

Teflon® Photoelectric Sensor

E3HQ

Ideal For Use In Harsh Chemical Environments

- Teflon® housing and cable protect sensor against harsh chemicals
- 10 mm dia. housing fits in tight places
- Built-in amplifier allows direct connection of sensor to control interface
- Stainless steel bracket included to aid in mounting



Ordering Information

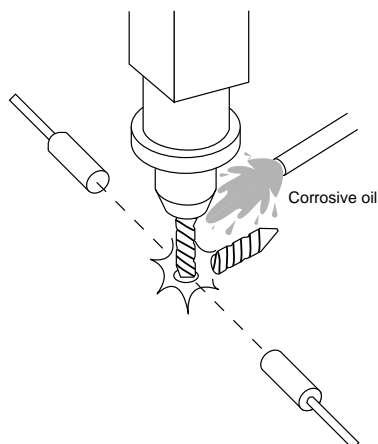
■ SENSORS

Sensing head	10 mm (0.39 in.) dia.	
Method of detection	Through-beam	
Sensing distance	80 cm (2.62 ft.)	
Operation mode	Light-ON	Dark-ON
Part number	E3HQ-CT11	E3HQ-CT12 (For 5 m cable, order E3HQ-CT12-5M)

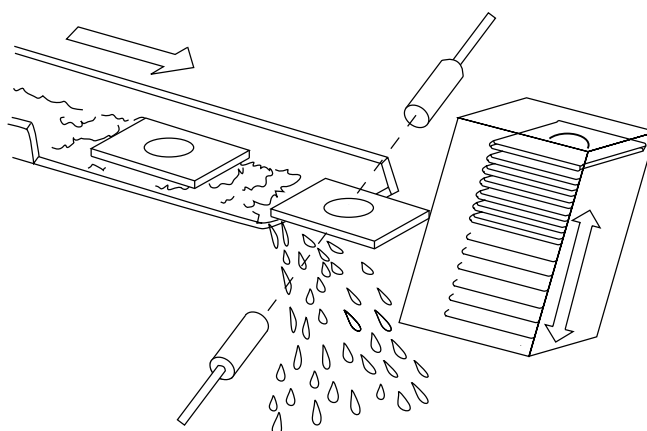
Teflon—Reg TM E.I. DuPont de Nemours and Co.

■ TYPICAL APPLICATIONS

Detection of broken drill bit



Object sensing in caustic solution

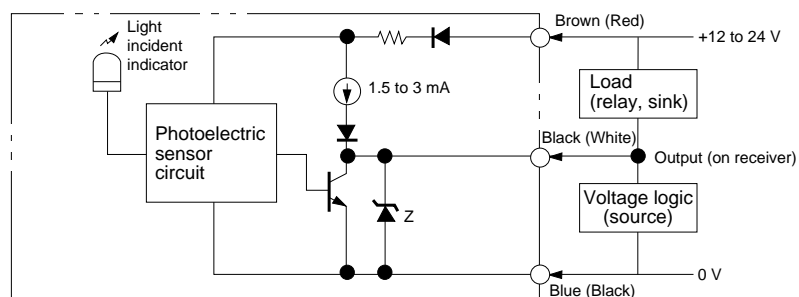


Specifications

Part number			E3HQ-CT1□
Method of detection			Through-beam
Supply voltage			12 to 24 VDC
Current consumption	Emitter		25 mA max.
	Receiver		15 mA max.
Sensing distance			80 cm (2.62 ft.)
Light source			Pulse modulated infrared LED
Detectable object type			Opaque materials, 6 mm (0.24 in.) minimum dimension
Operation mode	Light-ON		E3HQ-CT11
	Dark-ON		E3HQ-CT12
Sensitivity			Fixed
Mutual interference protection			Not provided
Control output	DC solid-state	Type	NPN transistor output with constant current source
		Max. load	Load (relay, sink) logic: 80 mA at 24 VDC Voltage (source) logic: 1.5 to 3 mA
		Max. on-state voltage drop	1 VDC at 80 mA
Response time	On		5 ms max.
	Off		5 ms max.
Circuit protection	Output short-circuit		Provided
	DC power supply reverse polarity		Provided
Indicators	Emitter		Power On (red LED)
	Receiver		Light Incident (red LED)
Materials	Sensor		Teflon-coated
	Cable		Teflon-coated
Connections	Prewired	Emitter	2-conductor cable, 2 m (6.56 ft.) length [E3HQ-CT12-5M, 5 m (16.4 ft) cable]
		Receiver	3-conductor cable, 2 m (6.56 ft.) length [E3HQ-CT12-5M, 5 m (16.4 ft) cable]
Weight	Emitter		40 g (1.4 oz.)
	Receiver		45 g (1.6 oz.)
Enclosure ratings	UL		1
	NEMA		1, 3, 4X, 6, 12
	IEC 144		IP67
Approvals	UL		—
	CSA		—
Ambient temperature	Operating		-25° to 55°C (-13° to 131°F)
	Storage		-30° to 70°C (-22° to 158°F)

■ OUTPUT CIRCUIT DIAGRAM

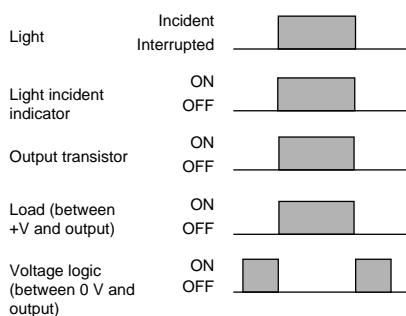
E3HQ-CT1□



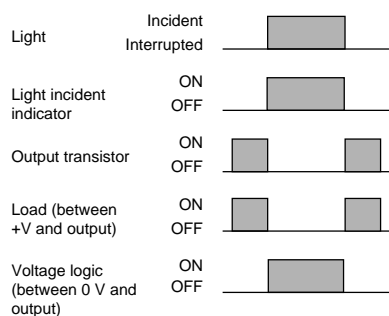
Note: IEC colors are shown first.

■ TIMING CHART

Light-ON operation mode



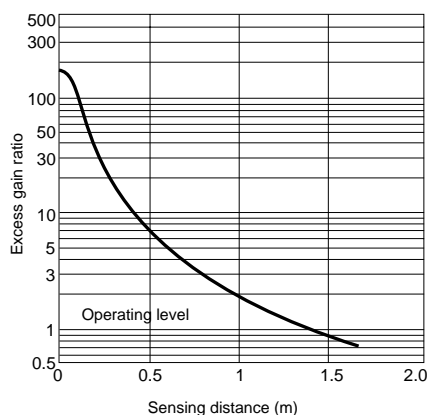
Dark-ON operation mode



Engineering Data

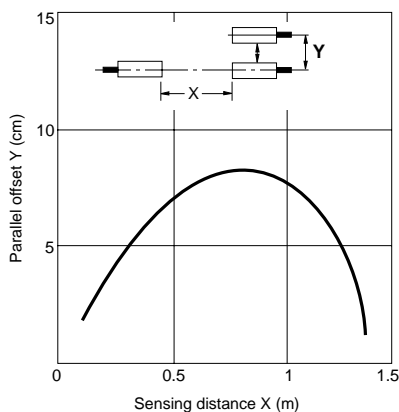
■ EXCESS GAIN RATIO

E3HQ-CT1□



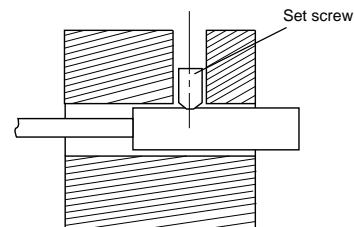
■ PARALLEL OFFSET

E3HQ-CT1□



■ TIGHTENING FORCE

Do not exceed the torque listed in the table below when tightening the set screw.

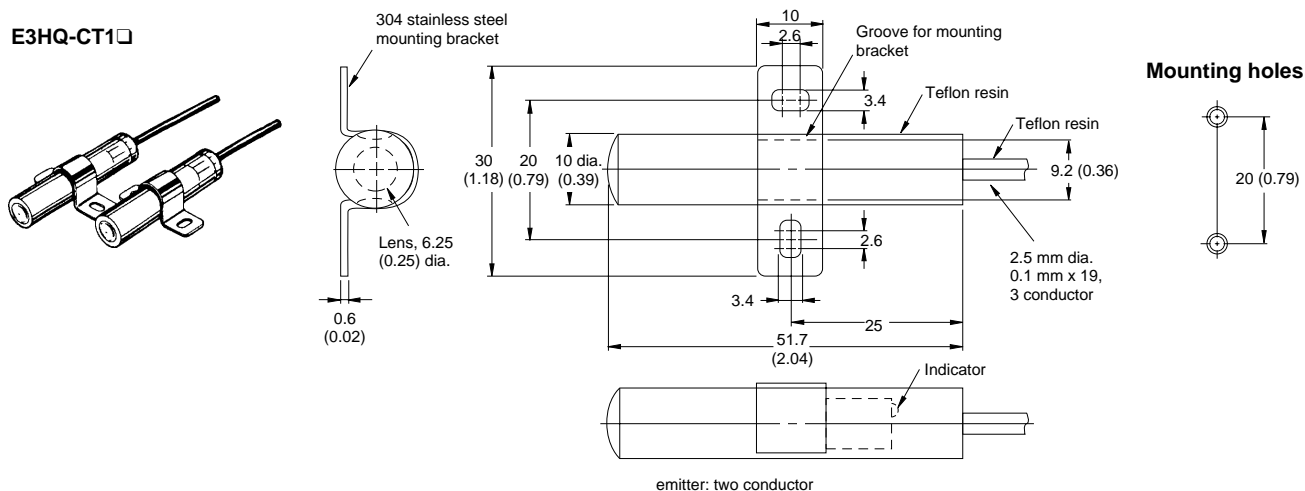


Model	Torque
E3HQ-CT1□	2 kgf-cm (1.7 in-lbs)

Dimensions

Unit: mm (inch)

E3HQ-CT1□





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