## CONTRINEX

## INDUCTIVE SENSOR MARITIME DW-Mx-70x-C23

| $\checkmark$ Maritime approved: | $\checkmark$ Factor 1 on Fe and AI |
| :--- | :--- | :--- |
| DNVGL-CG-0339: 2016 | $\checkmark$ Sea-water resistant |
| $\checkmark$ One-piece housing in | $\checkmark$ IP68, IP69K |
| stainless steel V4A | $\checkmark$ IO-Link v1.1 |



DW-MD-70x-C23


DW-MW-70x-C23-276

| DETECTION DATA |  |
| :--- | :--- |
| Rated operating distance $\left(\mathrm{S}_{\mathrm{n}}\right)$ | 7 mm |
| Assured operating distance $\left(\mathrm{S}_{\mathrm{a}}\right)$ | $\leq\left(0.81 \times \mathrm{S}_{\mathrm{n}}\right) \mathrm{mm}$ |
| Repeat accuracy | $\leq 0.3 \mathrm{~mm}$ |
| Hysteresis | $3 \% \mathrm{~S}_{\mathrm{r}} \leq \mathrm{Hyst} \leq 15 \% \mathrm{~S}_{\mathrm{r}}$ |
| Temperature drift | $\leq 10 \% \mathrm{~S}_{\mathrm{r}}$ |
| Standard target | $21 \times 21 \times 1 \mathrm{~mm}^{3}, \mathrm{FE} 360$ |
| Note: $0.9 \mathrm{~S}_{n} \leq \mathrm{S}_{\mathrm{r}} \leq 1.1 \mathrm{~S}_{n}$. |  |

## INTERFACE

Indicator LED, yellow Indicator LED, yellow, blinking IO-Link
MTTF (@40̊ㅡ)
Sensing state $\left(0 \leq s \leq 0.8 \mathrm{~S}_{\mathrm{r}}\right)$
Sensing state ( $0.8 \mathrm{~S}_{\mathrm{r}}<\mathrm{s} \leq \mathrm{S}_{\mathrm{r}}$ )
$\checkmark$
1028 y

## MECHANICAL DATA

| Mounting | Embeddable |
| :--- | :--- |
| Housing material | V4A / $1.4435 /$ AISI 316 L |
| Sensing face material | V4A $/ 1.4435 /$ AISI 316L |
| Max tightening torque | 2 Nm (for M3 screw) |
| Ambient operating temperature | $-25 . .+85^{\circ} \mathrm{C}^{1}$ |
| Enclosure rating | IP68 / IP69K |
| Weight (cable/connector) | see page 2 |
| Shock and vibration | IEC $60947-5-2$ |
| Max. operating pressure | 0.5 bar |
|  |  |

Embeddable
V4A / 1.4435 / AISI 316L
V4A / 1.4435 / AISI 316L
$-25 \ldots+85^{\circ} \mathrm{C}^{1}$
IP68 / IP69K
see page 2
0.5 bar

## ELECTRICAL DATA

| Supply voltage range $\left(\mathrm{U}_{\mathrm{B}}\right)$ | $10 \ldots . . .30 \mathrm{VDC}$ |
| :--- | :--- |
| Residual ripple | $\leq 20 \% \mathrm{U}_{\mathrm{B}}$ |
| Output current | $\leq 200 \mathrm{~mA}$ |
| Output voltage drop | $\leq 2.0 \mathrm{VDC}$ |
| Power consumption (no-load) | $\leq 10 \mathrm{~mA}$ |
| Residual current | $\leq 0.1 \mathrm{~mA}$ |
| Switching frequency | $\leq 180 \mathrm{~Hz}$ |
| Short-circuit protection | $\checkmark$ |
| Voltage reversal protection | $\checkmark$ |
| Cable length max. | $\leq 300 \mathrm{~m}$ |

${ }^{1}$ Maximum temperature according to UL: $70^{\circ} \mathrm{C}$.
Note: all data measured according to IEC 60947-5-2 standard with $\mathrm{U}_{\mathrm{B}}=20 \ldots 30 \mathrm{VDC}, \mathrm{T}_{\mathrm{A}}=23^{\circ} \mathrm{C} \pm 5^{\circ} \mathrm{C}$.

## CORRECTION FACTORS FOR TARGET OF

| Steel FE 360 | 1 | Copper | 0.8 | Aluminum | 1 | Brass | 1.2 | Stainless Steel V2A 1/2 mm | $0.5 / 0.85$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

## CORRECTION FACTORS FOR EMBEDDABLE MOUNTING IN SUPPORT OF

| Steel FE 360 | 0.9 | Aluminum | 0.95 | Brass | 1 | Stainless Steel V2A | 1.1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

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 $\mathrm{S}_{\mathrm{n}, \mathrm{Al}}=\mathrm{S}_{\mathrm{n}} \times \mathrm{CF}_{\mathrm{A} \cdot}$. In case of embeddable mounting, the distance is multiplied by the additional correction factor of the support, thus $\mathrm{S}_{\mathrm{n}, \mathrm{Al}}=\mathrm{S}_{\mathrm{n}} \times \mathrm{CF}_{\mathrm{Al}} \times \mathrm{CF}_{\text {emb, Al }}$.

## INSTALLATION CONDITIONS



## IO-LINK FUNCTIONALITIES

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



IODD files may be downloaded from
www.contrinex.com/product_range/inductive-maritime/.
Select the product name to display the product page with corresponding downloads.

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

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

WIRING DIAGRAM
PIN ASSIGNMENT


M8

## AVAILABLE TYPES

| Part number | Part reference | Polarity | Connection* | Output on pin 2 | Output on pin 4 / bk | Weight |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 330-320-116 | DW-MD-703-C23 | PNP | PVC, 2m, 3 wire | - | Normally open (NO) / IO-Link | 50 g |
| 330-320-117 | DW-MV-703-C23-276 | PNP | PVC, 0.2 m + M8 3-pin | - | Normally open (NO) / IO-Link | 24 g |

* Further cable lengths available on request; DNV GL certified up to 25 m

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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