

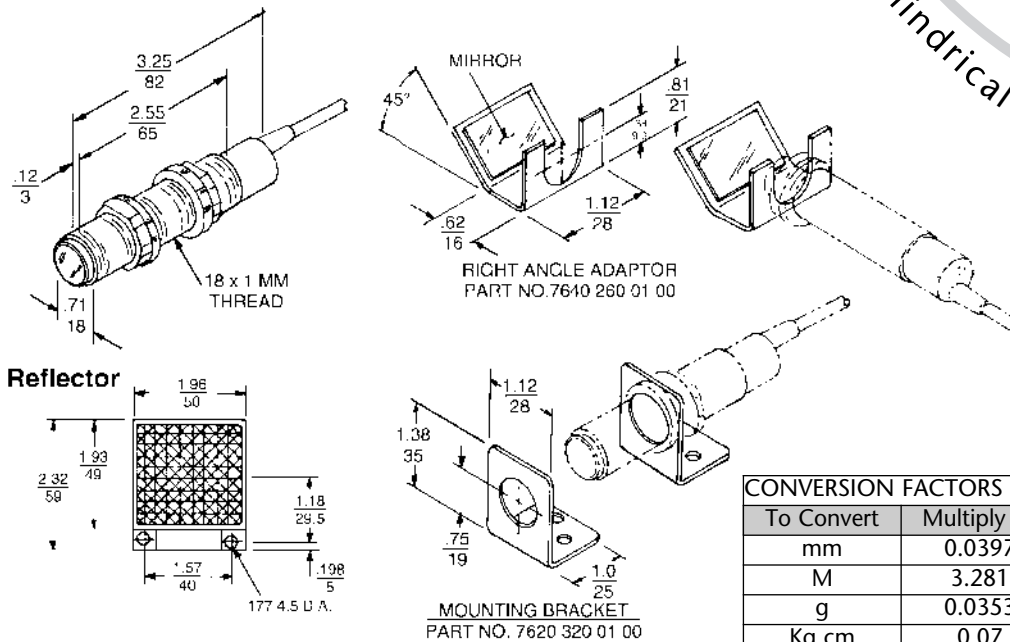
The **7640 Series** was developed to provide an *economical* sensor in an easy to mount **18mm cylindrical housing**. Available in four operating modes, these units can handle almost all of your sensing applications. They have a NEMA 4 rating and an operating temperature range from -13 to 140°F, so they can withstand the harshest environments. The 7640's transistor output is ideal for fast response and connection to PLC and other DC inputs.

- 10-30 VDC Power Supply
- Compact to Mount
- NPN Transistor Output
- NEMA 4 Housing, Potted



Cylindrical Photoelectric Sensor

**DIMENSIONS (INCHES/MILLIMETERS)**



CONVERSION FACTORS		
To Convert	Multiply By	To Obtain
mm	0.0397	inches
M	3.281	feet
g	0.0353	ounces
Kg cm	0.07	feet, pound

**SPECIFICATIONS**

	7642A Short Range Diffused	7643A Retroreflective	7644A Long Range Diffused	7645A Retroreflective Polarized
SENSING	Maximum Distance	4" (10 cm)	12' (3.5 m)*	18" (0.5 m)
	Minimum Target Size	0.2" (5 mm)	2.0" (5.1 cm)**	0.5" (1.25 cm)
INPUT	Voltage	10 to 30 VDC		
	Current (nominal)	30 mA Max.		
OUTPUT	Type	NPN or PNP Transistor, Short Circuit Protected		
	Capacity	200 mA		
	Response Time	<2 ms		
	Max. Switching Rate	500 Hz		
FEATURES	Operating Mode	Light-On / Dark-On		
	Status Indicator	Red LED		
ENVIRONMENT	Ambient Temperature	-13° to 140° F (-25° to 60° C)		
	Humidity	Maximum Relative Humidity 85%		

\* Using 2" square reflector supplied with sensor. See Ordering Codes for other reflectors.

\*\* Object size shown equals reflector size. Detection of smaller objects possible.

NOTE: All diffuse distances are accomplished with a 2" X 2" 90% reflective Kodak white card.

MODEL NUMBER >>>>>	764	04	N	2	
Type					
Short Range Diffused	2AD				
Retroreflective (IR)	3AR				
Long Range Diffused	4AD				
Polarized Retroreflective (red)	5AR				
Operation					
On/Off	04				
Power Requirements					
	10-30 VDC	N			
Beam Type					
Visible Red Polarized	1				
Infrared	2				
View					
End View	2				
Output					
Logic (DC) NPN	N				
Logic (DC) PNP	P				
Features					
Standard	X				
Quick Disconnect	Q				
Special	K				

\*Note: Mounting nuts (18mm) are shipped with units. A 2" square reflector shipped with retroreflective units.

**ACCESSORIES**

- 7650-715-01-00: Mounting Nuts (18mm)
- 7620-320-01-00: Mounting Bracket
- 7640-260-01-00: Right Angle Adapter
- 7680-025-23-00: Quick-Disconnect Mating Cable (DC only)

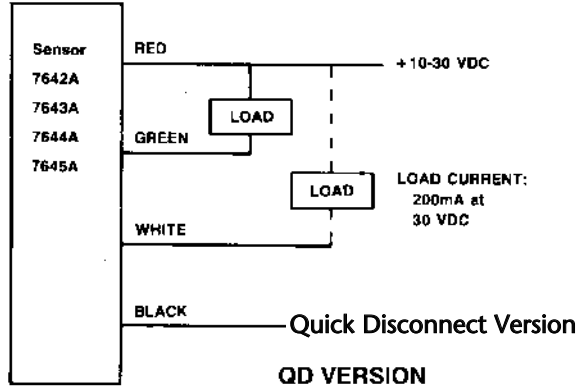
**REFLECTORS: 7645A**

- 7002-210-01-00: 3" Diameter Retroreflective Target Sensing Distance-9.0 ft.
- 7002-210-02-00: 1-5/8" Diameter Retroreflective Target Sensing Distance-5.5 ft.
- 7002-210-03-00: 7/8" Diameter Retroreflective Target Sensing Distance-5.0 ft.
- 7002-210-04-00: 5/8" Diameter Retroreflective Target Sensing Distance-3.0 ft.
- 0000-181-20-00: 1-1/2 X 3" Adhesive Backed Reflector Sensing Distance-7.0 ft.
- 0000-181-53-00: 1.4" Square Reflector Sensing Distance-8.0 ft.
- 0000-181-52-00: 2" Square Reflector\* Sensing Distance-12.0 ft.

(\*Supplied with Models 7643 and 7645)

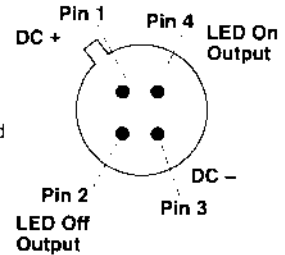
**WIRING**

**TRANSISTOR CABLED VERSION**



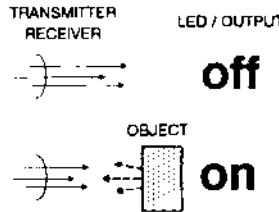
**NPN Transistor Output**

Note: The load connected to the GREEN wire is energized when the LED is on. The load connected to the WHITE wire is energized when the LED is off.

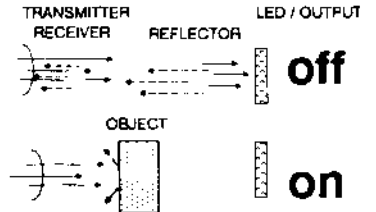


**OPERATING MODES**

**DIFFUSE REFLECTIVE**



**RETROREFLECTIVE**



**OPERATING CHARACTERISTICS**

