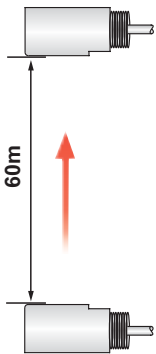
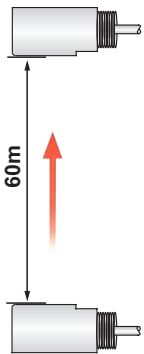


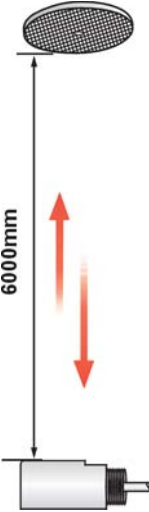
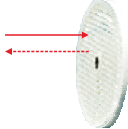
Selection Guide

Sensing mode	Connection	Supply Voltage	Output mode	Part number
 Through-beam mode Sensing distance 60m Infrared 950nm	Cable	10-30V DC	Emitter	Q40-T060MD-EY9C2L2
			NPN	Q40-T060MN-CY9C4U2
			PNP	Q40-T060MP-CY9C4U2
		20-250V AC	Emitter (2-wire)	Q40-T060MA-EY9C2L2
			Light-ON (3-wire)	Q40-T060MA-LY9C3U2
			Dark-ON (3-wire)	Q40-T060MA-DY9C3U2
		20-250V AC/DC	Emitter (2-wire)	Q40-T060MC-EY9C2L2
			SPDT Relay (5-wire)	Q40-T060MR-CY9C5U2
			SPDT Relay with Timing (5-wire)	Q40-T060MR-CY9C5U2-T
			Light-ON (2-wire)	Q40-T060MC-LY9C2U2
			Dark-ON (2-wire)	Q40-T060MC-DY9C2U2
	Quick Disconnect	10-30V DC (Euro)	Emitter	Q40-T060MD-EY9Q4LE
			NPN	Q40-T060MN-CY9Q4UE
			PNP	Q40-T060MP-CY9Q4UE
		20-250V AC (Micro)	Emitter (2-wire)	Q40-T060MA-EY9Q4LM
			Light-ON (3-wire)	Q40-T060MA-LY9Q4UM
			Dark-ON (3-wire)	Q40-T060MA-DY9Q4UM
		20-250V AC/DC (Micro)	Emitter (2-wire)	Q40-T060MC-EY9Q4LM
			SPDT Relay (5-wire)	Q40-T060MR-CY9Q5UM
			SPDT Relay with Timing (5-wire)	Q40-T060MR-CY9Q5UM-T
			Light-ON (2-wire)	Q40-T060MC-LY9Q4UM
			Dark-ON (2-wire)	Q40-T060MC-DY9Q4UM
	Quick Disconnect(Mini)	10-30V DC	Emitter	Q40-T060MD-EY9Q4LN
			NPN	Q40-T060MN-CY9Q4UN
			PNP	Q40-T060MP-CY9Q4UN
		20-250V AC	Emitter (2-wire)	Q40-T060MA-EY9Q4LN
			Light-ON (3-wire)	Q40-T060MA-LY9Q4UN
			Dark-ON (3-wire)	Q40-T060MA-DY9Q4UN
		20-250V AC/DC	Emitter (2-wire)	Q40-T060MC-EY9Q4LN
			SPDT Relay (5-wire)	Q40-T060MR-CY9Q5UN
			SPDT Relay with Timing (5-wire)	Q40-T060MR-CY9Q5UN-T
			Light-ON (2-wire)	Q40-T060MC-LY9Q4UN
			Dark-ON (2-wire)	Q40-T060MC-DY9Q4UN

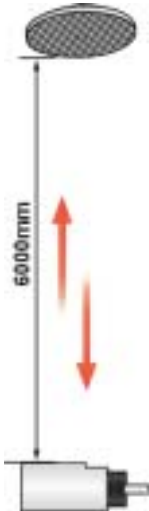
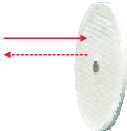
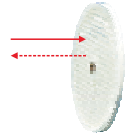
Selection Guide

Sensing mode	Connection	Supply Voltage	Output mode	Part number
 Through-beam mode Sensing distance 60m Infrared 950nm	6" Pigtail	10-30V DC (Euro)	Emitter	Q40-T060MD-EY9P4LE
			NPN	Q40-T060MN-CY9P4UE
			PNP	Q40-T060MP-CY9P4UE
		20-250V AC (Micro)	Emitter (2-wire)	Q40-T060MA-EY9P4LM
			Light-ON (3-wire)	Q40-T060MA-LY9P4UM
			Dark-ON (3-wire)	Q40-T060MA-DY9P4UM
		20-250V AC/DC (Micro)	Emitter (2-wire)	Q40-T060MC-EY9P4LM
			SPDT Relay (5-wire)	Q40-T060MR-CY9P5UM
			SPDT Relay with Timing (5-wire)	Q40-T060MR-CY9P5UM-T
			Light-ON (2-wire)	Q40-T060MC-LY9P4UM
			Dark-ON (2-wire)	Q40-T060MC-DY9P4UM
	6" Pigtail(Mini)	10-30V DC	Emitter	Q40-T060MD-EY9P4LN
			NPN	Q40-T060MN-CY9P4UN
			PNP	Q40-T060MP-CY9P4UN
		20-250V AC	Emitter (2-wire)	Q40-T060MA-EY9P4LN
			Light-ON (3-wire)	Q40-T060MA-LY9P4UN
			Dark-ON (3-wire)	Q40-T060MA-DY9P4UN
		20-250V AC/DC	Emitter (2-wire)	Q40-T060MC-EY9P4LN
			SPDT Relay (5-wire)	Q40-T060MR-CY9P5UN
			SPDT Relay with Timing (5-wire)	Q40-T060MR-CY9P5UN-T
			Light-ON (2-wire)	Q40-T060MC-LY9P4UN
			Dark-ON (2-wire)	Q40-T060MC-DY9P4UN

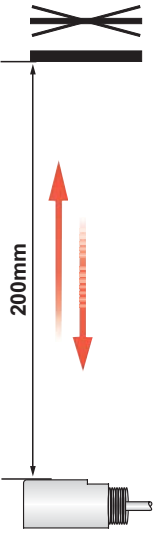
Selection Guide

Sensing mode	Connection	Supply Voltage	Output mode	Part number
 Retro-reflective mode With polarizing filter Sensing distance 6000mm LED red 680nm	Cable 	10-30V DC	NPN	Q40-L6000N-CY6C4U2-PF
			PNP	Q40-L6000P-CY6C4U2-PF
		20-250V AC	Light-ON (3-wire)	Q40-L6000A-LY6C3U2-PF
			Dark-ON (3-wire)	Q40-L6000A-DY6C3U2-PF
		20-250V AC/DC	SPDT Relay (5-wire)	Q40-L6000R-CY6C5U2-PF
			SPDT Relay with Timing (5-wire)	Q40-L6000R-CY6C5U2-TP
			Light-ON (2-wire)	Q40-L6000C-LY6C2U2-PF
			Dark-ON (2-wire)	Q40-L6000C-DY6C2U2-PF
	Quick Disconnect 	10-30V DC (Euro)	NPN	Q40-L6000N-CY6Q4UE-PF
			PNP	Q40-L6000P-CY6Q4UE-PF
		20-250V AC (Micro)	Light-ON (3-wire)	Q40-L6000A-LY6Q4UM-PF
			Dark-ON (3-wire)	Q40-L6000A-DY6Q4UM-PF
		20-250V AC/DC (Micro)	SPDT Relay (5-wire)	Q40-L6000R-CY6Q5UM-PF
			SPDT Relay with Timing (5-wire)	Q40-L6000R-CY6Q5UM-TP
			Light-ON (2-wire)	Q40-L6000C-LY6Q4UM-PF
			Dark-ON (2-wire)	Q40-L6000C-DY6Q4UM-PF
	Quick Disconnect(Mini) 	10-30V DC	NPN	Q40-L6000N-CY6Q4UN-PF
			PNP	Q40-L6000P-CY6Q4UN-PF
		20-250V AC	Light-ON (3-wire)	Q40-L6000A-LY6Q4UN-PF
			Dark-ON (3-wire)	Q40-L6000A-DY6Q4UN-PF
		20-250V AC/DC	SPDT Relay (5-wire)	Q40-L6000R-CY6Q5UN-PF
			SPDT Relay with Timing (5-wire)	Q40-L6000R-CY6Q5UN-TP
			Light-ON (2-wire)	Q40-L6000C-LY6Q4UN-PF
			Dark-ON (2-wire)	Q40-L6000C-DY6Q4UN-PF

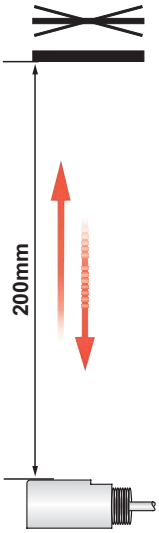
Selection Guide

Sensing mode	Connection	Supply Voltage	Output mode	Part number
 Retro-reflective mode With polarizing filter Sensing distance 6000mm LED red 680nm	6" Pigtail 	10-30V DC (Euro)	NPN	Q40-L6000N-CY6P4UE-PF
			PNP	Q40-L6000P-CY6P4UE-PF
		20-250V AC (Micro)	Light-ON (3-wire)	Q40-L6000A-LY6P4UM-PF
			Dark-ON (3-wire)	Q40-L6000A-DY6P4UM-PF
		20-250V AC/DC (Micro)	SPDT Relay (5-wire)	Q40-L6000R-CY6P5UM-PF
			SPDT Relay with Timing (5-wire)	Q40-L6000R-CY6P5UM-TP
			Light-ON (2-wire)	Q40-L6000C-LY6P4UM-PF
			Dark-ON (2-wire)	Q40-L6000C-DY6P4UM-PF
	6" Pigtail(Mini) 	10-30V DC	NPN	Q40-L6000N-CY6P4UN-PF
			PNP	Q40-L6000P-CY6P4UN-PF
		20-250V AC	Light-ON (3-wire)	Q40-L6000A-LY6P4UN-PF
			Dark-ON (3-wire)	Q40-L6000A-DY6P4UN-PF
		20-250V AC/DC	SPDT Relay (5-wire)	Q40-L6000R-CY6P5UN-PF
			SPDT Relay with Timing (5-wire)	Q40-L6000R-CY6P5UN-TP
			Light-ON (2-wire)	Q40-L6000C-LY6P4UN-PF
			Dark-ON (2-wire)	Q40-L6000C-DY6P4UN-PF

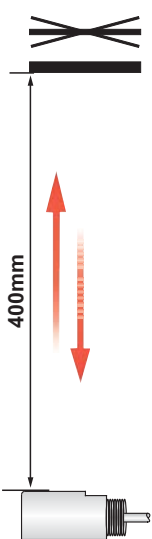
Selection Guide

Sensing mode	Connection	Supply Voltage	Output mode	Part number
 Diffuse mode (Fixed-field) with background suppression Sensing distance 200mm Infrared 880nm	Cable	10-30V DC	NPN	Q40-D0200N-CY9C4U2-BS
			PNP	Q40-D0200P-CY9C4U2-BS
		20-250V AC	Light-ON (3-wire)	Q40-D0200A-LY9C3U2-BS
			Dark-ON (3-wire)	Q40-D0200A-DY9C3U2-BS
		20-250V AC/DC	SPDT Relay (5-wire)	Q40-D0200R-CY9C5U2-BS
			SPDT Relay with Timing (5-wire)	Q40-D0200R-CY9C5U2-BT
			Light-ON (2-wire)	Q40-D0200C-LY9C2U2-BS
			Dark-ON (2-wire)	Q40-D0200C-DY9C2U2-BS
	Quick Disconnect	10-30V DC (Euro)	NPN	Q40-D0200N-CY9Q4UE-BS
			PNP	Q40-D0200P-CY9Q4UE-BS
		20-250V AC (Micro)	Light-ON (3-wire)	Q40-D0200A-LY9Q4UM-BS
			Dark-ON (3-wire)	Q40-D0200A-DY9Q4UM-BS
		20-250V AC/DC (Micro)	SPDT Relay (5-wire)	Q40-D0200R-CY9Q5UM-BS
			SPDT Relay with Timing (5-wire)	Q40-D0200R-CY9Q5UM-BT
			Light-ON (2-wire)	Q40-D0200C-LY9Q4UM-BS
			Dark-ON (2-wire)	Q40-D0200C-DY9Q4UM-BS
	Quick Disconnect(Mini)	10-30V DC	NPN	Q40-D0200N-CY9Q4UN-BS
			PNP	Q40-D0200P-CY9Q4UN-BS
		20-250V AC	Light-ON (3-wire)	Q40-D0200A-LY9Q4UN-BS
			Dark-ON (3-wire)	Q40-D0200A-DY9Q4UN-BS
		20-250V AC/DC	SPDT Relay (5-wire)	Q40-D0200R-CY9Q5UN-BS
			SPDT Relay with Timing (5-wire)	Q40-D0200R-CY9Q5UN-BT
			Light-ON (2-wire)	Q40-D0200C-LY9Q4UN-BS
			Dark-ON (2-wire)	Q40-D0200C-DY9Q4UN-BS

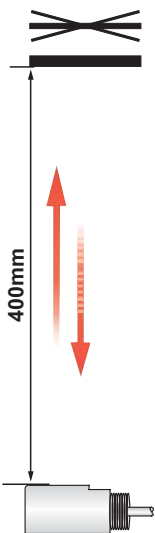
Selection Guide

Sensing mode	Connection	Supply Voltage	Output mode	Part number
 Diffuse mode (Fixed- field) with background suppression Sensing distance 200mm Infrared 880nm	6" Pigtail	10-30V DC (Euro)	NPN	Q40-D0200N-CY9P4UE-BS
			PNP	Q40-D0200P-CY9P4UE-BS
		20-250V AC (Micro)	Light-ON (3-wire)	Q40-D0200A-LY9P4UM-BS
			Dark-ON (3-wire)	Q40-D0200A-DY9P4UM-BS
		20-250V AC/DC (Micro)	SPDT Relay (5-wire)	Q40-D0200R-CY9P5UM-BS
			SPDT Relay with Timing (5-wire)	Q40-D0200R-CY9P5UM-BT
			Light-ON (2-wire)	Q40-D0200C-LY9P4UM-BS
			Dark-ON (2-wire)	Q40-D0200C-DY9P4UM-BS
	6" Pigtail(Mini)	10-30V DC	NPN	Q40-D0200N-CY9P4UN-BS
			PNP	Q40-D0200P-CY9P4UN-BS
		20-250V AC	Light-ON (3-wire)	Q40-D0200A-LY9P4UN-BS
			Dark-ON (3-wire)	Q40-D0200A-DY9P4UN-BS
		20-250V AC/DC	SPDT Relay (5-wire)	Q40-D0200R-CY9P5UN-BS
			SPDT Relay with Timing (5-wire)	Q40-D0200R-CY9P5UN-BT
			Light-ON (2-wire)	Q40-D0200C-LY9P4UN-BS
			Dark-ON (2-wire)	Q40-D0200C-DY9P4UN-BS

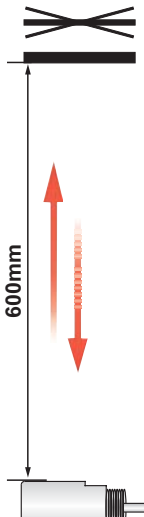
Selection Guide

Sensing mode	Connection	Supply Voltage	Output mode	Part number
 Diffuse mode (Fixed- field) with background suppression Sensing distance 400mm Infrared 880nm	Cable	10-30V DC	NPN	Q40-D0400N-CY9C4U2-BS
			PNP	Q40-D0400P-CY9C4U2-BS
		20-250V AC	Light-ON (3-wire)	Q40-D0400A-LY9C3U2-BS
			Dark-ON (3-wire)	Q40-D0400A-DY9C3U2-BS
		20-250V AC/DC	SPDT Relay (5-wire)	Q40-D0400R-CY9C5U2-BS
			SPDT Relay with Timing (5-wire)	Q40-D0400R-CY9C5U2-BT
			Light-ON (2-wire)	Q40-D0400C-LY9C2U2-BS
			Dark-ON (2-wire)	Q40-D0400C-DY9C2U2-BS
	Quick Disconnect	10-30V DC (Euro)	NPN	Q40-D0400N-CY9Q4UE-BS
			PNP	Q40-D0400P-CY9Q4UE-BS
		20-250V AC (Micro)	Light-ON (3-wire)	Q40-D0400A-LY9Q4UM-BS
			Dark-ON (3-wire)	Q40-D0400A-DY9Q4UM-BS
		20-250V AC/DC (Micro)	SPDT Relay (5-wire)	Q40-D0400R-CY9Q5UM-BS
			SPDT Relay with Timing (5-wire)	Q40-D0400R-CY9Q5UM-BT
			Light-ON (2-wire)	Q40-D0400C-LY9Q4UM-BS
			Dark-ON (2-wire)	Q40-D0400C-DY9Q4UM-BS
	Quick Disconnect(Mini)	10-30V DC	NPN	Q40-D0400N-CY9Q4UN-BS
			PNP	Q40-D0400P-CY9Q4UN-BS
		20-250V AC	Light-ON (3-wire)	Q40-D0400A-LY9Q4UN-BS
			Dark-ON (3-wire)	Q40-D0400A-DY9Q4UN-BS
		20-250V AC/DC	SPDT Relay (5-wire)	Q40-D0400R-CY9Q5UN-BS
			SPDT Relay with Timing (5-wire)	Q40-D0400R-CY9Q5UN-BT
			Light-ON (2-wire)	Q40-D0400C-LY9Q4UN-BS
			Dark-ON (2-wire)	Q40-D0400C-DY9Q4UN-BS

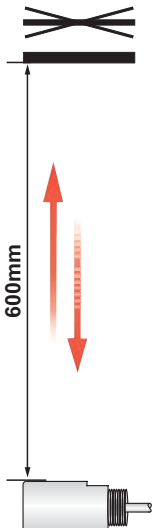
Selection Guide

Sensing mode	Connection	Supply Voltage	Output mode	Part number
 Diffuse mode (Fixed- field) with background suppression Sensing distance 400mm Infrared 880nm	6" Pigtail	10-30V DC (Euro)	NPN	Q40-D0400N-CY9P4UE-BS
			PNP	Q40-D0400P-CY9P4UE-BS
		20-250V AC (Micro)	Light-ON (3-wire)	Q40-D0400A-LY9P4UM-BS
			Dark-ON (3-wire)	Q40-D0400A-DY9P4UM-BS
		20-250V AC/DC (Micro)	SPDT Relay (5-wire)	Q40-D0400R-CY9P5UM-BS
			SPDT Relay with Timing (5-wire)	Q40-D0400R-CY9P5UM-BT
			Light-ON (2-wire)	Q40-D0400C-LY9P4UM-BS
			Dark-ON (2-wire)	Q40-D0400C-DY9P4UM-BS
	6" Pigtail(Mini)	10-30V DC	NPN	Q40-D0400N-CY9P4UN-BS
			PNP	Q40-D0400P-CY9P4UN-BS
		20-250V AC	Light-ON (3-wire)	Q40-D0400A-LY9P4UN-BS
			Dark-ON (3-wire)	Q40-D0400A-DY9P4UN-BS
		20-250V AC/DC	SPDT Relay (5-wire)	Q40-D0400R-CY9P5UN-BS
			SPDT Relay with Timing (5-wire)	Q40-D0400R-CY9P5UN-BT
			Light-ON (2-wire)	Q40-D0400C-LY9P4UN-BS
			Dark-ON (2-wire)	Q40-D0400C-DY9P4UN-BS

Selection Guide

Sensing mode	Connection	Supply Voltage	Output mode	Part number
 Diffuse mode (Fixed-field) with background suppression Sensing distance 600mm Infrared 880nm	Cable	10-30V DC	NPN	Q40-D0600N-CY9C4U2-BS
			PNP	Q40-D0600P-CY9C4U2-BS
		20-250V AC	Light-ON (3-wire)	Q40-D0600A-LY9C3U2-BS
			Dark-ON (3-wire)	Q40-D0600A-DY9C3U2-BS
		20-250V AC/DC	SPDT Relay (5-wire)	Q40-D0600R-CY9C5U2-BS
			SPDT Relay with Timing (5-wire)	Q40-D0600R-CY9C5U2-BS
			Light-ON (2-wire)	Q40-D0600C-LY9C2U2-BS
			Dark-ON (2-wire)	Q40-D0600C-DY9C2U2-BS
	Quick Disconnect	10-30V DC (Euro)	NPN	Q40-D0600N-CY9Q4UE-BS
			PNP	Q40-D0600P-CY9Q4UE-BS
		20-250V AC (Micro)	Light-ON (3-wire)	Q40-D0600A-LY9Q4UM-BS
			Dark-ON (3-wire)	Q40-D0600A-DY9Q4UM-BS
		20-250V AC/DC (Micro)	SPDT Relay (5-wire)	Q40-D0600R-CY9Q5UM-BS
			SPDT Relay with Timing (5-wire)	Q40-D0600R-CY9Q5UM-BT
			Light-ON (2-wire)	Q40-D0600C-LY9Q4UM-BS
			Dark-ON (2-wire)	Q40-D0600C-DY9Q4UM-BS
	Quick Disconnect(Mini)	10-30V DC	NPN	Q40-D0600N-CY9Q4UN-BS
			PNP	Q40-D0600P-CY9Q4UN-BS
		20-250V AC	Light-ON (3-wire)	Q40-D0600A-LY9Q4UN-BS
			Dark-ON (3-wire)	Q40-D0600A-DY9Q4UN-BS
		20-250V AC/DC	SPDT Relay (5-wire)	Q40-D0600R-CY9Q5UN-BS
			SPDT Relay with Timing (5-wire)	Q40-D0600R-CY9Q5UN-BT
			Light-ON (2-wire)	Q40-D0600C-LY9Q4UN-BS
			Dark-ON (2-wire)	Q40-D0600C-DY9Q4UN-BS

Selection Guide

Sensing mode	Connection	Supply Voltage	Output mode	Part number
 Diffuse mode (Fixed-field) with background suppression Sensing distance 600mm Infrared 880nm	6" Pigtail	10-30V DC (Euro)	NPN	Q40-D0600N-CY9P4UE-BS
			PNP	Q40-D0600P-CY9P4UE-BS
		20-250V AC (Micro)	Light-ON (3-wire)	Q40-D0600A-LY9P4UM-BS
			Dark-ON (3-wire)	Q40-D0600A-DY9P4UM-BS
		20-250V AC/DC (Micro)	SPDT Relay (5-wire)	Q40-D0600R-CY9P5UM-BS
			SPDT Relay with Timing (5-wire)	Q40-D0600R-CY9P5UM-BT
			Light-ON (2-wire)	Q40-D0600C-LY9P4UM-BS
			Dark-ON (2-wire)	Q40-D0600C-DY9P4UM-BS
	6" Pigtail(Mini)	10-30V DC	NPN	Q40-D0600N-CY9P4UN-BS
			PNP	Q40-D0600P-CY9P4UN-BS
		20-250V AC	Light-ON (3-wire)	Q40-D0600A-LY9P4UN-BS
			Dark-ON (3-wire)	Q40-D0600A-DY9P4UN-BS
		20-250V AC/DC	SPDT Relay (5-wire)	Q40-D0600R-CY9P5UN-BS
			SPDT Relay with Timing (5-wire)	Q40-D0600R-CY9P5UN-BT
			Light-ON (2-wire)	Q40-D0600C-LY9P4UN-BS
			Dark-ON (2-wire)	Q40-D0600C-DY9P4UN-BS

Specifications(DC)

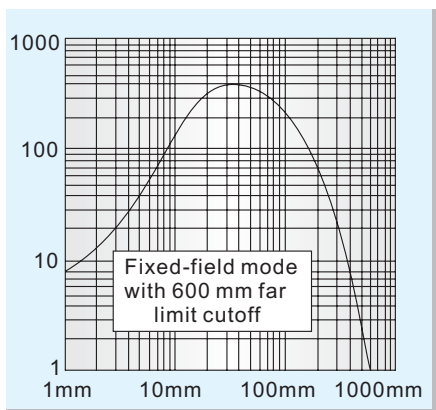
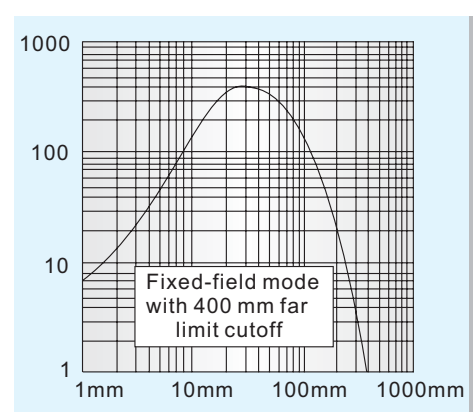
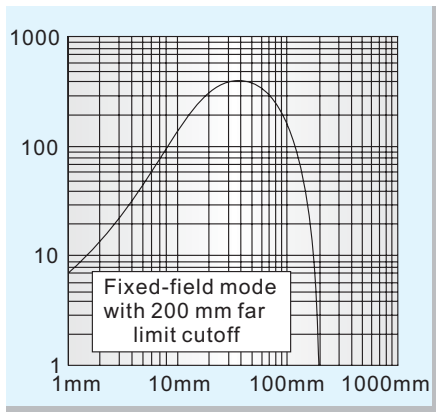
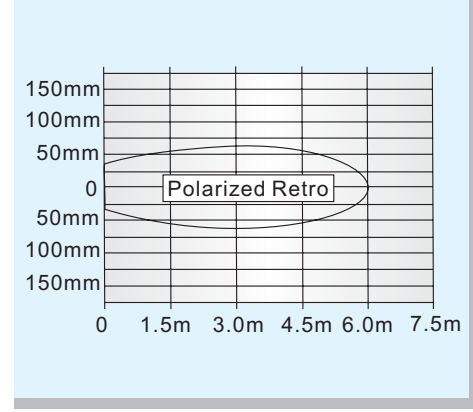
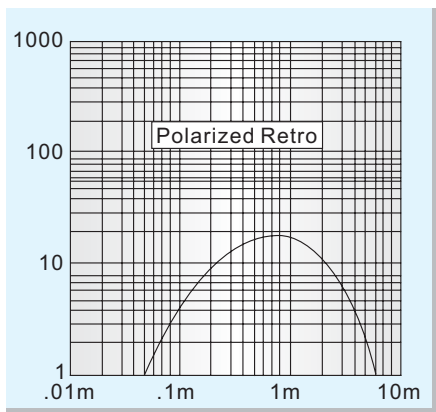
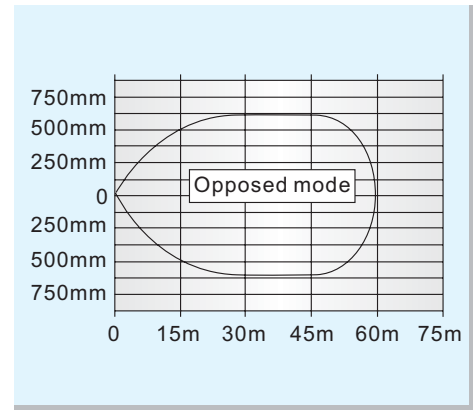
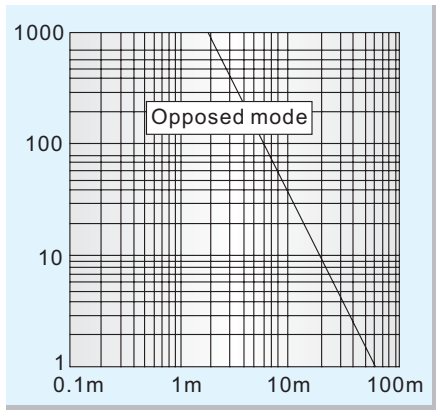
Type		Through-beam	Retroreflective (with polarizing filters)	Diffuse reflective (with background suppression) Fixed-field mode		
Item	Model No.	Q40-T060Mx- xX9xxxx	Q40-L6000x- xX6xxxx-PF	Q40-D0200x- xX9xxxx-BS	Q40-D0400x- xX9xxxx-BS	Q40-D0600x- xX9xxxx-BS
Sensing range		60m	6m	200mm	400mm	600mm
Sensing object		Opaque object of ϕ 8mm or more	3-way mirror	White paper		
Hysteresis		————		20% or less of operation distance		
Supply Voltage		10 to 30V DC, Ripple P-P 10% or less				
Current consumption		30mA or less				
Output		<NPN> output type> NPN open-collector transistor • Applied voltage: 30V DC or less • Maximum sink current: 200mA • Voltage drop: 2.5V or less		<PNP> output type> PNP open-collector transistor • Applied voltage: 30V DC or less • Maximum sink current: 200mA • Voltage drop: 2.5V or less		
Output operation		Selectable either Light-ON Dark-ON by the control input wire				
Short-circuit protection		Yes				
Reverse polarity protection		Yes				
Overload current protection		Yes				
Response time		1.5ms				
Operation indicator		Red LED (light up when the output is activated), Thru-beam sensor is provided it on the receiver				
Pollution degree		3(Industrial environment)				
Protection		IP67(IEC)				
Ambient temperature		-25°C to +55°C				
Ambient humidity		35 to 85% RH,Storage:35 to 85% RH				
EMC		IEC 60947-5-2, Parts 7.2.6.1.2.3 or RFI>3V/m(in 30-1000MHZ), EFT>1KV, ESD>4KV (contact)				
Voltage withstand ability		IEC 60947-5-2, Part 8.3.3.4 or 1500V AC for one min, between all supply terminals connected together and enclosure				
Insulation resistance		>20M Ω , with 1500V AC megger between all supply terminals connected together and enclosure				
Vibration resistance		IEC 60947-5-2, part 7.4.2 or 10-55HZ, 1.0mm amplitude in x, y and z directions for 30 min				
Shock resistance		IEC 60947-5-2, part 7.4.1 or 30g, 11ms in x, y and z directions for six time each				
Emitting element		Infrared LED (modulated)	Red LED (modulated)	Infrared LED (modulated)		
Housing material		Plastic housing: PBT				
Cable		Standard length 2m, other length based on request.				
Connector		EURO-style connector, Mini-style connector				
Pigtail Type		Cable, Quick disconnecter, 6" Pigtail				

Specifications(AC)

Type		Through-beam	Retroreflective (with polarizing filters)	Diffuse reflective (with background suppression) Fixed-field mode		
Item	Model No.			Q40-T060MA- xX9xxxx	Q40-L6000A- xX6xxxx-PF	Q40-D0200A- xX9xxxx-BS
Sensing range		60m	6m	200mm	400mm	600mm
Sensing object		Opaque object of ϕ 8mm or more	3-way mirror	White paper		
Hysteresis		————		20% or less of operation distance		
Supply Voltage		20 to 250V AC				
Current consumption		5mA or less				
Output		SPST solid-state AC switch; 3-wire hookup ● Applied voltage: 20 to 250V AC ● Max. Load current: 300 mA ● Voltage drop: 3V at 300mA AC, 2V at 15mA AC				
Output operation		Selectable either Light-ON Dark-ON by type number				
Short-circuit protection		Yes				
Overload current protection		Yes				
Response time		15ms				
Operation indicator		Red LED(light up when the output is activated), Thru-beam sensor is provided it on the receiver				
Pollution degree		3(Industrial environment)				
Protection		IP67(IEC)				
Ambient temperature		-25℃ to +55℃				
Ambient humidity		35 to 85% RH,Storage:35 to 85% RH				
EMC		IEC 60947-5-2, Parts 7.2.6.1.2.3 or RFI>3V/m(in 30-1000MHZ), EFT>1KV, ESD>4KV (contact)				
Voltage withstand ability		IEC 60947-5-2, Part 8.3.3.4 or 1500V AC for one min, between all supply terminals connected together and enclosure				
Insulation resistance		>20M Ω , with 1500V AC megger between all supply terminals connected together and enclosure				
Vibration resistance		IEC 60947-5-2, part 7.4.2 or 10-55HZ, 1.0mm amplitude in x, y and z directions for 30 min				
Shock resistance		IEC 60947-5-2, part 7.4.1 or 30g, 11ms in x, y and z directions for six time each				
Emitting element		Infrared LED (modulated)	Red LED (modulated)	Infrared LED (modulated)		
Housing material		Plastic housing: PBT				
Cable		Standard length 2m, other length based on request.				
Connector		Micro-style connector , Mini-style connector				
Pigtail Type		Cable, Quick disconnecter, 6" Pigtail				

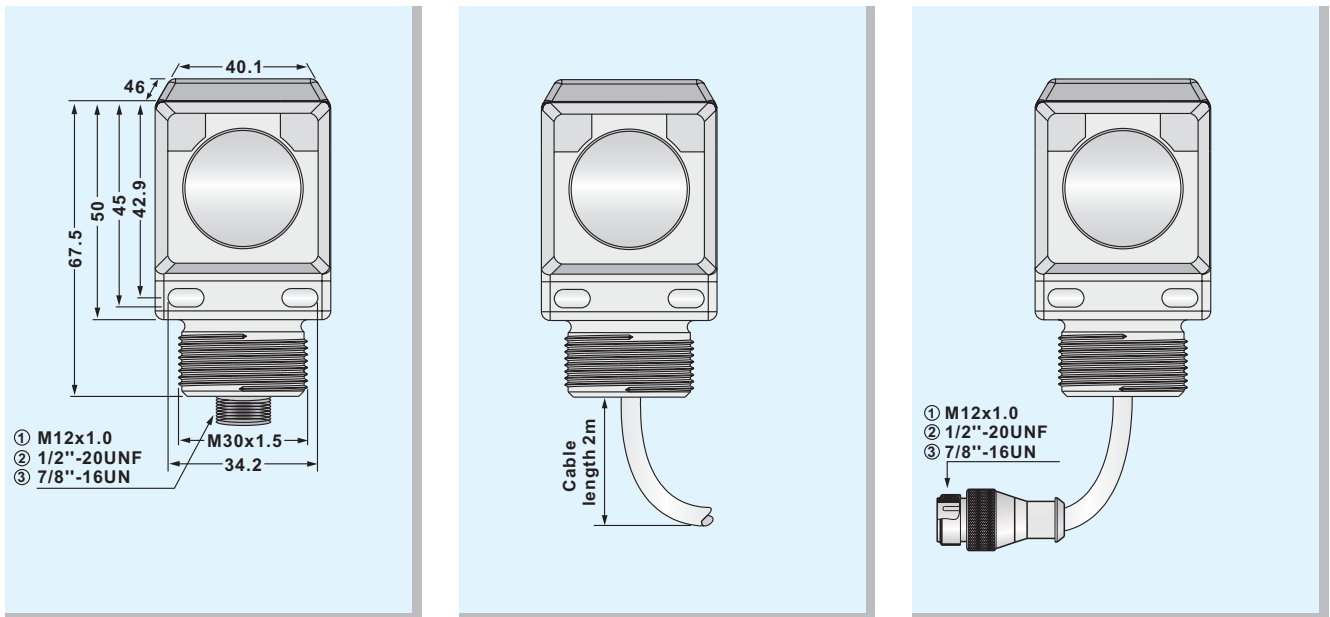
Specification (AC/DC)

Item	Type	Through-beam	Retroreflective (with polarizing filters)	Diffuse reflective (with background suppression) Fixed-field mode		
	Model No.			Q40-T060Mx- xX9xxxx	Q40-L6000x- xX6xxxx-PF	Q40-D0200x- xX9xxxx-BS
Sensing range		60m	6m	200mm	400mm	600mm
Sensing object		Opaque object of φ 8mm or more	3-way mirror	White paper		
Hysteresis		————		20% or less of operation distance		
Supply Voltage		20-250V AC or 20-250V DC				
Current consumption		30mA or less				
Output		SPDT EM Relay switch,5-wire hookup; SPST solid-state switch, 2-wire hookup; ● Applied voltage: 20-250V AC or 20-250V DC ● Max. Load current: 300 mA; SPDT EM Relay: 10A at 120VAC, 5A at 240VAC, 10A at 28VAC ● Voltage drop: 3V or less				
Time Options		No delay, On delay, Off delay, One-shot (with timer mode only)				
Time Settings		0.1...5s Variable (with timer mode only)				
Output operation		Light or dark switching delectable via switch(SPDT EM Relay) or Selectable either Light-ON Dark-ON by type number(SPST Solid-state)				
Short-circuit protection		Yes				
Overload current protection		Yes				
Response time		15ms				
Operation indicator		Red LED (light up when the output is activated), Thru-beam sensor is provided it on the receiver				
Pollution degree		3(Industrial environment)				
Protection		IP67(IEC)				
Ambient temperature		-25℃ to +55℃				
Ambient humidity		35 to 85% RH, Storage:35 to 85% RH				
EMC		IEC 60947-5-2, Parts 7.2.6.1.2.3 or RFI>3V/m(in 30-1000MHZ), EFT>1KV, ESD>4KV (contact)				
Voltage withstand ability		IEC 60947-5-2, Part 8.3.3.4 or 1500V AC for one min, between all supply terminals connected together and enclosure				
Insulation resistance		>20MΩ, with 1500V AC megger between all supply terminals connected together and enclosure				
Vibration resistance		IEC 60947-5-2, part 7.4.2 or 10-55HZ, 1.0mm amplitude in x, y and z directions for 30 min				
Shock resistance		IEC 60947-5-2, part 7.4.1 or 30g, 11ms in x, y and z directions for six time each				
Emitting element		Infrared LED (modulated)	Red LED (modulated)	Infrared LED (modulated)		
Housing material		Plastic housing: PBT				
Cable		Standard length 2m, other length based on request.				
Connector		Micro-style connector , Mini-style connector				
Pigtail Type		Cable, Quick disconnecter, 6" Pigtail				



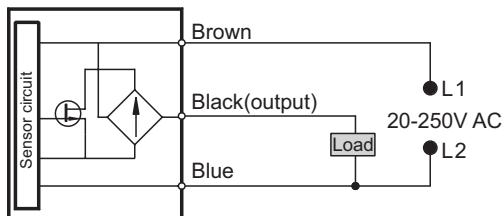
Dimension and I/O circuit diagram and Wiring diagram (AC)

Dimension



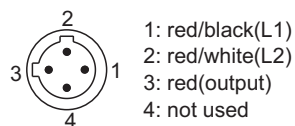
Receiver(AC)

I/O circuit diagram

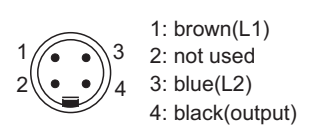


Connector pin position

MICRO-style

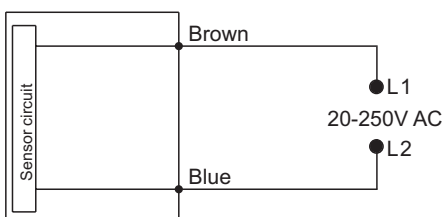


MINI-style

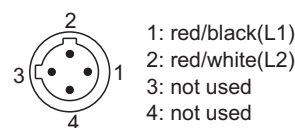


Emitter(AC)

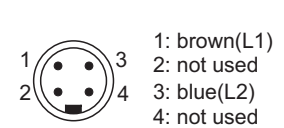
I/O circuit diagram



MICRO-style



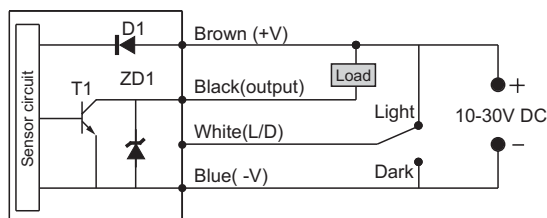
MINI-style



I/O circuit diagram and Wiring diagram (DC)

NPN output type

I/O circuit diagram



Symbol D1:Reverse polarity protection diode
ZD1:Surge absorption zener diode
T1:NPN output transistor

Connector pin position

EURO-style



1: +V
2: Light/Dark control
3: -V
4: Sensing output

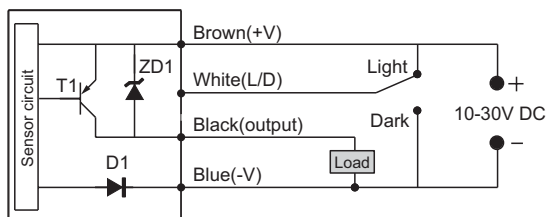
MINI-style



1: brown(+)
2: white(L/D)
3: blue(-)
4: black(output)

PNP output type

I/O circuit diagram



Symbol D1:Reverse polarity protection diode
ZD1:Surge absorption zener diode
T1:PNP output transistor

Connector pin position

EURO-style



1: +V
2: Light/Dark control
3: 0V
4: Sensing output

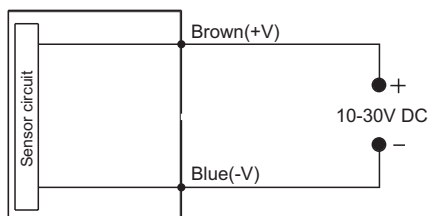
MINI-style



1: brown(+)
2: white(L/D)
3: blue(-)
4: black(output)

Emitter(DC)

I/O circuit diagram



Connector pin position

EURO-style



1: +V
2: not used
3: 0V
4: not used

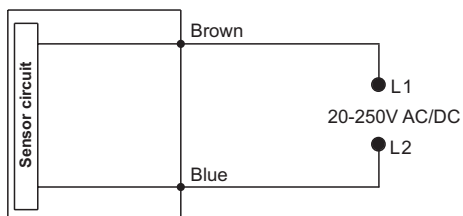
MINI-style



1: brown(+)
2: not used
3: blue(-)
4: not used

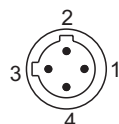
Emitter(AC/DC)

I/O circuit diagram



Connector pin position

MICRO-style



- 1: red/black(L1)
- 2: red/white(L2)
- 3: not used
- 4: not used

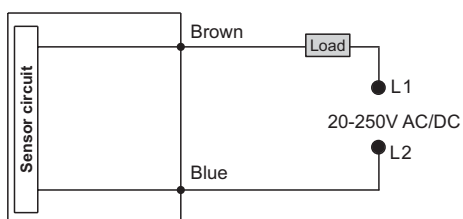
MINI-style



- 1: brown(L1)
- 2: not used
- 3: blue(L2)
- 4: not used

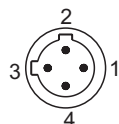
Receiver(AC/DC)

I/O circuit diagram



Connector pin position

MICRO-style



- 1: red/black(L1)
- 2: red/white(L2)
- 3: not used
- 4: not used

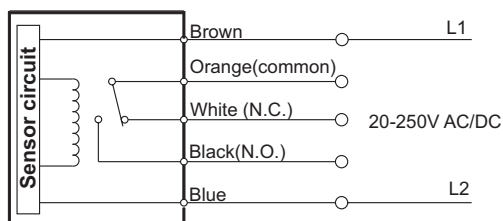
MINI-style



- 1: brown(L1)
- 2: not used
- 3: blue(L2)
- 4: not used

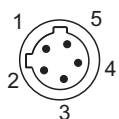
SPDT EM Relay Version

I/O circuit diagram



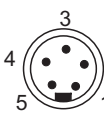
Connector pin position

MICRO-style



- 1: red/white(L1)
- 2: red(L2)
- 3: green(common)
- 4: red/yellow(N.O.)
- 5: red/black(N.C.)

MINI-style



- 1: black(N.O.)
- 2: blue(L2)
- 3: yellow/green(common)
- 4: brown(L1)
- 5: white(N.C.)