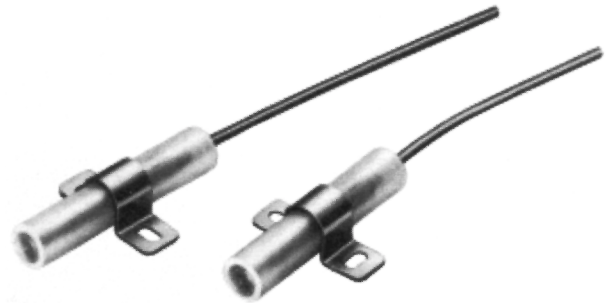


Teflon[®] Photoelectric Sensor

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

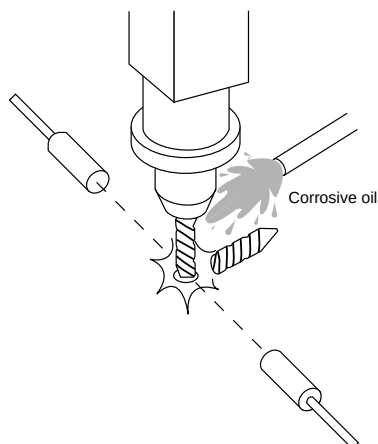
■ SENSORS

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)

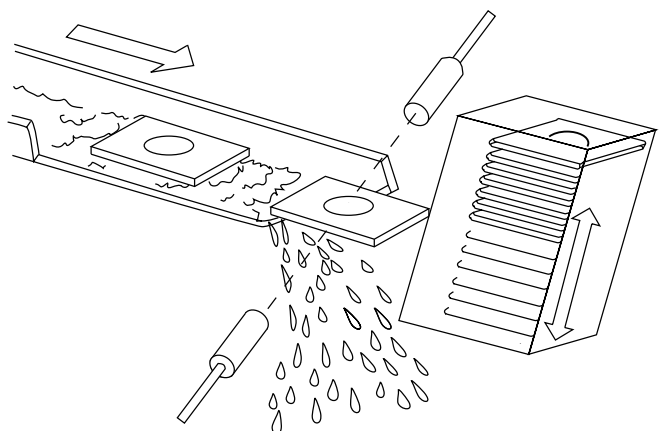
Teflon—Reg TM E.I. DuPont de Nemours and Co.

■ TYPICAL APPLICATIONS

Detection of broken drill bit



Object sensing in caustic solution

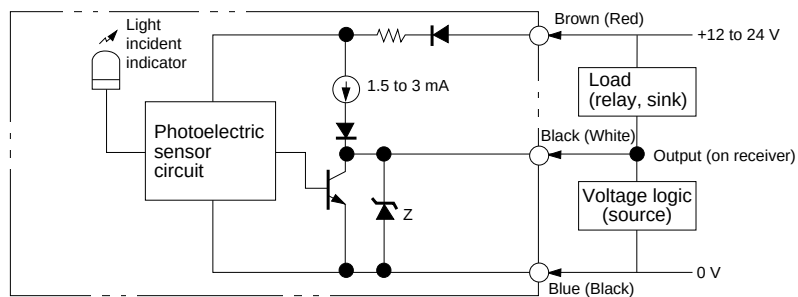


Specifications

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

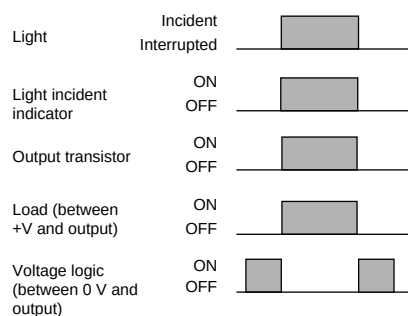
E3HQ-CT1□



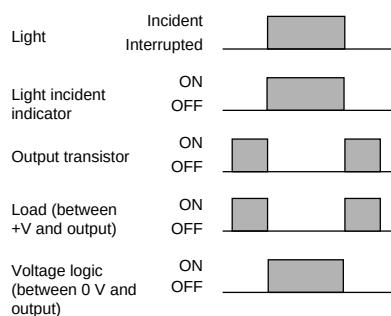
Note: IEC colors are shown first.

■ TIMING CHART

Light-ON operation mode



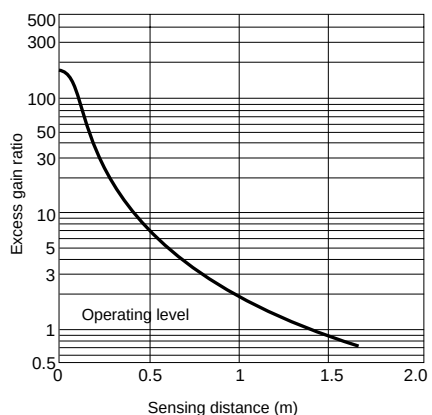
Dark-ON operation mode



Engineering Data

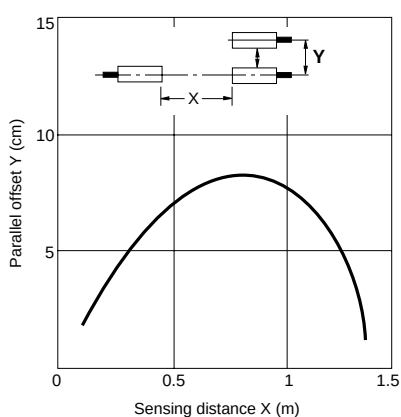
■ EXCESS GAIN RATIO

E3HQ-CT1□



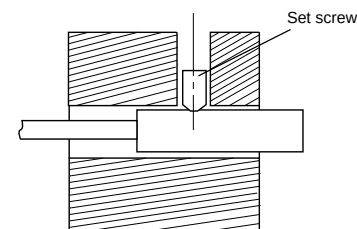
■ PARALLEL OFFSET

E3HQ-CT1□



■ TIGHTENING FORCE

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

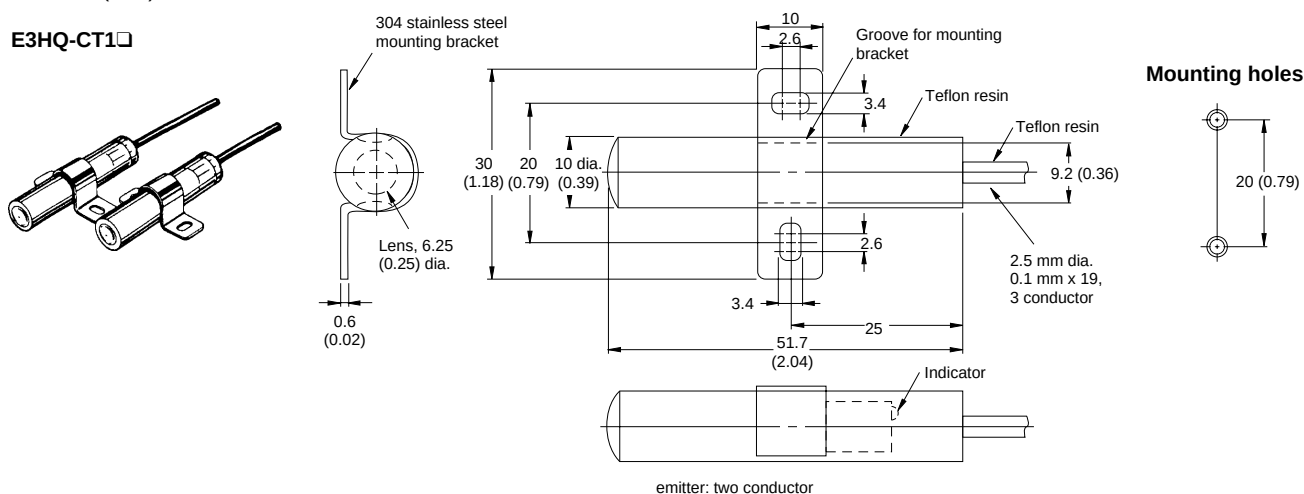


Model	Torque
E3HQ-CT1□	2 kgf-cm (1.7 in-lbs)

Dimensions

Unit: mm (inch)

E3HQ-CT1□



NOTE: DIMENSIONS ARE SHOWN IN MILLIMETERS. To convert millimeters to inches divide by 25.4.

OMRON

OMRON ELECTRONICS, INC.

One East Commerce Drive
Schaumburg, IL 60173

1-800-55-OMRON

OMRON CANADA, INC.

885 Milner Avenue
Scarborough, Ontario M1B 5V8

416-286-6465