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[TT Electronics/Optek Technology](#)
[OPB725A-18Z](#)

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Long Distance Reflective Switch OPB725A-18Z



Features:

- Remote mounting in 18 mm hole
- 48" (122 cm) 26 AWG wired with mounting nuts
- Non-contact infrared switch
- Up to 24" or more reflective distance depending on object



Description:

The **OPB725A-18Z** uses a high power output LED modulated by a synchronous driver/detector logic output device. This arrangement allows for detection of various objects at distances up to 24" or more from the sensor face while at the same time providing a high level of immunity to background lighting (10000 lux typical). The assembly is designed for 18 to 24 volt operation.

The OPB725A-18Z switch includes an externally-accessible trimpot, which allows the user to reduce the sensitivity of the device by up to approximately 30% from the maximum sensitivity setting.

When an object is present in the reflective path of the device, the light reflected from the device will cause the npn output transistor to turn on and provide a low voltage output (with appropriate value pullup resistor, typically 10kohms).

The LED and detector are protected by an infrared transmissive dust protective window to allow for use in dusty environments. The assembly includes a 48" [122cm] minimum length three wire pvc jacketed cable for easy interfacing to the user system (Vcc, Ground, Output). The device is shipped with two M18 x 1mm plastic nuts to allow for easy mounting into an 18mm (+0.2/-0) hole.

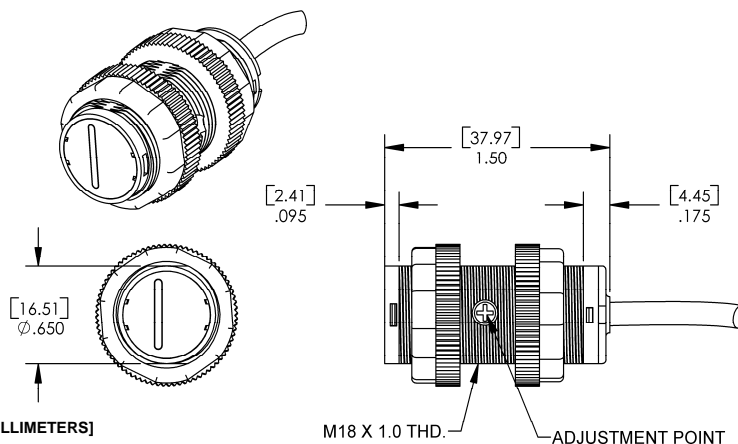
Custom electrical, cabling and connectors are available. Contact your local representative or OPTEK for more information.

Applications:

- Non-contact reflective object sensor
- Assembly line automation
- Machine automation
- Equipment security
- Door sensor
- Machine safety
- End of travel sensor

Ordering Information		
Part Number	LED Peak Wavelength	Wire Length / Size
OPB725A-18Z	850 nm	48" / 26 AWG Wire

Pin Out	
Wire Color	Function
Red	Vcc
Black	Ground
White	Inverted Open Collector



RoHS

OPTEK reserves the right to make changes at any time in order to improve design and to supply the best product possible.

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Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Operating Temperature Range	0° C to + 50° C
Storage Temperature Range	-40° C to + 80° C
Supply Voltage (V _{CC})	18 V to 24 V
Maximum Collector Voltage	30 V
Collector DC Current (Sink)	50 mA
Power Dissipation	250 mW

Electrical Characteristics (T_A = 25°C unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	CONDITIONS
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Output Photologic®

V _{OH}	High Level Output Voltage	22	-	-	V	V _{CC} = 24 V, RL = 10 K, (No Target)
V _{OL}	Low Level Output Voltage	-	-	0.8	V	V _{CC} = 24 V, RL = 10 K, D = 18" (90% Reflective Surface Kodak—EK E 152 7798)

Combined

Trip Point Distance	Typical distance with Gain at minimal value (Counter-Clockwise)	-	13	-	inches	V _{CC} = 24 V, RL = 10 K (90% Reflective Surface Kodak—EK E 152 7798) Target size 8"X8" [20cmX20cm]
	Typical distance with Gain in center position.	-	18	-		
	Typical distance with Gain at maximum value (Clockwise)	-	23	-		

Notes:

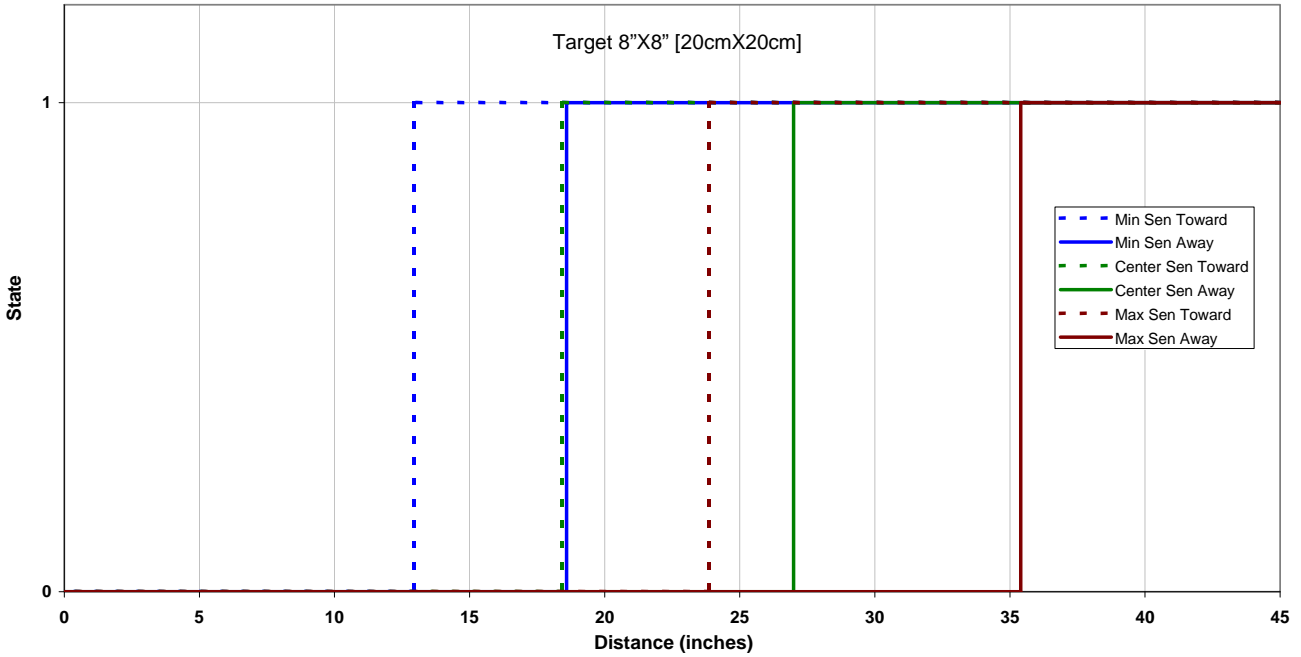
- (1) Methanol or isopropanol are recommended as cleaning agents. The plastic housing is soluble in chlorinated hydrocarbons and ketones.

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Typical Switching Characteristics



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