

## M18 Inductive Proximity Sensors

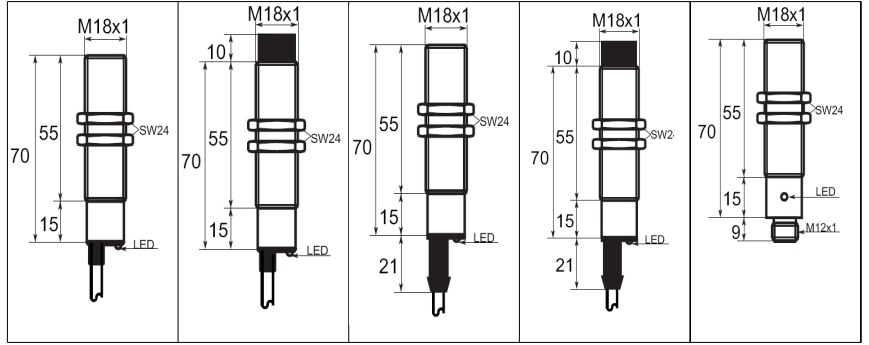
**Standard Length  
"Mini's"**

**Extended Sensing**

**3 Wire DC**

**2 Wire DC**

**2 Wire AC**



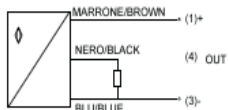
(Wiring Schematic)

|           |                       |     |           |           |           |           |             |
|-----------|-----------------------|-----|-----------|-----------|-----------|-----------|-------------|
| 3 Wire DC | PNP – Normally Open   | (1) | IMM32185C | IMM35188C | IMN32185C | IMN35188C | IMN32185M12 |
|           | PNP – Normally Closed | (1) | IMM33185C | IMM36188C | IMN33185C | IMN36188C | IMN33185M12 |
|           | PNP – Selectable      | (4) | IMM34185C | IMM37188C | IMN34185C | IMN37188C | IMN34185M12 |
|           | NPN – Normally Open   | (2) | IMM22185C | IMM25188C | IMN22185C | IMN25188C | IMN22185M12 |
|           | NPN – Normally Closed | (2) | IMM23185C | IMM26188C | IMN23185C | IMN26188C | IMN23185M12 |
|           | NPN – Selectable      | (5) | IMM24185C | IMM27188C | IMN24185C | IMN27188C | IMN24185M12 |
| 2 Wire DC | Normally Open         |     | -         | -         | -         | -         | -           |
|           | Normally Closed       |     | -         | -         | -         | -         | -           |
| 2 Wire AC | Normally Open         |     | -         | -         | -         | -         | -           |
|           | Normally Closed       |     | -         | -         | -         | -         | -           |

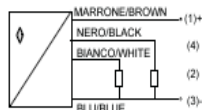
Mating cables / connectors

|                               |                               |                  |                 |                  |               |
|-------------------------------|-------------------------------|------------------|-----------------|------------------|---------------|
| Form                          | M18 Shielded                  | M18 Non-Shielded | M18 Shielded    | M18 Non-Shielded | M18 Shielded  |
| Nominal Sensing Distance (Sn) | 5mm                           | 8mm              | 5mm             | 8mm              | 5mm           |
| 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)      | 700 Hz                        | 700 Hz           | 700 Hz          | 700 Hz           | 700 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) |                  |                 |                  |               |

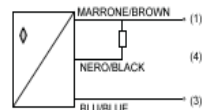
Wiring Diagram



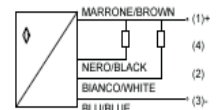
① PNP



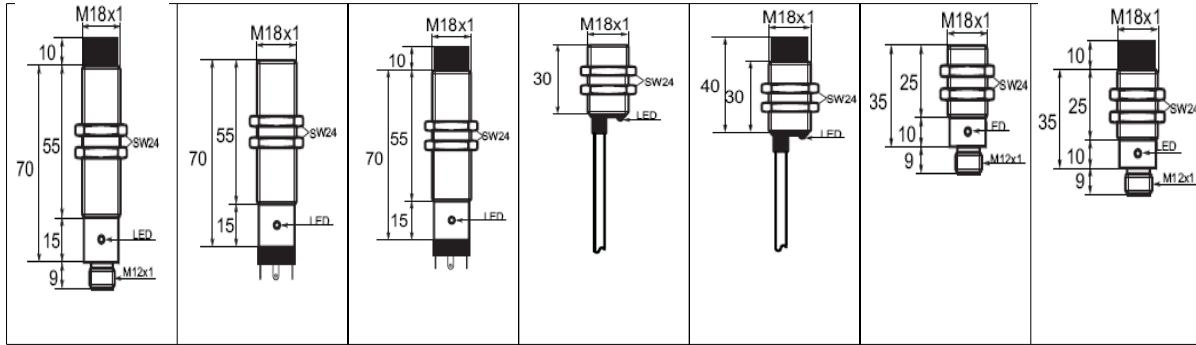
④ PNP



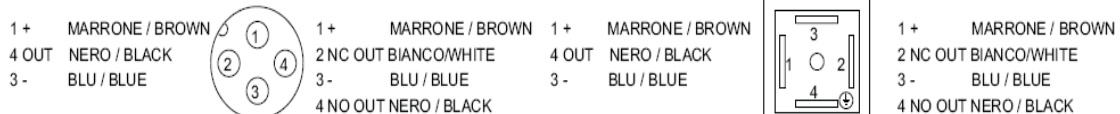
② NPN



⑤ NPN



|                  |                               |               |                  |                 |                  |               |                  |
|------------------|-------------------------------|---------------|------------------|-----------------|------------------|---------------|------------------|
| PNP – NO         | IMN35188M12                   | IMN32185P     | IMN35188P        | IMC32185C       | IMC35188C        | IMC32185M12   | IMC35188M12      |
| PNP – NC         | IMN36188M12                   | IMN33185P     | IMN36188P        | IMC33185C       | IMC36188C        | IMC33185M12   | IMC36188M12      |
| PNP – NO/NC      | IMN37188M12                   | IMN34185P     | IMN37188P        | IMC34185C       | IMC37188C        | IMC34185M12   | IMC37188M12      |
| NPN – NO         | IMN25188M12                   | IMN22185P     | IMN25188P        | IMC22185C       | IMC25188C        | IMC22185M12   | IMC25188M12      |
| NPN – NC         | IMN26188M12                   | IMN23185P     | IMN26188P        | IMC23185C       | IMC26188C        | IMC23185M12   | IMC26188M12      |
| NPN – NO/NC      | IMN27188M12                   | IMN24185P     | IMN27188P        | IMC24185C       | IMC27188C        | IMC24185M12   | IMC27188M12      |
| 2W DC NO         | -                             | -             | -                | -               | -                | -             | -                |
| 2W DC NC         | -                             | -             | -                | -               | -                | -             | -                |
| 2W AC NO         | -                             | -             | -                | -               | -                | -             | -                |
| 2W AC NC         | -                             | -             | -                | -               | -                | -             | -                |
| Mates            |                               |               |                  |                 |                  |               |                  |
| Form             | M18 Non-Shielded              | M18 Shielded  | M18 Non-Shielded | M18 Shielded    | M18 Non-Shielded | M18 Shielded  | M18 Non-Shielded |
| Sn               | 8mm                           | 5mm           | 8mm              | 5mm             | 8mm              | 5mm           | 8mm              |
| 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               | 700 Hz                        | 700 Hz        | 700 Hz           | 1.2kHz          | 1kHz             | 1.2kHz        | 1kHz             |
| 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) |               |                  |                 |                  |               |                  |



## M18 Inductive Proximity Sensors

**Standard Length**

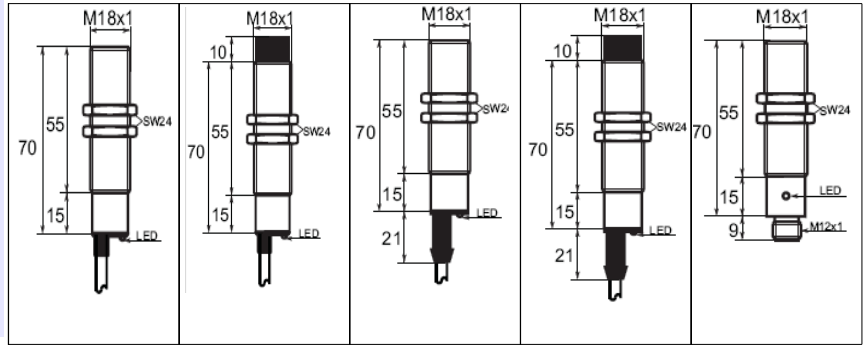
**"Mini's"**

**Extended Sensing**

**3 Wire DC**

**2 Wire DC**

**2 Wire AC**



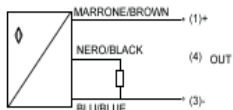
(Wiring Schematic)

|           |                       |     |           |            |           |            |             |
|-----------|-----------------------|-----|-----------|------------|-----------|------------|-------------|
| 3 Wire DC | PNP – Normally Open   | (1) | IMM32188C | IMM351816C | IMN32188C | IMN351816C | IMN32188M12 |
|           | PNP – Normally Closed | (1) | IMM33188C | IMM361816C | IMN33188C | IMN361816C | IMN33188M12 |
|           | PNP – Selectable      | (4) | -         | -          | -         | -          | -           |
|           | NPN – Normally Open   | (2) | IMM22188C | IMM251816C | IMN22188C | IMN251816C | IMN22188M12 |
|           | NPN – Normally Closed | (2) | IMM23188C | IMM261816C | IMN23188C | IMN261816C | IMN23188M12 |
|           | NPN – Selectable      | (5) | -         | -          | -         | -          | -           |
| 2 Wire DC | Normally Open         |     | -         | -          | -         | -          | -           |
|           | Normally Closed       |     | -         | -          | -         | -          | -           |
| 2 Wire AC | Normally Open         |     | -         | -          | -         | -          | -           |
|           | Normally Closed       |     | -         | -          | -         | -          | -           |

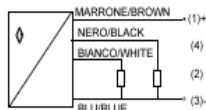
Mating cables / connectors

|                               |                               |                  |                 |                  |               |
|-------------------------------|-------------------------------|------------------|-----------------|------------------|---------------|
| Form                          | M18 Shielded                  | M18 Non-Shielded | M18 Shielded    | M18 Non-Shielded | M18 Shielded  |
| Nominal Sensing Distance (Sn) | 8mm                           | 16mm             | 8mm             | 16mm             | 8mm           |
| 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)      | 700 Hz                        | 400 Hz           | 700 Hz          | 400 Hz           | 700 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) |                  |                 |                  |               |

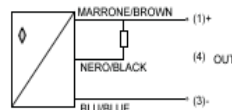
Wiring Diagram



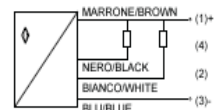
① PNP



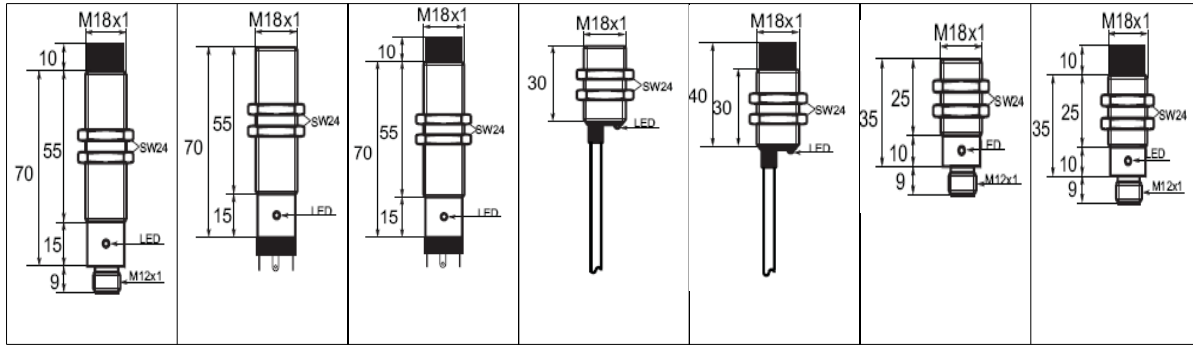
④ PNP



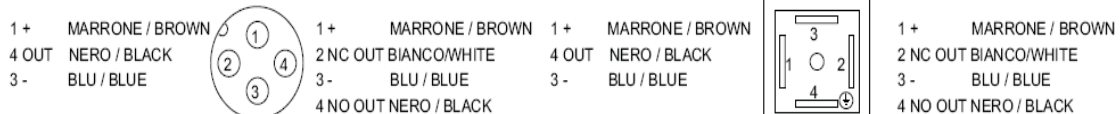
② NPN



⑤ NPN



|  |                  |                               |               |                  |                 |                  |               |                  |
|--|------------------|-------------------------------|---------------|------------------|-----------------|------------------|---------------|------------------|
|  | PNP – NO         | IMN351816M12                  | IMN32188P     | IMN351816P       | IMC32188C       | IMC351816C       | IMC32188M12   | IMC351816M12     |
|  | PNP – NC         | IMN361816M12                  | IMN33188P     | IMN361816P       | IMC33188C       | IMC361816C       | IMC33188M12   | IMC361816M12     |
|  | PNP – NO/NC      | -                             | -             | -                | -               | -                | -             | -                |
|  | NPN – NO         | IMN251816M12                  | IMN22188P     | IMN251816P       | IMC22188C       | IMC251816C       | IMC22188M12   | IMC251816M12     |
|  | NPN – NC         | IMN261816M12                  | IMN23188P     | IMN261816P       | IMC23188C       | IMC261816C       | IMC23188M12   | IMC261816M12     |
|  | NPN – NO/NC      | -                             | -             | -                | -               | -                | -             | -                |
|  | 2W DC NO         | -                             | -             | -                | -               | -                | -             | -                |
|  | 2W DC NC         | -                             | -             | -                | -               | -                | -             | -                |
|  | 2W AC NO         | -                             | -             | -                | -               | -                | -             | -                |
|  | 2W AC NC         | -                             | -             | -                | -               | -                | -             | -                |
|  | Mates            |                               |               |                  |                 |                  |               |                  |
|  | Form             | M18 Non-Shielded              | M18 Shielded  | M18 Non-Shielded | M18 Shielded    | M18 Non-Shielded | M18 Shielded  | M18 Non-Shielded |
|  | Sn               | 16mm                          | 8mm           | 16mm             | 8mm             | 16mm             | 8mm           | 16mm             |
|  | 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                  |               |                  | ≤ 1.8V          |                  |               |                  |
|  | Io               | ≤ 10mA                        |               |                  |                 |                  |               |                  |
|  | Hz               | 400 Hz                        | 700 Hz        | 400 Hz           | 700Hz           | 400Hz            | 700Hz         | 400Hz            |
|  | 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) |               |                  |                 |                  |               |                  |



## M18 Inductive Proximity Sensors

**Standard Length**

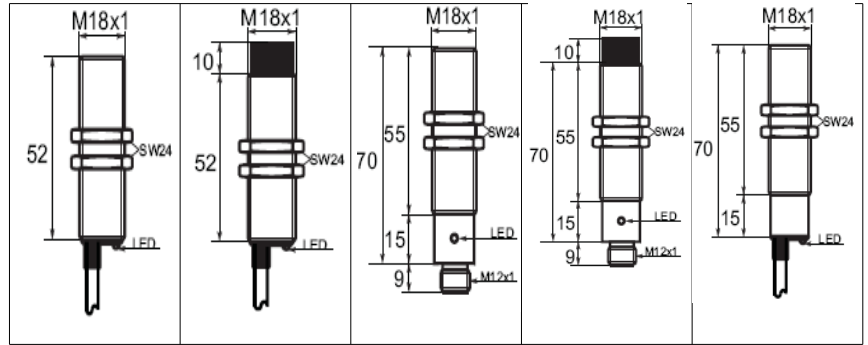
**"Mini's"**

**Extended Sensing**

**3 Wire DC**

**2 Wire DC**

**2 Wire AC**



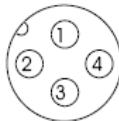
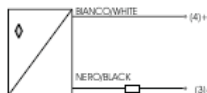
(Wiring Schematic)

|           |                       |     |           |           |             |             |           |
|-----------|-----------------------|-----|-----------|-----------|-------------|-------------|-----------|
| 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) | IMM42185C | IMM45188C | IMN42185M12 | IMN45188M12 | -         |
|           | Normally Closed       | (6) | IMM43185C | IMM46188C | IMN43185M12 | IMN46188M12 | -         |
| 2 Wire AC | Normally Open         | (7) | -         | -         | -           | -           | IMM62185C |
|           | Normally Closed       | (7) | -         | -         | -           | -           | IMM63185C |

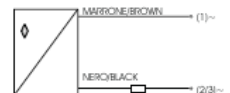
Mating cables / connectors

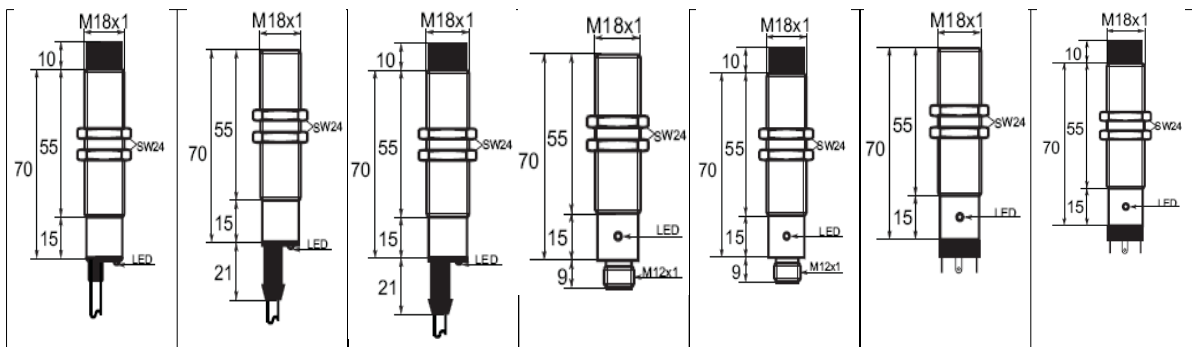
| Form                          | M18 Shielded                  | M18 Non-Shielded | M18 Shielded  | M18 Non-Shielded | M18 Shielded    |
|-------------------------------|-------------------------------|------------------|---------------|------------------|-----------------|
| Nominal Sensing Distance (Sn) | 5mm                           | 8mm              | 5mm           | 8mm              | 5mm             |
| 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 Vdc                       |                  |               |                  | ≤ 4.5Vac        |
| Power Consumption (Io)        | ≤ 0.7mA                       |                  |               |                  | ≤ 2.5mA         |
| Switching Frequency (Hz)      | 700 Hz                        | 400 Hz           | 700 Hz        | 400 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

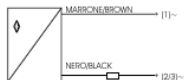


4 + NERO / BLACK  
3 - BLU / BLUE

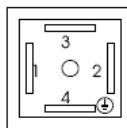




|                  |                               |                 |                  |               |                  |               |                  |
|------------------|-------------------------------|-----------------|------------------|---------------|------------------|---------------|------------------|
| PNP – NO         | -                             | -               | -                | -             | -                | -             | -                |
| PNP – NC         | -                             | -               | -                | -             | -                | -             | -                |
| PNP – NO/NC      | -                             | -               | -                | -             | -                | -             | -                |
| NPN – NO         | -                             | -               | -                | -             | -                | -             | -                |
| NPN – NC         | -                             | -               | -                | -             | -                | -             | -                |
| NPN – NO/NC      | -                             | -               | -                | -             | -                | -             | -                |
| 2W DC NO         | -                             | -               | -                | -             | -                | -             | -                |
| 2W DC NC         | -                             | -               | -                | -             | -                | -             | -                |
| 2W AC NO         | IMM65188C                     | IMN62185C       | IMN65188C        | IMN62185M12   | IMN65188M12      | IMN62185P     | IMN65188P        |
| 2W AC NC         | IMM66188C                     | IMN63185C       | IMN66188C        | IMN63185M12   | IMN66188M12      | IMN63185P     | IMN66188P        |
| Mates            |                               |                 |                  |               |                  |               |                  |
| Form             | M18 Non-Shielded              | M18 Shielded    | M18 Non-Shielded | M18 Shielded  | M18 Non-Shielded | M18 Shielded  | M18 Non-Shielded |
| Sn               | 16mm                          | 8mm             | 16mm             | 8mm           | 16mm             | 8mm           | 16mm             |
| Housing          | Nickel Plated Brass           |                 |                  |               |                  |               |                  |
| Termination      | 2.0 Meter Cable               | 2.0 Meter Cable | 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            | 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  
2/3 ~ BLU / BLUE

# Mouser Electronics

Authorized Distributor

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## Crouzet:

[IMN351816C](#) [IMN351816M12](#) [IMN351816P](#) [IMN35188C](#) [IMN35188M12](#) [IMN35188P](#) [IMN361816C](#)  
[IMN361816M12](#) [IMN361816P](#) [IMN36188C](#) [IMN36188M12](#) [IMN36188P](#) [IMN37188C](#) [IMN37188M12](#) [IMN37188P](#)  
[IMN42185M12](#) [IMN43185M12](#) [IMN45188M12](#) [IMN46188M12](#) [IMN62185C](#) [IMN62185M12](#) [IMN62185P](#) [IMN63185C](#)  
[IMN63185M12](#) [IMN63185P](#) [IMN65188C](#) [IMN65188M12](#) [IMN65188P](#) [IMN66188C](#) [IMN66188M12](#) [IMN66188P](#)  
[IMM22185C](#) [IMM22188C](#) [IMM23185C](#) [IMM23188C](#) [IMM24185C](#) [IMM251816C](#) [IMM25188C](#) [IMM261816C](#)  
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