

## Table of Contents



### OVERVIEW – Inductive Proximity Sensors

|                    |   |
|--------------------|---|
| Introduction ..... | 4 |
| Operation .....    | 5 |



### CYLINDRICAL Inductive Proximity Sensors

|                                  |    |
|----------------------------------|----|
| Introduction/Operation .....     | 8  |
| Selection Guide, DC styles ..... | 12 |
| Selection Guide, AC styles ..... | 14 |
| Product Specifications.....      | 16 |



### LIMIT STYLE Inductive Proximity Sensors

|                              |    |
|------------------------------|----|
| Introduction/Operation ..... | 68 |
| Selection Guide.....         | 71 |
| Product Specifications.....  | 72 |



### BLOCK STYLE Inductive Proximity Sensors

|                              |    |
|------------------------------|----|
| Introduction/Operation ..... | 80 |
| Selection Guide.....         | 82 |
| Product Specifications.....  | 84 |



### RING STYLE Inductive Proximity Sensors

|                              |     |
|------------------------------|-----|
| Introduction/Operation ..... | 98  |
| Selection Guide.....         | 100 |
| Product Specifications.....  | 102 |

### OTHER INFORMATION

|                          |     |
|--------------------------|-----|
| APPENDIX:                |     |
| IP Codes .....           | 132 |
| NEMA requirements .....  | 133 |
| Cross Reference .....    | 134 |
| Glossary.....            | 135 |
| Conversion Charts .....  | 137 |
| INDEX .....              | 138 |
| TERMS & CONDITIONS ..... | 141 |
| WARRANTY .....           | 143 |



### ACCESSORIES for Inductive Proximity Sensors

|                         |     |
|-------------------------|-----|
| Introduction .....      | 113 |
| Mounting Brackets ..... | 114 |
| Cable Assemblies.....   | 116 |
| Switching Units.....    | 122 |
| Motion Detectors .....  | 128 |

All specifications subject to change without notice or obligation

# Accessories



## GENERAL INFORMATION

Altech accessories are available as optional equipment to assist in the use of sensor products. Some sensor products require specific accessory units in order to perform satisfactory. Please consult the product specification to determine which accessories are essential.

The accessories include mounting brackets, cable assemblies, switching amplifier units, and motion detector systems.

## MOUNTING BRACKETS

Several fixtures are available that provide the ability to mount cylindrical and limit style sensors.

## CABLE ASSEMBLIES

Altech offers one of the largest Quick Disconnect selection of sensors in the industry and matching cable assemblies. Standard Sensors come with 2 meter fixed PVC cables, but to improve maintenance and mean time to repair (MTTR) quick disconnect sensors with matching cable assemblies are desirable.

For DC Sensors Altech offers a mini- style 4-pin cable assembly, a micro style 3- and 4-pin cable assembly, and a

pico style 3-pin cable assembly. Most are available in straight or 90° molded cable connection, and the micro and pico styles are also available with 2 LED's.

For AC Sensors Altech offers a mini- style 3-pin cable assembly, a micro style 3-pin and 4-pin cable assembly.

## SWITCHING/AMPLIFIER UNITS

Altech offers a wide variety of products used in conjunction with Ring Sensors, Analog Sensors, Namur Sensors, testers and power supply modules for all sensor products.

## MOTION DETECTOR SYSTEMS

Motion detectors accept impulses from proximity sensors when a repetitious event is occurring. These impulses are measured compared to a standard. The motion detector will "Time Out" between impulses and provide an output for over or under the set speed.

Altech offers completely contained motion detector systems, including built-in proximity sensors or as separate components.

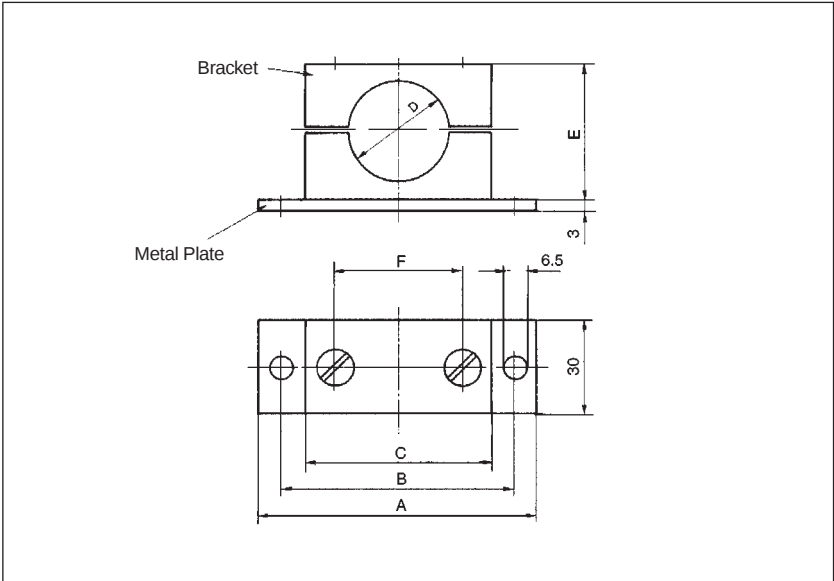
# Accessories

## Mounting Brackets

9512-6100/9512-6200  
9512-6400/9512-6600



Non-metallic mounting brackets are used for 8mm (.31 in.), 12mm (.47 in.), 18mm (.71 in.), and 30mm (1.18mm) cylindrical sensors.

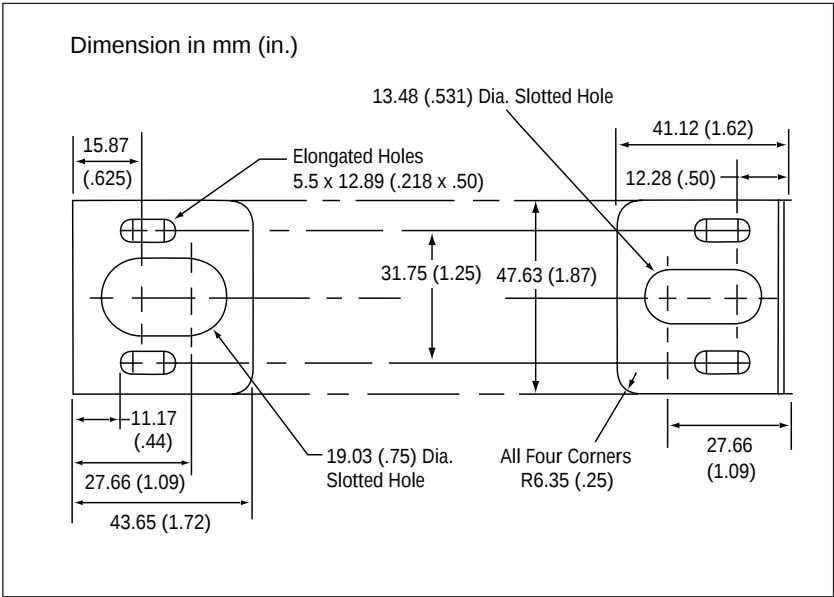


| Dimensions in mm (in.) |           |           |           |           |           |           |
|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| D=SENSOR Ø             | A         | B         | C         | E         | F         | Model     |
| 8 (0.31)               | 64 (2.52) | 50 (2.0)  | 37 (1.46) | 27 (1.06) | 20 (0.79) | 9512-6100 |
| 12 (0.47in.)           | 64 (2.52) | 50 (2.0)  | 37 (1.46) | 27 (1.06) | 20 (0.79) | 9512-6200 |
| 18 (0.71in.)           | 70 (2.76) | 56 (2.20) | 42 (1.65) | 33 (1.3)  | 26 (1.02) | 9512-6400 |
| 30 (1.18in.)           | 87 (3.43) | 73 (2.87) | 58 (2.28) | 42 (1.65) | 40 (1.57) | 9512-6600 |

## Model No. MB 1

A Metallic Mounting Bracket is available for 12mm (.47 in.) and 18mm (.071 in.) cylindrical sensors. Bracket is finished in clear anodized Aluminum.

This bracket allows for adjustment forward, backward, and sensor height.



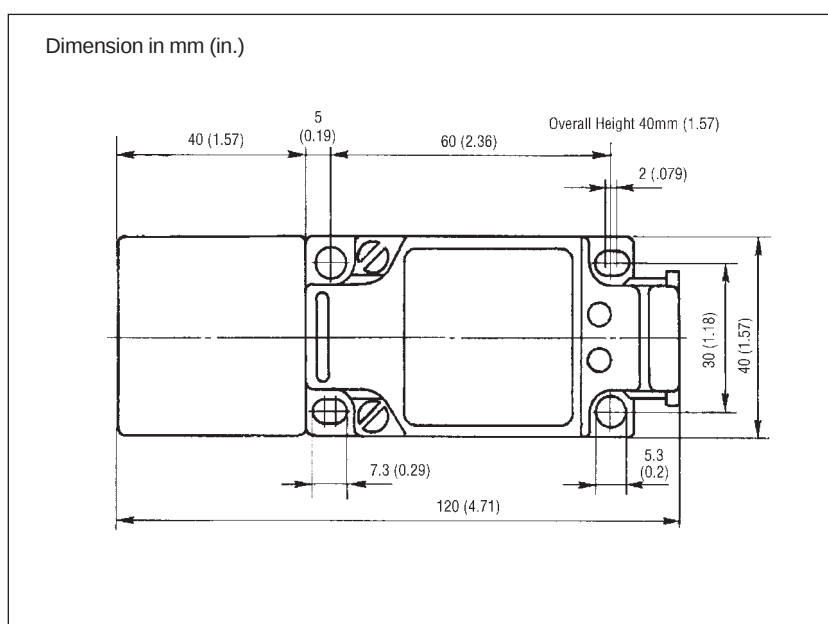
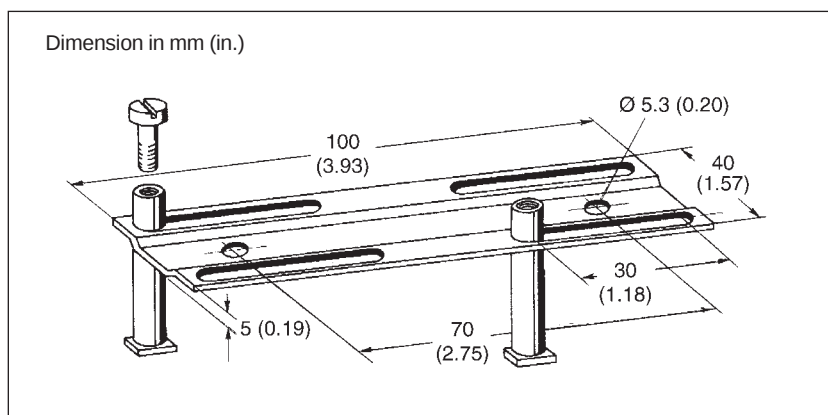
# Accessories

## 9512-8200 Mounting Plate for Limit Style Sensors

Mounting dimensions: According to DIN 50 027/037  
Material: VA 1.4301.

This mounting plate is used if the sensing device has to be adjusted after the installation.

**This mounting plate is used only for Limit Style Sensors.**



# Accessories / Cable Assemblies

## Model / Description

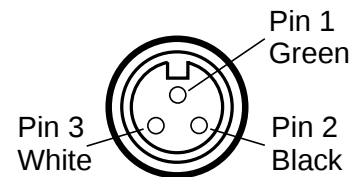
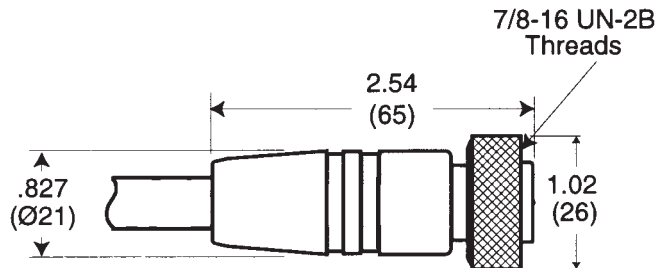
## Dimensions

## Wire Color Code

### 8000-5030

2m (6ft.) 3 pin  
plug & cable for  
AC sensors with  
connector 62

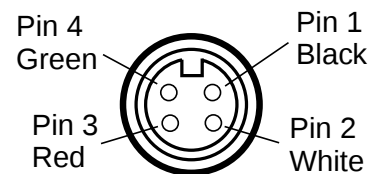
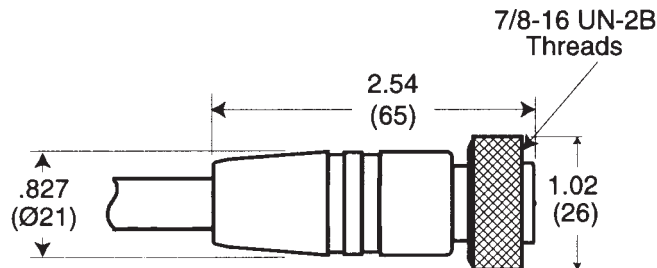
Use 8000-5035  
for 5m lengths



### 8000-5040

2m (6ft.) 4 pin  
Cable for DC  
sensors with  
connector 62

Use 8000-5045  
for 5m lengths



## Technical Data / Connectors and Receptacles: 8000-5030, 8000-5040

**Application Class:** -40°C to +90°C

### Materials:

Body: PUR, yellow

Contact: Solid-machined Brass,  
Gold over Silver Plating

Insert: PUR, yellow

Coupling Nut: Standard: aluminum (black anodized)  
Options: nylon (glass reinforced black);  
stainless steel (passivated)

Receptacle shell: Aluminum, Clear Anodized  
Options: Brass, Electroless Nickel  
Plated, Stainless Steel

### Mechanical Data:

Protection: IP68, NEMA 6P  
(only in fully locked position)

Insertion Force: ≤ 3.0N .67 lbs.

Withdrawal Force: ≥ 1.0N .22 lbs.

Shock: IEC 68-2-27

Vibration: IEC 68-2-6

### Electrical Data:

Contact Resistance: ≤ 5mΩ

Current Rating: 8000-5030 - 10A, 8000-5040 - 8A

Working Voltage: 16 AWG cable: 600 VAC-RMS

Dielectric Withstanding  
Voltage: 2 & 3 pole \_ 2 KVAC RMS/60sec  
4 & 5 pole \_ 1.5 KVAC RMS/60sec

Insulation Resistance: >10<sup>9</sup>Ω

### Cable:

16 AWG: UL-STOW-A; Hi-Flex bare,  
65 x 34 copper stranding, yellow jacket

18 AWG: UL-SOOW-A; AWM 2661; Hi-Flex bare  
41 x 34 copper stranding, yellow jacket

### Agency Approvals:

UL Recognition: E104696

CSA Certified: LR101546-1

# Accessories / Cable Assemblies

## Model / Description

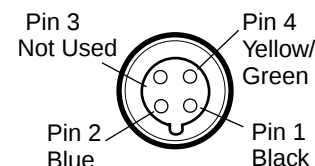
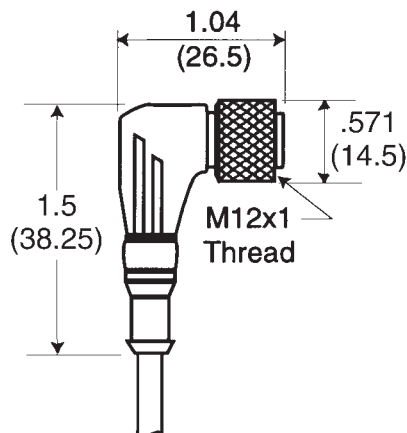
## Dimensions

## Wire Color Code

### 8000-5060

2m (6ft.) right angle  
4 pin plug & cable  
for AC sensors with  
connectors 66 & 67

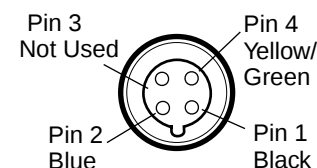
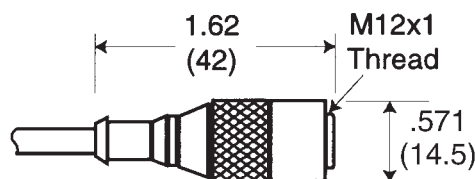
Use 8000-5065  
for 5m lengths



### 8000-5070

2m (6ft.) straight  
4 pin plug & cable for  
AC sensors with con-  
nectors 66 & 67

Use 8000-5075  
for 5m lengths



## Technical Data / Connectors and Receptacles: 8000-5060, 8000-5070

**Application Class:** HNE acc. to DIN 40040  
-40°C to +90°C

### Materials:

Molded Body: PUR (polyurethane)  
Contact: Copper alloy, gold over nickel plating  
Cable: PVC, self extinguishing, orange  
Coupling Nut: Brass, nickel plated

### Mechanical Data:

Protection: IP68, NEMA 6P  
(only in fully locked position)

### Electrical Data:

Contact Rating: ≤5mΩ  
Current Rating: 3A  
Working Voltage: 250V  
Dielectric Withstanding Voltage: 2 KVAC RMS/60 seconds  
Insulation Resistance: >10<sup>9</sup>Ω

### Cable:

22 AWG: Hi-Flex bare copper stranding,  
yellow jacket  
18 AWG: Hi-Flex bare copper stranding,  
yellow jacket

### Agency Approvals:

UL recognition: E104696  
CSA Certified: LR101546-1

# Accessories / Cable Assemblies

## Model / Description

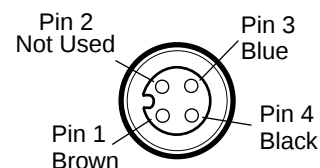
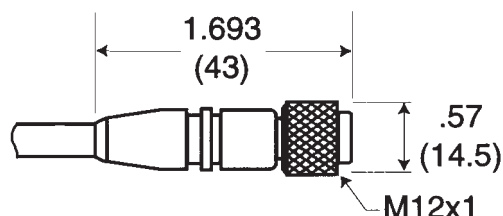
## Dimensions

## Wire Color Code

### 8000-5110

2m (6ft.) straight  
4 pin plug & cable  
for DC sensors  
(sink or source) with  
connectors 45,50,63 & 65

Use 8000-5115  
for 5m lengths

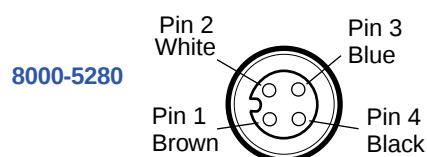
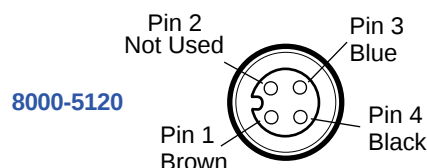
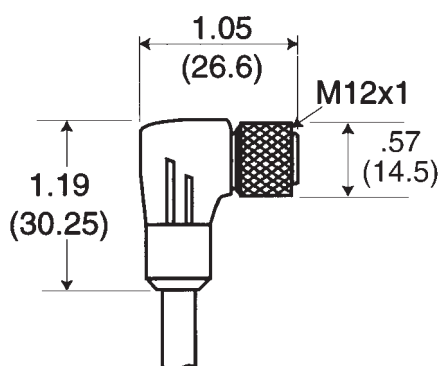


### 8000-5120 & 8000-5280

2m (6ft.) right angle  
4 pin plug & cable  
for DC sensors  
(sink or source) with  
connectors 45,50,63 & 65

8000-5120 – Use 8000-5125  
for 5m lengths

8000-5280 – Use 8000-5285  
for 5m lengths



## Technical Data / Connectors and Receptacles: 8000-5110, 8000-5120, 8000-5280

**Application Class:** HNE acc. to DIN 40040  
-40°C to +90°C

### Materials:

Molded Body: PUR (Polyurethane)  
Contact: Copper alloy, gold over  
nickel plating  
Cable: PVC, self extinguishing, yellow  
Coupling Nut: Brass, nickel plated

### Mechanical Data:

Protection: IP68, NEMA 6P  
(only in fully locked position)

### Electrical Data:

Contact Resistance:  $\leq 5\text{m}\Omega$   
Current Rating: 3A  
Working Voltage: 250V  
Dielectric Withstanding  
Voltage: 2 KVAC RMS/60 seconds  
Insulation Resistance:  $>10^9\Omega$

### Cable:

22 AWG: AWM 2661; Hi-Flex bare,  
26 x 36 or 22 x 36 copper stranding,  
yellow jacket

### Agency Approvals:

UL Recognition: E104696  
CSA Certified: LR101546-1

# Accessories / Cable Assemblies

## Model / Description

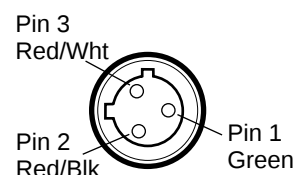
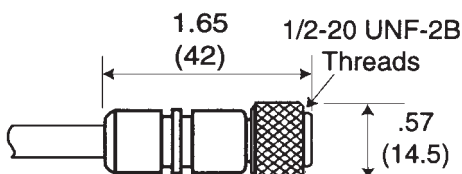
## Dimensions

## Wire Color Code

### 8000-5130

2m (6ft.) straight  
3 pin plug & cable  
for AC sensors with  
connector 48,68

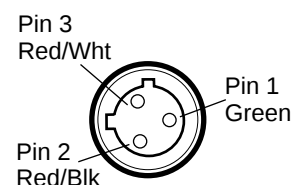
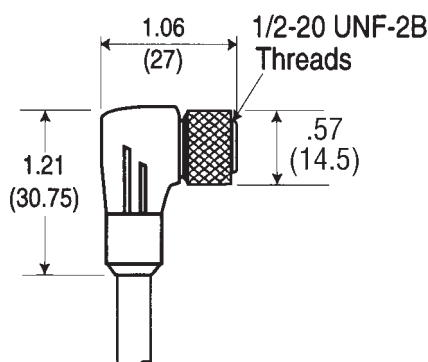
Use 8000-5135  
for 5m lengths



### 8000-5140

2m (6ft.) right angle  
3 pin plug & cable  
for AC sensors with  
conector 48,68

Use 8000-5145  
for 5m lengths



## Technical Data / Connectors and Receptacles: 8000-5130, 8000-5140

**Application Class:** HNE acc. to DIN 40040  
-40°C to +90°C

### Materials:

**Molded Body:** PUR (Polyurethane)  
**Contact:** Copper alloy, gold over nickel plating  
**Receptacle:** Brass, nickel plated  
**Cable:** PVC, self-extinguishing, yellow  
**Coupling Nut:** Brass, nickel plated

### Mechanical Data:

**Protection:** IP68, NEMA 6P  
(only in fully locked position)

### Electrical Data:

**Contact Resistance:**  $\leq 5\Omega$   
**Current Rating:** 3A  
**Working Voltage:** 250V  
**Dielectric Withstanding Voltage:** 2 KVAC RSM/60 seconds  
**Insulation Resistance:**  $>10^9\Omega$

### Cable:

**22 AWG:** AWM 2661; Hi-Flex bare, 26 x 36 copper stranding, yellow jacket

### Agency Approvals:

**UL Recognition:** E104696  
**CSA Certified:** LR101546-1

# Accessories / Cable Assemblies

## Model / Description

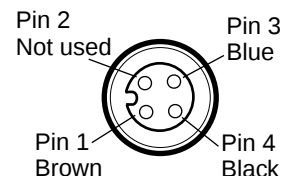
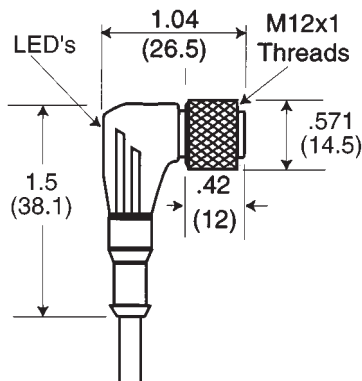
## Dimensions

## Wire Color Code

### 8000-5150 & 8000-5160

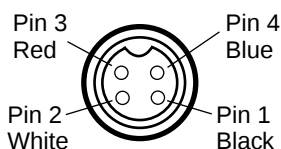
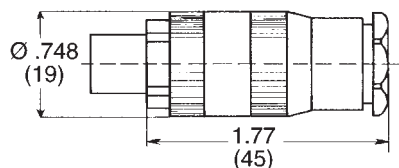
2m (6ft.) 4 pin plug & cable with 2 LED's for DC sensors with connectors 45,50,63 & 65. RP-515 for sink (NPN) output sensor. RP-516 for source (PNP) output sensor.

Use 8000-5155 & 8000-5165 for 5mm lengths



### 9512-0200

2m (6ft.) straight 4 pin metal plug & cable for connector 59



## Technical Data / Connectors and Receptacles: 8000-5150, 8000-5160

**Application Class:** -40°C to +90°C

### Materials:

Molded Body: PUR (Polyurethane)  
Contact: Copper Alloy, gold over nickel plating  
Insert: PUR (Plugs)  
Cable: PVC, self-extinguishing, yellow  
Coupling Nut: Brass, nickel plated

### Mechanical Data:

Protection: IP68, NEMA 6P (only in fully locked position)  
Insertion Force (Contact): ≤ 2N .45 lbs.  
≥ .5N .11 lbs.  
Shock: IEC 68-2-27  
Vibration: IEC 68-2-6

### Electrical Data:

Contact Resistance: ≤ 5mΩ  
Current Rating: 3A  
Working Voltage: 10-30 VDC  
Dielectric Withstanding Voltage: 2 KVAC RMS/60 seconds  
Insulation Resistance: >10<sup>9</sup>Ω

**Cable:** .25mm<sup>2</sup>

### Agency Approvals:

UL Recognition: E104696  
CSA Certified: LR101546-1

# Accessories / Cable Assemblies

## Model / Description

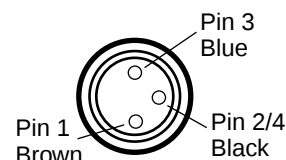
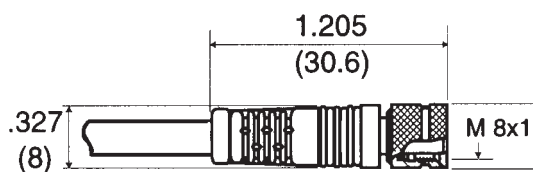
## Dimensions

## Wire Color Code

### 8000-5220

2m (6ft.) straight  
3 pin plug & cable for DC sensors  
with 64 connector

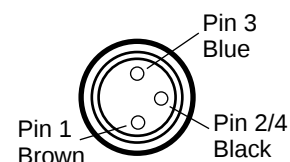
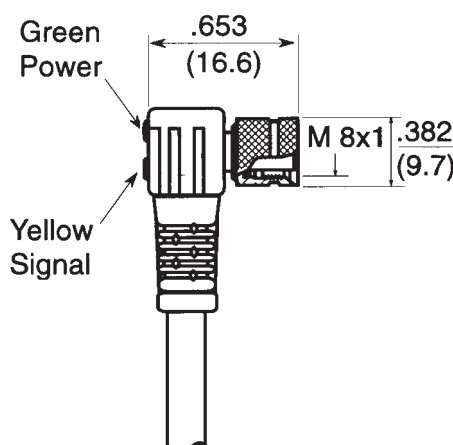
Use 8000-5225 for 5m lengths



### 8000-5230

2m (6ft.) right angle 3 pin plug &  
cable with 2 LED's for DC, PNP  
(source) sensors with 64 connector

Use 8000-5235 for 5m lengths



### 8000-5240

2m (6ft.) right angle 3 pin plug & cable  
with 2 LED's for DC, NPN  
(sink) sensors with 64 connector

Use 8000-5245 for 5m lengths

## Technical Data / Connectors and Receptacles: 8000-5220, 8000-5230, 8000-5240

**Application Class:** HNE acc. to DIN 40040  
-25°C to +90°C ≤75%rF

### Materials:

Molded Body: TPU, self-extinguishing (RMS only –  
PA 6.6, self extinguishing)

Contact: Solid machined brass, gold  
over nickel plating

Receptacle: Brass, nickel plated

O-Ring for Receptacle: Viton

Cable: PVC, self extinguishing, orange

Coupling Nut: Brass, nickel plated

### Mechanical Data:

Protection: Snap-In – IP65, NEMA 4  
Locking – IP 68 NEMA 6P  
(only in fully locked position)

### Electrical Data:

Contact Resistance: ≤ 5mΩ

Current Rating: 4A

60 VAC / RMS/75VDC (solder  
contacts potted with epoxy for  
receptacles)

Working Voltage: 250V

Dielectric Withstanding  
Voltage: 2 K VAC RMS/60 seconds

Insulation Resistance: >10<sup>9</sup>Ω

# Accessories

8300-0100/0500

## Power and Switching Units for NPN and PNP sensors

- *Short circuit protection*
- *Temperature range:*  
-10 to 50°C (14 - 122°F)
- *Type 8300-0100: 230V*
- *Type 8300-0500: 110V*
- *LED for Output Energized*

The Universal Power and Switching Unit is used to supply power for sensors and provide a relay output of the sensor status.

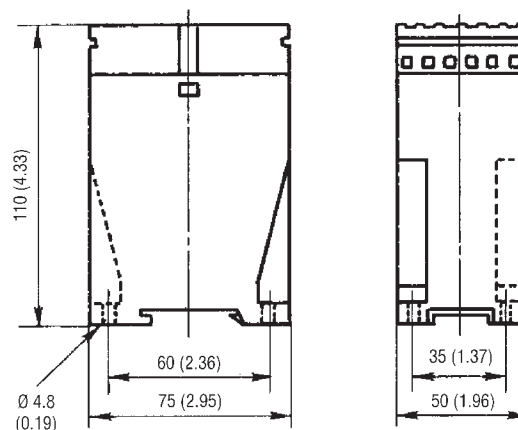
The unit is DIN rail mountable and can supply power for one NPN or PNP sensor.

### Standard Data

| Cat. No.                               | 8300-0100                                  | 8300/0500                                  |
|----------------------------------------|--------------------------------------------|--------------------------------------------|
| Supply Voltage:                        | 230V AC                                    | 110V AC                                    |
| Operating Frequency:                   | 50/60Hz                                    | 50/60Hz                                    |
| Temperature Range:                     | -10°C up to +50°C                          | -10°C up to +50°C                          |
| Output Voltage:<br>(for sensor supply) | 24V, stabilized and<br>short circuit-proof | 24V, stabilized and<br>short circuit-proof |
| Max. Load Current:                     | 120mA                                      | 120mA                                      |
| Relay Output:                          | SPDT                                       | SPDT                                       |
| Max. Switching Voltage:                | 250V AC                                    | 250V AC                                    |
| Max. Switching Current:                | 5A (ohmic load)                            | 5A (ohmic load)                            |
| Max. Switching Capacity:               | 1100VA                                     | 1100VA                                     |



Dimensions in mm (in.)



## Accessories

### 8100-2200

### Power and Switching Units for Namur sensors

- **Power supply unit**
- **Temperature range:**  
-10 to 70°C (14 - 158°F)
- **Amplifier**
- **Relay Output**
- **Drives one Namur sensor**

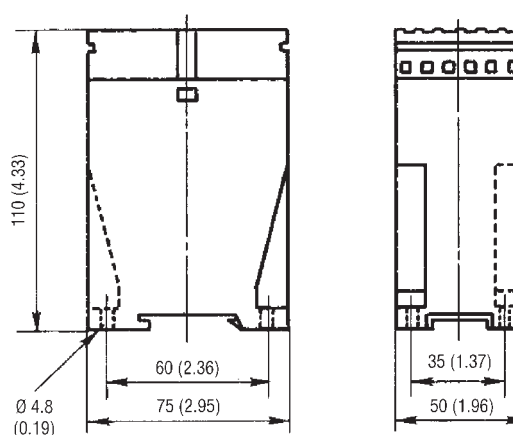
Namur sensors operate with a supply voltage of 8.2V. Therefore, Namur sensors are mostly operated with switching units (with a current interface according to DIN 19234). The 8100-2200 Namur Switching Unit is equipped with such an interface. The Namur sensor has a low impedance with no metal target detected. When a metal target is detected the impedance is higher. This change in impedance causes current change which is detected by the switching unit. The 8100-2200 switching unit opens up application areas such as standard proximity switches to Namur sensors. This is supported by the small overall dimensions of the Namur sensors.



#### Standard Data

|                                        |                                 |
|----------------------------------------|---------------------------------|
| Cat. No.                               | 8100-2200                       |
| Supply Voltage:                        | 220V/110V AC                    |
| Operating Frequency:                   | 50/60Hz                         |
| Temperature Range:                     | -10°C up to +70°C (14 to 158°F) |
| Output Voltage:<br>(for sensor supply) | 8.2V                            |
| Relay Output:                          | SPDT                            |
| Switching Voltage:                     | 250V AC                         |
| Switching Current:                     | 5A (resistive)                  |
| Max. Switching Capacity:               | 1100VA                          |

Dimensions in mm (in.)



# Accessories

## 8102-0900/0930 Power and Switching Units for High Sensitive Ring Sensors

This switching amplifier is used with ALTECH Dynamic Ring Sensors. It can also be used as a time delay for NPN sensors since it contains a delay function. Both a transistor output and relay contact output are available.

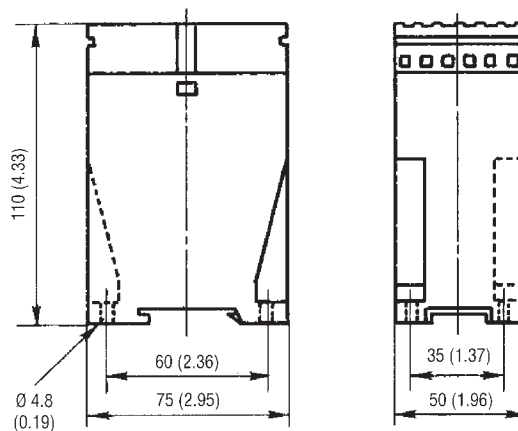


- Adjustable Pulse Duration of the output signal
- Short circuit protection
- Transistor Output and a relay output
- LED for Output Energized
- Type 8102-0900: 220V
- Type 8100-0930: 110V
- Temperature range: -10 to 50°C (14 - 122°F)
- Adjustable Output timing delay of 10 msec to 18 seconds

### Standard Data

| Cat. No.                               | 8102-0930                                  | 8102-0900                                  |
|----------------------------------------|--------------------------------------------|--------------------------------------------|
| Supply Voltage:                        | 220V AC                                    | 110V AC                                    |
| Operating Frequency:                   | 50/60Hz                                    | 50/60Hz                                    |
| Temperature Range:                     | -10°C up to +50°C                          | -10°C up to +50°C                          |
| Output Voltage:<br>(for sensor supply) | 24V, stabilized and<br>short circuit-proof | 24V, stabilized and<br>short circuit-proof |
| Transistor Output:                     |                                            |                                            |
| Max. Load Current                      | 80mA                                       | 80mA                                       |
| Voltage Drop                           | 0.5V                                       | 0.5V                                       |
| Leakage Current                        | ≤10µA                                      | ≤10µA                                      |
| Relay Output:                          | SPDT                                       | SPDT                                       |
| Max. Switching Voltage:                | 250V AC                                    | 250V AC                                    |
| Max. Switching Current:                | 5A (ohmic load)                            | 5A (ohmic load)                            |
| Max. Switching Capacity:               | 1100VA                                     | 1100VA                                     |

Dimensions in mm (in.)



## Accessories

### 8100-2100/2130 Power and Switching Units for Analog Sensors

- Provides 24V DC for Sensors
- Choice of 4 Outputs
  - Analog Voltage
  - Analog Current
  - 4 Bit Digital
  - Relays (3) with LED indicators
- Compatible with all Altech Analog Sensors

The multi-function amplifier Type 8100-2100/2130 operates in conjunction with either one of the analog sensors 9914-0800, 9414-0800, 9414-0900, 9914-1000, 9814-1133, 9814-2133, 9714-2000 or 9714-4300. It contains a power supply for the sensor voltage (24V DC) and converts the analog signal of the sensors to four different outputs.

1. Analog voltage output:  
0-10V DC, max 5mA.
2. Analog current output:  
0-20mA, max. load resistance 500Ω.
3. Digital Output:  
four bit, open collector, npn, "active low".
4. Relay Output:  
3 relays for triggering point are built in (change over contact, SPDT).  
Load voltage: 220V AC  
Load current: 5A (resistive)  
Switching capacity: 1100VA  
The switching point of each relay can be adjusted by a potentiometer and is indicated by individual LED's.  
Settings:  
Three Relays with switching thresholds can be chosen by means of three integrated potentiometers. When reaching the switching threshold, the corresponding LED will light up.

In addition to Units 8100-2100 and 8100-2130, there are two Analog Modules available to be mounted onto DIN/EN mounting rails.

- Module 8100-2400 with:
  - Analog voltage output
  - Analog current output
  - 4-bit digital output
- Module 8100-2500 with:
  - 8-bit digital output

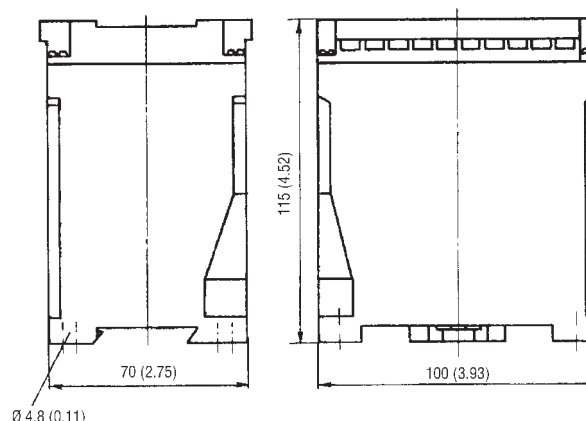
Modules 8100-2400 and 8100-2500 are described on page 126.

#### Standard Data

| Cat. No.                         | 8100-2100                      | 8100/2130                      |
|----------------------------------|--------------------------------|--------------------------------|
| Supply Voltage:                  | 220V AC                        | 110V AC                        |
| Operating Frequency:             | 50/60Hz                        | 50/60Hz                        |
| Temperature Range:               | -10°C up to +60°C (32 - 140°F) | -10°C up to +60°C (32 - 140°F) |
| Supply Voltage for Analog Sensor | 24V                            | 24V                            |



Dimensions in mm (in.)



# Accessories

## 8100-2400/8100-2500 Analog Input Multi-Function Switching Unit

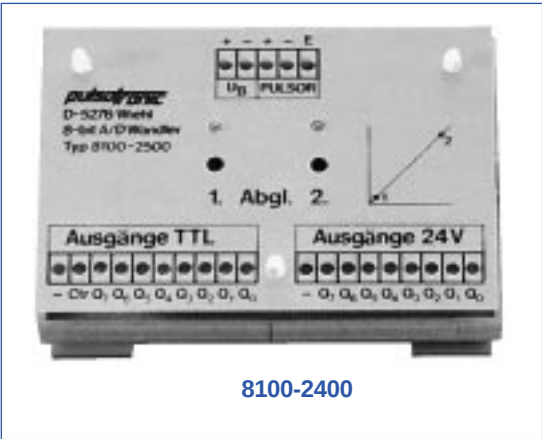
- 8100-2400 has choice of 3 outputs
  - Analog Voltage
  - Analog Current
  - 4 Bit Digital
- 8100-2500 has an 8 bit digital output
- Output protected against short circuits and polarity reversal

The Multifunction Amplifiers Type 8100-2400 and 8100-2500 operate in conjunction with either one of the Analog sensors 9914-0800, 9914-1000, 9914-1133, 9814-2133, 9714-2000 or 9714-4300. It operates with customer supplied DC voltage, 18-30V DC, and converts the analog signal to three (3) different outputs for the 8100-2400. The 8100-2500 has one output, an 8 bit digital output.

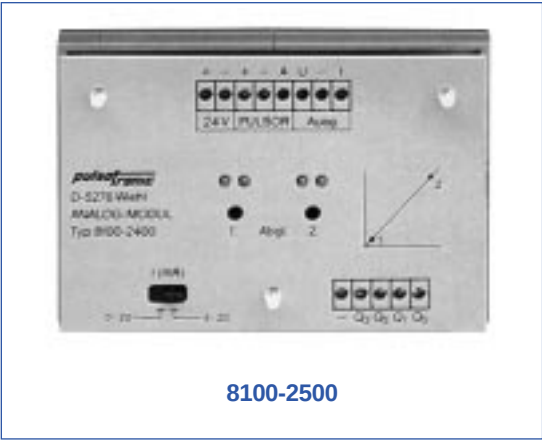
The 8100-2500, 8-bit digital output divides the analog voltage into 256 individual increments which results in a resolution of 10µm/bit (.0004 in./bit). All outputs are protected against short circuits, and the unit is protected from Polarity reversal.

### Standard Data

| Cat. No.                | 8100-2400                          | 8100-2500                 |
|-------------------------|------------------------------------|---------------------------|
| Supply Voltage:         | 18-30V DC                          | 18-30V DC                 |
| Temperature Range:      | 0 to 60°C (32 to140°F)             | 0 to 60°C (32 to140°F)    |
| Analog Voltage Output:  | 0 to 10V                           | —                         |
| Analog Current Output:  | 0 to 20mA or<br>4 to 20mA (jumper) | —                         |
| Digital Output 1:       | 4 bit open collector, PNP          | 8 bit open collector, PNP |
| Max. load current:      | 20mA                               | 20mA                      |
| Voltage drop:           | ≤3.5V at 20mA                      | ≤3.5V at 20mA             |
| Max. Switching Voltage: | 30V                                | 30V                       |
| Digital Output 2:       | —                                  | 8 bit TTL output          |
| VQH                     | —                                  | ≤4.5V                     |
| IQH                     | —                                  | ≤2mAV                     |
| VQL                     | —                                  | ≤0.3V                     |
| IQL                     | —                                  | ≤6mA                      |



8100-2400



8100-2500

## Accessories

8309-0130/8309-0230

Testers for DC and  
AC Sensors

- Tests an inductive sensors field in place, without removing the sensor
- Tests the output circuit
- Identifies the sensor output as either sink (NPN) or source (PNP) for DC sensors

These testers can greatly reduce down-time and maintenance costs by quickly checking the proper function of all kinds of inductive capacitive, or photoelectric sensors.



8309-0130  
For DC Sensors



8309-0230  
For AC Sensors

# Accessories

## 9863-4300/4400/4600 Motion Detector Systems

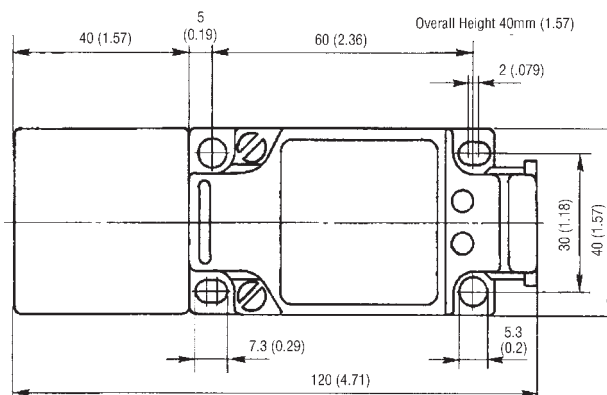
- *9 position sensor head adjustment simplifies adaptation to conditions*
- *Programmable NO/NC outputs*
- *Speed range of 100 - 3000 pulses per minute*
- *Startup delay 0.5 - 6.0 seconds, adjustable*
- *2 LED's for Output Energized & Operating Voltage*
- *IP67 Protection (NEMA 1,3,4,6,12,13) Protection*

These Motion Detecting Systems in Limit Style housing are used to control the rotational speed of motors, pumps, and conveyor drives. They are completely self-contained, with an integral proximity switch and timing functions to perform over and under speed detection. Typical targets are cam lobes, sprocket teeth, or small tabs.

### Standard Data

| Cat. No.                                                                                                                        | 9863-4300       | 9863-4400         | 9863-4600       |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------|-----------------|
| Mounting:                                                                                                                       | Flush           | Semi-Flush        | Flush           |
| Sensing Distance:                                                                                                               | 15mm (0.59 in.) | 25mm (0.98 in.)   | 15mm (0.59 in.) |
| Switching Mode:                                                                                                                 | PNP             | PNP               | PNP             |
| Type Sensor:                                                                                                                    | Overspeed       | Overspeed         | Underspeed      |
| Speed Range:                                                                                                                    | 100 - 3000 ppm  | 100 - 3000 ppm    | 100 - 3000 ppm  |
| Startup Delay:                                                                                                                  | 0.5 - 6 sec     | 0.5 - 6 sec       | 0.5 - 6 sec     |
| Voltage Range:                                                                                                                  | 10 - 30V DC     | 10 - 30V DC       | 10 - 30V DC     |
| Ripple Voltage:                                                                                                                 | ≤10%            | ≤10%              | ≤10%            |
| Voltage Drop Across Sensor:                                                                                                     | ≤2.4V           | ≤2.4V             | ≤2.4V           |
| Max. Load Current:                                                                                                              | 400mA           | 400mA             | 400mA           |
| Supply Current:                                                                                                                 | ≤34mA           | ≤34mA             | ≤34mA           |
| Leakage Current:                                                                                                                | ≤10μA           | ≤10μA             | ≤10μA           |
| Repeat Accuracy:                                                                                                                | .75mm (0.3 in.) | 1.25mm (.049 in.) | .75mm (.03 in.) |
| Temperature Range:                                                                                                              | -25 to +70°C    | -25 to +70°C      | -25 to +70°C    |
| Housing Material:                                                                                                               | Trogamid T      | Trogamid T        | Trogamid T      |
| Output, all models: If speed is above limit, the output is switched on.<br>If speed is below limit, the output is switched off. |                 |                   |                 |

Dimensions in mm (in.)



# Accessories

**8303-0430**

## Motion Detector in Universal Housing

- Operates on DC supply voltage
- 3 Speed Ranges
- System start-up delay adjustable

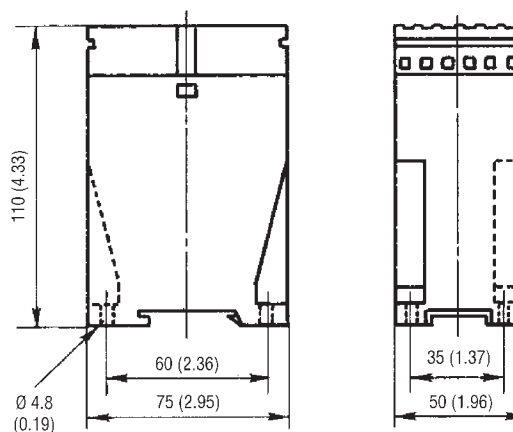
This motion detector detects the rotational speed of actuation, rotating shafts or other movements such as lifting or pushing. The impulse can be given by any PNP or NPN DC-sensor. The impulse is effected by control cams, gears, wheels or other signals. The housing can be mounted on a DIN/EN rail or on a mounting plate.

### Standard Data

|                                   |                                                                                           |
|-----------------------------------|-------------------------------------------------------------------------------------------|
| Cat. No.                          | 8303-0430                                                                                 |
| Supply Voltage:                   | 18V - 30V                                                                                 |
| Temperature Range:                | -10°C up to +60°C                                                                         |
| 5 speed range:                    | 6 - 60 rpm<br>60 - 600 rpm<br>600 - 6000 rpm                                              |
| Start-up Delay:                   | 0.5 - 10 sec                                                                              |
| Hysteresis                        | 0.5 - 10% adjustable                                                                      |
| Relay Output:                     | SPDT 250V/5A                                                                              |
| Function Switch:                  | Position S — Relay activated for overspeed<br>Position 0 — Relay activated for underspeed |
| LED - Switching state indication: | Same time as relay contact                                                                |



Dimensions in mm (in.)



# Accessories

## 8100-2700/2800

### Motion Detector in

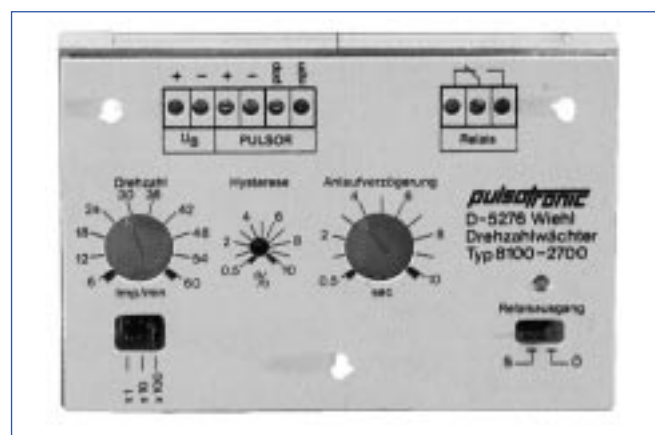
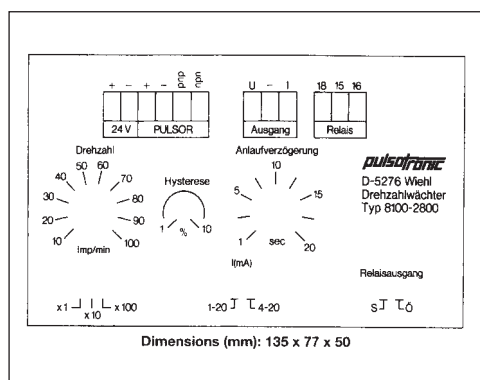
### Universal Snap-on Housing

These units monitor/control electronically the speed of drives, rotating shafts or other motions. Both inductive and other three-wire DC voltage proximity switches can be used as pulse generator input to this motion detector. Pulse generation is effected e.g. by rotating control cams, gear-wheels or other signal targets. The housing can be snapped on to DIN/EN mounting rails or threaded to mounting plates.

- *System start-up delay adjustment*
- *3 Speed ranges with adjustment to set speed*
- *DC Supply Voltage*
- *Relay Output*

#### Standard Data

|                                    |                                                                                                                                                            |                                                                          |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Cat. No.                           | 8100-2700                                                                                                                                                  | 8100-2800                                                                |
| Supply voltage (polarity reversal) | 18V - 30V DC                                                                                                                                               | 18V - 30V DC                                                             |
| Supply Current:                    | ≤50mA at 24V                                                                                                                                               | —                                                                        |
| Inputs:                            | NPN or PNP sensor signal                                                                                                                                   | NPN or PNP sensor signal                                                 |
| Analog Output Voltage:             | —                                                                                                                                                          | 1V - 10V<br>load resistance min 2KΩ                                      |
| Analog Current Output:             | —                                                                                                                                                          | adjustable 4-20mA<br>load resistance 0-500Ω                              |
| Relay Output:                      |                                                                                                                                                            |                                                                          |
| Current Carrying Capacity:         | 250V/5A                                                                                                                                                    | 250V/5A                                                                  |
| Normally Open/Closed               |                                                                                                                                                            |                                                                          |
| Selectable via Plug::              | In NO position, the relay will be activated, if the set speed is exceeded.<br>In NC position, the relay will be activated if the speed falls below the set | In NO position the relay will be activated, if the set speed is exceeded |
| Speed Ranges:                      | 6 - 60 rpm<br>60 - 600 rpm<br>600 - 6000 rpm                                                                                                               | 10 - 100 rpm<br>100 - 1000 rpm<br>1000 - 10000 rpm                       |
| Starting Delay Adjustable:         | 0.5 - 10 sec.                                                                                                                                              | 1 - 10 sec                                                               |
| Hysteresis Adjustable:             | 5 - 10%                                                                                                                                                    | 1 - 10%                                                                  |
| LED Switching State Indication:    | activated same time as relay                                                                                                                               | activated same time as relay                                             |
| Temperature Range:                 | -0°C to +60°C (32-140°F)                                                                                                                                   | -0°C to +60°C (32-140°F)                                                 |



## THE NEWEST ADDITION TO ALTECH'S SENSOR PRODUCTS...

### **Pulsotronic Capacitive, Photo-electric, and Ultrasonic Sensors.**

ALTECH now offers a comprehensive line of Capacitive, Photo-electric, and Ultrasonic Sensors to satisfy the expanding Automation Industry.

These new Sensors are available in DC (PNP & NPN), and AC models. Housing styles are Cylindrical, Limit Style, and Block.

#### *Features:*

- **Capacitive** – *Detects Metals, Non-Metals, and Liquids.*
  - **Photo-electric** – *Available in Diffuse Reflection, Retro-Reflection, and Through Beam models.*
  - **Ultrasonic** – *Digital and Analog models available, using sound to detect targets and target distances.*



*...Contact Altech for more information*