

## M30 Inductive Proximity Sensors

**Standard Length**

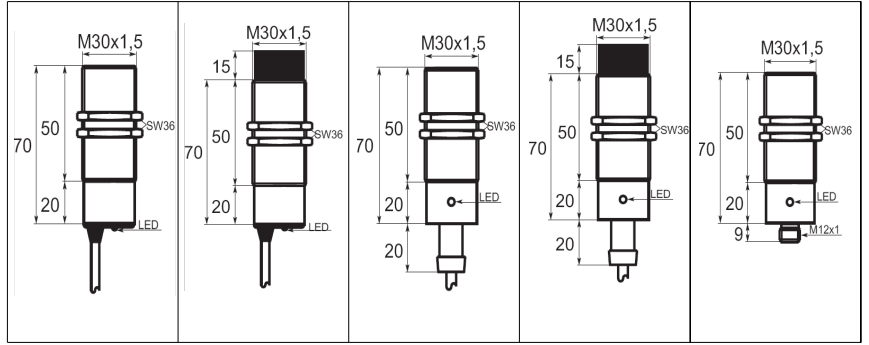
**"Mini's"**

**Extended Sensing**

**3 Wire DC**

**2 Wire DC**

**2 Wire AC**



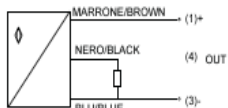
(Wiring Schematic)

|           |                       |     |            |            |            |            |              |
|-----------|-----------------------|-----|------------|------------|------------|------------|--------------|
| 3 Wire DC | PNP – Normally Open   | (1) | IMM323010C | IMM353015C | IMN323010C | IMN353015C | IMN323010M12 |
|           | PNP – Normally Closed | (1) | IMM333010C | IMM363015C | IMN333010C | IMN363015C | IMN333010M12 |
|           | PNP – Selectable      | (4) | IMM343010C | IMM373015C | IMN343010C | IMN373015C | IMN343010M12 |
|           | NPN – Normally Open   | (2) | IMM223010C | IMM253015C | IMN223010C | IMN253015C | IMN223010M12 |
|           | NPN – Normally Closed | (2) | IMM233010C | IMM263015C | IMN233010C | IMN263015C | IMN233010M12 |
|           | NPN – Selectable      | (5) | IMM243010C | IMM273015C | IMN243010C | IMN273015C | IMN243010M12 |
| 2 Wire DC | Normally Open         |     | -          | -          | -          | -          | -            |
|           | Normally Closed       |     | -          | -          | -          | -          | -            |
| 2 Wire AC | Normally Open         |     | -          | -          | -          | -          | -            |
|           | Normally Closed       |     | -          | -          | -          | -          | -            |

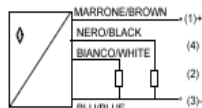
Mating cables / connectors

|                               |                               |                  |                 |                  |               |
|-------------------------------|-------------------------------|------------------|-----------------|------------------|---------------|
| Form                          | M30 Shielded                  | M30 Non-Shielded | M30 Shielded    | M30 Non-Shielded | M30 Shielded  |
| Nominal Sensing Distance (Sn) | 10mm                          | 15mm             | 10mm            | 15mm             | 10mm          |
| Housing Material              | Nickel Plated Brass           |                  |                 |                  |               |
| Termination Type              | 2.0 Meter Cable               | 2.0 Meter Cable  | 2.0 Meter Cable | 2.0 Meter Cable  | M12 Connector |
| Min / Max Supply Voltage      | 10 to 30Vdc                   |                  |                 |                  |               |
| Max. Load Current (Ir)        | 200mA                         |                  |                 |                  |               |
| Max ripple factor (Vr)        | ≤ 10%                         |                  |                 |                  |               |
| Voltage Drop (Ud)             | ≤ 3V @ 200mA                  |                  |                 |                  |               |
| Power Consumption (Io)        | ≤ 10mA                        |                  |                 |                  |               |
| Switching Frequency (Hz)      | 200 Hz                        | 200 Hz           | 200 Hz          | 200 Hz           | 200 Hz        |
| Repeatability                 | < 2% nominal sensing distance |                  |                 |                  |               |
| Hysteresis                    | ≤ 10% Sn                      |                  |                 |                  |               |
| Short Circuit Protection      | Yes                           |                  |                 |                  |               |
| Output LED                    | Yes                           |                  |                 |                  |               |
| Operating Temperature         | -25 to +70 C                  |                  |                 |                  |               |
| IP Rating                     | IP67 (with connector mounted) |                  |                 |                  |               |

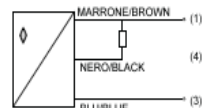
Wiring Diagram



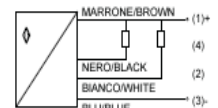
① PNP



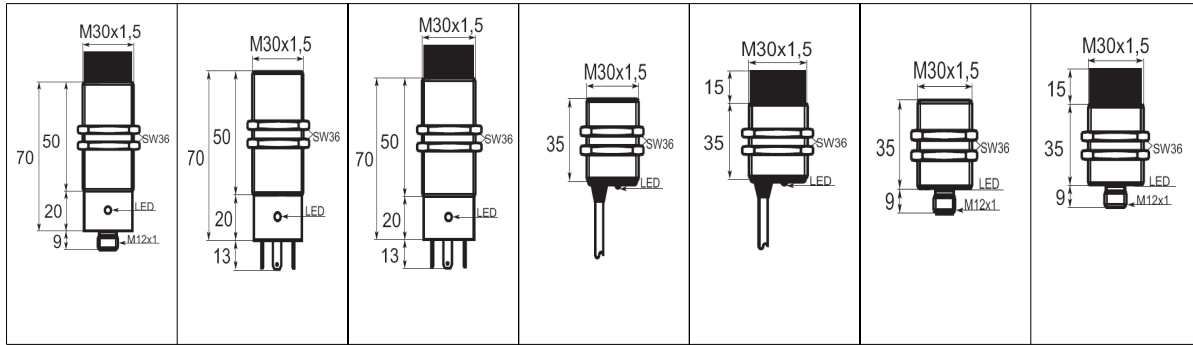
④ PNP



② NPN

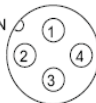


⑤ NPN



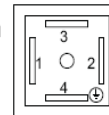
|                  |                               |               |                  |                 |                  |               |                  |
|------------------|-------------------------------|---------------|------------------|-----------------|------------------|---------------|------------------|
| PNP – NO         | IMN353015M12                  | IMN323010P    | IMN353015P       | IMC323010C      | IMC353015C       | IMC323010M12  | IMC353015M12     |
| PNP – NC         | IMN363015M12                  | IMN333010P    | IMN363015P       | IMC333010C      | IMC363015C       | IMC333010M12  | IMC363015M12     |
| PNP – NO/NC      | IMN373015M12                  | IMN343010P    | IMN373015P       | IMC343010C      | IMC373015C       | IMC343010M12  | IMC373015M12     |
| NPN – NO         | IMN253015M12                  | IMN223010P    | IMN253015P       | IMC223010C      | IMC253015C       | IMC223010M12  | IMC253015M12     |
| NPN – NC         | IMN263015M12                  | IMN233010P    | IMN263015P       | IMC233010C      | IMC263015C       | IMC233010M12  | IMC263015M12     |
| NPN – NO/NC      | IMN273015M12                  | IMN243010P    | IMN273015P       | IMC243010C      | IMC273015C       | IMC243010M12  | IMC273015M12     |
| 2W DC NO         | -                             | -             | -                | -               | -                | -             | -                |
| 2W DC NC         | -                             | -             | -                | -               | -                | -             | -                |
| 2W AC NO         | -                             | -             | -                | -               | -                | -             | -                |
| 2W AC NC         | -                             | -             | -                | -               | -                | -             | -                |
| Mates            |                               |               |                  |                 |                  |               |                  |
| Form             | M30 Non-Shielded              | M30 Shielded  | M30 Non-Shielded | M30 Shielded    | M30 Non-Shielded | M30 Shielded  | M30 Non-Shielded |
| Sn               | 15mm                          | 10mm          | 15mm             | 10mm            | 15mm             | 10mm          | 15mm             |
| Housing          | Nickel Plated Brass           |               |                  |                 |                  |               |                  |
| Termination      | M12 Connector                 | Sub-Base Plug | Sub-Base Plug    | 2.0 Meter Cable | 2.0 Meter Cable  | M12 Connector | M12 Connector    |
| Supply Vdc       | 10 to 30Vdc                   |               |                  |                 |                  |               |                  |
| Max Load         | 200mA                         |               |                  |                 |                  |               |                  |
| Max ripple       | ≤ 10%                         |               |                  |                 |                  |               |                  |
| Ud               | ≤ 3V @ 200mA                  |               |                  |                 |                  |               |                  |
| Io               | ≤ 10mA                        |               |                  |                 |                  |               |                  |
| Hz               | 200 Hz                        | 200 Hz        | 200 Hz           | 200 Hz          | 200 Hz           | 200 Hz        | 200 Hz           |
| Repeatability    | < 2% nominal sensing distance |               |                  |                 |                  |               |                  |
| Hysteresis       | ≤ 10% Sn                      |               |                  |                 |                  |               |                  |
| Short Protection | Yes                           |               |                  |                 |                  |               |                  |
| LED              | Yes                           |               |                  |                 |                  |               |                  |
| Op Temp          | -25 to +70 C                  |               |                  |                 |                  |               |                  |
| IP Rating        | IP67 (with connector mounted) |               |                  |                 |                  |               |                  |

1+ MARRONE / BROWN  
4 OUT NERO / BLACK  
3- BLU / BLUE



1+ MARRONE / BROWN  
2 NC OUT BIANCO/WHITE  
3- BLU / BLUE  
4 NO OUT NERO / BLACK

1+ MARRONE / BROWN  
4 OUT NERO / BLACK  
3- BLU / BLUE



1+ MARRONE / BROWN  
2 NC OUT BIANCO/WHITE  
3- BLU / BLUE  
4 NO OUT NERO / BLACK

## M30 Inductive Proximity Sensors

**Standard Length**

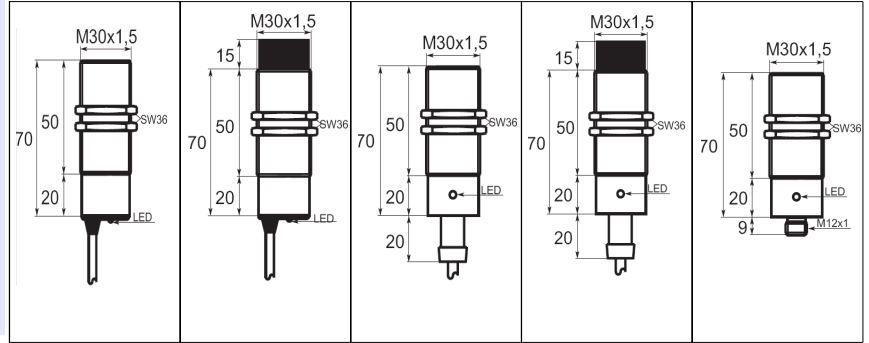
**"Mini's"**

**Extended Sensing**

**3 Wire DC**

**2 Wire DC**

**2 Wire AC**



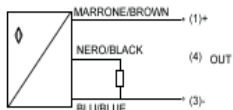
(Wiring Schematic)

|           |                       |     |            |            |            |            |              |
|-----------|-----------------------|-----|------------|------------|------------|------------|--------------|
| 3 Wire DC | PNP – Normally Open   | (1) | IMM323020C | IMM353035C | IMN323020C | IMN353035C | IMN323020M12 |
|           | PNP – Normally Closed | (1) | IMM333020C | IMM363035C | IMN333020C | IMN363035C | IMN333020M12 |
|           | PNP – Selectable      | (4) | -          | -          | -          | -          | -            |
|           | NPN – Normally Open   | (2) | IMM223020C | IMM253035C | IMN223020C | IMN253035C | IMN223020M12 |
|           | NPN – Normally Closed | (2) | IMM233020C | IMM263035C | IMN233020C | IMN263035C | IMN233020M12 |
|           | NPN – Selectable      | (5) | -          | -          | -          | -          | -            |
| 2 Wire DC | Normally Open         |     | -          | -          | -          | -          | -            |
|           | Normally Closed       |     | -          | -          | -          | -          | -            |
| 2 Wire AC | Normally Open         |     | -          | -          | -          | -          | -            |
|           | Normally Closed       |     | -          | -          | -          | -          | -            |

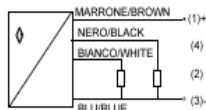
Mating cables / connectors

|                               |                               |                  |                 |                  |               |
|-------------------------------|-------------------------------|------------------|-----------------|------------------|---------------|
| Form                          | M30 Shielded                  | M30 Non-Shielded | M30 Shielded    | M30 Non-Shielded | M30 Shielded  |
| Nominal Sensing Distance (Sn) | 20mm                          | 35mm             | 20mm            | 35mm             | 20mm          |
| Housing Material              | Nickel Plated Brass           |                  |                 |                  |               |
| Termination Type              | 2.0 Meter Cable               | 2.0 Meter Cable  | 2.0 Meter Cable | 2.0 Meter Cable  | M12 Connector |
| Min / Max Supply Voltage      | 10 to 30Vdc                   |                  |                 |                  |               |
| Max. Load Current (Ir)        | 200mA                         |                  |                 |                  |               |
| Max ripple factor (Vr)        | ≤ 10%                         |                  |                 |                  |               |
| Voltage Drop (Ud)             | ≤ 3V @ 200mA                  |                  |                 |                  |               |
| Power Consumption (Io)        | ≤ 10mA                        |                  |                 |                  |               |
| Switching Frequency (Hz)      | 200 Hz                        | 100 Hz           | 200 Hz          | 100 Hz           | 200 Hz        |
| Repeatability                 | < 2% nominal sensing distance |                  |                 |                  |               |
| Hysteresis                    | ≤ 10% Sn                      |                  |                 |                  |               |
| Short Circuit Protection      | Yes                           |                  |                 |                  |               |
| Output LED                    | Yes                           |                  |                 |                  |               |
| Operating Temperature         | -25 to +70 C                  |                  |                 |                  |               |
| IP Rating                     | IP67 (with connector mounted) |                  |                 |                  |               |

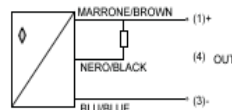
Wiring Diagram



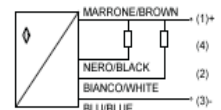
① PNP



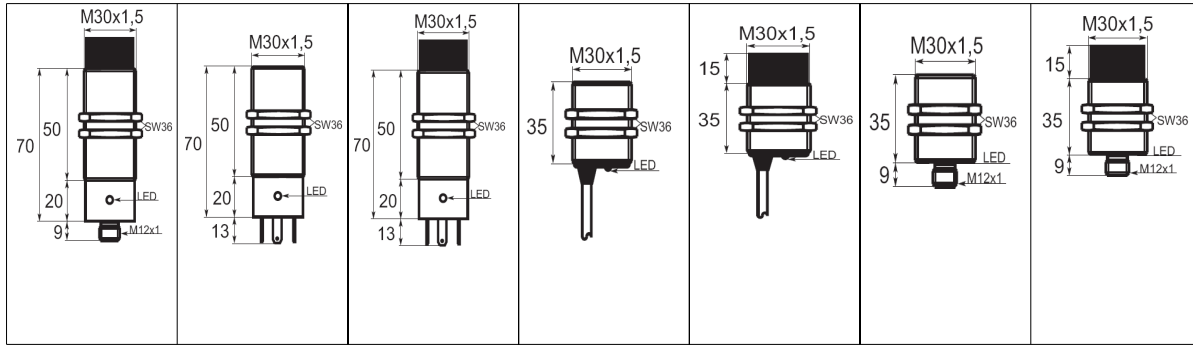
④ PNP



② NPN

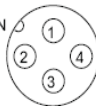


⑤ NPN



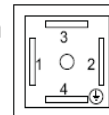
|  |                  |                               |               |                  |                 |                  |               |                  |
|--|------------------|-------------------------------|---------------|------------------|-----------------|------------------|---------------|------------------|
|  | PNP – NO         | IMN353035M12                  | IMN323020P    | IMN353035P       | IMC323020C      | IMC353035C       | IMC323020M12  | IMC353035M12     |
|  | PNP – NC         | IMN363035M12                  | IMN333020P    | IMN363035P       | IMC333020C      | IMC363035C       | IMC333020M12  | IMC363035M12     |
|  | PNP – NO/NC      | -                             | -             | -                | -               | -                | -             | -                |
|  | NPN – NO         | IMN253035M12                  | IMN223020P    | IMN253035P       | IMC223020C      | IMC253035C       | IMC223020M12  | IMC253035M12     |
|  | NPN – NC         | IMN263035M12                  | IMN233020P    | IMN263035P       | IMC233020C      | IMC263035C       | IMC233020M12  | IMC263035M12     |
|  | NPN – NO/NC      | -                             | -             | -                | -               | -                | -             | -                |
|  | 2W DC NO         | -                             | -             | -                | -               | -                | -             | -                |
|  | 2W DC NC         | -                             | -             | -                | -               | -                | -             | -                |
|  | 2W AC NO         | -                             | -             | -                | -               | -                | -             | -                |
|  | 2W AC NC         | -                             | -             | -                | -               | -                | -             | -                |
|  | Mates            |                               |               |                  |                 |                  |               |                  |
|  | Form             | M30 Non-Shielded              | M30 Shielded  | M30 Non-Shielded | M30 Shielded    | M30 Non-Shielded | M30 Shielded  | M30 Non-Shielded |
|  | Sn               | 35mm                          | 20mm          | 35mm             | 20mm            | 35mm             | 20mm          | 35mm             |
|  | Housing          | Nickel Plated Brass           |               |                  |                 |                  |               |                  |
|  | Termination      | M12 Connector                 | Sub-Base Plug | Sub-Base Plug    | 2.0 Meter Cable | 2.0 Meter Cable  | M12 Connector | M12 Connector    |
|  | Supply Vdc       | 10 to 30Vdc                   |               |                  |                 |                  |               |                  |
|  | Max Load         | 200mA                         |               |                  |                 |                  |               |                  |
|  | Max ripple       | ≤ 10%                         |               |                  |                 |                  |               |                  |
|  | Ud               | ≤ 3V @ 200mA                  |               |                  | ≤ 1.8Vdc        |                  |               |                  |
|  | Io               | ≤ 10mA                        |               |                  |                 |                  |               |                  |
|  | Hz               | 100Hz                         | 200Hz         | 100Hz            | 200Hz           | 100Hz            | 200Hz         | 100Hz            |
|  | Repeatability    | < 2% nominal sensing distance |               |                  |                 |                  |               |                  |
|  | Hysteresis       | ≤ 10% Sn                      |               |                  |                 |                  |               |                  |
|  | Short Protection | Yes                           |               |                  |                 |                  |               |                  |
|  | LED              | Yes                           |               |                  |                 |                  |               |                  |
|  | Op Temp          | -25 to +70 C                  |               |                  |                 |                  |               |                  |
|  | IP Rating        | IP67 (with connector mounted) |               |                  |                 |                  |               |                  |

1+ MARRONE / BROWN  
4 OUT NERO / BLACK  
3- BLU / BLUE



1+ MARRONE / BROWN  
2 NC OUT BIANCO/WHITE  
3- BLU / BLUE  
4 NO OUT NERO / BLACK

1+ MARRONE / BROWN  
4 OUT NERO / BLACK  
3- BLU / BLUE



1+ MARRONE / BROWN  
2 NC OUT BIANCO/WHITE  
3- BLU / BLUE  
4 NO OUT NERO / BLACK

## M30 Inductive Proximity Sensors

**Standard Length**

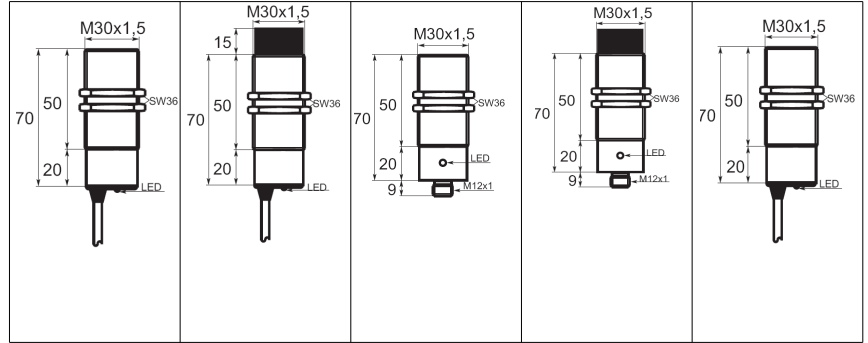
**"Mini's"**

**Extended Sensing**

**3 Wire DC**

**2 Wire DC**

**2 Wire AC**



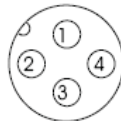
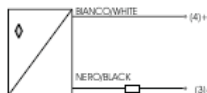
(Wiring Schematic)

|           |                       |     |            |            |              |              |            |
|-----------|-----------------------|-----|------------|------------|--------------|--------------|------------|
| 3 Wire DC | PNP – Normally Open   | (1) | -          | -          | -            | -            | -          |
|           | PNP – Normally Closed | (1) | -          | -          | -            | -            | -          |
|           | PNP – Selectable      | (4) | -          | -          | -            | -            | -          |
|           | NPN – Normally Open   | (2) | -          | -          | -            | -            | -          |
|           | NPN – Normally Closed | (2) | -          | -          | -            | -            | -          |
|           | NPN – Selectable      | (5) | -          | -          | -            | -            | -          |
| 2 Wire DC | Normally Open         | (6) | IMM423010C | IMM453015C | IMN423010M12 | IMN453015M12 | IMM623010C |
|           | Normally Closed       | (6) | IMM433010C | IMM463015C | IMN433010M12 | IMN463015M12 | IMM633010C |
| 2 Wire AC | Normally Open         | (7) | -          | -          | -            | -            | -          |
|           | Normally Closed       | (7) | -          | -          | -            | -            | -          |

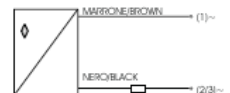
Mating cables / connectors

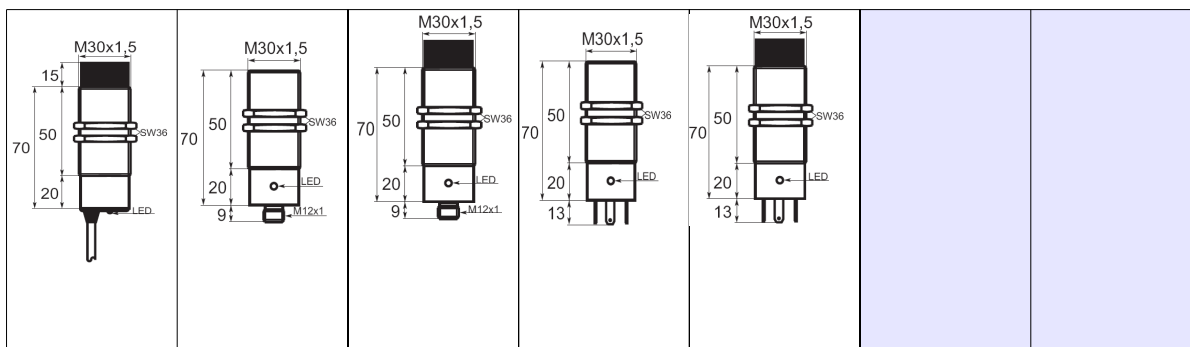
| Form                          | M30 Shielded                  | M30 Non-Shielded | M30 Shielded  | M30 Non-Shielded | M30 Shielded    |
|-------------------------------|-------------------------------|------------------|---------------|------------------|-----------------|
| Nominal Sensing Distance (Sn) | 10mm                          | 15mm             | 10mm          | 15mm             | 10mm            |
| Housing Material              | Nickel Plated Brass           |                  |               |                  |                 |
| Termination Type              | 2.0 Meter Cable               | 2.0 Meter Cable  | M12 Connector | M12 Connector    | 2.0 Meter Cable |
| Min / Max Supply Voltage      | 10 to 30Vdc                   |                  |               |                  | 20 to 220 Vac   |
| Max. Load Current (Ir)        | 100mA                         |                  |               |                  | 400 mA          |
| Max ripple factor (Vr)        | ≤ 10%                         |                  |               |                  | -               |
| Voltage Drop (Ud)             | ≤ 7.5 Vdc                     |                  |               |                  | ≤ 4.5Vac        |
| Power Consumption (Io)        | ≤ 0.7mA                       |                  |               |                  | ≤ 2.5mA         |
| Switching Frequency (Hz)      | 200 Hz                        | 200 Hz           | 200 Hz        | 200 Hz           | 20 Hz           |
| Repeatability                 | < 2% nominal sensing distance |                  |               |                  |                 |
| Hysteresis                    | ≤ 10% Sn                      |                  |               |                  |                 |
| Short Circuit Protection      | Yes                           |                  |               |                  | No              |
| Output LED                    | Yes                           |                  |               |                  | Yes             |
| Operating Temperature         | -25 to +70 C                  |                  |               |                  |                 |
| IP Rating                     | IP67 (with connector mounted) |                  |               |                  |                 |

Wiring Diagram

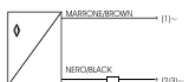


4+ NERO / BLACK  
3- BLU / BLUE

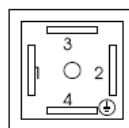




|                  |                               |               |                  |               |                  |   |   |
|------------------|-------------------------------|---------------|------------------|---------------|------------------|---|---|
| PNP – NO         | -                             | -             | -                | -             | -                | - | - |
| PNP – NC         | -                             | -             | -                | -             | -                | - | - |
| PNP – NO/NC      | -                             | -             | -                | -             | -                | - | - |
| NPN – NO         | -                             | -             | -                | -             | -                | - | - |
| NPN – NC         | -                             | -             | -                | -             | -                | - | - |
| NPN – NO/NC      | -                             | -             | -                | -             | -                | - | - |
| 2W DC NO         | -                             | -             | -                | -             | -                | - | - |
| 2W DC NC         | -                             | -             | -                | -             | -                | - | - |
| 2W AC NO         | IMM653015C                    | IMN623010M12  | IMN653015M12     | IMN623010P    | IMN653015P       |   |   |
| 2W AC NC         | IMM663015C                    | IMN633010M12  | IMN663015M12     | IMN633010P    | IMN663015P       |   |   |
| Mates            |                               |               |                  |               |                  |   |   |
| Form             | M30 Non-Shielded              | M30 Shielded  | M30 Non-Shielded | M30 Shielded  | M30 Non-Shielded | - | - |
| Sn               | 15mm                          | 10mm          | 15mm             | 10mm          | 15mm             | - | - |
| Housing          | Nickel Plated Brass           |               |                  |               |                  |   |   |
| Termination      | 2.0 Meter Cable               | M12 Connector | M12 Connector    | Sub-Base Plug | Sub-Base Plug    |   |   |
| Supply Vdc       | 20 to 220Vac                  |               |                  |               |                  |   |   |
| Max Load         | 400mA                         |               |                  |               |                  |   |   |
| Max ripple       | -                             |               |                  |               |                  |   |   |
| Ud               | ≤ 4.5Vac                      |               |                  |               |                  |   |   |
| Io               | ≤ 2.5mA                       |               |                  |               |                  |   |   |
| Hz               | 20 Hz                         | 20 Hz         | 20 Hz            | 20 Hz         | 20 Hz            |   |   |
| Repeatability    | < 2% nominal sensing distance |               |                  |               |                  |   |   |
| Hysteresis       | ≤ 10% Sn                      |               |                  |               |                  |   |   |
| Short Protection | No                            |               |                  |               |                  |   |   |
| LED              | Yes                           |               |                  |               |                  |   |   |
| Op Temp          | -25 to +70 C                  |               |                  |               |                  |   |   |
| IP Rating        | IP67 (with connector mounted) |               |                  |               |                  |   |   |



1 ~ MARRONE / BROWN  
2/3 ~ BLU / BLUE



1 ~ MARRONE / BROWN  
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