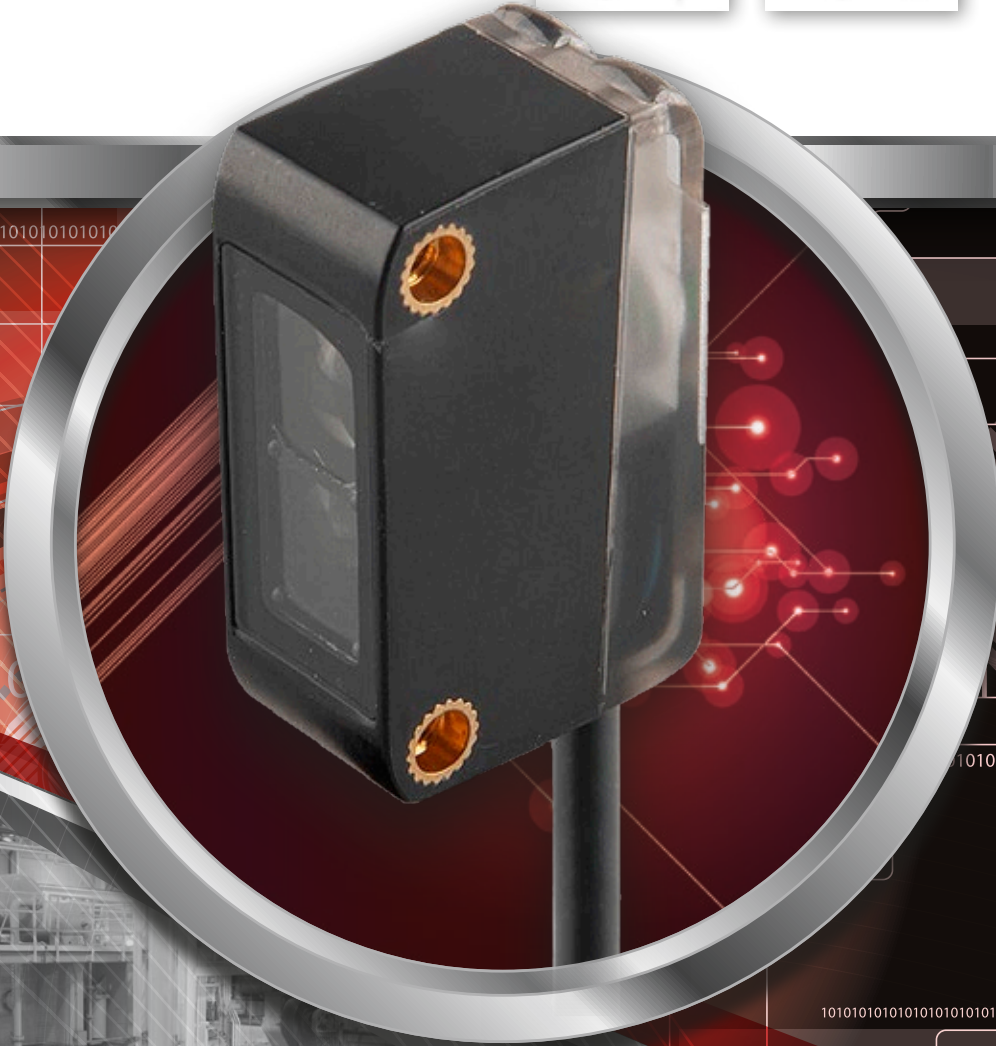


**HTM**<sup>TM</sup>  
**SENSORS**



- HIGH PERFORMANCE, SMALL RECTANGULAR HOUSING
- LASER LIGHT SOURCE
- STANDARD 25.4 mm MOUNTING HOLE DISTANCE
- MULTIPLE MODES, INCLUDING BGS, OPPOSED AND POLARIZED RETROREFLECTIVE
- AVAILABLE IN PREWIRED, M8 AND M12 PIGTAIL WITH ADJUSTABLE LIGHT-ON/DARK-ON OPERATION

# H31 PHOTOELECTRIC SENSORS

## BACKGROUND SUPPRESSION



## POLARIZED RETROREFLECTIVE



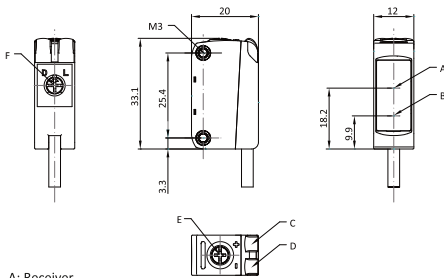
## OPPOSED



| TYPE DESCRIPTOR             | BACKGROUND SUPPRESSION                              |                            | POLARIZED RETROREFLECTIVE   | THRU-BEAM TRANSMITTER         | THRU-BEAM RECEIVER                         |
|-----------------------------|-----------------------------------------------------|----------------------------|-----------------------------|-------------------------------|--------------------------------------------|
| SENSING RANGE               | 6-150 mm                                            | 6-350 mm                   | 5 m                         | 30 m                          |                                            |
| LIGHT SOURCE                | Red Laser (650 nm) Class 1                          |                            |                             |                               | —                                          |
| LIGHT SPOT SIZE (DISTANCE)  | 1.5 mm @ 150 mm                                     | 2 mm @ 350 mm              | 3 mm @ 500 mm,<br>8 mm @ 5m | 3 mm @ 500 mm,<br>25 mm @ 15m | —                                          |
| INDICATOR LED               | Output: Red<br>Steady State: Green                  |                            |                             | Power: Green                  | Output: Red<br>Steady State: Green         |
| SUPPLY VOLTAGE RANGE (UB)   | 10-30 V DC                                          |                            |                             |                               |                                            |
| SHORT CIRCUIT PROTECTION    | Yes                                                 |                            |                             |                               |                                            |
| REVERSE POLARITY PROTECTION | Yes                                                 |                            |                             |                               |                                            |
| SWITCHING FREQUENCY         | 300 Hz                                              |                            | 800 Hz                      | —                             | 800 Hz                                     |
| OUTPUT TYPE                 | NPN or PNP (100mA Max)                              |                            |                             | —                             | NPN or PNP (100mA Max)                     |
| OPERATION MODE              | Light On / Dark On<br>Selectable by Switch          |                            |                             | —                             | Light On / Dark On<br>Selectable by Switch |
| HOUSING MATERIAL            | PC+PBT                                              |                            |                             |                               |                                            |
| LENS MATERIAL               | PC                                                  |                            |                             |                               |                                            |
| IP RATING                   | IP67                                                |                            |                             |                               |                                            |
| CABLE OR CONNECTOR          | Available in Prewired, M8 or M12 Pigtail Connectors |                            |                             |                               |                                            |
| PART NUMBERS                |                                                     |                            |                             |                               |                                            |
| NPN with M8 Pigtail         | H31-BGS-0150N-SA-M8-4P0.3                           | H31-BGS-0350N-SA-M8-4P0.3  | H31-PRET-5000N-SA-M8-4P0.3  |                               | H31-TRX-30000N-SA-M8-4P0.3                 |
| NPN with M12 Pigtail        | H31-BGS-0150N-SA-M12-4P0.3                          | H31-BGS-0350N-SA-M12-4P0.3 | H31-PRET-5000N-SA-M12-4P0.3 |                               | H31-TRX-30000N-SA-M12-4P0.3                |
| PNP with M8 Pigtail         | H31-BGS-0150P-SA-M8-4P0.3                           | H31-BGS-0350P-SA-M8-4P0.3  | H31-PRET-5000P-SA-M8-4P0.3  |                               | H31-TRX-30000P-SA-M8-4P0.3                 |
| PNP with M12 Pigtail        | H31-BGS-0150P-SA-M12-4P0.3                          | H31-BGS-0350P-SA-M12-4P0.3 | H31-PRET-5000P-SA-M12-4P0.3 |                               | H31-TRX-30000P-SA-M12-4P0.3                |
| NPN Pre-wired               | H31-BGS-0150N-SA-2M                                 | H31-BGS-0350N-SA-2M        | H31-PRET-5000N-SA-2M        |                               | H31-TRX-30000N-SA-2M                       |
| PNP Pre-wired               | H31-BGS-0150P-SA-2M                                 | H31-BGS-0350P-SA-2M        | H31-PRET-5000P-SA-2M        |                               | H31-TRX-30000P-SA-2M                       |
| TRANSMITTER                 |                                                     |                            |                             |                               |                                            |
| M8 Pigtail                  |                                                     |                            |                             | H31-TTX-30000D-M8-4P0.3       |                                            |
| M12 Pigtail                 |                                                     |                            |                             | H31-TTX-30000D-M12-4P0.3      |                                            |
| PrewireD                    |                                                     |                            |                             | H31-TTX-30000D-2M             |                                            |

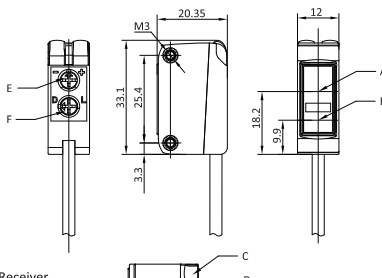
NOTE: Specifications subject to change without notification.

## BACKGROUND SUPPRESSION



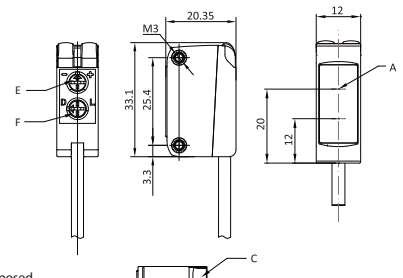
A: Receiver  
B: Emitter  
C: Output indicator  
D: Steady state indicator  
E: Adjustor for distance  
F: Adjustor for LO/DO

## POLARIZED RETROREFLECTIVE



A: Receiver  
B: Emitter  
C: Output indicator  
D: Steady state indicator  
E: Distance adjustment knob  
F: Adjustor for LO/DO

## OPPOSED



Opposed  
A: Receiver, emitter  
C: Output indicator  
D: Steady state indicator  
E: Distance adjustment knob (Receiver only)  
F: Adjustor for LO/DO (Receiver only)

H31 PHOTOELECTRIC SENSORS WITH LASER LIGHT SOURCE ENSURE PRECISE DETECTION WITH MULTIPLE MODES FOR LIMITED SPACES, WITH IP67 ENCLOSURE RATING, AND ARE BOTH DUST AND WATER-RESISTANT, ENSURING LONG-TERM RELIABILITY IN LOGISTICS, NEW ENERGY, AND PHOTOVOLTAIC APPLICATIONS.

TOLL FREE: 1-800-644-1756