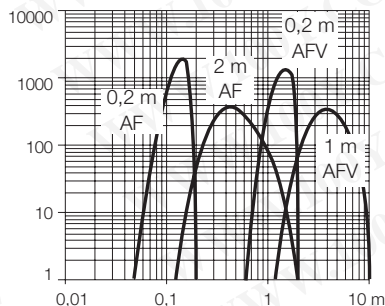
Connectors (Q60BB6... only)

WAK4.5-2/P00 80 085 76 straight type
 WWAK4.5-2/P00 80 085 83 right-angled type

Q60 series Adjustable Field

Excess gain curve:
Excess gain at cut-off point

Adjustable field

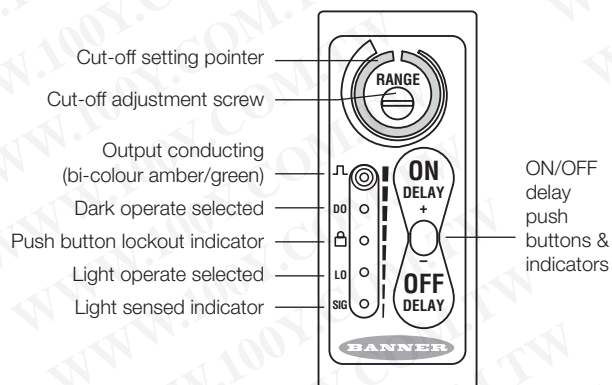


Min. range (depending on cut-off point) [mm]	Cut-off point [mm]	Light source	Output function	Connection	Type	Ident number
50...125	200...2000	IR	pnp, npn	cable	Q60BB6AF2000	30 630 00
50...125	200...2000	IR	pnp, npn	connector	Q60BB6AF2000Q	30 630 01
50...125	200...2000	IR	relay	cable	Q60VR3AF2000	30 630 04
65...130	200...1000	red	pnp, npn	cable	Q60BB6AFV1000	30 700 92
65...130	200...1000	red	pnp, npn	connector	Q60BB6AFV1000Q	30 700 93
65...130	200...1000	red	relay	cable	Q60VR3AFV1000	30 700 94

Indicator LEDs

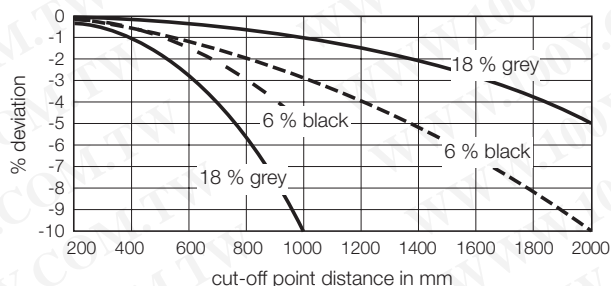
ON delay	green	RUN mode, ON delay active
	flashing green	ON delay selecting mode active
OFF delay	green	RUN mode, OFF delay active
	flashing green	OFF delay selecting mode active
5-segment light bar*		indicates relative delay time during ON or OFF delay selection modes
Output	amber	outputs conducting
	green	outputs conducting during ON/OFF delay selection modes
Dark operate	green	dark operate selected
Lockout	green	buttons are locked out
Light operate	green	light operate selected
Signal	green	sensor receives signal
	flashing green	marginal signal indication

* Output, dark operate, lockout, light operate and signal indicators function as a 5-segment light bar during ON or OFF delay selection modes



Interpretation of performance curves for adjustable field models

The percentage of deviation indicates a change in the cut-off point for either 18 % grey or 6 % black targets, relative to the cut-off point set for a 90 % reflective white test card.



Sensing Hysteresis (AF versions)

2000 mm cut-off: less than 3 % of set cut-off distance
 1600 mm cut-off: less than 2,25 % of set cut-off distance
 1200 mm cut-off: less than 1,30 % of set cut-off distance
 800 mm cut-off: less than 0,5 % of set cut-off distance
 400 mm cut-off: less than 0,25 % of set cut-off distance

Sensing Hysteresis (AFV versions)

1000 mm cut-off: less than 2 % of set cut-off distance
 800 mm cut-off: less than 1,2 % of set cut-off distance
 600 mm cut-off: less than 0,7 % of set cut-off distance
 400 mm cut-off: less than 0,35 % of set cut-off distance
 200 mm cut-off: less than 0,25 % of set cut-off distance

Output Ratings Q60VR3AF2000 & Q60VR3AF1000

Minimum voltage and current: 5 VDC, 10 mA
 Mechanical life of relay: 50.000.000 operations
 Electrical life of relay at full resistive load: 100.000 operations
 Maximum switching power (resistive load): 1250 VA, 150 W
 Maximum switching voltage (resistive load): 250 VAC, 125 VDC
 Maximum switching current (resistive load): 5 A at 250 VAC, 5 A at 30 VDC derated to 200 mA at 125 VDC

☞ Setting the cut off distance adjustment screw to its maximum clockwise position places the receiver lens directly in front of the receiver elements and results in the Q60 performing as a long-range diffuse sensor.

Subject to changes without notice • Edition Revision 11.02 • P/N ED074



IMPORTANT SAFETY WARNING! 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.