

# Sensors Part Number Key

<b>B</b>	<b>i</b>	<b>10</b>	<b>U</b>	<b>-</b>	<b>G</b>	<b>T</b>	<b>30</b>	<b>-</b>	<b>A</b>	<b>DZ</b>	<b>30</b>	<b>X2</b>	<b>Wiring Option*</b>	<b>Special Option Code*</b>
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**Mounting**

- B = embeddable
- BID = high pressure sensor
- N = nonembeddable
- S = slot
- W = position

**Principle of Operation**

- C = capacitive
- CC = capacitive, (ESD immune)
- CF = capacitive (noise immune)
- CT = teach programmable
- I = inductive
- IM = inductive magnet operated

**Rated Operating Distance (mm)**

**Sensing Characteristics**

- F = front sensing on Q34 sensor
- FE = ferrous only
- NF = nonferrous only
- R = ring sensor
- T = top sensing on Q34 sensor
- U = Uprox® sensor

**Housing Material Modifier**

- E = stainless steel

**Housing Style**

**Barrel - Metal**

- G = full threading, generally chrome plated brass
- H = smooth, chrome plated brass or stainless steel
- HS = smooth side sensor
- M = partial threading, chrome plated brass

**Barrel - Plastic**

- K = smooth
- P = full threading
- S = partial threading
- T = right angle

**Rectangular**

- Q = metal or plastic, various rectangular styles
- QV = plastic, variable position
- QF = plastic, flat, rectangular style

**Limit Switch**

- CA = Stubby, short aluminum housing, connector
- CK = Stubby, short plastic housing, connector
- CP = Combiprox, plastic housing, terminal chamber

**Slot**

- K = slot sensor, plastic housing

**Ring/Tube**

- S32 = large plastic rectangular, static or dynamic output
- Q = small rectangular plastic housing, static output
- W = small plastic housing, dynamic output
- TS = tube sensing, plastic housing

**Permaprox Cylinder Sensors**

- AKT = plastic, clamp-on; active face centered
- IKE = metal, clamp- or strap-on; active face on end
- IKM = metal, clamp- or strap-on; active face middle
- IKT = metal, clamp- or strap-on; active face centered
- UNT = plastic, groove mount or strap-on; active face on end
- UNR = plastic, round groove, top load, active face on end
- UNC = plastic, round groove, end load; active face on end
- KST = metal/plastic, strap-on; active face centered
- NST = plastic, clamp-on; active face centered
- PSM = metal/plastic, strap-on; active face on end
- PST = plastic, strap-on; active face on end

**Cylinder Rotatable**

- CRS = cylinder rotatable sensor with probe, metal

**Primary Barrel Modifier**

- T = PTFE coated

**Additional Features**

- LD = load dump
- T = teach buttons

**Number of LEDs**

- (blank) = no LEDs
- X = 1 LED, signal
- X2 = 2 LEDs, power and signal
- X3 = 3 LEDs, power and two separate signals

**Voltage Range**

**AC/DC: (No SCP\*\*)**

- 3 = 20-250 VAC, 10-300 VDC
- 14 = 20-132 VAC, 10-140 VDC
- 31 = 20-250 VAC, 10-300 VDC, plastic barrel, 100 mA
- 33 = 20-250 VAC, 10-300 VDC, grounded metal barrel, 100 mA

**AC/DC: (Latched SCP)**

- 30 = 20-250 VAC, 10-300 VDC 400 mA
- 32 = 20-250 VAC, 10-300 VDC 100 mA

**DC: (Polarity Protected and SCP)**

- 4 = 10-65 VDC
- 5 = 4.75-5.25 VDC
- 6 = 10-30 VDC
- 7 = 10-30 VDC, TTL compatible, No SCP
- 8 = 19.2-28.8 VDC
- 41 = 10-55 VDC
- 44 = 10-55 VDC
- 45 = 8.6-65 VDC

**Output**

- 2APS = 2 x OSSD, N.O., PNP
- D = 2-wire DC (transistor output)
- DZ = 2-wire AC/DC, (power MOSFET output)
- G = 2-wire DC, low voltage drop
- N = NPN transistor (current sinking)
- P = PNP transistor (current sourcing)
- R = relay output
- Z = 2-wire AC or 2-wire AC/DC

**Output Function**

- A = normally open (N.O.)
- DA = dynamic output (ring sensor), normally open
- F = connection programmable (N.O. or N.C.)
- IOL = IO-Link
- LI = linear analog output, current only
- LU = linear analog output, voltage only
- LIU = linear analog output, voltage and current
- R = normally closed (N.C.)
- SIU = analog output (non-linear)
- U = programmable by jumper (N.O. or N.C.)
- V = complementary outputs: one N.O., one N.C.
- Y0 = NAMUR output, requires switching amplifier
- Y1 = NAMUR output, requires switching amplifier, ATEX Approved

**Secondary Barrel Modifier**

- CA = conduit adaptor connection
- E = extended barrel length
- F = stainless steel face
- H = Stoneface cap material
- K = short barrel length
- M = medium barrel length
- S = side sensing
- SE = extended length (rectangular only)
- SK = right-angle terminal chamber
- SR = straight terminal chamber
- T = barb fitting at cable entry
- TC = terminal chamber
- WD = washdown IP67/IP68/IP69K

**Housing Diameter or Height (mm) or CRS Probe Length (mm = Number/10)**

**NOTE:**

Part number keys are to assist in identification only. Verify new part numbers with factory; some configurations are not possible. \* See reverse side for wiring options and special option codes. \*\*SCP = short-circuit and overload protection

# Wiring Options

## A) Connectorized Sensor

Bi2-M12-AN6X - H1 1 4 1

### Connector Family

- B1 = Minifast, 7/8"-16UN, metal, male
- B2 = Minifast, 7/8"-16UN, plastic, male
- B3 = Microfast, 1/2"-20UNF, metal, male
- H1 = Eurofast, M12x1, metal or plastic, male
- V1 = Picofast, M8x1, snap and threads, metal or plastic, male

### Factory Code

- 0 = non-standard wiring
- 1 = standard wiring
- 3 = N.C. DC output on pin 4
- 4 = N.O. 2 wire DC output on pin 4

### Connector/Sensor Transition

- 1 = straight
- 3 = straight with adapter
- 4 = right angle with adapter

### Number of Pins

- 3 = 3
- 4 = 4
- 5 = 5

## B) Potted Cable

Bi2-M12-AN6X 7M

### Cable Length

- (blank) = 2 meter cable
- 7M = 7 meter cable
- \*M = custom cable lengths available

## C) Potted Cable with Molded Connector

Bi2-M12-AN6X - 0.2 - RS 4.21T

### Cable Length

- 0.2 = 0.2 meters (minimum)
- 2M = 2 meters
- \*M = custom cable lengths available

### Standard Cordset Connector

- AC:** RSM30 = Minifast, 7/8"-16UN, metal, male, 3-conductor
- RSM40 = Minifast, 7/8"-16UN, metal, male, 4-conductor
- SB3T = Microfast, 1/2"-20UNF, metal, male, 3-conductor
- DC:** RS4T = Eurofast, M12x1, metal or plastic, male, 3-conductor
- RS4.2T = Eurofast, M12x1, metal or plastic, male, 2-conductor, pins 3 & 4
- RS4.21T = Eurofast, M12x1, metal or plastic, male, NAMUR, 2-conductor
- RS4.23T = Eurofast, M12x1, metal or plastic, male, 2-conductor, pins 1 & 4
- RS4.4T = Eurofast, M12x1, metal or plastic, male, 4-conductor
- PSG3 = Picofast, snap, plastic, male, 3-conductor
- PSG3M = Picofast, M8x1, metal, male, 3-conductor

# Special Option Codes

## Option Codes for Special or Custom-Built Sensors

Bi 2-S12-AN7X /S100 OR Bi10R-W30-DAN6X-H1141 /F2

- /S34 = weld field immune
- /S90 = TPU cable
- /S97 = -40 °C (-40 °F) operating temperature
- /S100 = +100 °C (+212 °F) operating temperature
- /S120 = +120 °C (+248 °F) operating temperature
- /S139 = submersible
- /S250 = without potentiometer (capacitive only)
- /S907 = +160 °C (+320 °F) operating temperature
- /S1589 = barrel sensors with Weldguard laminate
- /S1590 = rectangular sensor with Weldguard laminate
- /S1610 = barrel sensors with Armorguard sleeve and Weldguard laminate
- /S1751 = C1D2 approved
- /S1144 = PTFE tubing
- /S1154 = PTFE tubing/Weldguard sensor

/F2 = alternate oscillator frequency