

HTM electronics

SENSOR ACCESSORIES



WWW.HTMSENSORS.COM

SENSOR TESTER



Features

- * Wiring instructions printed on case
- * Easy connect, spring-loaded, wire terminals
- * Dual operation indicators: LED and buzzer
- * Power supply from a single 9V battery (supplied)
- * Built-in steel target for checking inductive sensors
- * Automatic switch off after approx. 30 sec. of non-use

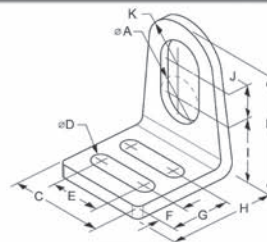
Full-function Sensor Tester

Pocket-sized sensor tester with push-type terminals makes wire connections quick and easy. Allows for fast field checks, troubleshooting and/or demonstration of 10-30 VDC sensors with a maximum sensor current drain of 50mA. 2, 3, or 4-wire and NAMUR type sensor built to DIN 19234. Confirms operation of inductive, photoelectric, capacitive and ultrasonic sensors.

Dimensional Diagram	Model Number: S-TER		Wiring Connections
	Supply Voltage	18 VDC	<p>NAMUR & 2 wire Sensors — Brown to + Blue to Signal</p> <p>3 & 4 wire Sensors — Brown to + Blue to - (Ground) White to Signal (NC) Black to Signal (NO)</p>
	Maximum Rated Load	100mA (fused)	
	Leakage Current	-	
	Short-circuit Protection	Yes	
	Over Voltage Protection	Yes	
	LED Display	Yes (2)	
	Audible Output	Yes	
	Operating Temperature	Room Temperature	
	Humidity	80% non-condensing	
	Housing Material	ABS	
	Protection Class	IP67	
	Battery	9V (2)	

STEEL MOUNTING BRACKETS

Right Angle Brackets

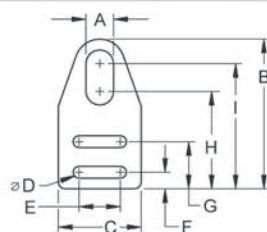


Model #	A	B	C	D	E	F	G	H	I	J	K
HRAB-08	8.10 (0.319)	25.4 (1.00)	31.8 (1.25)	5.54 (0.218)	15.9 (0.625)	7.14 (0.281)	19.0 (0.749)	31.8 (1.25)	9.83 (0.387)	7.62 (0.300)	7.95 (0.313)
HRAB-12	12.1 (0.476)	38.1 (1.50)	38.1 (1.50)		19.1 (0.750)	7.92 (0.312)	22.2 (0.875)	34.8 (1.37)	14.0 (0.555)	12.7 (0.500)	11.4 (0.450)
HRAB-18	18.1 (0.713)	50.8 (2.00)	44.5 (1.75)		25.4 (1.00)				19.1 (0.750)	15.9 (0.625)	15.9 (0.625)
HRAB-30	30.1 (0.319)	63.5 (2.50)	57.2 (2.25)	7.13 (0.281)	34.8 (1.37)	10.3 (0.406)	30.9 (1.22)	44.5 (1.75)	23.0 (0.907)	19.1 (0.750)	21.4 (0.843)

Notes

- 1) Dimensions are in mm(inch).
- 2) Models listed are zinc-plated carbon steel. For 303 stainless steel add "SS" after each model number, for example; HRAB-12-SS.
- 3) Material thickness on 8-18mm models is 1.78(.070), 30mm is 2.16(.095)
- 4) HTM will gladly design, quote and or stock your custom requirements.

Flat Brackets



Model #	A	B	C	D	E	F	G	H	I
HFAB-08	8.10 (0.319)	54.3 (2.14)	31.7 (1.25)	5.60 (0.220)	15.9 (0.625)	7.14 (0.281)	19.0 (0.749)	38.7 (1.25)	46.2 (0.387)
HFAB-12	12.1 (0.476)	69.9 (2.75)	38.1 (1.50)		19.1 (0.750)	7.92 (0.312)	22.2 (0.875)	45.7 (1.80)	58.4 (2.30)
HFAB-18	18.1 (0.713)	82.6 (3.25)	44.5 (1.75)		25.4 (1.00)			50.8 (2.00)	66.7 (2.63)
HFAB-30	30.1 (0.319)	105 (4.11)	57.2 (2.25)	7.24 (0.285)	34.8 (1.37)	10.3 (0.406)	30.9 (1.22)	49.0 (1.93)	61.2 (2.14)

Notes

- 1) Dimensions are in mm(inch).
- 2) Models listed are zinc-plated carbon steel. For 303 stainless steel add "SS" after each model number, for example; HRAB-12-SS.
- 3) Material thickness on 8-18mm models is 1.78(.070), 30mm is 2.16(.095)

CONTACT SENSOR PROBES

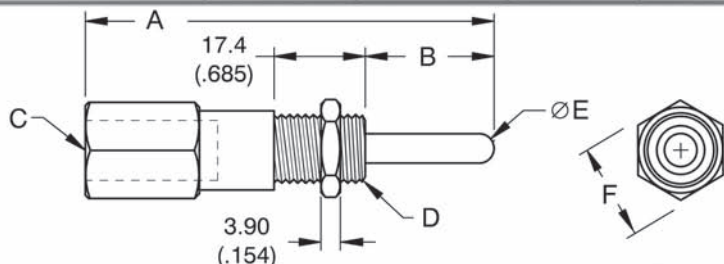


Convert Standard Proximity Sensors Into Probe-style Switches.

Features

- * Accurate and compact sensing
- * Ball-end rod reaches into tight areas
- * Accepts standard shielded 8 or 12mm sensors
- * Spring-loaded probe with Oilite® bearing
- * Wide variety of lengths and diameters
- * Tool steel probe
- * Rapid installation, simple to adjust
- * Reliable and versatile solid-state output
- * Offers new control input options

Model	A	B	C	D	E	F	Probe Travel
HPPA-08-25-03	75.6 (2.98)	25.4 (1.00)	M8 x 1 to a depth of 20.0 (0.79)	M8 x 1	3.18 (0.125)	11.1 (0.44)	Maximum: 1.93 (0.076) Activation depends on sensors' range, typically 0.13 (0.005) to 0.25 (0.010). For best results, use shielded sensor with a range of (S _n =1mm).
HPPA-08-50-03	99.6 (3.92)	50.8 (2.00)					
HPPA-08-75-03	126 (4.96)	76.2 (3.00)					
HPPA-08-100-03	150 (5.91)	102 (4.00)					
HPPA-12-25-03	75.6 (2.98)	25.4 (1.00)	M12 x 1 to a depth of 18.0 (0.71)	M12 x 1	6.35 (0.250)	15.8 (0.62)	Maximum: 1.93 (0.076) Activation: depends on sensors' range, typically 0.13 (0.005) to 0.38 (0.010). For best results, use shielded sensor with a range of (S _n =2mm).
HPPA-12-50-03	99.6 (3.92)	50.8 (2.00)					
HPPA-12-75-03	126 (4.96)	76.2 (3.00)					
HPPA-12-100-03	150 (5.91)	102 (4.00)					
HPPA-12-25-06	75.6 (2.98)	25.4 (1.00)					
HPPA-12-50-06	99.6 (3.92)	50.8 (2.00)					
HPPA-12-75-06	126 (4.96)	76.2 (3.00)					
HPPA-12-100-06	150 (5.91)	102 (4.00)					



Notes:

- 1) Damage to both probe and sensor may result if specified maximum probe travel is exceeded.
- 2) Standard probe requires 252grams (9oz.) for sensor activation. Optional "heavy" spring rate requires 1120grams (40oz) to activate sensor (add an "H" to end of model number).
- 3) For use with shielded type proximity sensors only.
- 4) Thread sensor into probe only until proper "On/Off" triggering is achieved, do not thread sensor in fully or damage will occur.
- 5) Custom lengths and diameters are available. Call for quote.

CONTACT SENSOR PLUNGERS



Heat-treated Stop Screws Create Heavy-duty Solid State Switch

Features

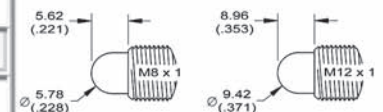
- * Available in 8, 12 and 18mm screw diameters with a wide variety of lengths
- * Heat-treated alloy steel construction
- * Mix & match with various sensors
- * Optional ball-end piston & spring rates
- * Stop travel and sense with a single device
- * Versatile outputs using any shielded sensor
- * Isolates sensor from impact damage

Model	A	B	C	D	E	F	G...	Diagram					
HBSA-08-25-08	M8 x 1	25.0 (0.98)	M8 x 1 or M12 x 1	3.16 (0.12)	5.84 (0.23)	6.26 (0.24)	Mounting Nut: 12.8 (0.50) Sensor Hex: 11.0 (0.43)	<p>Rounded Piston Dimensions</p>					
HBSA-08-50-08		50.0 (1.97)											
HBSA-12-25-12	M12 x 1	25.0 (0.98)	M8 x 1 or M12 x 1 or M18 x 1	4.32 (0.17)	9.40 (0.37)	5.94 (0.23)	15.7 (0.62)						
HBSA-12-50-12		50.0 (1.97)											
HBSA-12-75-12		75.0 (2.95)											
HBSA-12-100-12		100 (3.94)											
HBSA-18-25-18	M18 x 1	25.0 (0.98)	M8 x 1 or M12 x 1 or M18 x 1	4.32 (0.17)	6.36 (0.25)	6.36 (0.25)	22.1 (0.87)						
HBSA-18-50-18		50.0 (1.97)											
HBSA-18-75-18		75.0 (2.95)											
HBSA-18-100-18		100 (3.94)											

Part Number Legend

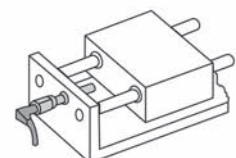
BSA - XX - XX - XX - X
 Banking Screw Adapter _____
 Barrel Thread, Dimension "A" _____
 Barrel Length, Dimension "B" _____
 Sensor Size (08, 12 or 18) _____
 "R" for rounded piston (8 & 12 only) _____

Rounded Piston Dimensions



Application

Shown below, a BSA is used as a reliable and rugged stop for a linear slide unit. Accurate and easy adjustments to end of stroke positions are possible using a standard, shielded, prox sensor:



CUSHIONED SENSOR MOUNTS



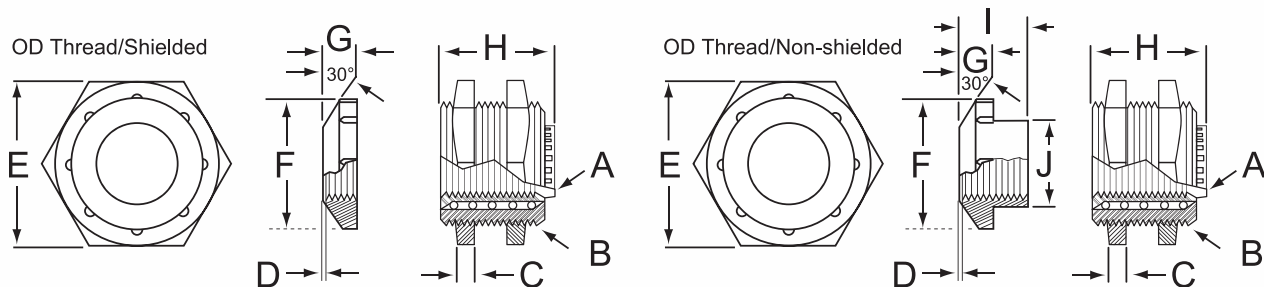
Spring-loaded Sensor Protection

Features

- * Spring-loaded housing mechanism
- * Plastic caps for shielded and unshielded sensors
- * Stainless Steel or anodized aluminum
- * Reduces downtime and replacement expenses
- * Reduces abrasion and impact damage
- * Speeds sensor installation and setup times
- * Reduces spare sensor inventories

Models	A	B	C	D	E	F	G	H	I	J	K	Notes
HSN-08	M8	M16	3.10	0.25	22.0	15.2	5.33	22.1	N/A		8.89	Model numbers with an "N" after the sensor thread size are for non-shielded sensors. Caps are plastic, housings are anodized aluminum. For stainless steel mounts, add "SS" to the end of the model number (except for LP models which are only available in stainless steel and do not require the "SS").
HSN-08N	x1	x1.5	(0.12)	(0.01)	(0.87)	(0.60)	(0.21)	(0.87)	9.51	11.0	(0.35)	
HSN-12-LP	M12	M18	4.06	0.51	24.0	22.9	6.35	21.1	N/A		12.1	
HSN-12N-LP	x1	x1	(0.16)	(0.02)	(0.95)	(0.90)	(0.25)	(0.83)	17.3	14.7	(0.48)	
HSN-18	M18	M30	5.10	0.76	35.8	29.7	8.38	29.7	N/A		12.4	
HSN-18N	x1	1.5			(1.41)	(1.17)	(0.33)	(1.17)	17.8	23.9	(0.49)	
HSN-30	M30	M47			51.0	43.7	7.62	37.3	N/A		14.5	
HSN-30N	x1.5	x1.5			(1.72)	(1.72)	(0.30)	(1.47)	22.9	38.6	(0.57)	
									(0.90)	(1.52)		

Dimensions



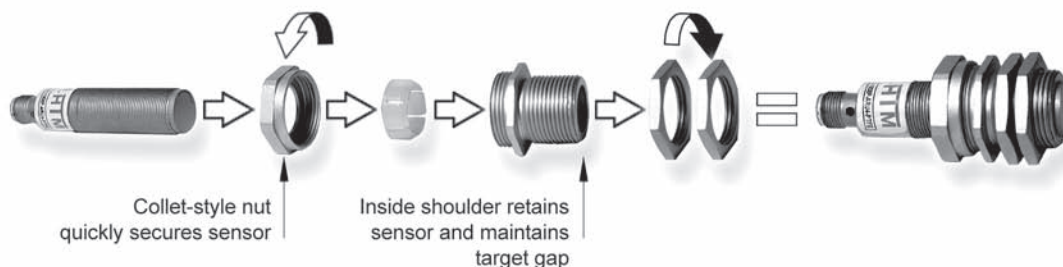
QUICK RELEASE COLLARS



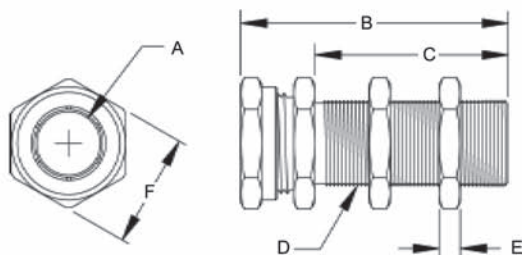
Quickly and Securely Install Sensors with a Simple Twist

Features

- * Collet-style locknut secures sensor
- * Integral stop shoulder maintains target gap
- * 8,12,18 and 30mm sizes
- * Short & long barrel lengths
- * Housing protects sensor from physical impact
- * Fast sensor change-out with no adjustment needed
- * PTFE coated models repels weld spatter

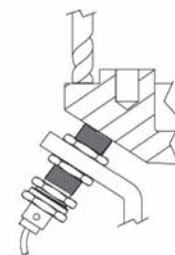


Models	PTFE Coated	A	B	C	D	E	F
HQT-08	QT-08-T	8.18	32.4 (1.28)	17.5 (0.69)	M12 x 1	3.85	16.9
HQT-08L	QT-08L-T	(0.32)	48.0 (1.93)	34.0 (1.34)		(0.15)	(0.67)
HQT-12	QT-12-T	12.1	33.7 (1.34)	19.5 (0.77)	M16 x 1	4.01	21.8
HQT-12L	QT-12L-T	(0.48)	44.8 (1.76)	30.0 (1.18)		(0.16)	(0.86)
HQT-18	QT-18-T	18.1	38.5 (1.52)	20.0 (0.79)	M24 x 1.5	4.95	30.0
HQT-18L	QT-18L-T	(0.71)	58.0 (2.28)	40.0 (1.57)		(0.19)	(1.18)
HQT-30	QT-30-T	30.1	35.0 (1.50)	20.0 (0.79)	M36 x 1.5	6.13	41.0
HQT-30L	QT-30L-T	(1.19)	58.0 (2.28)	40.0 (1.57)		(0.24)	(1.61)




Smart Rest Pad

Use Quick Release Collars as a "smart rest pad" for tooling and fixturing. With sensors protected by Quick Release Collars you can rest castings or work pieces right on your sensors. Quick Release Collars can take the load and adjustments are easy via the threaded housing. Sensors confirm part positioning to initiate machining, welding or other control cycles.



SENSOR FACE CAPS



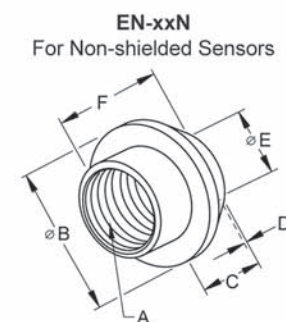
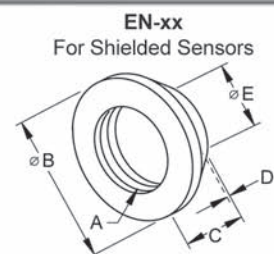
Protect Sensors From Abrasion

Features

- * Wide variety of protective materials
- * For shielded and non-shielded sensors
- * Reduces or eliminates abrasion damage
- * Lower downtime & sensor replacement costs
- * Beveled and designed for use with our Spring-loaded Mounts (see page 6)
- * Replace the cap, not the sensor

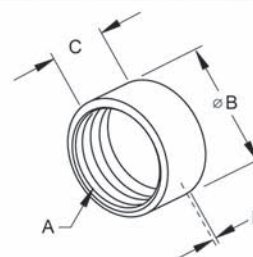
End Nose Caps

Model	A	B	C	D	E	F
HEN-08	M8 x 1	15.2 (0.60)	5.28 (0.21)	0.38 (0.015)	6.45 (0.25)	NA
HEN-08N		14.5 (0.57)	5.08 (0.20)			9.50 (0.37)
HEN-12	M12 x 1	24.4 (0.96)	6.35 (0.25)	0.76 (0.30)	11.4 (0.45)	NA
HEN-12N		22.9 (0.90)	6.35 (0.25)			17.3 (0.68)
HEN-18	M18 x 1	31.3 (1.23)	8.38 (0.33)	0.76 (0.30)	17.5 (0.73)	NA
HEN-18N		34.0 (1.34)	8.38 (0.33)			17.8 (0.70)
HEN-30	M30 x 1.5	43.7 (1.72)	7.62 (0.30)	1.02 (0.04)	29.2 (1.15)	NA
HEN-30N		44.5 (1.75)	7.87 (0.31)			22.9 (0.90)



Sensor Caps

Model	A	B	C	D
HSC-12-D	M12 x 1	14.7 (0.58)	8.90 (0.35)	0.89 (0.035)
HSC-12N-D			15.2 (0.60)	
HSC-18-D	M18 x 1	24.1 (0.95)	8.90 (0.35)	1.14 (0.045)
HSC-18N-D			17.8 (0.70)	
HSC-30-D	M30 x 1.5	38.1 (1.50)	9.90 (0.39)	2.03 (0.08)
HSC-30N-D			25.4 (1.00)	



MINIATURE LCD COUNTER

HC-8 Electronic Counter

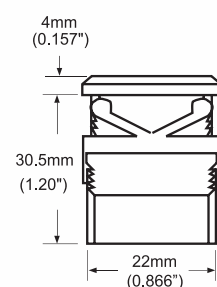
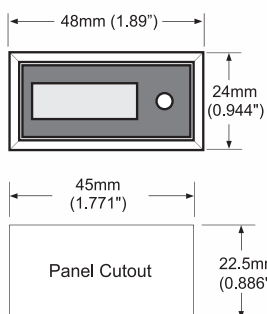


Miniature, Low Cost, LCD Electronic Counter

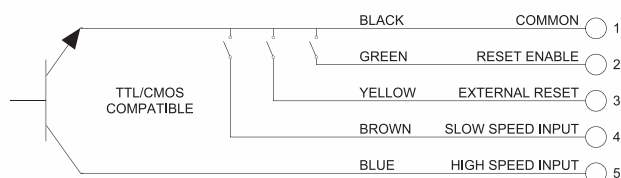
Features

- * UL, CSA listed, CE certified
- * Meets NEMA 4X and IP65 ratings
- * Long life lithium battery
- * 10 kHz Count Speed
- * Plug-in adapter with terminal block and AC pulsing (option, HC-8-AC/DC)
- * Slow speed for contact closures
- * High speed input for sinking inputs from a maximum of 18 VDC without module

Power	Internal lithium battery				
Display	8 digit black LCD, Digit size 7.00mm (0.276")				
Reset	Panel or Remote				
Temp. Range	-10 to 60°C (14 to 140°F)				
Signal Input	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5
	Common	Manual Reset Enable	External Reset	Slow Speed Count Input	High Speed Count Input
		Link to common to enable front panel reset key.	Contact closure/open collector neg. edge triggered, 0.7V threshold, minimum pulse length 15ms.	Contact closure/open collector, minimum pulse length 15ms, 30Hz max. negative edge triggered, Low: <0.7V, High: 3 to 18 V or open	Open collector input, 10kHz max., min. pulse length 50µs, 30Hz max. negative edge triggered, Low: <0.7V, High: 3 to 18 V or open
Approvals	UL File: E135458, CSA File: LR9602, CE Approved				
Material	ABS plastic				
Battery Life	10 years (calculated)				
Connection	5 pin, plug-in connector with 9" (229mm) leads supplied with counter				
Sealing	Front panel (without adapters) sealed to NEMA 4X/IP65 when used with clip mount and gasket provided				



Wiring Diagram



POWER SUPPLIES



Enclosed Switching Power Supplies

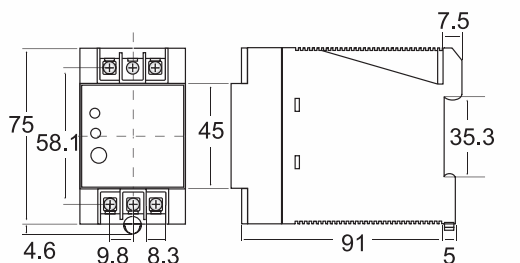
Features

- * Multiple output terminals each for positive and negative
- * 2 mounting possibilities (DIN rail and pannel)
- * LED lights up to indicate output voltage drop
- * Wide range voltage input (AC 110-220V)
- * EMC Standards: EN61000-4-2,3,4,5
- * EMI Standards: IEC-1000-3-2,3,FCC class B

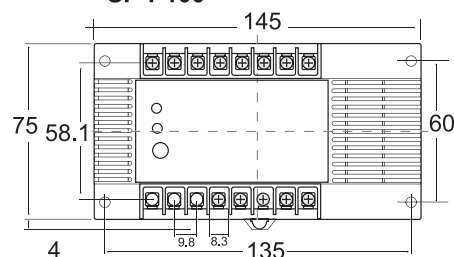
Models with low voltage output LED indicators

Model	Capacity	Output Voltage	Output Current
SP-P015S012P-FT	15w	12V	1.2A
SP-P015S024P-FT		24V	0.6A
SP-P030S024P-FT	30w	24V	1.3A
SP-P050S024P-FT	50w	24V	2.1A
SP-P100S024P-FT	100w	24V	4.2A

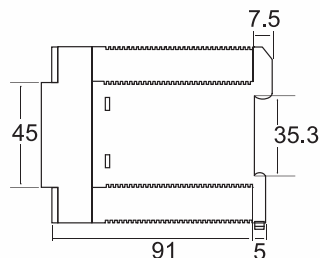
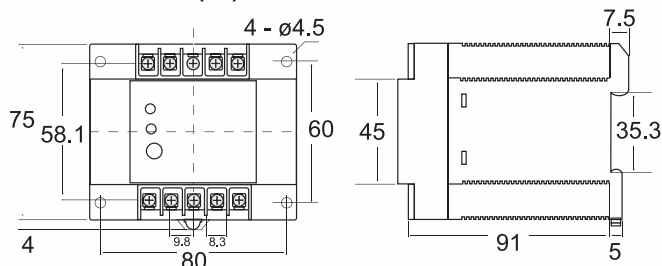
SP-P015



SP-P100



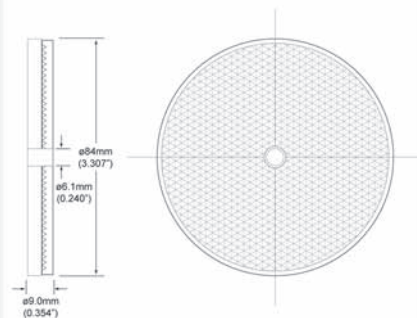
SP-P030(50)



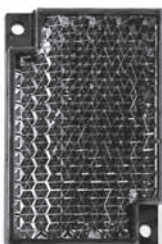
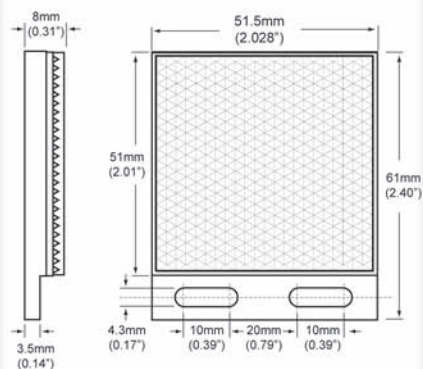
REFLECTORS



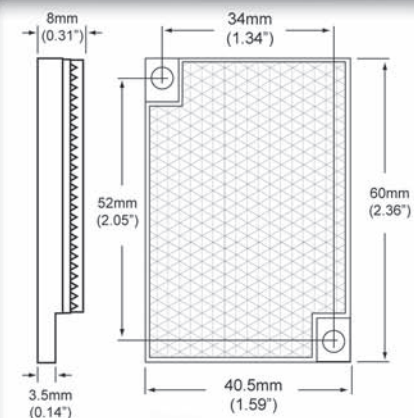
RE-D84 Reflector



RE-6152 Reflector



RE-6041 Reflector



HTM electronics

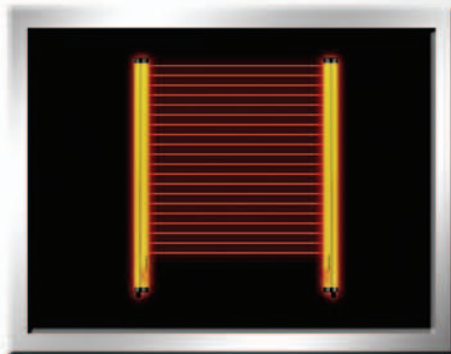
SENSOR SOLUTIONS MADE SIMPLE

PROXIMITY SENSORS



Wide Variety At Low Prices
Long Range
Metal Faced
Weld Field Immune
Miniature Proximity

SAFETY LIGHT CURTAINS



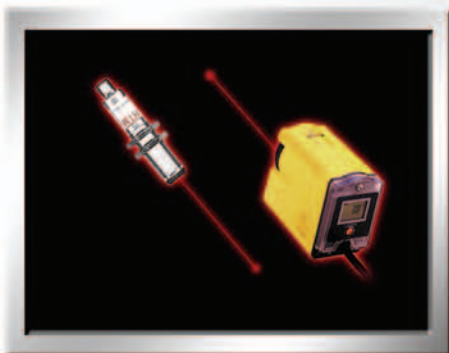
Category 4 Safety
Category 2 Safety
Finger Protection (14mm)
Hand Protection (30mm)
Body Protection (Access)

PHOTOELECTRIC SENSORS



Through Beam
Retro-reflective
Diffuse / Distance / Contrast
Background Suppression
Polarized / Clear Object

LASER SENSORS



Diffuse
Push Button Set-up
Retro-reflective
Through Beam
Temperature Sensors

CABLES & BOXES



M12 Micro & AC 1/2 20
M8 Pico & 7/8" x 16 Mini
Double Ended Cables
Distribution Boxes

SENSOR ACCESSORIES



NPN / PNP Sensor Tester
Mounting Brackets
Spring Mounts
Contact Adapters
Connectors

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HTM electronics

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