

## ■ Ordering Information

**BRQ T 5 M - T D T A - C - P**

Control output	No mark	NPN open collector output
	P	PNP open collector output
Connection	No mark	Cable type
	C	Connector type
Appearance	A	Standard
	B	Short body <sup>※1</sup>
Emitter/Receiver	1	Emitter
	2	Receiver
Output type	T	Transistor output
Power supply	D	DC power
Sensing type	T	Through-beam type
	P	Retroreflective type (built-in polarizing filter)
	D	Diffuse reflective type
Sensing distance unit	No mark	mm
	M	m
Sensing distance	Number	Sensing distance
Form of sensing	No mark	Front sensing type
Case material	T	Stainless steel 316L
	M	Brass, Ni-plate
	P	Plastic
Item	BRQ	Cylindrical photoelectric sensor

## ■ Specifications

Model	NPN open collector output	BRQ□5M-TDT□-□	BRQ□20M-TDT□-□	BRQ□30M-TDT□-□	BRQ□3M-PDT□-□	BRQ□100-DDT□-□	BRQ□400-DDT□-□	BRQ□1M-DDT□-□
	PNP open collector output	BRQ□5M-TDT□-□-P	BRQ□20M-TDT□-□-P	BRQ□30M-TDT□-□-P	BRQ□3M-PDT□-□-P	BRQ□100-DDT□-□-P	BRQ□400-DDT□-□-P	BRQ□1M-DDT□-□-P
Sensing type		Through-beam type			Retroreflective type (built-in polarizing filter)	Diffuse reflective type		
Sensing distance		5m	20m	30m	3m <sup>※1</sup>	100mm <sup>※2</sup>	400mm <sup>※2</sup>	1m <sup>※3</sup>
Sensing target		Opaque materials of min. Ø7mm			Opaque materials of min. Ø75mm	Opaque, translucent materials		
Hysteresis		—					Max. 20% at rated sensing distance	
Response time		Max. 1ms						
Power supply		10-30VDC= ±10% (ripple P-P: max.10%)						
Current consumption		Emitter/Receiver: max. 20mA			Max. 30mA			
Light source		Red LED (660nm)				Infrared LED (850nm)	Red LED (660nm)	
Sensitivity adjustment		Sensitivity adjuster						
Operation mode		Selectable Light ON or Dark ON by control wire (white)						
Control output		NPN or PNP open collector output ・ Load voltage: max. 30VDC= ・ Load current: max. 100mA ・ Residual voltage: max. 2VDC=						
Protection circuit		Power/Output reverse polarity protection circuit, output short over current protection circuit, interference prevention function (except through-beam type)						
Indicator		Operation indicator: yellow LED, Stability indicator: green LED (emitter power indicator of through-beam type: red LED)						
Connection		Cable type, connector type						
Insulation resistance		Over 20MΩ (at 500VDC megger)						
Noise immunity		±240V the squire wave noise (pulse width:1μs) by the noise simulator						
Dielectric strength		1,000VAC 50/60Hz for 1 minute						
Vibration		1.5mm amplitude at frequency of 10 to 55Hz in each X, Y, Z direction for 2 hours						
Shock		500m/s <sup>2</sup> (approx. 50G) in X, Y, Z direction for 3 times						
Environ- ment	Ambient illu.	Sunlight: max. 11,000lx, Incandescent lamp: max. 3,000lx (receiver illumination)						
	Ambient temp.	-25 to 60°C, storage: -30 to 70°C						
	Ambient humi.	35 to 85%RH, storage: 35 to 85%RH						
Protection structure		・ BRQT Series: IP67 (IEC standard), IP69K (DIN standard) ・ BRQM, BRQP Series: IP67 (IEC standard)						
Material		・ Case: BRQT Series - stainless steel 316L / BRQM Series - brass, Ni-plate BRQP Series - polycarbonate ・ Lens, Lens cover: polymethyl methacrylate acrylic						
Cable <sup>※4</sup>		Ø4mm, 4-wire, 2m (emitter of through-beam type: Ø4mm, 2-wire, 2m) (AWG26, core diameter: 0.52mm, number of cores: 20, insulator out diameter: Ø1mm)						
Accessory	Individual	—			Reflector (MS-2A)   —			
	Common	M18 fixing nut: 4, adjustment screwdriver			M18 fixing nut: 2, adjustment screwdriver			
Approval		  						
Weight <sup>※5</sup>	Cable type	BRQT-A/BRQM-A: approx. 220g (approx. 140g) BRQP-A: approx. 160g (approx. 110g) BRQP-B: approx. 150g (approx. 100g)			BRQT-A/BRQM-A: approx. 150g (approx. 70g) BRQP-A: approx. 120g (approx. 60g) BRQP-B: approx. 120g (approx. 50g)			
	Connector type	BRQT-A/BRQM-A: approx. 160g (approx. 50g) BRQP-A: approx. 110g (approx. 25g) BRQP-B: approx. 100g (approx. 20g)			BRQT-A/BRQM-A: approx. 140g (approx. 30g) BRQP-A: approx. 110g (approx. 15g) BRQP-B: approx. 100g (approx. 10g)			

## ■ Connections

