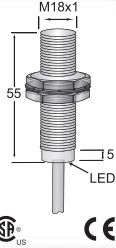
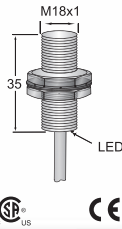
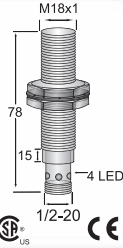
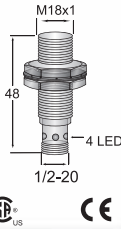
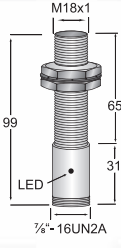


# Metal Head™ - M18

|                                | M18                                                                                 |                                                                                     | M18                                                                                 |                                                                                       | M18                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                |    |    |    |    |    |
| Sensing Distance               | 5mm                                                                                 |                                                                                     | 5mm                                                                                 |                                                                                       | 5mm                                                                                   |
| Extended Sensing Distance      | 8mm                                                                                 |                                                                                     | 8mm                                                                                 |                                                                                       | 8mm                                                                                   |
| Operating Voltage              | 20-250 VAC, 50-60 Hz; 10-30 VDC                                                     |                                                                                     | 20-250 VAC, 50-60 Hz; 10-30 VDC                                                     |                                                                                       | 20-250 VAC, 50-60 Hz; 10-30 VDC                                                       |
| Ripple                         | DC Ripple <10%                                                                      |                                                                                     | DC Ripple <10%                                                                      |                                                                                       | DC Ripple <10%                                                                        |
| No Load Current                | <2.5mA                                                                              |                                                                                     | <2.5mA                                                                              |                                                                                       | <2.5mA                                                                                |
| Max. Load Current              | 200mA                                                                               |                                                                                     | 200mA                                                                               |                                                                                       | 100mA                                                                                 |
| Leakage Current                | <2.5mA                                                                              |                                                                                     | <2.5mA                                                                              |                                                                                       | <2.5mA                                                                                |
| Surge Current                  | 2.2A for 20ms                                                                       |                                                                                     | 2.2A for 20ms                                                                       |                                                                                       | 2.2A for 20ms                                                                         |
| Min. Load Current              | 5mA                                                                                 |                                                                                     | 5mA                                                                                 |                                                                                       | 5mA                                                                                   |
| Voltage Drop                   | <=10 VAC; <=8 VDC                                                                   |                                                                                     | <=10 VAC; <=8 VDC                                                                   |                                                                                       | <=10 VAC; <=8 VDC                                                                     |
| Switching Frequency            | 25 Hz AC; 40 Hz DC                                                                  |                                                                                     | 25 Hz AC; 40 Hz DC                                                                  |                                                                                       | 25 Hz AC; 40 Hz DC                                                                    |
| Response Time                  | 10ms/10ms                                                                           |                                                                                     | 10ms/10ms                                                                           |                                                                                       | 10ms/10ms                                                                             |
| Switching Hysteresis           | <15% (Sr)                                                                           |                                                                                     | <15% (Sr)                                                                           |                                                                                       | <15% (Sr)                                                                             |
| Repeat Accuracy                | <1.0% (Sr)                                                                          |                                                                                     | <1.0% (Sr)                                                                          |                                                                                       | <1.0% (Sr)                                                                            |
| Protection Category            | IP67                                                                                |                                                                                     | IP67                                                                                |                                                                                       | IP67                                                                                  |
| Operating Temperature          | -25°C - +70°C                                                                       |                                                                                     | -25°C - +70°C                                                                       |                                                                                       | -25°C - +70°C                                                                         |
| Temperature Drift              | <10% (Sr)                                                                           |                                                                                     | <10% (Sr)                                                                           |                                                                                       | <10% (Sr)                                                                             |
| Short Circuit Protection       | Yes                                                                                 |                                                                                     | Yes                                                                                 |                                                                                       | Yes                                                                                   |
| Overload Trip Point            | -                                                                                   |                                                                                     | -                                                                                   |                                                                                       | -                                                                                     |
| Time Delay Before Availability | -                                                                                   |                                                                                     | -                                                                                   |                                                                                       | -                                                                                     |
| Shock / Vibration              | IEC 60947-5-2, Part 7.4.1 & 7.4.2                                                   |                                                                                     | IEC 60947-5-2, Part 7.4.1 & 7.4.2                                                   |                                                                                       | IEC 60947-5-2, Part 7.4.1 & 7.4.2                                                     |
| Material Active Face           | Stainless Steel (0.5mm)                                                             |                                                                                     | Stainless Steel (0.5mm)                                                             |                                                                                       | Stainless Steel (0.5mm)                                                               |
| Housing Material               | Stainless Steel                                                                     |                                                                                     | Stainless Steel                                                                     |                                                                                       | Stainless Steel                                                                       |
| Part Numbers                   | Shielded                                                                            | Shielded                                                                            | Shielded                                                                            | Shielded                                                                              | Shielded                                                                              |
| AC/DC 2 wire 20-250V, N.O.     | FCS1-1805U-A3U2                                                                     | FCS1-1805U-A3S2                                                                     | FCS1-1805U-AUU3                                                                     | FCS1-1805U-AUS3                                                                       | FCS1-1805U-AZU3                                                                       |
| AC/DC 2 wire 20-250V, N.C.     | FCS1-1805U-B3U2                                                                     | FCS1-1805U-B3S2                                                                     | FCS1-1805U-BUU3                                                                     | FCS1-1805U-BUS3                                                                       | FCS1-1805U-BZU3                                                                       |
| Extended Range                 |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| AC/DC 2 wire 20-250V, N.O.     | ECS1-1808U-A3U2                                                                     | ECS1-1808U-A3S2                                                                     | ECS1-1808U-AUU3                                                                     | ECS1-1808U-AUS3                                                                       | ECS1-1808U-AZU3                                                                       |
| AC/DC 2 wire 20-250V, N.C.     | ECS1-1808U-B3U2                                                                     | ECS1-1808U-B3S2                                                                     | ECS1-1808U-BUU3                                                                     | ECS1-1808U-BUS3                                                                       | ECS1-1808U-BZU3                                                                       |
|                                |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|                                |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|                                |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|                                |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|                                |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|                                |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|                                |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|                                |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| Diagrams (units in mm)         | Short Body                                                                          |                                                                                     | Short Body                                                                          |                                                                                       |                                                                                       |
|                                |  |  |  |  |  |