

QD

Miniature Photoelectric Sensor



Key Features

- Infrared, Visible Red LED & Red Laser
- PNP/NPN & analogue outputs
- Pre-cabled & M8 plug options
- NO/NC selectable
- Transparent object detection
- Metal & plastic detection
- Models with or without sensitivity adjustment
- Background suppression
- IP67 protection

QD Series Selection

	Type	Source	Distance	Output	
Miniature (21 x 31.2 x 12.8)	QDIBS/0P-0F	Diffuse - BGS*	Infrared	400mm	NO/NC PNP
	QDRBS/0P-0F	Diffuse - BGS*	Visible Red	100mm	NO/NC PNP
	QDID4/0N-0F	Diffuse	Infrared	1.5m	NO/NC NPN
	QDID4/0P-0F	Diffuse	Infrared	1.5m	NO/NC PNP
	QDIP2/0P-0A	Retro-Reflective	Infrared	7m	NO/NC PNP
	QDRP1/0P-0F	Polarized Retro-Reflective	Visible Red	5m	NO/NC PNP
	QDRCM1/0P-0F	Retro-Reflective (Transparent Objects)	Visible Red	500mm	NO/NC PNP
	QDIER/0P-0A	Through-Beam TX and RX	Infrared	20m	NO/NC PNP
	QDRER/0N-0F	Through-Beam TX and RX	Visible Red	20m	NO/NC NPN
	QDRE/00-0F	Through-Beam Emitter (TX)	Visible Red		-
	QDRR/0N-0F	Through-Beam Receiver (RX)	-	20m	NO/NC NPN

* BGS = Background Suppression

FL

Photoelectric Sensor



Key Features

- Sensors for car washes
- IP protection: Head IP69K (sensor IP67)
- Wide beam angle for easy alignment
- Totally filled with resin
- Two versions: Long & standard distance
- Synchronization through cable
- Coded emission: Anti mutual-interference

FL Series Selection

	Type	Source	Distance	Output	
M18 T Type	FLIE/00-0C	Through-Beam TX	8m	-	
	FLIH/00-0C		15m	-	
	FLIR/DN-0C	Through-Beam RX	Infrared	8m	DO NPN
	FLID/DN-0C			15m	DO NPN
	FLIR/LN-0C			8m	LO NPN
	FLID/LN-0C			15m	LO NPN
	FLIR/DP-0C			8m	DO PNP
	FLID/DP-0C			15m	DO PNP
	FLIR/LP-0C			8m	LO PNP
	FLID/LP-0C			15m	LO PNP
	FLIR/DT-0C			8m	DO Push/Pull
	FLID/DT-0C			15m	DO Push/Pull
	FLIR/LT-0C			8m	LO Push/Pull
	FLID/LT-0C			15m	LO Push/Pull

SQ

Cubic Photoelectric Sensor



Key Features

- Compact cubic universal sensor (50x50mm)
- High performance and versatility
- Cable output or revolving M12 connector
- NPN/PNP outputs for VDC models
- SPDT relay output for multi-voltage DC/AC models
- Totally protected against electrical damage
- Diffuse: 1m & 2m
- Background suppression: 500mm
- Polarised: 6m
- Through-beam: 20m
- Two multi-function status LEDs
- IP67 protection rating



SQ Series Selection

	Type	Source	Distance	Output	Operating Voltage	Exit
SQD/B01-C	Diffuse	Infrared	1m	PNP/NPN - NO+NC	10-30VDC	Pre-cabled
SQD/B01-P	Diffuse	Infrared	1m	PNP/NPN - NO+NC	10-30VDC	M12 plug
SQD/C01-C	Diffuse	Infrared	1m	Relay SPDT	12-240 VDC / 24-240 VAC, 50-60Hz	Pre-cabled
SQD/B02-C	Diffuse	Infrared	2m	PNP/NPN - NO+NC	10-30VDC	Pre-cabled
SQD/B02-P	Diffuse	Infrared	2m	PNP/NPN - NO+NC	10-30VDC	M12 plug
SQD/C02-C	Diffuse	Infrared	2m	Relay SPDT	12-240 VDC / 24-240 VAC, 50-60Hz	Pre-cabled
SQG/B00.5-C	Diffuse - BGS	Infrared	120/500mm	PNP/NPN - NO+NC	10-30VDC	Pre-cabled
SQG/B00.5-P	Diffuse - BGS	Infrared	120/500mm	PNP/NPN - NO+NC	10-30VDC	M12 plug
SQP/B06-C	Polarized Retro-Reflective	Infrared	6m	PNP/NPN - NO+NC	10-30VDC	Pre-cabled
SQP/B06-P	Polarized Retro-Reflective	Infrared	6m	PNP/NPN - NO+NC	10-30VDC	M12 plug
SQP/C06-C	Polarized Retro-Reflective	Infrared	6m	Relay SPDT	12-240 VDC / 24-240 VAC, 50-60Hz	Pre-cabled
SQE/0D20-C	Through-Beam Emitter	Infrared	20m	-	10-30VDC	Pre-cabled
SQE/0D20-P	Through-Beam Emitter	Infrared	20m	-	10-30VDC	M12 plug
SQE/0A20-C	Through-Beam Emitter	Infrared	20m	-	12-240 VDC / 24-240 VAC, 50-60Hz	Pre-cabled
SQR/B020-C	Through-Beam Receiver	Infrared	20m	PNP/NPN - NO+NC	10-30VDC	Pre-cabled
SQR/B020-P	Through-Beam Receiver	Infrared	20m	PNP/NPN - NO+NC	10-30VDC	M12 plug
SQR/C020-C	Through-Beam Receiver	Infrared	20m	Relay SPDT	12-240 VDC / 24-240 VAC, 50-60Hz	Pre-cabled

ASPRO

Retroreflective Area Sensor



Key Features

- Controlled height up to 69mm
- Operating distance up to 4500mm
- Minimum object detection of 6mm in diameter
- Two teach-in settings: Fine and standard
- 10mm optical pitch
- IP67 protection degree
- Blanking function
- Aluminium body



ASPR Series Selection

	Type	Source	Distance	Output
ASPRO/0B-1T	Retroreflective	Visible Red	200-4500mm	NO/NC NPN+PNP
ASPRO/0I-1T	Retroreflective	Visible Red	200-4500mm	I/O Link
ASPRO/0T-1T	Retroreflective	Visible Red	200-4500mm	NO/NC Push Pull
ASPRO/BN-1T	Retroreflective	Visible Red	200-4500mm	NO+NC NPN
ASPRO/BP-1T	Retroreflective	Visible Red	200-4500mm	NO+NC PNP

FA

M18 Barrel Photoelectric Sensor



Key Features

- Compact M18 sensors, 10-30VDC
- Models with axial & 90° optics
- IR, red light & red light laser emission models available
- Intelligent models with background suppression
- Metal & plastic housings*
- Models with or without sensitivity adjustment
- IP67 protection rating



FA Series Selection

	Type	Distance	Output	Sensitivity Adjustment
FAIH/X0-**-	Infrared LED Emission	20m (axial optics), 15m (90° optics)	-	No
FAIH/00-**-	Infrared LED Emission	20m (axial optics), 15m (90° optics)	-	No
FAIZ/**-**-	Receiver	20m (axial optics), 15m (90° optics)	NPN or PNP	No
FAID/**-**-	Receiver	20m (axial optics), 15m (90° optics)		Yes
FALH/X0-**-	Visible Red Laser Emission	50m	-	Yes
FAL4/**-**-	Diffuse Red Laser Emission	300mm	NPN or PNP	Yes (teach function)
FALN/**-**-	Polarized Retro-Reflective	25m with RL110		Yes (teach function)
FARA/**-**-	Diffuse Red LED Emission	50mm		No
FARB/**-**-	Diffuse Red LED Emission	50mm		Yes
FAR2/**-**-	Diffuse Red LED Emission	100mm		No
FAR3/**-**-	Diffuse Red LED Emission	100mm		Yes
FA14/**-**-	Diffuse Infrared Emission	200mm		Yes
FA15/**-**-	Diffuse Infrared Emission	200mm		No
FA16/**-**-	Diffuse Infrared Emission	400mm		No
FA17/**-**-	Diffuse Infrared Emission	400mm		Yes
FA18/**-**-	Diffuse Infrared Emission	1m		Yes
FA19/**-**-	Diffuse Infrared Emission	1m		No
FAIC/**-**-	Retro-Reflective Infrared Emission	4m		No
FAIM/**-**-	Retro-Reflective Infrared Emission	4m		Yes
FAIP/**-**-	Retro-Reflective Red LED Emission	3m (axial optics), 2m (90° optics)	No	
FAIN/**-**-	Retro-Reflective Red LED Emission	3m (axial optics), 2m (90° optics)	Yes	
FAIL/**-**-	Polarized Retro-Reflective	1m	Yes	

* Please check the product datasheet at www.imopc.com for the correct ordering code.



In addition to the sensors shown in this brochure IMO also offers an extensive range of cables, reflectors and brackets to suit all our sensors

FX

Fibre Optic Amplifier



Key Features

- Digital “Teach In” sensitivity adjustment (FX4)
- Multi turn potentiometer adjustment (FX3)
- High speed output response
- Ultra thin 10mm housing
- 20mm to 200mm range
- Pulse stretcher
- CE, UL and cUL approved

FX Series Selection

	Type	Source	Distance	Output
FX3/0N-0A	Use with diffuse or through-beam fibre	Visible Red	Fibre dependent	NPN - NO/NC
FX3/0N-0F	Use with diffuse or through-beam fibre	Visible Red	Fibre dependent	NPN - NO/NC
FX3/0P-0A	Use with diffuse or through-beam fibre	Visible Red	Fibre dependent	PNP - NO/NC
FX3/0P-0F	Use with diffuse or through-beam fibre	Visible Red	Fibre dependent	PNP - NO/NC
FX4/0P-0F	Use with diffuse or through-beam fibre	Visible Red	Fibre dependent	PNP - NO/NC
FX4/0N-0F	Use with diffuse or through-beam fibre	Visible Red	Fibre dependent	NPN - NO/NC

CF range of Fibres

	Model	Sensing Distance			Fibre Core Ø	Free-Cut	Lens	Head Type	Fibre & Sleeve Bending Radius R _{min}	Temperature Range	Head Material
		FS1	FX3	FX4							
CF/CA1	Diffuse	60mm	140mm	140mm	0.5mm	Yes	Yes	M5	15mm-N/A	-25 to +70°C	V2A INOX/Stainless Steel
CF/CA2	Diffuse	15mm	70mm	110mm	0.5mm	No	No	M4	5mm-N/A	-40 to +70°C	CuZn Ni Plated
CF/CA4	Diffuse	15mm	60mm	80mm	0.5mm	No	No	M4 + Sleeve	5mm-5mm	-40 to +55°C	CuZn Ni Plated
CF/CB1	Diffuse	50mm	200mm	300mm	1mm	Yes	No	M6	10mm-N/A	-40 to +70°C	CuZn Ni Plated
CF/CB3	Diffuse	50mm	200mm	300mm	1mm	Yes	No	M6 + Sleeve	10mm-10mm	-40 to +55°C	CuZn Ni Plated
CF/CC1	Diffuse	15mm	70mm	100mm	1mm	No	Yes	M6	10mm-N/A	-40 to +70°C	CuZn Ni Plated
CF/RA4	Through Beam	30mm	150mm	250mm	0.5mm	No	No	M4 + Sleeve	10mm-10mm	-40 to +55°C	CuZn Ni Plated
CF/RA7	Through Beam	30mm	150mm	250mm	0.5mm	No	No	M3	5mm-N/A	-40 to +70°C	CuZn Ni Plated
CF/RB3	Through Beam	120mm	700mm	700mm	1mm	Yes	Yes	M4 + M2.6	25mm-N/A	-40 to +70°C	CuZn Ni Plated
CF/RB4	Through Beam	120mm	600mm	900mm	1mm	Yes	No	M4 + Sleeve	10mm-10mm	-40 to +55°C	CuZn Ni Plated
CF/RB6	Through Beam	120mm	600mm	900mm	1mm	Yes	No	M4	10mm-N/A	-40 to +70°C	CuZn Ni Plated
CF/RB9	Through Beam	1.2m	8m	10m	1mm	Yes	Yes	Ø 6mm	10mm-N/A	-40 to +70°C	CuZn Ni Plated
CF/RBA	Through Beam	1.2m	8m	10m	1mm	Yes	Yes	M7	10mm-N/A	-40 to +70°C	CuZn Ni Plated
CF/RC6	Through Beam	100mm	500mm	500mm	1mm	No	No	M4	10mm-N/A	-40 to +70°C	CuZn Ni Plated
CF/RC9	Through Beam	1m	6m	8m	1mm	No	Yes	Ø 6mm	10mm-N/A	-40 to +70°C	CuZn Ni Plated
CF/RCA	Through Beam	1m	6m	8m	1mm	No	Yes	M7	10mm-N/A	-40 to +70°C	CuZn Ni Plated

FS

Fork Sensor



Key Features

- 3mm gap
- Label detection
- Multilayer transparent film detection

Fork Sensor Selection

	Type	Source	Distance	Output	Operating Voltage	Exit
FS3/0P-0F	Fork	Infrared	3mm gap	PNP - NO/NC	12-24VDC	M8 plug
FS3/0N-0F	Fork	Infrared	3mm gap	NPN - NO/NC	12-24VDC	M8 plug
FS3/00-0F	Fork	Infrared	3mm gap	PNP/NPN - NO/NC	12-24VDC	M8 plug

LDL

Photoelectric Luminescence Sensor



Key Features

- M18 / M30 compact housing
- Ultraviolet light emission
- Sensitivity adjustment (M18)
- Self teach local & remote (M30)
- NPN or PNP (NO/NC selectable)
- Delay off selectable (M30)
- Interchangeable lens (M18)
- IP65 protection rating

LDL Series Selection

	Type	Output Logic	Housing	Exit
LDLU/0N-0C	M18 Luminescence Sensor	NPN (NO/NC selectable)	M18 plastic body	Right angle cable exit
LDLU/0N-0K	M18 Luminescence Sensor	NPN (NO/NC selectable)	M18 plastic body	M12 right angle plug
LDLU/0P-0C	M18 Luminescence Sensor	PNP (NO/NC selectable)	M18 plastic body	Right angle cable exit
LDLU/0P-0K	M18 Luminescence Sensor	PNP (NO/NC selectable)	M18 plastic body	M12 right angle plug
LDLV/0N-1K	M30 Luminescence Sensor	NPN (NO/NC selectable)	M30 metal body	M12 right angle plug
LDLV/0P-1K	M30 Luminescence Sensor	PNP (NO/NC selectable)	M30 metal body	M12 right angle plug