

INDUCTIVE SENSORS FOR HARSH ENVIRONMENTS

Absolute reliability even under the most difficult application conditions – that is the key benefit of the inductive sensor series WD (wash-down).

Securely protected by a PVDF front cap, a special Viton seal and a stainless steel housing, these sensors not only fulfil but even exceed the requirements of protection degree IP68 and IP69K¹⁾.

All cable devices are equipped with threads for connection of protective tubing that prevents mechanical damage of the cable. All materials are suited to installations in the food industry.

Wash-down sensors enhance system availability significantly due to their stable and interference-immune electronics combined with an extended switching distance and a large temperature range.

Temperature, shock and continuous storage testing at high and low temperatures plus an insulation test with 0.5 kV clearly demonstrate that these sensors are ideally adapted to wash-down applications and even withstand frequent steam or pressure jet cleaning without suffering harm.

With their robust stainless steel housings, full impermeability and excellent resistance to oils, cooling agents and lubricants, these sensors also perform perfectly in machine engineering applications.



Wash-down sensors are available in M12, M18 and M30 housing styles and in all electrical and connection modes (DC pnp/npn, connector types, cable versions or proven terminal chamber technology). The large variety of this line meets all application needs.

- For hostile environmental conditions
- High degree of protection: IP68 and IP69K¹⁾
- PVDF front cap suited to the specific conditions in the food industry, resistant to aggressive cleaning agents, with special Viton o-ring sealing
- Resistant to high pressure cleaning according to EN 60529
- Stainless steel housing
- Pressure resistant front cap
- Increased switching distances of up to 20 mm
- Cable devices with connection for flexible tubing for extra cable protection
- Connection via terminal chamber, cable or connector M 12 x 1

¹⁾ IP69K according to DIN 40050, part 9; IP68 according to EN 60529, plus:

- 24 h continuous storage at +70 °C
- 24 h continuous storage at -25 °C
- 7 days continuous storage in water at a depth of 3 m
- 10 temperature shock cycles -25 to +75 °C

Inductive Sensors for Harsh Environments

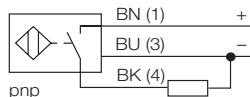
Types and Data

General data

- Protection degree IP68/IP69K
- Temperature range 0...85 °C
- Cable devices with thread for connection of protective tubing

Electrical data

Supply voltage U_B 10...30 VDC
 Rated operational power I_o 200 mA[Ⓢ]
 No-load current $I_0 \leq 10$ mA
 Switching status LED



(also available with npn output)

Materials and cable cross sections

Sensor housing stainless steel A2 (1.4301)
 Active face PVDF
 End cap EPTR
 Cable LifYY
 - cross section 3 x 0.34 mm²

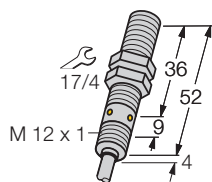
Switching distance 3 mm, flush mounting

Threaded barrel M 12 x 1

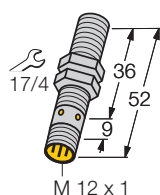
Housing diameter 12 mm
 Fixing torque 15 Nm
 Max. pressure on front cap 20 bar



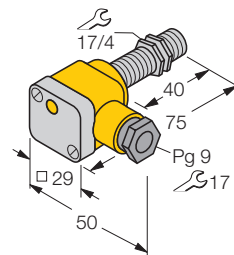
Bi3-EM12WD-AP6X



Bi3-EM12WD-AP6X-H1141



Bi3-EM12WDSK-AP6X



Switching distance 5 mm, non-flush mounting (without drawing)

Ni5-EM12WD-AP6X

Ni5-EM12WD-AP6X-H1141

Ni5-EM12WDSK-AP6X

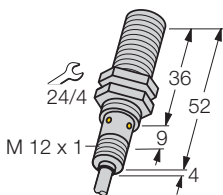
Switching distance 7 mm, flush mounting

Threaded barrel M 18 x 1

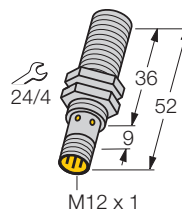
Housing diameter 18 mm
 Fixing torque 30 Nm
 Max. pressure on front cap 15 bar



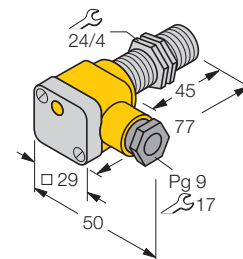
Bi7-EM18WD-AP6X



Bi7-EM18WD-AP6X-H1141



Bi7-EM18WDSK-AP6X



Switching distance 10 mm, non-flush mounting (without drawing)

Ni10-EM18WD-AP6X

Ni10-EM18WD-AP6X-H1141

Ni10-EM18WDSK-AP6X

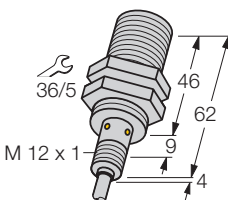
Switching distance 12 mm, flush mounting

Threaded barrel M 30 x 1,5

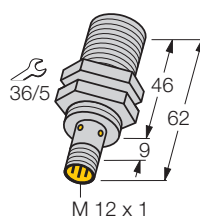
Housing diameter 30 mm
 Fixing torque 100 Nm
 Max. pressure on front cap 10 bar



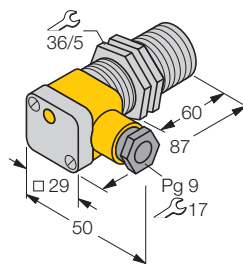
Bi12-EM30WD-AP6X



Bi12-EM30WD-AP6X-H1141



Bi12-EM30WDSK-AP6X



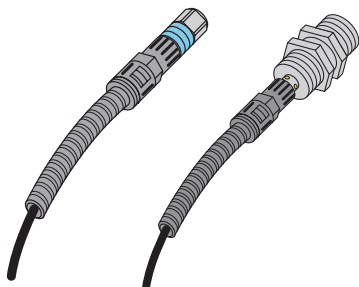
Switching distance 20 mm, non-flush mounting (without drawing)

Ni20-EM30WD-AP6X

Ni20-EM30WD-AP6X-H1141

Ni20-EM30WDSK-AP6X

Mounting example



Protective flexible tubing for cable devices and connectors

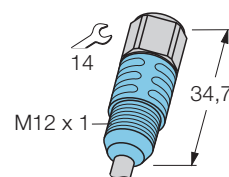
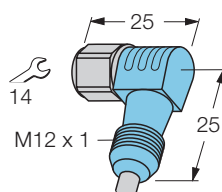
Accessories

(please order separately)

Connectors

WWAKEG4-2/P00

WAKEG4-2/P00



Resistant version with stainless steel hexagon nut and PVR cable, protection degree IP68/IP69K

