



## EM-030

Main Unit, Shielded Type, f3, NPN



\*Please note that accessories depicted in the image are for illustrative purposes only and may not be included with the product.

## Specifications

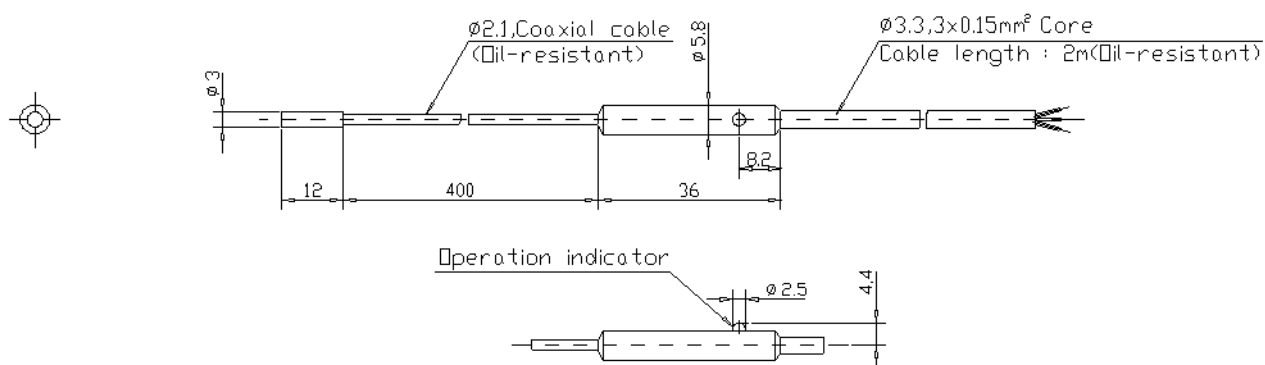
|                                         |                     |                                                                                  |
|-----------------------------------------|---------------------|----------------------------------------------------------------------------------|
| Model                                   |                     | EM-030                                                                           |
| Type                                    |                     | Shielded                                                                         |
| Shape                                   |                     | 3 mm 0.12" dia Cylindrical.                                                      |
| Detecting distance                      |                     | 0.6 mm 0.02" ±15%                                                                |
| Detectable object                       |                     | Ferrous metals (see Characteristics for non-ferrous metals)                      |
| Standard target<br>(iron, t=1 mm 0.04") |                     | 5 x 5 mm 0.20"                                                                   |
| Hysteresis                              |                     | 10% max. of detecting distance                                                   |
| Response frequency                      |                     | 1.2 kHz                                                                          |
| Operation mode                          |                     | N.O.                                                                             |
| Temperature characteristics             |                     | ±10% max. of detecting distance at +23°C 73.4°F, within -10 to +70°C 14 to 158°F |
| Display indicator                       |                     | Red LED                                                                          |
| Output                                  |                     | NPN                                                                              |
| Control output                          |                     | NPN: 200 mA (40 V) max., Residual voltage: 1 V max.                              |
| Housing                                 |                     | Stainless steel                                                                  |
| Rating                                  | Power voltage       | 10.8 to 30 VDC, Ripple (P-P) 10 % or less*1                                      |
|                                         | Current consumption | 12 mA or less                                                                    |
| Environmental resistance                | Enclosure rating    | IP67                                                                             |
|                                         | Ambient temperature | -25 to +80 °C -13 to 176 °F (No freezing)                                        |
|                                         | Relative humidity   | 35 to 95 % RH (No condensation)                                                  |
| Weight                                  |                     | Approx. 36 g (including nuts and 2-m 6.6' cable)                                 |

\*1 Make sure that the power voltage stays within 10.8 V to 30 V even if it is affected by ripple effects.

## Dimensions

\* Download CAD file or product manual for larger image/text and more detail.

EM-030



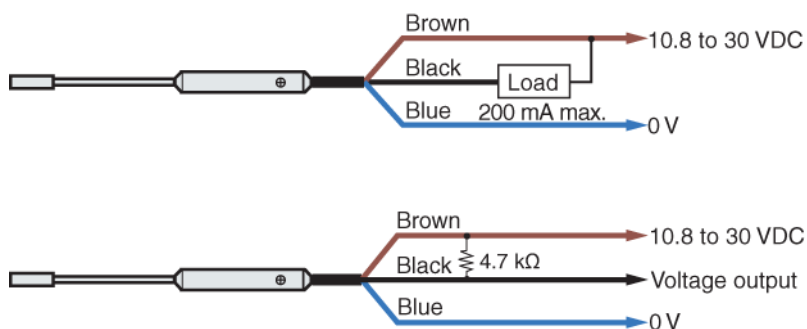
## I/O Circuit Connection diagram

\* Download CAD file or product manual for larger image/text and more detail.

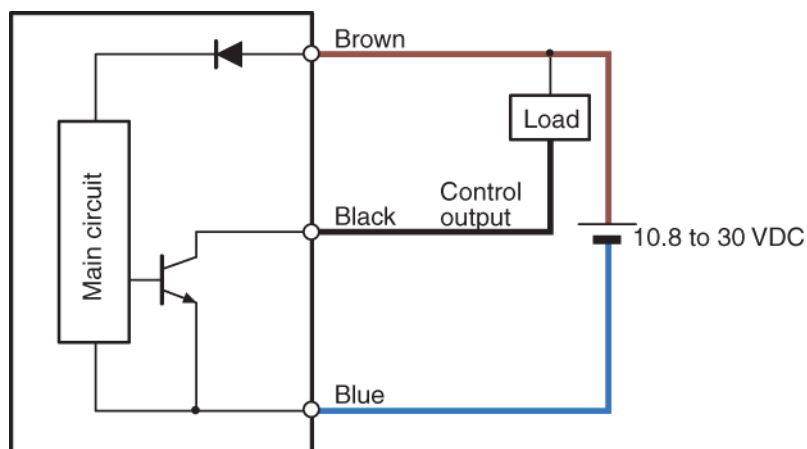
When driving a direct load (NPN output type)

&

When connecting to a voltage input device  
(NPN output type)

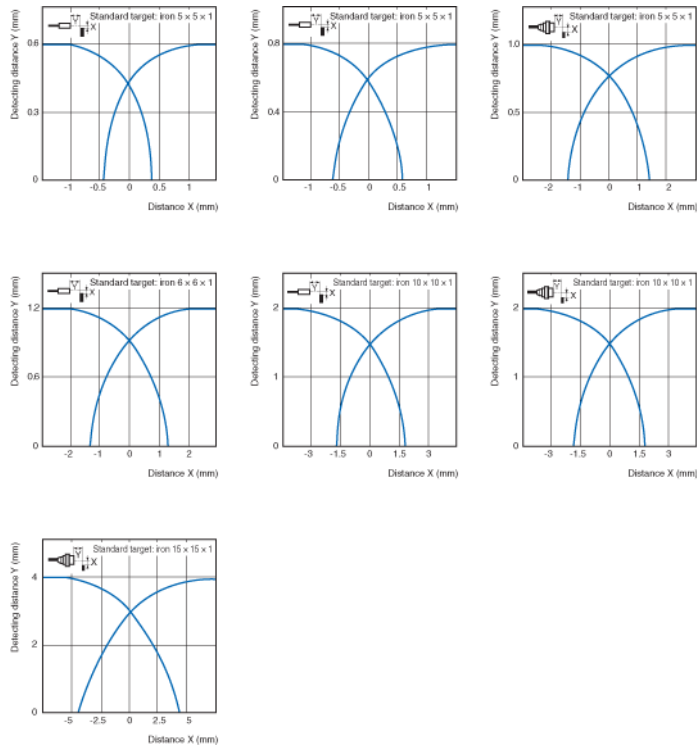


NPN



# Characteristics

\* Download CAD file or product manual for larger image/text and more detail.



Detecting distance vs. size and material of target (Typical)

