

### INDICATORE DI LIVELLO A COMANDO MAGNETICO SERIE MLG MAGNETIC DRIVE LEVEL INDICATORS MLG SERIES



#### DESCRIZIONE

Un magnete permanente incorporato nel galleggiante, comanda gli elementi sensibili montati in una apposita custodia a tenuta stagna, facendoli ruotare su se stessi di 180°. Questi elementi trattati con speciali vernici di colore diverso sulle due facce presentano con l'aumentare del livello (galleggiante in salita) le facce rosse e si posizionano con il diminuire dello stesso (galleggiante in discesa) presentando le facce bianche, indicando così in modo molto evidente la posizione del galleggiante e quindi del livello del liquido.

#### APPLICAZIONI E CARATTERISTICHE TECNICHE

- misuratori visivi di livello di liquidi di qualsiasi tipo (p.s. min. 0,55 kg/dm<sup>3</sup> per tipo metallico e min. 0,88 Kg/dm<sup>3</sup> per tipo plastico)
- misura interfaccia di liquidi
- misura di livello di liquidi particolarmente aggressivi o con pressioni e temperatura non sopportabili dai normali livelli a tubo di vetro o a riflessione.
- precisione  $\pm 5$  mm
- pressione max ammissibile 50 kg/cm<sup>2</sup> per versioni standard fino a 150 kg/cm<sup>2</sup> per versioni su richiesta.
- temperatura di esercizio da -20°C a 200°C
- versioni per bassa temperatura fino a -160°C con antibrina e per alta temperatura fino a +400°C, su richiesta
- lunghezza massima 5,5 metri per tipo metallico e 3 metri per tipo plastico.

#### DESCRIPTION

A permanent magnet incorporated in the float actuates the sensing elements mounted in the special waterproof case, causing them to rotate 180°. These elements, which are treated with special paints of contrasting color on the two faces, show the red color faces when the level increases (float going up) and the white faces when the level decreases (float going down), thus showing very clearly the position of the float and hence the liquids level.

#### APPLICATIONS AND TECHNICAL DATA

- visual level indicators for any type of liquids (s. g. 0,55 kg/dm<sup>3</sup> min. for the metallic type and 0,88 Kg/dm<sup>3</sup> for the plastic type).
- interface measurement of liquids
- level measurement of particularly aggressive liquids or with pressure and temperature not suitable for standard glass tube or reflection indicators
- accuracy  $\pm 5$  mm.
- Max. pressure 50 Bar for standard versions and up to 150 bar for on request versions.
- operating temperatures from -20°C to 200°C
- Special versions for low temperature up to -160°C with anti-frost device and for high temperature up to +400°C.
- Max. length 5,5 meters for metallic type and 3 meters for plastic type

| Sistemi standard di collegamento al processo<br>Standard systems for process connection                                                                                                                                                              |  |  | Versione per montaggio di testa<br>Top mounting version |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|---------------------------------------------------------|
|                                                                                                                                                                                                                                                      |  |  |                                                         |
| Quote indicative per versioni in metallo<br>Indicative amounts for metal versions                                                                                                                                                                    |  |  |                                                         |
| Attacchi C standard / Process connections C standard: <ul style="list-style-type: none"> <li>• Filettato / Screwed 1" NPT-F</li> <li>• Flangiato / Flanged UNI PN...DN25</li> <li>• Flangiato / Flanged 1" ANSI ... RF</li> <li>• 1" S.W.</li> </ul> |  |  |                                                         |
| NB: le valvole di spurgo e sfiato sono applicabili su tutti i modelli<br>NB: drain and vent valves are applicable on all models                                                                                                                      |  |  |                                                         |

### LIMITI DI PRESSIONE / PRESSURE LIMITS

|                                                   | 38 °C                                  | 100 °C | 150 °C | 200 °C |
|---------------------------------------------------|----------------------------------------|--------|--------|--------|
| 1" ANSI 150 FF<br>UNI DN 25 PN 6                  | Vedi tabella seguente / See next table |        |        |        |
| 1" ANSI 150 RF<br>UNI DN 25 PN 16                 | 19                                     | 16     | 15     | 13     |
| 1" ANSI 300 RF<br>UNI DN 25 PN 25                 | 25                                     | 21     | 19     | 17     |
| 1" ANSI 300 RF<br>UNI DN 25 PN 40                 | 40                                     | 35     | 31     | 28     |
| 1" ANSI 600 RF<br>UNI DN 25 PN 64                 | 50                                     | 43     | 39     | 36     |
| Versioni con corpo in / Body material SS AISI 316 |                                        |        |        |        |

# SCHEDA PRODOTTO

## DATA SHEET

DS-MLG  
ED-24-10

### CODIFICATION

#### 00 Series

|     |                      |  |
|-----|----------------------|--|
| MLG | Magnetic Level Gauge |  |
|-----|----------------------|--|

#### 01 Type of Mounting

|     |              |  |
|-----|--------------|--|
| LL  | Side-Side    |  |
| TOP | Top Mounting |  |

#### 02 Range in meters

|       |                 |  |
|-------|-----------------|--|
| 0 ÷ 9 | Range in meters |  |
|-------|-----------------|--|

#### 03 Range in millimeters

|         |                      |  |
|---------|----------------------|--|
| 0 ÷ 999 | Range in millimeters |  |
|---------|----------------------|--|

#### 04 Process Connection Standard and Type

|   |                                         |  |
|---|-----------------------------------------|--|
| A | Flange - ASME B16.5 - RF                |  |
| B | Flange - ASME B16.5 - Ring Joint        |  |
| C | Flange - ASME B16.5 - Large male face   |  |
| D | Flange - ASME B16.5 - Small male face   |  |
| E | Flange - ASME B16.5 - Large female face |  |
| F | Flange - ASME B16.5 - Small female face |  |
| G | Flange - ASME B16.5 - Large tongue face |  |
| H | Flange - ASME B16.5 - Small tongue face |  |
| L | Flange - ASME B16.5 - Large groove face |  |
| M | Flange - ASME B16.5 - Small groove face |  |
| 1 | Flange - UNI EN 1092 - RF               |  |
| 2 | Flange - UNI EN 1092 - Tongue           |  |
| 3 | Flange - UNI EN 1092 - Groove           |  |
| 4 | Flange - UNI EN 1092 - Spigot           |  |
| 5 | Flange - UNI EN 1092 - Recess           |  |
| 6 | Flange - UNI EN 1092 - O-Ring Spigot    |  |
| 7 | Flange - UNI EN 1092 - O-Ring Groove    |  |

#### 05 Process Connection Rating

|    |                             |  |
|----|-----------------------------|--|
| 01 | Class 150 (ASME B16.5)      |  |
| 02 | Class 300 (ASME B16.5)      |  |
| 03 | Class 400 (ASME B16.5)      |  |
| 04 | Class 600 (ASME B16.5)      |  |
| 05 | Class 900 (ASME B16.5)      |  |
| 06 | Class 1500 (ASME B16.5)     |  |
| 07 | Class 2500 (ASME B16.5)     |  |
| 20 | PN 2,5 (UNI EN 1092)        |  |
| 21 | PN 6 (UNI EN 1092)          |  |
| 22 | PN 10 (UNI EN 1092)         |  |
| 23 | PN 16 (UNI EN 1092)         |  |
| 24 | PN 25 (UNI EN 1092)         |  |
| 25 | PN 40 (UNI EN 1092)         |  |
| 26 | PN 63 (UNI EN 1092)         |  |
| 27 | PN 100 (UNI EN 1092)        |  |
| 28 | PN 160 (UNI EN 1092)        |  |
| 29 | PN 250 (UNI EN 1092)        |  |
| 30 | PN 320 (UNI EN 1092)        |  |
| 31 | PN 400 (UNI EN 1092)        |  |
| 40 | Class 3000 (Socket Welding) |  |
| 41 | Class 6000 (Socket Welding) |  |
| 42 | Class 9000 (Socket Welding) |  |

# SCHEDA PRODOTTO

## DATA SHEET

DS-MLG  
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### 06 Process Connection Size

|    |                      |
|----|----------------------|
| 01 | 1/2" (ASME B16.5)    |
| 02 | 3/4" (ASME B16.5)    |
| 03 | 1" (ASME B16.5)      |
| 04 | 1" 1/4 (ASME B16.5)  |
| 05 | 1" 1/2 (ASME B16.5)  |
| 06 | 2" (ASME B16.5)      |
| 07 | 2" 1/2 (ASME B16.5)  |
| 08 | 3" (ASME B16.5)      |
| 09 | 3" 1/2 (ASME B16.5)  |
| 10 | 4" (ASME B16.5)      |
| 11 | 5" (ASME B16.5)      |
| 12 | 6" (ASME B16.5)      |
| 20 | DN 15 (UNI EN 1092)  |
| 21 | DN 20 (UNI EN 1092)  |
| 22 | DN 25 (UNI EN 1092)  |
| 23 | DN 32 (UNI EN 1092)  |
| 24 | DN 40 (UNI EN 1092)  |
| 25 | DN 50 (UNI EN 1092)  |
| 26 | DN 65 (UNI EN 1092)  |
| 27 | DN 80 (UNI EN 1092)  |
| 28 | DN 100 (UNI EN 1092) |
| 29 | DN 125 (UNI EN 1092) |
| 30 | DN 150 (UNI EN 1092) |
| 40 | 1/2" SOCKET WELDED   |
| 41 | 3/4" SOCKET WELDED   |
| 42 | 1" SOCKET WELDED     |
| 43 | 1" 1/4 SOCKET WELDED |
| 44 | 1" 1/2 SOCKET WELDED |
| 45 | 2" SOCKET WELDED     |
| 46 | 2" 1/2 SOCKET WELDED |
| 47 | 3" SOCKET WELDED     |
| 48 | 4" SOCKET WELDED     |

### 07 Body and Chamber Materials

|   |                                      |
|---|--------------------------------------|
| A | Body and Chamber in SS AISI 316/316L |
| B | Body and Chamber in HC276            |
| C | Body and Chamber in INCONEL 625      |
| D | Body and Chamber in DUPLEX           |
| E | Body and Chamber in SUPER DUPLEX     |
| F | Body and Chamber in MONEL 400        |

### 08 Float Material and Density

|    |                                                               |
|----|---------------------------------------------------------------|
| A0 | Float in SS AISI 316, Density = 340 ÷ 500 Kg/m <sup>3</sup>   |
| A1 | Float in SS AISI 316, Density = 500 ÷ 700 Kg/m <sup>3</sup>   |
| A2 | Float in SS AISI 316, Density = 700 ÷ 900 Kg/m <sup>3</sup>   |
| A3 | Float in SS AISI 316, Density = 900 ÷ 1100 Kg/m <sup>3</sup>  |
| A4 | Float in SS AISI 316, Density = 1100 ÷ 1300 Kg/m <sup>3</sup> |
| A5 | Float in SS AISI 316, Density = 1300 ÷ 1500 Kg/m <sup>3</sup> |
| A6 | Float in SS AISI 316, Density = 1500 ÷ 1700 Kg/m <sup>3</sup> |
| A7 | Float in SS AISI 316, Density = 1700 ÷ 1900 Kg/m <sup>3</sup> |
| A8 | Float in SS AISI 316, Density = 1900 ÷ 2000 Kg/m <sup>3</sup> |
| T0 | Float in Titanium, Density = 340 ÷ 500 Kg/m <sup>3</sup>      |
| T1 | Float in Titanium, Density = 500 ÷ 700 Kg/m <sup>3</sup>      |
| T2 | Float in Titanium, Density = 700 ÷ 900 Kg/m <sup>3</sup>      |
| T3 | Float in Titanium, Density = 900 ÷ 1100 Kg/m <sup>3</sup>     |
| T4 | Float in Titanium, Density = 1100 ÷ 1300 Kg/m <sup>3</sup>    |
| T5 | Float in Titanium, Density = 1300 ÷ 1500 Kg/m <sup>3</sup>    |
| T6 | Float in Titanium, Density = 1500 ÷ 1700 Kg/m <sup>3</sup>    |
| T7 | Float in Titanium, Density = 1700 ÷ 1900 Kg/m <sup>3</sup>    |
| T8 | Float in Titanium, Density = 1900 ÷ 2000 Kg/m <sup>3</sup>    |

### 09 Bolt Material

|   |                            |
|---|----------------------------|
| A | Bolts - ASTM A320 L7       |
| B | Bolts - ASTM A193 B7       |
| C | Bolts - ASTM A193 B8       |
| D | Bolts - ASTM A193 B8M      |
| E | Bolts - ASTM A193 B8M Cl.2 |

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### 10 Nuts Material

|   |                         |  |
|---|-------------------------|--|
| 1 | Nuts - ASTM A194 2H     |  |
| 2 | Nuts - ASTM A194 2HM    |  |
| 3 | Nuts - ASTM A194 Gr.7   |  |
| 4 | Nuts - ASTM A194 Gr.8M  |  |
| 5 | Nuts - ASTM A194 Gr.8MA |  |

### 11 Vent Connection

|   |                                      |  |
|---|--------------------------------------|--|
| A | Vent - Screwed - 1/2" NPT            |  |
| B | Vent - Screwed - 3/4" NPT            |  |
| C | Vent - Screwed - 1" NPT              |  |
| D | Vent - Flanged - 1/2" (ASME B16.5)   |  |
| E | Vent - Flanged - 3/4" (ASME B16.5)   |  |
| F | Vent - Flanged - 1" (ASME B16.5)     |  |
| G | Vent - Flanged - DN 15 (UNI EN 1092) |  |
| H | Vent - Flanged - DN 20 (UNI EN 1092) |  |
| L | Vent - Flanged - DN 25 (UNI EN 1092) |  |

### 12 Drain Connection

|   |                                       |  |
|---|---------------------------------------|--|
| A | Drain - Screwed - 1/2" NPT            |  |
| B | Drain - Screwed - 3/4" NPT            |  |
| C | Drain - Screwed - 1" NPT              |  |
| D | Drain - Flanged - 1/2" (ASME B16.5)   |  |
| E | Drain - Flanged - 3/4" (ASME B16.5)   |  |
| F | Drain - Flanged - 1" (ASME B16.5)     |  |
| G | Drain - Flanged - DN 15 (UNI EN 1092) |  |
| H | Drain - Flanged - DN 20 (UNI EN 1092) |  |
| L | Drain - Flanged - DN 25 (UNI EN 1092) |  |
| Z | Not Applicable (TOP Mounting)         |  |

### 13 Housing and Flags Configuration

|   |                                                         |  |
|---|---------------------------------------------------------|--|
| 1 | Housing Aluminum with Red & White flags                 |  |
| 2 | Housing SS 316 with Red & White flags                   |  |
| 3 | Housing Aluminum with Red, White AND Yellow alarm flags |  |
| 4 | Housing SS 316 with Red, White AND Yellow alarm flags   |  |

### 14 Operating Temperature

|   |              |  |
|---|--------------|--|
| A | Up to 50 °C  |  |
| B | 50 ÷ 100 °C  |  |
| C | 100 ÷ 150 °C |  |
| D | 150 ÷ 200 °C |  |
| E | 200 ÷ 250 °C |  |
| F | 250 ÷ 300 °C |  |
| G | 300 ÷ 350 °C |  |
| H | Over 350 °C  |  |

### 15 Hazardous Area Classification

|   |                     |  |
|---|---------------------|--|
| A | ATEX Certified Ex-H |  |
| N | Not Hazardous Area  |  |

### 16 Options

|    |                                     |  |
|----|-------------------------------------|--|
| 01 | Painting STD SPRIANO (Up to 150 °C) |  |
| 02 | Painting STD SPRIANO (Up to 350 °C) |  |
| 03 | Offshore painting (Up to 200 °C)    |  |
| 04 | Offshore painting (Up to 350 °C)    |  |
| 05 | Material certificates 3.1           |  |
| 06 | PMI Certificates                    |  |
| 07 | HIC / SSC Test                      |  |
| 08 | Ball Valves screwed                 |  |
| 09 | Ball Valves flanged                 |  |
| 10 | Graduated scale with arrows         |  |
| 11 | Inductive Contacts                  |  |
| 12 | Heating or Cooling Jacket           |  |