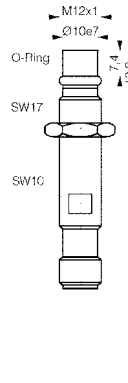
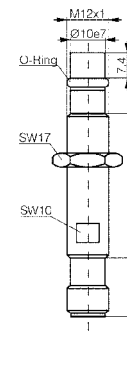
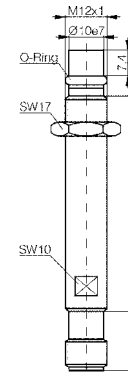
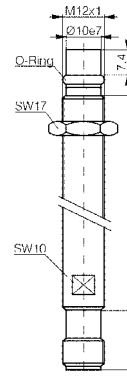
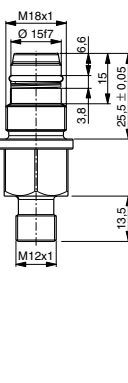
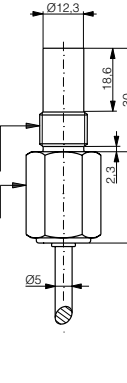
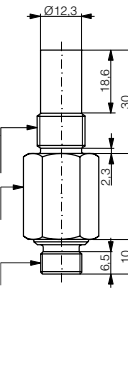
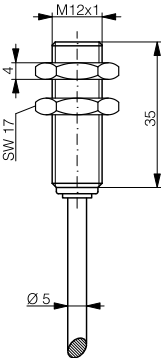
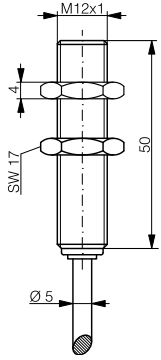
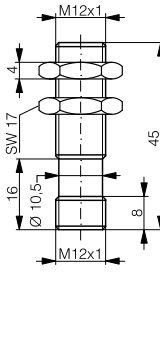
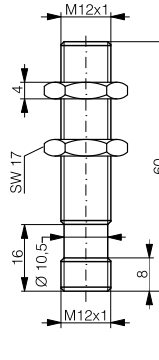
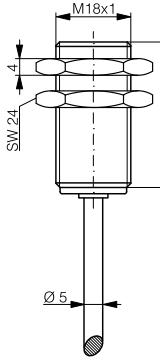


| Size                                                                                                                                                                                    | Ø 4                  | M5                   | Ø 6.5                    | M8                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|--------------------------|--------------------------|
| Operating distance mm                                                                                                                                                                   | 0.6                  | 0.6                  | 2.5                      | 2.5                      |
| Max. operating pressure                                                                                                                                                                 | 20 bars              | 20 bars              | 20 bars                  | 20 bars                  |
| Housing material                                                                                                                                                                        | Stainless steel V2A  | Stainless steel V2A  | Stainless steel V2A      | Stainless steel V2A      |
| Sensing face                                                                                                                                                                            | Sapphire             | Sapphire             | Ceramic ZrO <sub>2</sub> | Ceramic ZrO <sub>2</sub> |
| Connection <sup>1)</sup>                                                                                                                                                                | PUR cable type 3     | PUR cable type 3     | PUR cable type 3         | PUR cable type 3         |
| Degree of protection                                                                                                                                                                    | IP 68                | IP 68                | IP 68                    | IP 68                    |
| Mounting                                                                                                                                                                                | Embeddable           | Embeddable           | Embeddable               | Embeddable               |
| Max. switching frequency                                                                                                                                                                | 5,000 Hz             | 5,000 Hz             | 1,000 Hz                 | 1,000 Hz                 |
| Technical data <sup>2)</sup>                                                                                                                                                            | Table 1              | Table 1              | Table 1                  | Table 1                  |
| Wiring <sup>3)</sup>                                                                                                                                                                    | Diagram 1            | Diagram 1            | Diagram 1                | Diagram 1                |
| LED                                                                                                                                                                                     | ---                  | ---                  | ---                      | ---                      |
| Supply voltage range                                                                                                                                                                    | 10 ... 30 VDC        | 10 ... 30 VDC        | 10 ... 30 VDC            | 10 ... 30 VDC            |
| Ambient temperature range                                                                                                                                                               | -25 ... +70 °C       | -25 ... +70 °C       | -25 ... +70 °C           | -25 ... +70 °C           |
| Output current                                                                                                                                                                          | ≤ 200 mA             | ≤ 200 mA             | ≤ 200 mA                 | ≤ 200 mA                 |
| <sup>1)</sup> Standard cable length 2 m.<br>Non-standard cable lengths<br>and types on request.<br><sup>2)</sup> see page 68<br><sup>3)</sup> see page 69<br><sup>4)</sup> see page 112 |                      |                      |                          |                          |
|                                                                                                                                                                                         |                      |                      |                          |                          |
|                                                                                                                                                                                         |                      |                      |                          |                          |
|                                                                                                                                                                                         |                      |                      |                          |                          |
| Dimensions:                                                                                                                                                                             |                      |                      |                          |                          |
| Part references:<br>( <b>bold</b> : preferred types)                                                                                                                                    |                      |                      |                          |                          |
| NPN N.O.                                                                                                                                                                                | <b>DW-AD-401-04E</b> | <b>DW-AD-401-M5E</b> | <b>DW-AD-501-065E</b>    | <b>DW-AD-501-M8E</b>     |
| NPN N.C.                                                                                                                                                                                |                      |                      |                          |                          |
| PNP N.O.                                                                                                                                                                                | <b>DW-AD-403-04E</b> | <b>DW-AD-403-M5E</b> | <b>DW-AD-503-065E</b>    | <b>DW-AD-503-M8E</b>     |
| PNP N.C.                                                                                                                                                                                |                      |                      |                          |                          |
| NAMUR                                                                                                                                                                                   |                      |                      |                          |                          |
| AC/DC 2-wire N.O.                                                                                                                                                                       |                      |                      |                          |                          |
| AC/DC 2-wire N.C.                                                                                                                                                                       |                      |                      |                          |                          |
| Compatible connectors <sup>4)</sup>                                                                                                                                                     |                      |                      |                          |                          |

# HIGH-PRESSURE-RESISTANT SERIES P

| P12                                                                                |                                                                                     |                                                                                     |                                                                                     | P18                                                                                  | P20                                                                                   |                                                                                       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1.5                                                                                | 1.5                                                                                 | 1.5                                                                                 | 1.5                                                                                 | 1.5                                                                                  | 3                                                                                     | 3                                                                                     |
| 500 bars                                                                           | 500 bars                                                                            | 500 bars                                                                            | 500 bars                                                                            | 500 bars                                                                             | 500 bars                                                                              | 500 bars                                                                              |
| Stainless steel V2A                                                                | Stainless steel V2A                                                                 | Stainless steel V2A                                                                 | Stainless steel V2A                                                                 | Stainless steel V2A                                                                  | Stainless steel V4A                                                                   | Stainless steel V4A                                                                   |
| Ceramic ZrO <sub>2</sub>                                                           | Ceramic ZrO <sub>2</sub>                                                            | Ceramic ZrO <sub>2</sub>                                                            | Ceramic ZrO <sub>2</sub>                                                            | Ceramic ZrO <sub>2</sub>                                                             | Ceramic ZrO <sub>2</sub>                                                              | Ceramic ZrO <sub>2</sub>                                                              |
| Connector S12                                                                      | Connector S12                                                                       | Connector S12                                                                       | Connector S12                                                                       | Connector S12                                                                        | PUR cable type 11                                                                     | Connector S12                                                                         |
| IP 68                                                                              | IP 68                                                                               | IP 68                                                                               | IP 68                                                                               | IP 68                                                                                | IP 68                                                                                 | IP 68                                                                                 |
| Embeddable                                                                         | Embeddable                                                                          | Embeddable                                                                          | Embeddable                                                                          | Embeddable                                                                           | Embeddable                                                                            | Embeddable                                                                            |
| 2,000 Hz                                                                           | 2,000 Hz                                                                            | 2,000 Hz                                                                            | 2,000 Hz                                                                            | 2,000 Hz                                                                             | 500 Hz                                                                                | 500 Hz                                                                                |
| Table 6                                                                            | Table 6                                                                             | Table 6                                                                             | Table 6                                                                             | Table 6                                                                              | Table 6                                                                               | Table 6                                                                               |
| Diagram 2                                                                          | Diagram 2                                                                           | Diagram 2                                                                           | Diagram 2                                                                           | Diagram 2                                                                            | Diagram 1                                                                             | Diagram 2                                                                             |
| ---                                                                                | ---                                                                                 | ---                                                                                 | ---                                                                                 | ---                                                                                  | ---                                                                                   | ---                                                                                   |
| 10 ... 30 VDC                                                                      | 10 ... 30 VDC                                                                       | 10 ... 30 VDC                                                                       | 10 ... 30 VDC                                                                       | 10 ... 30 VDC                                                                        | 10 ... 30 VDC                                                                         | 10 ... 30 VDC                                                                         |
| -25 ... +80 °C                                                                     | -25 ... +80 °C                                                                      | -25 ... +80 °C                                                                      | -25 ... +80 °C                                                                      | -25 ... +80 °C                                                                       | -25 ... +80 °C                                                                        | -25 ... +80 °C                                                                        |
| ≤ 200 mA                                                                           | ≤ 200 mA                                                                            | ≤ 200 mA                                                                            | ≤ 200 mA                                                                            | ≤ 200 mA                                                                             | ≤ 200 mA                                                                              | ≤ 200 mA                                                                              |
|   |   |   |   |   |   |   |
|  |  |  |  |  |  |  |
| <b>DW-AS-501-P12</b>                                                               | <b>DW-AS-501-P12-627</b>                                                            | <b>DW-AS-501-P12-621</b>                                                            | <b>DW-AS-501-P12-622</b>                                                            | in preparation                                                                       | <b>DW-AD-501-P20</b>                                                                  | <b>DW-AS-501-P20</b>                                                                  |
| <b>DW-AS-503-P12</b>                                                               | <b>DW-AS-503-P12-627</b>                                                            | <b>DW-AS-503-P12-621</b>                                                            | <b>DW-AS-503-P12-622</b>                                                            | <b>DW-AS-503-P18</b>                                                                 | <b>DW-AD-503-P20</b>                                                                  | <b>DW-AS-503-P20</b>                                                                  |
|                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |
|                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |
| G ... N                                                                            | G ... N                                                                             | G ... N                                                                             | G ... N                                                                             | G ... N                                                                              |                                                                                       | G ... N                                                                               |

For all these products, you will find detailed data sheets, application notes, dimensional drawings, cross-reference lists, part references, new items, special executions, extensive additional technical information, specifications concerning quality, safety and standards, as well as the addresses of our agents, and much more besides, on our Internet website at [www.contrinex.com](http://www.contrinex.com). The website contents are constantly up-dated and extended.

| Size                                                                                                                                                                                 | M12                                                                                 |                                                                                     |                                                                                      |                                                                                       | M18                                                                                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Sensing range mm                                                                                                                                                                     | 0 ... 6                                                                             | 0 ... 6                                                                             | 0 ... 6                                                                              | 0 ... 6                                                                               | 0 ... 10                                                                              |
| Housing material                                                                                                                                                                     | Chrome-plated brass                                                                 | Chrome-plated brass                                                                 | Chrome-plated brass                                                                  | Chrome-plated brass                                                                   | Chrome-plated brass                                                                   |
| Connection <sup>1)</sup>                                                                                                                                                             | PUR cable type 7                                                                    | PUR cable type 7                                                                    | Connector S12                                                                        | Connector S12                                                                         | PUR cable type 7                                                                      |
| Degree of protection                                                                                                                                                                 | IP 67                                                                               | IP 67                                                                               | IP 67                                                                                | IP 67                                                                                 | IP 67                                                                                 |
| Cut-off frequency -3dB                                                                                                                                                               | 1,000 Hz                                                                            | 1,000 Hz                                                                            | 1,000 Hz                                                                             | 1,000 Hz                                                                              | 500 Hz                                                                                |
| Mounting                                                                                                                                                                             | Quasi-embeddable                                                                    | Quasi-embeddable                                                                    | Quasi-embeddable                                                                     | Quasi-embeddable                                                                      | Quasi-embeddable                                                                      |
| Technical data <sup>2)</sup>                                                                                                                                                         | Table 7                                                                             | Table 7                                                                             | Table 7                                                                              | Table 7                                                                               | Table 7                                                                               |
| Voltage output                                                                                                                                                                       | 0 ... 5 V / 0 ... 10 V                                                              | 0 ... 5 V / 0 ... 10 V                                                              | 0 ... 5 V / 0 ... 10 V                                                               | 0 ... 5 V / 0 ... 10 V                                                                | 0 ... 5 V / 0 ... 10 V                                                                |
| Current output                                                                                                                                                                       | 1 ... 5 mA                                                                          | 1 ... 5 mA / 4 ... 20 mA                                                            | 1 ... 5 mA                                                                           | 1 ... 5 mA / 4 ... 20 mA                                                              | 1 ... 5 mA / 4 ... 20 mA                                                              |
| Wiring <sup>3)</sup>                                                                                                                                                                 | Diagram 5                                                                           | Diagram 5                                                                           | Diagram 5                                                                            | Diagram 5                                                                             | Diagram 5                                                                             |
| Supply voltage range                                                                                                                                                                 | 10 ... 30 / 15 ... 30 VDC*                                                          | 10 ... 30 / 15 ... 30 VDC*                                                          | 10 ... 30 / 15 ... 30 VDC*                                                           | 10 ... 30 / 15 ... 30 VDC*                                                            | 10 ... 30 / 15 ... 30 VDC*                                                            |
| Ambient temperature range                                                                                                                                                            | -25 ... +70 °C                                                                      | -25 ... +70 °C**                                                                    | -25 ... +70 °C                                                                       | -25 ... +70 °C**                                                                      | -25 ... +70 °C**                                                                      |
| <sup>1)</sup> Standard cable length 2 m.<br>Non-standard cable lengths and types on request.<br><sup>2)</sup> see page 68<br><sup>3)</sup> see page 69<br><sup>4)</sup> see page 112 |    |    |     |    |    |
| Dimensions:<br><br><br><br><br><br><br><br><br><br>Part references:<br><b>(bold: preferred types)</b>                                                                                |  |  |  |  |  |
| Non-linearized:                                                                                                                                                                      |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |
| Outputs 0...5 V / 1...5 mA                                                                                                                                                           | <b>DW-AD-509-M12-120</b>                                                            | <b>DW-AD-509-M12</b>                                                                | <b>DW-AS-509-M12-120</b>                                                             | <b>DW-AS-509-M12</b>                                                                  | <b>DW-AD-509-M18 -120</b>                                                             |
| Outputs 0...10 V / 4...20 mA                                                                                                                                                         | <b>DW-AD-509-M12-320***</b>                                                         | <b>DW-AD-509-M12-390</b>                                                            | <b>DW-AS-509-M12-320***</b>                                                          | <b>DW-AS-509-M12-390</b>                                                              | <b>DW-AD-509-M18 -320</b>                                                             |
| Compatible connectors <sup>4)</sup>                                                                                                                                                  |                                                                                     |                                                                                     | M, N                                                                                 | M, N                                                                                  |                                                                                       |

\* DW-A#-509-M##-320/390

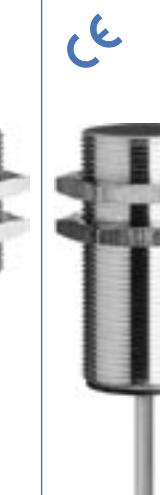
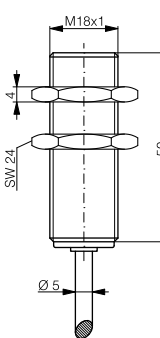
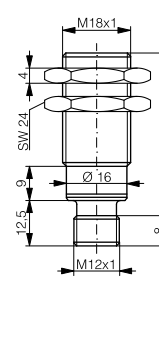
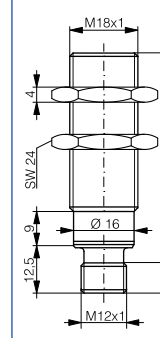
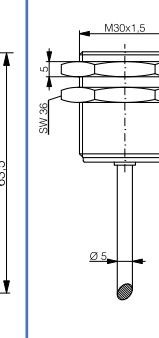
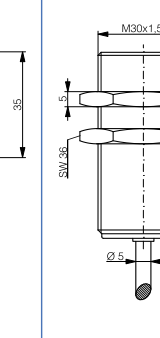
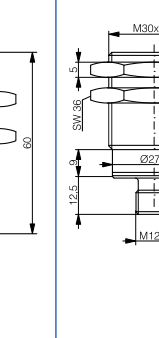
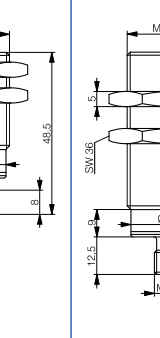
\*\* Depending on operating conditions, limited temperature range for types DW-A#-509-M##-320/390 (see data sheets)

\*\*\* without current output

# ANALOG SERIES

## M18

## M30

| M18                                                                                |                                                                                     |                                                                                     | M30                                                                                 |                                                                                      |                                                                                       |                                                                                       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 0 ... 10                                                                           | 0 ... 10                                                                            | 0 ... 10                                                                            | 0 ... 20                                                                            | 0 ... 20                                                                             | 0 ... 20                                                                              | 0 ... 20                                                                              |
| Chrome-plated brass                                                                | Chrome-plated brass                                                                 | Chrome-plated brass                                                                 | Chrome-plated brass                                                                 | Chrome-plated brass                                                                  | Chrome-plated brass                                                                   | Chrome-plated brass                                                                   |
| PUR cable type 7                                                                   | Connector S12                                                                       | Connector S12                                                                       | PUR cable type 7                                                                    | PUR cable type 7                                                                     | Connector S12                                                                         | Connector S12                                                                         |
| IP 67                                                                              | IP 67                                                                               | IP 67                                                                               | IP 67                                                                               | IP 67                                                                                | IP 67                                                                                 | IP 67                                                                                 |
| 500 Hz                                                                             | 500 Hz                                                                              | 500 Hz                                                                              | 200 Hz                                                                              | 200 Hz                                                                               | 200 Hz                                                                                | 200 Hz                                                                                |
| Quasi-embeddable                                                                   | Quasi-embeddable                                                                    | Quasi-embeddable                                                                    | Quasi-embeddable                                                                    | Quasi-embeddable                                                                     | Quasi-embeddable                                                                      | Quasi-embeddable                                                                      |
| Table 7                                                                            | Table 7                                                                             | Table 7                                                                             | Table 7                                                                             | Table 7                                                                              | Table 7                                                                               | Table 7                                                                               |
| 0 ... 5 V / 0 ... 10 V                                                             | 0 ... 5 V / 0 ... 10 V                                                              | 0 ... 5 V / 0 ... 10 V                                                              | 0 ... 5 V / 0 ... 10 V                                                              | 0 ... 5 V / 0 ... 10 V                                                               | 0 ... 5 V / 0 ... 10 V                                                                | 0 ... 5 V / 0 ... 10 V                                                                |
| 1 ... 5 mA / 4 ... 20 mA                                                           | 1 ... 5 mA / 4 ... 20 mA                                                            | 1 ... 5 mA / 4 ... 20 mA                                                            | 1 ... 5 mA / 4 ... 20 mA                                                            | 1 ... 5 mA / 4 ... 20 mA                                                             | 1 ... 5 mA / 4 ... 20 mA                                                              | 1 ... 5 mA / 4 ... 20 mA                                                              |
| Diagram 5                                                                          | Diagram 5                                                                           | Diagram 5                                                                           | Diagram 5                                                                           | Diagram 5                                                                            | Diagram 5                                                                             | Diagram 5                                                                             |
| 10 ... 30 / 15 ... 30 VDC*                                                         | 10 ... 30 / 15 ... 30 VDC*                                                          | 10 ... 30 / 15 ... 30 VDC*                                                          | 10 ... 30 / 15 ... 30 VDC*                                                          | 10 ... 30 / 15 ... 30 VDC*                                                           | 10 ... 30 / 15 ... 30 VDC*                                                            | 10 ... 30 / 15 ... 30 VDC*                                                            |
| -25 ... +70 °C**                                                                   | -25 ... +70 °C**                                                                    | -25 ... +70 °C**                                                                    | -25 ... +70 °C**                                                                    | -25 ... +70 °C**                                                                     | -25 ... +70 °C**                                                                      | -25 ... +70 °C**                                                                      |
|   |   |   |   |   |   |   |
|  |  |  |  |  |  |  |
| <b>DW-AD-509-M18</b>                                                               | <b>DW-AS-509-M18-120</b>                                                            | <b>DW-AS-509-M18-002</b>                                                            | <b>DW-AD-509-M30-120</b>                                                            | <b>DW-AD-509-M30</b>                                                                 | <b>DW-AS-509-M30-120</b>                                                              | <b>DW-AS-509-M30-002</b>                                                              |
| <b>DW-AD-509-M18-390</b>                                                           | <b>DW-AS-509-M18-320</b>                                                            | <b>DW-AS-509-M18-390</b>                                                            | <b>DW-AD-509-M30-320</b>                                                            | <b>DW-AD-509-M30-390</b>                                                             | <b>DW-AS-509-M30-320</b>                                                              | <b>DW-AS-509-M30-390</b>                                                              |
|                                                                                    | M, N                                                                                | M, N                                                                                |                                                                                     |                                                                                      | M, N                                                                                  | M, N                                                                                  |

\* DW-A#-509-M##-320/390 \*\* Depending on operating conditions, limited temperature range for DW-A#-509-M##-320/390 (see data sheets)

For all these products, you will find detailed data sheets, application notes, dimensional drawings, cross-reference lists, part references, new items, special executions, extensive additional technical information, specifications concerning quality, safety and standards, as well as the addresses of our agents, and much more besides, on our Internet website at [www.contrinex.com](http://www.contrinex.com). The website contents are constantly up-dated and extended.