PD Series

Photoelectric Sensors

Features:

- Low Cost
- Non Contact Sensing
- Various Sensing Types
- Low Power Consumption
- Shock Resistant

Description:

The PD Series photoelectric sensors offer superior optical performance in a miniature 18 mm package. Designed specifically for a wide variety of applications, including food processing, packaging, and materials handling. Their miniature size makes it easy to design into any system.

The PD Series provides flawless operation in the harshest environments. Rated NEMA 4, 6, and 13, the PD Series keeps working in wet and high-pressure washdown situations even under water. The PD Series is highly immune to extreme shock and vibration, and passes the NEMA ICS 1-109 showering arc test. Even walkie-talkies won't interfere with it's performance.

PD Series sensors are available in 10-30 VDC thru-beam reflex, and proximity configurations. Infrared, visible-beam, and polarized models are available, as is a complete line of fiber optic cables. Easy alignment is provided by a variable intensity indicator (patents pending) on all models, and by an additional forward-looking alignment indicator on thru-beam models.

The unique "round and square" profile makes installation easy. It can be screwed into standard 18 mm threaded brackets. Bulkhead mounts are mounted flush against any surface. Electrical connections are made via an all purpose cable.

New From KEP—Sensi Prox…

The PD Series introduces a photoelectric breakthrough: SENSI-PROX. Unlike other proximity sensors whose signal strengths drop off gradually, KEP's SENSI PROX proximity sensor has an extremely sharp cut-off. Because of this, SENSI PROX sensors provide superior background suppression and absolute detection at precise distances.

Accessories:

Retroreflectors and mounting brackets are available to complete the installation of your PD Series sensor.

Specifications:

ELECTRICAL (all models)

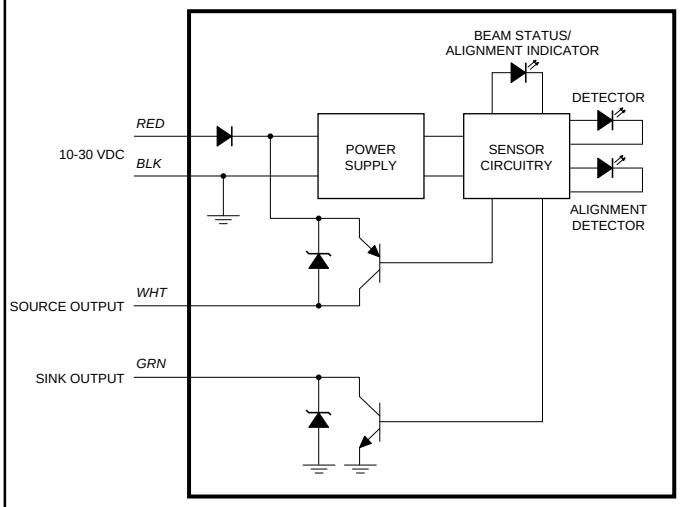
Input voltage: 10-30 VDC (above 55°C derate to 24 VDC at 70°C)
Power dissipation: 1W max
Response time:
Dark-to-light: 1 mS max
Light-to-dark: 1 mS max
Sensitivity adjustment: 20:1 ratio
Power on delay: <300 mS
Output type and rating:
Source and sink transistors:
Sourcing: 100 mA max
Sinking: 250 mA max (above 55°C, derate sinking output to 120 mA max at 70°C) Off-state voltage: 30 VDC max
Off-state leakage: 10 µA max
Light/Dark Operation: When the Lt/Dk control is in the Lt position (fully clockwise) the outputs turn on when the beam is complete. When in the Dk position, the outputs turn on when the beam is broken.
Alignment Indicator: LED intensity varies with signal strength to aid alignment. LED status:
OFF: power is off
DIM: power is on, but beam is broken
BRIGHT: power is on, and beam is complete (unbroken). Intensity varies with signal strength.

Mechanical/Environmental:

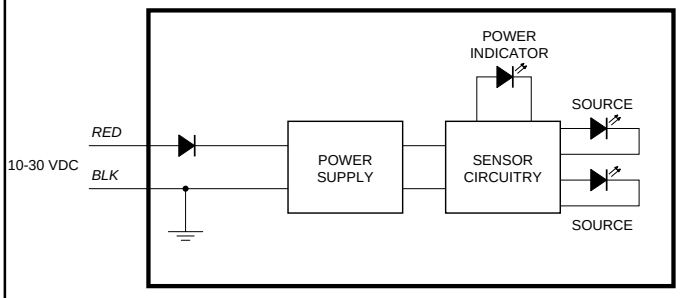
Operating temperature: -20°C to +70°C (-4°F to +158°F)
Storage temperature: -20°C to +70°C (-4°F to +158°F)
Humidity: 95% RH, noncondensing
Case material: Rigid Polyurethane
Lens material: Polycarbonate
Vibration: 30g or 0.06 in displacement, whichever is less, from 50 Hz to 2 kHz
Shock: 100g for 3 ms 1/2 sine wave pulse
Ratings: NEMA 4, 6, 13
Mounting: Side or 18 mm thru-hole (see dimensions).
Cable Length: 6 feet
Side mounting: Use #4 screws to attach the sensor to a wall or mounting bracket. Thru-hole mounting: The sensor can be mounted through an 18 mm (0.71 in) diameter hole using nuts included with the sensor.
NOTE: All sensors UL and CSA approved.

WIRING DIAGRAMS:

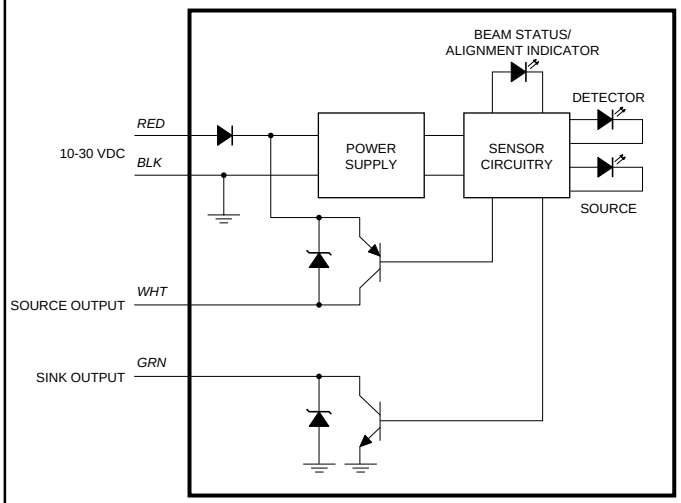
PDD25



PDS25

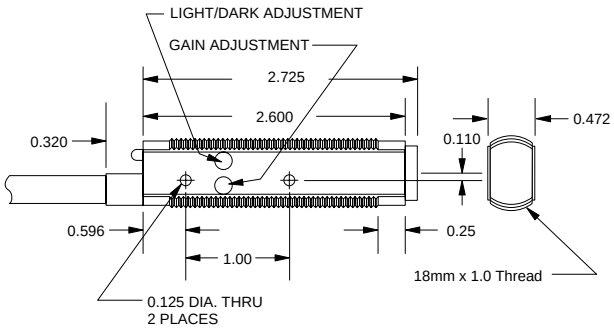


PDP02, PDP08, PDR15
PDR25, PDS00

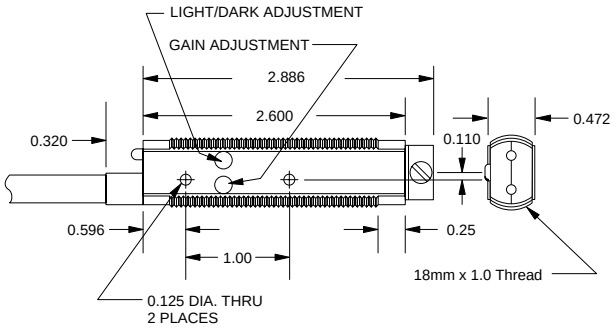


DIMENSIONAL DIAGRAMS:

PDR15



PDF00



How To Order:

EXAMPLE: PD R 25

Series
Photo Detector

Style

S = Source	25
D = Detector	25
P = Prox (Sensi Prox)	02
PS = Prox (Short Range)	08
R = Reflex (Visible)	25
RP= Reflex (Polarized)	15
F = Fiber Optic	00

Maximum Range
0X = (in inches)
XX = (in feet)

ACCESSORIES:

EXAMPLE: PDA T3.0

Series
Photo Detector Accessories

Type
F1 = Fiber Bifurcated Reflex
78" long - cut to desired length
F2 = Fiber Thru-beam (set of 2)
78" long - cut to desired length
T3.0 = Target - round reflector 3" dia. (2 per package)
T.5 = Target - round reflector 0.5" dia. (2 per package)
TX X = Target Tape - 2" (specify length _ _)
BS = Bracket - swival
BA = Bracket - 90° angle (2 per package)