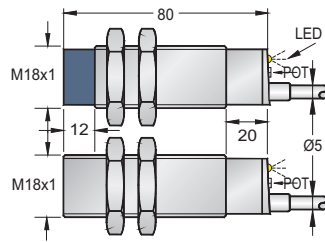


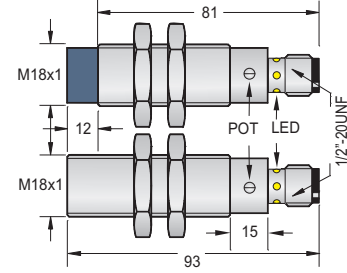


**Features**

- M18mm diameter
- 20-250VAC/DC operating voltage
- Sn=2 ... 8mm, shielded  
2 ... 15mm, non-shielded
- Brass housing case  
PBT housing case
- AC/DC Output
- NO, NC Function
- Cable version  
3 Pin M12 Connector version
- IP67 Protection



(Unit: mm)



(Unit: mm)

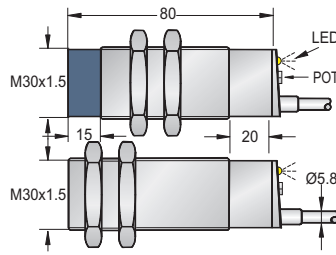


| Connection                          |          | 2m Cable                                                                                             |                     | 3 Pin M12 Connector                                                                                  |                     |
|-------------------------------------|----------|------------------------------------------------------------------------------------------------------|---------------------|------------------------------------------------------------------------------------------------------|---------------------|
| Mounting                            |          | Shielded                                                                                             | Non-shielded        | Shielded                                                                                             | Non-shielded        |
| Brass Case                          | AC/DC-NO | C9AE18S08A                                                                                           | C9AF18S15A          | C9AE18S08L                                                                                           | C9AF18S15L          |
|                                     | AC/DC-NC | C9AE18T08A                                                                                           | C9AF18T15A          | C9AE18T08L                                                                                           | C9AF18T15L          |
| PBT Case                            | AC/DC-NO | C9ME18S08A                                                                                           | C9MF18S15A          | C9ME18S08L                                                                                           | C9MF18S15L          |
|                                     | AC/DC-NC | C9ME18T08A                                                                                           | C9MF18T15A          | C9ME18T08L                                                                                           | C9MF18T15L          |
| General Data                        |          |                                                                                                      |                     |                                                                                                      |                     |
| Housing size                        |          | M18mm                                                                                                |                     | M18mm                                                                                                |                     |
| Installation type                   |          | Shielded                                                                                             | Non-shielded        | Shielded                                                                                             | Non-shielded        |
| Sensing distance(Sn: mm)            |          | 2...8mm adjustable                                                                                   | 2...15mm adjustable | 2...8mm adjustable                                                                                   | 2...15mm adjustable |
| Standard sensing object             |          | Steel 24x24x1mm                                                                                      | Steel 45x45x1mm     | Steel 24x24x1mm                                                                                      | Steel 45x45x1mm     |
| Effective sensing distance (Sr: mm) |          | 90 ... 110% of Sn                                                                                    |                     | 90 ... 110% of Sn                                                                                    |                     |
| Assured operating distance(Sa: mm)  |          | 0 ... 80% of Sn                                                                                      |                     | 0 ... 80% of Sn                                                                                      |                     |
| Hysteresis                          |          | <15%                                                                                                 |                     | <15%                                                                                                 |                     |
| Housing material                    |          | Nickel plated brass/PBT Resin                                                                        |                     | Nickel plated brass/PBT Resin                                                                        |                     |
| Operating voltage                   |          | 20 ... 250VAC/DC                                                                                     |                     | 20 ... 250VAC/DC                                                                                     |                     |
| Electrical Data                     |          |                                                                                                      |                     |                                                                                                      |                     |
| Rated operating voltage             |          | 110VAC                                                                                               |                     | 110VAC                                                                                               |                     |
| Repeated accuracy                   |          | ±10%                                                                                                 |                     | ±10%                                                                                                 |                     |
| Surge current                       |          | 5A(20ms)                                                                                             |                     | 5A(20ms)                                                                                             |                     |
| No load current                     |          | <2.5mA                                                                                               |                     | <2.5mA                                                                                               |                     |
| Max. Load current                   |          | 300mA                                                                                                |                     | 300mA                                                                                                |                     |
| Leakage current                     |          | <2.5mA                                                                                               |                     | <2.5mA                                                                                               |                     |
| Voltage drop                        |          | <10VAC, <8VDC                                                                                        |                     | <10VAC, <8VDC                                                                                        |                     |
| Switching frequency                 |          | <25Hz/AC, <40Hz/DC                                                                                   |                     | <25Hz/AC, <40Hz/DC                                                                                   |                     |
| Response time                       |          | 10ms/10ms                                                                                            |                     | 10ms/10ms                                                                                            |                     |
| Rated insulation voltage            |          | 250VAC                                                                                               |                     | 250VAC                                                                                               |                     |
| Operating temperature               |          | -25°C ... +70°C                                                                                      |                     | -25°C ... +70°C                                                                                      |                     |
| Storage temperature                 |          | -40°C ... +80°C                                                                                      |                     | -40°C ... +80°C                                                                                      |                     |
| Temperature drift                   |          | <10%                                                                                                 |                     | <10%                                                                                                 |                     |
| Power indicator                     |          | No                                                                                                   |                     | No                                                                                                   |                     |
| Function indicator                  |          | Yellow LED                                                                                           |                     | Yellow LED                                                                                           |                     |
| Reverse polarity protection         |          | No                                                                                                   |                     | No                                                                                                   |                     |
| Short-circuit protection            |          | No                                                                                                   |                     | No                                                                                                   |                     |
| Min. load current                   |          | 5mA                                                                                                  |                     | 5mA                                                                                                  |                     |
| Correction factors                  |          | Fe37 steel=1/stainless steel approx. 0.85/brass approx. 0.5/<br>Al. Approx. 0.45/ copper approx. 0.4 |                     | Fe37 steel=1/stainless steel approx. 0.85/brass approx. 0.5/<br>Al. Approx. 0.45/ copper approx. 0.4 |                     |
| Mechanical Data                     |          |                                                                                                      |                     |                                                                                                      |                     |
| Sensing surface material            |          | PBT                                                                                                  |                     | PBT                                                                                                  |                     |
| Protection                          |          | IP67                                                                                                 |                     | IP67                                                                                                 |                     |
| Shock rating                        |          | Shock, half-sinus, 30gn, 11ms                                                                        |                     | Shock, half-sinus, 30gn, 11ms                                                                        |                     |
| Vibration rating                    |          | 55Hz, 1mm ampl., 3x30min.                                                                            |                     | 55Hz, 1mm ampl., 3x30min.                                                                            |                     |
| EMC                                 |          | IEC 60947-5-2                                                                                        |                     | IEC 60947-5-2                                                                                        |                     |
| Accessory                           |          | 2 nuts                                                                                               |                     | 2 nuts                                                                                               |                     |
| Connection                          |          | 2m PVC cable (Ø5 3x0.5mm <sup>2</sup> /2x0.5mm <sup>2</sup> )                                        |                     | Micro-style 3 Pin 1/2" connector                                                                     |                     |
| Weight                              |          | Approx. 115g                                                                                         |                     | Approx. 94g                                                                                          |                     |

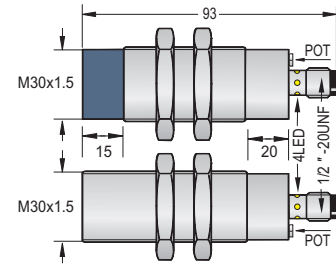


**Features**

- M30mm diameter
- 20-250VAC/DC operating voltage
- Sn=2 ... 20mm, shielded  
2 ... 30mm, non-shielded
- Brass housing case  
PBT housing case
- AC/DC Output
- NO,NC Function
- Cable version  
3 Pin M12 Connector version
- IP67 Protection



(Unit: mm)



(Unit: mm)



| Connection                          |          | 2m Cable                                                                                             |              | 3 Pin M12 Connector                                                                                  |              |
|-------------------------------------|----------|------------------------------------------------------------------------------------------------------|--------------|------------------------------------------------------------------------------------------------------|--------------|
| Mounting                            |          | Shielded                                                                                             | Non-shielded | Shielded                                                                                             | Non-shielded |
| Brass Case                          | AC/DC-NO | C9AE30S20A                                                                                           | C9AF30S30A   | C9AE30S20L                                                                                           | C9AF30S30L   |
|                                     | AC/DC-NC | C9AE30T20A                                                                                           | C9AF30T30A   | C9AE30T20L                                                                                           | C9AF30T30L   |
| PBT Case                            | AC/DC-NO | C9ME30S20A                                                                                           | C9MF30S30A   | C9ME30S20L                                                                                           | C9MF30S30L   |
|                                     | AC/DC-NC | C9ME30T20A                                                                                           | C9MF30T30A   | C9ME30T20L                                                                                           | C9MF30T30L   |
| General Data                        |          |                                                                                                      |              |                                                                                                      |              |
| Housing size                        |          | M30mm                                                                                                |              | M30mm                                                                                                |              |
| Installation type                   |          | Shielded                                                                                             | Non-shielded | Shielded                                                                                             | Non-shielded |
| Sensing distance(Sn: mm)            |          | 2...20mm adjustable                                                                                  |              | 2...30mm adjustable                                                                                  |              |
| Standard sensing object             |          | Steel 60x60x1mm                                                                                      |              | Steel 90x90x1mm                                                                                      |              |
| Effective sensing distance (Sr: mm) |          | 90 ... 110% of Sn                                                                                    |              | 90 ... 110% of Sn                                                                                    |              |
| Assured operating distance(Sa: mm)  |          | 0 ... 80% of Sn                                                                                      |              | 0 ... 80% of Sn                                                                                      |              |
| Hysteresis                          |          | <15%                                                                                                 |              | <15%                                                                                                 |              |
| Housing material                    |          | Nickel plated brass/PBT Resin                                                                        |              | Nickel plated brass/PBT Resin                                                                        |              |
| Operating voltage                   |          | 20 ... 250VAC/DC                                                                                     |              | 20 ... 250VAC/DC                                                                                     |              |
| Electrical Data                     |          |                                                                                                      |              |                                                                                                      |              |
| Rated operating voltage             |          | 110VAC                                                                                               |              | 110VAC                                                                                               |              |
| Repeated accuracy                   |          | ±10%                                                                                                 |              | ±10%                                                                                                 |              |
| Surge current                       |          | 2.2A(20ms)                                                                                           |              | 2.2A(20ms)                                                                                           |              |
| No load current                     |          | <2.5mA                                                                                               |              | <2.5mA                                                                                               |              |
| Max. Load current                   |          | 200mA                                                                                                |              | 200mA                                                                                                |              |
| Leakage current                     |          | <2.5mA                                                                                               |              | <2.5mA                                                                                               |              |
| Voltage drop                        |          | <10VAC, <8VDC                                                                                        |              | <10VAC, <8VDC                                                                                        |              |
| Switching frequency                 |          | <25Hz/AC, <40Hz/DC                                                                                   |              | <25Hz/AC, <40Hz/DC                                                                                   |              |
| Response time                       |          | 10ms/10ms                                                                                            |              | 10ms/10ms                                                                                            |              |
| Rated insulation voltage            |          | 250VAC                                                                                               |              | 250VAC                                                                                               |              |
| Operating temperature               |          | -25°C ... +70°C                                                                                      |              | -25°C ... +70°C                                                                                      |              |
| Storage temperature                 |          | -40°C ... +80°C                                                                                      |              | -40°C ... +80°C                                                                                      |              |
| Temperature drift                   |          | <10%                                                                                                 |              | <10%                                                                                                 |              |
| Power indicator                     |          | No                                                                                                   |              | No                                                                                                   |              |
| Function indicator                  |          | Yellow LED                                                                                           |              | Yellow LED                                                                                           |              |
| Reverse polarity protection         |          | No                                                                                                   |              | No                                                                                                   |              |
| Short-circuit protection            |          | No                                                                                                   |              | No                                                                                                   |              |
| Min. load current                   |          | 5mA                                                                                                  |              | 5mA                                                                                                  |              |
| Correction factors                  |          | Fe37 steel=1/stainless steel approx. 0.85/brass approx. 0.5/<br>Al. Approx. 0.45/ copper approx. 0.4 |              | Fe37 steel=1/stainless steel approx. 0.85/brass approx. 0.5/<br>Al. Approx. 0.45/ copper approx. 0.4 |              |
| Mechanical Data                     |          |                                                                                                      |              |                                                                                                      |              |
| Sensing surface material            |          | PBT                                                                                                  |              | PBT                                                                                                  |              |
| Protection                          |          | IP67                                                                                                 |              | IP67                                                                                                 |              |
| Shock rating                        |          | Shock, half-sinus, 30gn, 11ms                                                                        |              | Shock, half-sinus, 30gn, 11ms                                                                        |              |
| Vibration rating                    |          | 55Hz, 1mm ampl., 3x30min.                                                                            |              | 55Hz, 1mm ampl., 3x30min.                                                                            |              |
| EMC                                 |          | IEC 60947-5-2                                                                                        |              | IEC 60947-5-2                                                                                        |              |
| Accessory                           |          | 2 nuts                                                                                               |              | 2 nuts                                                                                               |              |
| Connection                          |          | 2m PVC cable (Ø5.8 3x0.5mm <sup>2</sup> /2x0.5mm <sup>2</sup> )                                      |              | Micro-style 3 Pin 1/2" connector                                                                     |              |
| Weight                              |          | Approx. 231g                                                                                         |              | Approx. 137g                                                                                         |              |

|                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                      |                   |                                                                                                      |                            |                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------------|------------------------------------------------------------------------------------------------------|----------------------------|---------------------|
| <b>Features</b> <ul style="list-style-type: none"> <li>• Ø34mm diameter</li> <li>• 20-250VAC/DC operating voltage</li> <li>• Sn=2 ... 25mm, shielded<br/>2 ... 35mm, non-shielded</li> <li>• PBT housing case</li> <li>• AC/DC Output</li> <li>• NO, NC Function</li> <li>• Cable version<br/>3 Pin M12 Connector version</li> <li>• IP67 Protection</li> </ul> |                                                                                                      | <p>(Unit: mm)</p> |                                                                                                      | <p>(Unit: mm)</p>          |                     |
|                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                      |                   |                                                                                                      |                            |                     |
|                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                      | <b>2m Cable</b>   |                                                                                                      | <b>3 Pin M12 Connector</b> |                     |
|                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                      | <b>Shielded</b>   | <b>Non-shielded</b>                                                                                  | <b>Shielded</b>            | <b>Non-shielded</b> |
| <b>Connection</b>                                                                                                                                                                                                                                                                                                                                               | AC/DC-NO                                                                                             |                   |                                                                                                      |                            |                     |
|                                                                                                                                                                                                                                                                                                                                                                 | AC/DC-NC                                                                                             |                   |                                                                                                      |                            |                     |
| <b>Brass Case</b>                                                                                                                                                                                                                                                                                                                                               | AC/DC-NO                                                                                             |                   |                                                                                                      |                            |                     |
|                                                                                                                                                                                                                                                                                                                                                                 | AC/DC-NC                                                                                             |                   |                                                                                                      |                            |                     |
| <b>PBT Case</b>                                                                                                                                                                                                                                                                                                                                                 | AC/DC-NO                                                                                             | C9NE34S25A        | C9NF34S35A                                                                                           | C9NE34S25L                 | C9NF34S35L          |
|                                                                                                                                                                                                                                                                                                                                                                 | AC/DC-NC                                                                                             | C9NE34T25A        | C9NF34T35A                                                                                           | C9NE34T25L                 | C9NF34T35L          |
| <b>General Data</b>                                                                                                                                                                                                                                                                                                                                             |                                                                                                      |                   |                                                                                                      |                            |                     |
| Housing size                                                                                                                                                                                                                                                                                                                                                    | Ø34mm                                                                                                |                   | Ø34mm                                                                                                |                            |                     |
| Installation type                                                                                                                                                                                                                                                                                                                                               | Shielded                                                                                             | Non-shielded      | Shielded                                                                                             | Non-shielded               |                     |
| Sensing distance(Sn: mm)                                                                                                                                                                                                                                                                                                                                        | 2...25mm adjustable                                                                                  |                   | 2...35mm adjustable                                                                                  |                            |                     |
| Standard sensing object                                                                                                                                                                                                                                                                                                                                         | Steel 75x75x1mm                                                                                      |                   | Steel 105x105x1mm                                                                                    |                            |                     |
| Effective sensing distance (Sr: mm)                                                                                                                                                                                                                                                                                                                             | 90 ... 110% of Sn                                                                                    |                   | 90 ... 110% of Sn                                                                                    |                            |                     |
| Assured operating distance(Sa: mm)                                                                                                                                                                                                                                                                                                                              | 0 ... 80% of Sn                                                                                      |                   | 0 ... 80% of Sn                                                                                      |                            |                     |
| Hysteresis                                                                                                                                                                                                                                                                                                                                                      | <15%                                                                                                 |                   | <15%                                                                                                 |                            |                     |
| Housing material                                                                                                                                                                                                                                                                                                                                                | PBT Resin/PBT                                                                                        |                   | PBT Resin/PBT                                                                                        |                            |                     |
| Operating voltage                                                                                                                                                                                                                                                                                                                                               | 20 ... 250VAC/DC                                                                                     |                   | 20 ... 250VAC/DC                                                                                     |                            |                     |
| <b>Electrical Data</b>                                                                                                                                                                                                                                                                                                                                          |                                                                                                      |                   |                                                                                                      |                            |                     |
| Rated operating voltage                                                                                                                                                                                                                                                                                                                                         | 110VAC                                                                                               |                   | 110VAC                                                                                               |                            |                     |
| Repeated accuracy                                                                                                                                                                                                                                                                                                                                               | ±10%                                                                                                 |                   | ±10%                                                                                                 |                            |                     |
| Surge current                                                                                                                                                                                                                                                                                                                                                   | 5A(20ms)                                                                                             |                   | 5A(20ms)                                                                                             |                            |                     |
| No load current                                                                                                                                                                                                                                                                                                                                                 | <2.5mA                                                                                               |                   | <2.5mA                                                                                               |                            |                     |
| Max. Load current                                                                                                                                                                                                                                                                                                                                               | 300mA                                                                                                |                   | 300mA                                                                                                |                            |                     |
| Leakage current                                                                                                                                                                                                                                                                                                                                                 | <2.5mA                                                                                               |                   | <2.5mA                                                                                               |                            |                     |
| Voltage drop                                                                                                                                                                                                                                                                                                                                                    | <10VAC, <8VDC                                                                                        |                   | <10VAC, <8VDC                                                                                        |                            |                     |
| Switching frequency                                                                                                                                                                                                                                                                                                                                             | <25Hz/AC, <40Hz/DC                                                                                   |                   | <25Hz/AC, <40Hz/DC                                                                                   |                            |                     |
| Response time                                                                                                                                                                                                                                                                                                                                                   | 10ms/10ms                                                                                            |                   | 10ms/10ms                                                                                            |                            |                     |
| Rated insulation voltage                                                                                                                                                                                                                                                                                                                                        | 250VAC                                                                                               |                   | 250VAC                                                                                               |                            |                     |
| Operating temperature                                                                                                                                                                                                                                                                                                                                           | -25°C ... +70°C                                                                                      |                   | -25°C ... +70°C                                                                                      |                            |                     |
| Storage temperature                                                                                                                                                                                                                                                                                                                                             | -40°C ... +80°C                                                                                      |                   | -40°C ... +80°C                                                                                      |                            |                     |
| Temperature drift                                                                                                                                                                                                                                                                                                                                               | <10%                                                                                                 |                   | <10%                                                                                                 |                            |                     |
| Power indicator                                                                                                                                                                                                                                                                                                                                                 | No                                                                                                   |                   | No                                                                                                   |                            |                     |
| Function indicator                                                                                                                                                                                                                                                                                                                                              | Yellow LED                                                                                           |                   | Yellow LED                                                                                           |                            |                     |
| Reverse polarity protection                                                                                                                                                                                                                                                                                                                                     | No                                                                                                   |                   | No                                                                                                   |                            |                     |
| Short-circuit protection                                                                                                                                                                                                                                                                                                                                        | No                                                                                                   |                   | No                                                                                                   |                            |                     |
| Min. load current                                                                                                                                                                                                                                                                                                                                               | 5mA                                                                                                  |                   | 5mA                                                                                                  |                            |                     |
| Correction factors                                                                                                                                                                                                                                                                                                                                              | Fe37 steel=1/stainless steel approx. 0.85/brass approx. 0.5/<br>Al. Approx. 0.45/ copper approx. 0.4 |                   | Fe37 steel=1/stainless steel approx. 0.85/brass approx. 0.5/<br>Al. Approx. 0.45/ copper approx. 0.4 |                            |                     |
| <b>Mechanical Data</b>                                                                                                                                                                                                                                                                                                                                          |                                                                                                      |                   |                                                                                                      |                            |                     |
| Sensing surface material                                                                                                                                                                                                                                                                                                                                        | PBT                                                                                                  |                   | PBT                                                                                                  |                            |                     |
| Protection                                                                                                                                                                                                                                                                                                                                                      | IP67                                                                                                 |                   | IP67                                                                                                 |                            |                     |
| Shock rating                                                                                                                                                                                                                                                                                                                                                    | Shock, half-sinus, 30gn, 11ms                                                                        |                   | Shock, half-sinus, 30gn, 11ms                                                                        |                            |                     |
| Vibration rating                                                                                                                                                                                                                                                                                                                                                | 55Hz, 1mm ampl., 3x30min.                                                                            |                   | 55Hz, 1mm ampl., 3x30min.                                                                            |                            |                     |
| EMC                                                                                                                                                                                                                                                                                                                                                             | IEC 60947-5-2                                                                                        |                   | IEC 60947-5-2                                                                                        |                            |                     |
| Accessory                                                                                                                                                                                                                                                                                                                                                       | Bracket and nuts                                                                                     |                   | Bracket and nuts                                                                                     |                            |                     |
| Connection                                                                                                                                                                                                                                                                                                                                                      | 2m PVC cable (Ø5.8 2x0.5mm <sup>2</sup> )                                                            |                   | Micro-style 3 Pin 1/2" connector                                                                     |                            |                     |
| Weight                                                                                                                                                                                                                                                                                                                                                          | Approx. 250g                                                                                         |                   | Approx. 162g                                                                                         |                            |                     |