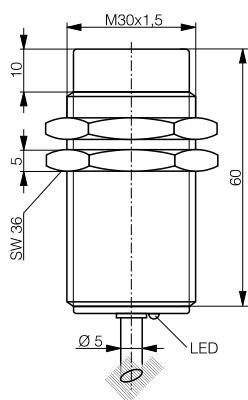
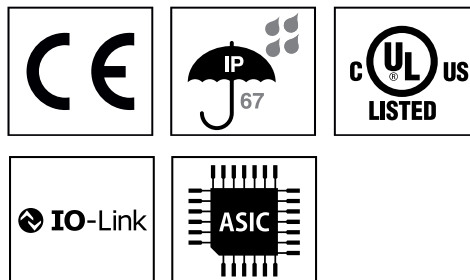
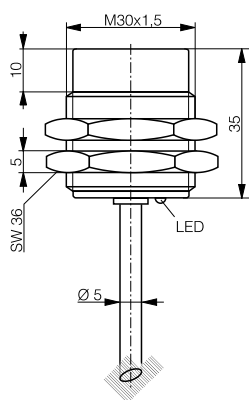


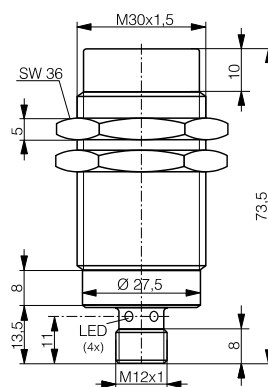
| HOUSING | OPERATING DISTANCE | MOUNTING       | <ul style="list-style-type: none"> <li>✓ Long operating distance</li> <li>✓ Exceptional price-performance ratio</li> <li>✓ Excellent accuracy</li> <li>✓ IP67</li> <li>✓ IO-Link v1.1</li> </ul> |  |
|---------|--------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| M30     | 40 mm              | Non-embeddable |                                                                                                                                                                                                  |  |



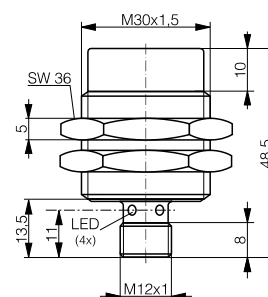
DW-AD-513-M30



DW-AD-513-M30-120



DW-AS-513-M30-002



DW-AS-513-M30-120

| DETECTION DATA                       |                                          | INTERFACE                       |                                           |
|--------------------------------------|------------------------------------------|---------------------------------|-------------------------------------------|
| Rated operating distance ( $S_n$ )   | 40 mm                                    | Indicator LED, yellow           | Sensing state ( $0 \leq s \leq 0.8 S_r$ ) |
| Assured operating distance ( $S_a$ ) | $\leq (0.81 \times S_n)$ mm              | Indicator LED, yellow, blinking | Sensing state ( $0.8 S_r < s \leq S_r$ )  |
| Repeat accuracy                      | $\leq 2$ mm                              | IO-Link                         | ✓                                         |
| Hysteresis                           | $3\% S_r \leq \text{Hyst} \leq 15\% S_r$ | MTTF (@40°C)                    | 1063 y                                    |
| Temperature drift                    | $\leq 10\% S_r$                          |                                 |                                           |
| Standard target                      | 120 x 120 x 1 mm <sup>3</sup> , FE360    |                                 |                                           |

Note:  $0.9S_n \leq S_a \leq 1.1S_n$ .

| ELECTRICAL DATA                |                 | MECHANICAL DATA               |                     |
|--------------------------------|-----------------|-------------------------------|---------------------|
| Supply voltage range ( $U_B$ ) | 10...30 VDC     | Mounting                      | Non-embeddable      |
| Residual ripple                | $\leq 20\% U_B$ | Housing material              | Chrome-plated brass |
| Output current                 | $\leq 200$ mA   | Sensing face material         | PBTP                |
| Output voltage drop            | $\leq 2.0$ VDC  | Max tightening torque         | 70 Nm               |
| Power consumption (no-load)    | $\leq 10$ mA    | Ambient operating temperature | -25...+70°C         |
| Residual current               | $\leq 0.1$ mA   | Enclosure rating              | IP67                |
| Switching frequency            | $\leq 65$ Hz    | Weight (cable / connector)    | see page 2          |
| Short-circuit protection       | ✓               | Shock and vibration           | IEC 60947-5-2 / 7.4 |
| Voltage reversal protection    | ✓               |                               |                     |
| Cable length max.              | $\leq 300$ m    |                               |                     |

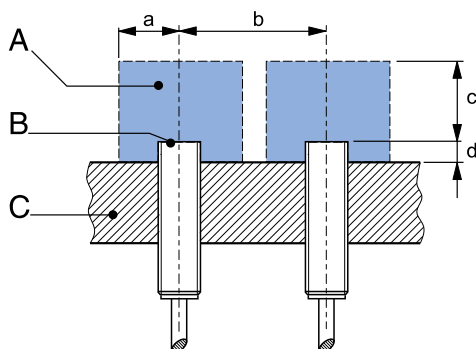
Note: all data measured according to IEC 60947-5-2 standard with  $U_B = 20 \dots 30$  VDC,  $T_A = 23^\circ\text{C} \pm 5^\circ\text{C}$ .

## CORRECTION FACTORS

|              |          |        |             |          |             |       |             |                           |             |
|--------------|----------|--------|-------------|----------|-------------|-------|-------------|---------------------------|-------------|
| Steel FE 360 | <b>1</b> | Copper | <b>0.39</b> | Aluminum | <b>0.43</b> | Brass | <b>0.47</b> | Stainless S. V2A 1 / 2 mm | <b>0.73</b> |
|--------------|----------|--------|-------------|----------|-------------|-------|-------------|---------------------------|-------------|

Note: the operating distance of the sensor must be multiplied by the correction factor of the material. For example, the operating distance on Aluminum is  $S_{n, Al} = S_n \times CF_{Al}$ . In case of embeddable mounting, the distance is multiplied by the additional correction factor of the support, thus  $S_{n, Al} = S_n \times CF_{Al} \times CF_{emb, Al}$ .

## INSTALLATION CONDITIONS



A : metal free zone  
B : sensing face  
C : support

a : 55 mm  
b : 150 mm  
c : 120 mm

d : steel 16 mm  
alu 6 mm  
brass 7 mm  
stainless steel 14 mm

Note: additional installation information can be found in the glossary of the Contrinex General Catalog.

## IO-LINK FUNCTIONALITIES

|                    |                   |
|--------------------|-------------------|
| IO-Link version    | 1.1               |
| SIO mode           | Supported         |
| Process data       | 7-bit input       |
| Baudrate           | COM2 (38.4 kBaud) |
| Minimum cycle time | 10.4 ms           |
| ISDU               | Not supported     |



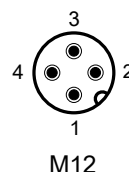
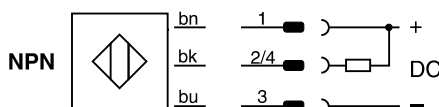
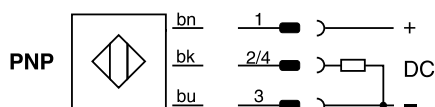
IODD files may be downloaded from

[www.contrinex.com/product-range/inductive-sensors/](http://www.contrinex.com/product-range/inductive-sensors/).

Select the product name to display the product page with corresponding downloads.

Alternatively, just click/scan the QR code on the left.

## WIRING DIAGRAM



## AVAILABLE TYPES

| Part number | Part reference    | Polarity | Connection       | Output on pin 2     | Output on pin 4 / bk         | Weight |
|-------------|-------------------|----------|------------------|---------------------|------------------------------|--------|
| 330-020-421 | DW-AD-511-M30     | NPN      | PVC, 2 m, 3 wire | -                   | Normally open (NO)           | 202 g  |
| 330-020-422 | DW-AD-511-M30-120 | NPN      | PVC, 2 m, 3 wire | -                   | Normally open (NO)           | 161 g  |
| 330-020-423 | DW-AD-512-M30     | NPN      | PVC, 2 m, 3 wire | -                   | Normally close (NC)          | 207 g  |
| 330-020-424 | DW-AD-513-M30     | PNP      | PVC, 2 m, 3 wire | -                   | Normally open (NO) / IO-Link | 200 g  |
| 330-020-425 | DW-AD-513-M30-120 | PNP      | PVC, 2 m, 3 wire | -                   | Normally open (NO) / IO-Link | 166 g  |
| 330-020-431 | DW-AD-514-M30     | PNP      | PVC, 2 m, 3 wire | -                   | Normally close (NC)          | 200 g  |
| 330-020-448 | DW-AS-511-M30-002 | NPN      | M12 4-pin        | -                   | Normally open (NO)           | 148 g  |
| 330-020-449 | DW-AS-511-M30-120 | NPN      | M12 4-pin        | -                   | Normally open (NO)           | 118 g  |
| 330-020-450 | DW-AS-512-M30-002 | NPN      | M12 4-pin        | Normally close (NC) | -                            | 149 g  |
| 330-020-451 | DW-AS-513-M30-002 | PNP      | M12 4-pin        | -                   | Normally open (NO) / IO-Link | 148 g  |
| 330-020-454 | DW-AS-513-M30-120 | PNP      | M12 4-pin        | -                   | Normally open (NO) / IO-Link | 117 g  |
| 330-020-456 | DW-AS-514-M30-002 | PNP      | M12 4-pin        | Normally close (NC) | -                            | 148 g  |
| 330-020-457 | DW-AS-514-M30-120 | PNP      | M12 4-pin        | Normally close (NC) | -                            | 110 g  |

Note: part reference may include additional suffix to indicate a revision version or special version. Further information is available on request.

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