



## Properties

- 500 mm and 1000 mm sensing range versions
- DC, switching output
- Ø18 mm cylindrical housing
- Connector version

## Your Benefit

- Ultra bright rear-view LEDs
- Flexible configuration via Teach-wire or UB-PROG2 pushbutton

## Technical Data

For detailed data and product description refer to the data sheets at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

### General Data

|                           |                                                                                 |
|---------------------------|---------------------------------------------------------------------------------|
| Operating voltage         | 10 ... 30 V DC , ripple 10 % <sub>SS</sub>                                      |
| No-load supply current    | ≤ 50 mA                                                                         |
| Rated operational current | 200 mA , short-circuit/overload protected                                       |
| Input type                | 1 program input,                                                                |
| Synchronization           | 1 synchronous connection, bi-directional                                        |
| LED yellow                | indication of the switching state<br>flashing: program function object detected |
| LED red                   | permanently red: Error<br>red, flashing: program function, object not detected  |
| Ambient temperature       | -25 ... 70 °C (-13 ... 158 °F)                                                  |
| Material                  |                                                                                 |
| Housing                   | brass, nickel-plated                                                            |
| Transducer                | epoxy resin/hollow glass sphere mixture; foam polyurethane, cover PBT           |
| Protection degree         | IP65                                                                            |
| Connection type           | Device connector M12 x 1 , 5-pin                                                |



### Model Number

|                      |                                                             | UB500-18GM75-E4-V15 | UB500-18GM75-E5-V15 | UB1000-18GM75-E4-V15 | UB1000-18GM75-E5-V15 |
|----------------------|-------------------------------------------------------------|---------------------|---------------------|----------------------|----------------------|
| Sensing range        | 30 ... 500 mm                                               | ●                   | ●                   |                      |                      |
|                      | 70 ... 1000 mm                                              |                     |                     | ●                    | ●                    |
| Transducer frequency | approx. 380 kHz                                             | ●                   | ●                   |                      |                      |
|                      | approx. 255 kHz                                             |                     |                     | ●                    | ●                    |
| Output type          | 1 switch output NPN Normally open/<br>closed , programmable | ●                   |                     | ●                    |                      |
|                      | 1 switch output PNP Normally open/<br>closed , programmable |                     | ●                   |                      | ●                    |
| Switching frequency  | max. 8 Hz                                                   | ●                   | ●                   |                      |                      |
|                      | max. 3 Hz                                                   |                     |                     | ●                    | ●                    |

### Approvals and Certificates

|              |                                |   |   |   |   |
|--------------|--------------------------------|---|---|---|---|
| UL approval  | cULus Listed, General Purpose  | ● | ● | ● | ● |
| CSA approval | cCSAus Listed, General Purpose | ● | ● | ● | ● |

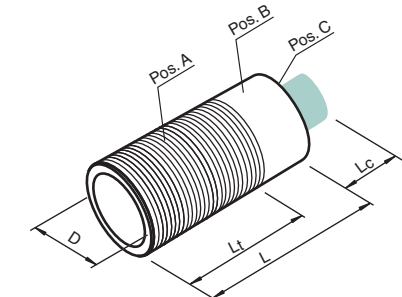
### Dimensions

|                                    |        |
|------------------------------------|--------|
| Length L [mm]                      | 75     |
| Diameter D [mm]                    | 18     |
| Thread length l <sub>t</sub> [mm]  | 48     |
| Connector area l <sub>c</sub> [mm] | 10     |
| LED position                       | Pos. C |

## Accessories

This and more accessories can be found in chapter 3.5 from page 673  
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

|              |                                                                                   |
|--------------|-----------------------------------------------------------------------------------|
| UB-PROG2     | Programming unit                                                                  |
| OMH-04       | Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm                     |
| BF 18        | Mounting flange, 18 mm                                                            |
| BF 18-F      | Mounting flange with dead stop, 18 mm                                             |
| BF 5-30      | Universal mounting bracket for cylindrical sensors with a diameter of 5 ... 30 mm |
| UVW90-K18    | Ultrasonic -deflector                                                             |
| V15-G-2M-PVC | Cable socket, M12, 5-pin, PVC cable                                               |
| V15-W-2M-PUR | Cable socket, M12, 5-pin, PUR cable                                               |

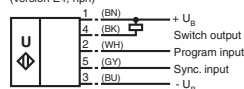


## Electrical Connection



UB500-18GM75-E4-V15  
UB1000-18GM75-E4-V15

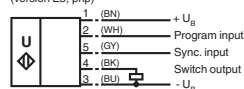
Standard symbol/Connections:  
(version E4, npn)



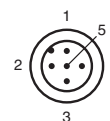
Wire colors in accordance with EN 60947-5-2.

UB500-18GM75-E5-V15  
UB1000-18GM75-E5-V15

Standard symbol/Connections:  
(version E5, npn)



Wire colors in accordance with EN 60947-5-2.



Wire colors in accordance with EN 60947-5-2

|   |    |         |
|---|----|---------|
| 1 | BN | (brown) |
| 2 | WH | (white) |
| 3 | BU | (blue)  |
| 4 | BK | (black) |
| 5 | GY | (gray)  |



## Technical Data

For detailed data and product description refer to the data sheets at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

### General Data

|                           |                                                                                 |
|---------------------------|---------------------------------------------------------------------------------|
| Operating voltage         | 10 ... 30 V DC , ripple 10 % <sub>SS</sub>                                      |
| No-load supply current    | ≤ 50 mA                                                                         |
| Rated operational current | 2 x 100 mA , short-circuit/overload protected                                   |
| Input type                | 1 program input,                                                                |
| LED yellow                | indication of the switching state<br>flashing: program function object detected |
| LED red                   | "Error", object uncertain<br>in program function: No object detected            |
| Ambient temperature       | -25 ... 70 °C (-13 ... 158 °F)                                                  |
| Material                  |                                                                                 |
| Housing                   | brass, nickel-plated                                                            |
| Transducer                | epoxy resin/hollow glass sphere mixture; foam polyurethane, cover PBT           |
| Protection degree         | IP65                                                                            |
| Connection type           | Device connector M12 x 1 , 5-pin                                                |



## Properties

- 500 mm and 1000 mm sensing range versions
- DC, 2 switching outputs
- Ø18 mm cylindrical housing
- Connector version

## Your Benefit

- Dual outputs, either both N.O. or N.C.
- Ultra bright rear-view LEDs
- Flexible configuration via Teach-wire or UB-PROG3 pushbutton

### Model Number

|                      |                                                                                                                 | UB500-18GM75-E6-V15 | UB500-18GM75-E7-V15 | UB1000-18GM75-E6-V15 | UB1000-18GM75-E7-V15 |
|----------------------|-----------------------------------------------------------------------------------------------------------------|---------------------|---------------------|----------------------|----------------------|
| Sensing range        | green = preferred type<br>30 ... 500 mm<br>70 ... 1000 mm                                                       | ●                   | ●                   | ●                    | ●                    |
| Transducer frequency | approx. 380 kHz<br>approx. 255 kHz                                                                              | ●                   | ●                   | ●                    | ●                    |
| Output type          | 2 switch outputs NPN, normally open/<br>closed , programmable<br>2 switch outputs PNP, NO/NC, program-<br>mable | ●                   | ●                   | ●                    | ●                    |
| Switching frequency  | max. 8 Hz<br>max. 3 Hz                                                                                          | ●                   | ●                   | ●                    | ●                    |

### Approvals and Certificates

|              |                                |   |   |   |   |
|--------------|--------------------------------|---|---|---|---|
| UL approval  | cULus Listed, General Purpose  | ● | ● | ● | ● |
| CSA approval | cCSAus Listed, General Purpose | ● | ● | ● | ● |

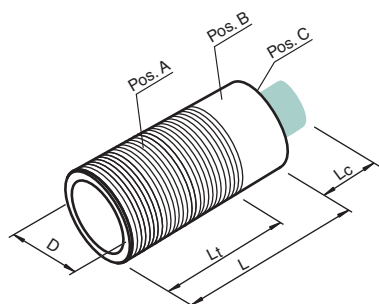
### Dimensions

|                                    |        |
|------------------------------------|--------|
| Length L [mm]                      | 75     |
| Diameter D [mm]                    | 18     |
| Thread length l <sub>t</sub> [mm]  | 48     |
| Connector area l <sub>c</sub> [mm] | 10     |
| LED position                       | Pos. C |

## Accessories

This and more accessories can be found in chapter 3.5 from page 673  
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

|              |                                                                                   |
|--------------|-----------------------------------------------------------------------------------|
| UB-PROG3     | Programming unit                                                                  |
| OMH-04       | Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm                     |
| BF 18        | Mounting flange, 18 mm                                                            |
| BF 18-F      | Mounting flange with dead stop, 18 mm                                             |
| BF 5-30      | Universal mounting bracket for cylindrical sensors with a diameter of 5 ... 30 mm |
| UVW90-K18    | Ultrasonic -deflector                                                             |
| V15-G-2M-PVC | Cable socket, M12, 5-pin, PVC cable                                               |
| V15-W-2M-PUR | Cable socket, M12, 5-pin, PUR cable                                               |

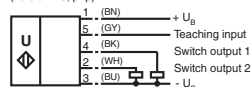


## Electrical Connection



UB500-18GM75-E6-V15  
UB1000-18GM75-E6-V15

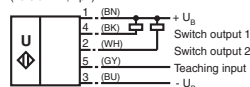
Standard symbol/Connections:  
(version E6, npn)



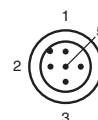
Core colours in accordance with EN 60947-5-2.

UB500-18GM75-E7-V15  
UB1000-18GM75-E7-V15

Standard symbol/Connections:  
(version E7, npn)



Core colours in accordance with EN 60947-5-2.



Wire colors in accordance with EN 60947-5-2

|   |    |         |
|---|----|---------|
| 1 | BN | (brown) |
| 2 | WH | (white) |
| 3 | BU | (blue)  |
| 4 | BK | (black) |
| 5 | GY | (gray)  |



## Technical Data

For detailed data and product description refer to the data sheets at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

### General Data

|                           |                                                                                 |
|---------------------------|---------------------------------------------------------------------------------|
| Operating voltage         | 10 ... 30 V DC , ripple 10 % <sub>SS</sub>                                      |
| No-load supply current    | ≤ 50 mA                                                                         |
| Rated operational current | 2 x 100 mA , short-circuit/overload protected                                   |
| Input type                | 1 program input,                                                                |
| LED yellow                | indication of the switching state<br>flashing: program function object detected |
| LED red                   | "Error", object uncertain<br>in program function: No object detected            |
| Ambient temperature       | -25 ... 70 °C (-13 ... 158 °F)                                                  |
| Material                  |                                                                                 |
| Housing                   | brass, nickel-plated                                                            |
| Transducer                | epoxy resin/hollow glass sphere mixture; foam polyurethane, cover PBT           |
| Protection degree         | IP65                                                                            |
| Connection type           | Device connector M12 x 1 , 5-pin                                                |



## Properties

- 500 mm and 1000 mm sensing range versions
- DC, 2 switching outputs
- Ø18 mm cylindrical housing
- Connector version

## Your Benefit

- Dedicated N.O. (1) and N.C. (1) outputs
- Ultra bright rear-view LEDs
- Flexible configuration via Teach-wire or UB-PROG3 pushbutton

### Model Number

|                      |                                                           | UB500-18GM75-E01-V15 | UB500-18GM75-E23-V15 | UB1000-18GM75-E01-V15 | UB1000-18GM75-E23-V15 |
|----------------------|-----------------------------------------------------------|----------------------|----------------------|-----------------------|-----------------------|
| Sensing range        | 30 ... 500 mm                                             | ●                    | ●                    |                       |                       |
|                      | 70 ... 1000 mm                                            |                      |                      | ●                     | ●                     |
| Transducer frequency | approx. 380 kHz                                           | ●                    | ●                    |                       |                       |
|                      | approx. 255 kHz                                           |                      |                      | ●                     | ●                     |
| Output type          | 2 switch outputs NPN, normally open/closed , programmable | ●                    |                      | ●                     |                       |
|                      | 2 switch outputs PNP, NO/NC, programmable                 |                      | ●                    |                       | ●                     |
| Switching frequency  | max. 8 Hz                                                 | ●                    | ●                    |                       |                       |
|                      | max. 3 Hz                                                 |                      |                      | ●                     | ●                     |

### Approvals and Certificates

|              |                                |   |   |   |   |
|--------------|--------------------------------|---|---|---|---|
| UL approval  | cULus Listed, General Purpose  | ● | ● | ● | ● |
| CSA approval | cCSAus Listed, General Purpose | ● | ● | ● | ● |

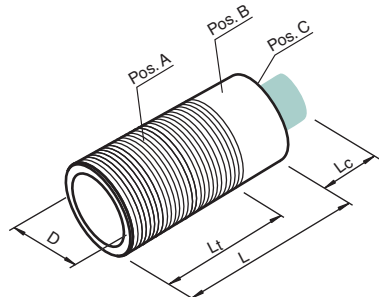
### Dimensions

|                                    |        |
|------------------------------------|--------|
| Length L [mm]                      | 75     |
| Diameter D [mm]                    | 18     |
| Thread length l <sub>t</sub> [mm]  | 48     |
| Connector area l <sub>c</sub> [mm] | 10     |
| LED position                       | Pos. C |

## Accessories

This and more accessories can be found in chapter 3.5 from page 673  
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

|                     |                                                                                   |
|---------------------|-----------------------------------------------------------------------------------|
| <b>UB-PROG3</b>     | Programming unit                                                                  |
| <b>OMH-04</b>       | Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm                     |
| <b>BF 18</b>        | Mounting flange, 18 mm                                                            |
| <b>BF 18-F</b>      | Mounting flange with dead stop, 18 mm                                             |
| <b>BF 5-30</b>      | Universal mounting bracket for cylindrical sensors with a diameter of 5 ... 30 mm |
| <b>UVW90-K18</b>    | Ultrasonic -deflector                                                             |
| <b>V15-G-2M-PVC</b> | Cable socket, M12, 5-pin, PVC cable                                               |
| <b>V15-W-2M-PUR</b> | Cable socket, M12, 5-pin, PUR cable                                               |

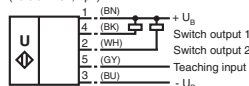


## Electrical Connection



UB500-18GM75-E01-V15  
UB1000-18GM75-E01-V15

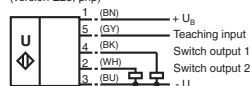
Standard symbol/Connections:  
(version E01, npn)



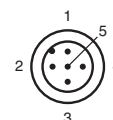
Core colours in accordance with EN 60947-5-2.

UB500-18GM75-E23-V15  
UB1000-18GM75-E23-V15

Standard symbol/Connections:  
(version E23, npn)



Core colours in accordance with EN 60947-5-2.



Wire colors in accordance with EN 60947-5-2

|   |    |         |
|---|----|---------|
| 1 | BN | (brown) |
| 2 | WH | (white) |
| 3 | BU | (blue)  |
| 4 | BK | (black) |
| 5 | GY | (gray)  |



## Technical Data

For detailed data and product description refer to the data sheets at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

### General Data

|                                       |                                                                                                           |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Deviation of the characteristic curve | ± 1 % of full-scale value                                                                                 |
| Input type                            | 1 program input                                                                                           |
| Synchronization                       | 1 synchronous connection, bi-directional                                                                  |
| LED yellow                            | permanently yellow: object in the evaluation range<br>yellow, flashing: program function, object detected |
| LED red                               | permanently red: Error<br>red, flashing: program function, object not detected                            |
| Ambient temperature                   | -25 ... 70 °C (-13 ... 158 °F)                                                                            |
| Material                              |                                                                                                           |
| Housing                               | brass, nickel-plated                                                                                      |
| Transducer                            | epoxy resin/hollow glass sphere mixture; foam polyurethane, cover PBT                                     |
| Protection degree                     | IP65                                                                                                      |
| Connection type                       | Device connector M12 x 1, 5-pin                                                                           |



## Properties

- 500 mm and 1000 mm sensing range versions
- DC, analog output
- Ø18 mm cylindrical housing
- Connector version

## Your Benefit

- Ultra bright rear-view LEDs
- Flexible configuration via Teach-wire or UB-PROG2 pushbutton

### Model Number

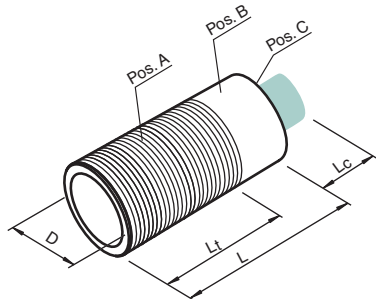
|                        |                                                                                        | UB500-18GM75-U-V15 | UB500-18GM75-I-V15 | UB1000-18GM75-I-V15 | UB1000-18GM75-U-V15 |
|------------------------|----------------------------------------------------------------------------------------|--------------------|--------------------|---------------------|---------------------|
| Sensing range          | green = preferred type<br>30 ... 500 mm<br>70 ... 1000 mm                              | ●                  | ●                  | ●                   | ●                   |
| Transducer frequency   | approx. 380 kHz<br>approx. 255 kHz                                                     | ●                  | ●                  | ●                   | ●                   |
| Operating voltage      | 10 ... 30 V DC, ripple 10 % <sub>SS</sub><br>15 ... 30 V DC, ripple 10 % <sub>SS</sub> | ●                  | ●                  | ●                   | ●                   |
| No-load supply current | ≤ 45 mA<br>≤ 50 mA                                                                     | ●                  | ●                  | ●                   | ●                   |
| Output type            | 1 analog output 0 ... 10 V<br>1 analog output 4 ... 20 mA                              | ●                  | ●                  | ●                   | ●                   |
| Resolution             | 0.11 mm at max. sensing range<br>0.13 mm at max. sensing range<br>0.35 mm              | ●                  | ●                  | ●                   | ●                   |

### Approvals and Certificates

|              |                                |   |   |   |   |
|--------------|--------------------------------|---|---|---|---|
| UL approval  | cULus Listed, General Purpose  | ● | ● | ● | ● |
| CSA approval | cCSAus Listed, General Purpose | ● | ● | ● | ● |

### Dimensions

|                                    |        |
|------------------------------------|--------|
| Length L [mm]                      | 75     |
| Diameter D [mm]                    | 18     |
| Thread length l <sub>t</sub> [mm]  | 48     |
| Connector area l <sub>c</sub> [mm] | 10     |
| LED position                       | Pos. C |



## Accessories

This and more accessories can be found in chapter 3.5 from page 673  
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

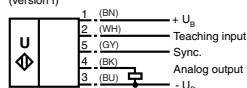
|              |                                                               |
|--------------|---------------------------------------------------------------|
| UB-PROG2     | Programming unit                                              |
| OMH-04       | Mounting aid for round steel Ø 12 mm or sheet 1.5 mm ... 3 mm |
| BF 18        | Mounting flange, 18 mm                                        |
| BF 18-F      | Mounting flange with dead stop, 18 mm                         |
| UVW90-K18    | Ultrasonic -deflector                                         |
| V15-G-2M-PVC | Cable socket, M12, 5-pin, PVC cable                           |
| V15-W-2M-PUR | Cable socket, M12, 5-pin, PUR cable                           |

## Electrical Connection



UB1000-18GM75-I-V15  
UB500-18GM75-I-V15

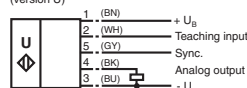
Standard symbol/Connections:  
(version I)



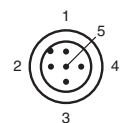
Core colours in accordance with EN 60947-5-2.

UB1000-18GM75-U-V15  
UB500-18GM75-U-V15

Standard symbol/Connections:  
(version U)



Core colours in accordance with EN 60947-5-2.



Wire colors in accordance with EN 60947-5-2

|   |    |         |
|---|----|---------|
| 1 | BN | (brown) |
| 2 | WH | (white) |
| 3 | BU | (blue)  |
| 4 | BK | (black) |
| 5 | GY | (gray)  |



## Properties

- 500 mm and 1000 mm sensing range versions
- DC, frequency output, PWM output and serial output versions
- Ø18 mm cylindrical housing
- Connector version

## Technical Data

For detailed data and product description refer to the data sheets at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

### General Data

|                                       |                                                                       |
|---------------------------------------|-----------------------------------------------------------------------|
| Operating voltage                     | 10 ... 30 V DC , ripple 10 % <sub>SS</sub>                            |
| No-load supply current                | ≤ 50 mA                                                               |
| Resolution                            | 1 mm                                                                  |
| Deviation of the characteristic curve | ± 1 % of full-scale value                                             |
| Input type                            | 1 Parameterization input                                              |
| Synchronization                       | 1 synchronous connection, bi-directional                              |
| LED green                             | Power on                                                              |
| LED red                               | flashing: error<br>permanent: no object detected                      |
| Ambient temperature                   | -25 ... 70 °C (-13 ... 158 °F)                                        |
| Material                              |                                                                       |
| Housing                               | brass, nickel-plated                                                  |
| Transducer                            | epoxy resin/hollow glass sphere mixture; foam polyurethane, cover PBT |
| Protection degree                     | IP65                                                                  |
| Connection type                       | Device connector M12 x 1 , 5-pin                                      |



### Model Number

|                      |                                             | UB500-18GM75-F-V15 | UB500-18GM75-PWM-V15 | UB500-18GM75-BIT-V15 | UB1000-18GM75-F-V15 | UB1000-18GM75-PWM-V15 | UB1000-18GM75-BIT-V15 |
|----------------------|---------------------------------------------|--------------------|----------------------|----------------------|---------------------|-----------------------|-----------------------|
| Sensing range        | 30 ... 500 mm                               | ●                  | ●                    | ●                    |                     |                       |                       |
|                      | 80 ... 1000 mm                              |                    |                      |                      | ●                   | ●                     | ●                     |
| Transducer frequency | approx. 380 kHz                             | ●                  | ●                    | ●                    |                     |                       |                       |
|                      | approx. 255 kHz                             |                    |                      |                      | ●                   | ●                     | ●                     |
| Output type          | 1 frequency output, push/pull, programmable | ●                  |                      |                      | ●                   |                       |                       |
|                      | 1 PWM output, push/pull, programmable       |                    | ●                    |                      |                     | ●                     |                       |
|                      | 1 serial output, push/pull, programmable    |                    |                      | ●                    |                     |                       | ●                     |

### Approvals and Certificates

|              |                                |   |   |   |   |   |   |
|--------------|--------------------------------|---|---|---|---|---|---|
| UL approval  | cULus Listed, General Purpose  | ● | ● | ● | ● | ● | ● |
| CSA approval | cCSAus Listed, General Purpose | ● | ● | ● | ● | ● | ● |

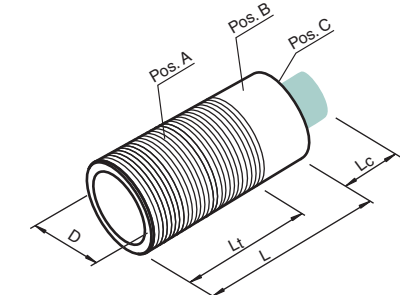
### Dimensions

|                                    |        |
|------------------------------------|--------|
| Length L [mm]                      | 75     |
| Diameter D [mm]                    | 18     |
| Thread length l <sub>t</sub> [mm]  | 52     |
| Connector area l <sub>c</sub> [mm] | 10     |
| LED position                       | Pos. B |

## Accessories

This and more accessories can be found in chapter 3.5 from page 673  
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

|              |                                                                                   |
|--------------|-----------------------------------------------------------------------------------|
| OMH-04       | Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm                     |
| BF 18        | Mounting flange, 18 mm                                                            |
| BF 18-F      | Mounting flange with dead stop, 18 mm                                             |
| BF 5-30      | Universal mounting bracket for cylindrical sensors with a diameter of 5 ... 30 mm |
| UVW90-K18    | Ultrasonic -deflector                                                             |
| V15-G-2M-PVC | Cable socket, M12, 5-pin, PVC cable                                               |
| V15-W-2M-PUR | Cable socket, M12, 5-pin, PUR cable                                               |



## Electrical Connection

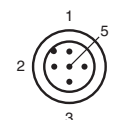


UB1000-18GM75-F-V15  
UB500-18GM75-F-V15  
UB500-18GM75-PWM-V15  
UB1000-18GM75-PWM-V15  
UB1000-18GM75-BIT-V15  
UB500-18GM75-BIT-V15

Standard symbol/Connections:

|   |        |                   |
|---|--------|-------------------|
| U | 1 (BN) | → U <sub>B</sub>  |
|   | 2 (WH) | Programming input |
|   | 5 (GY) | Synchronous       |
|   | 4 (BK) | Output            |
|   | 3 (BU) | → U <sub>B</sub>  |

Core colours in accordance with EN 60947-5-2.



Wire colors in accordance with EN 60947-5-2

|   |    |         |
|---|----|---------|
| 1 | BN | (brown) |
| 2 | WH | (white) |
| 3 | BU | (blue)  |
| 4 | BK | (black) |
| 5 | GY | (gray)  |