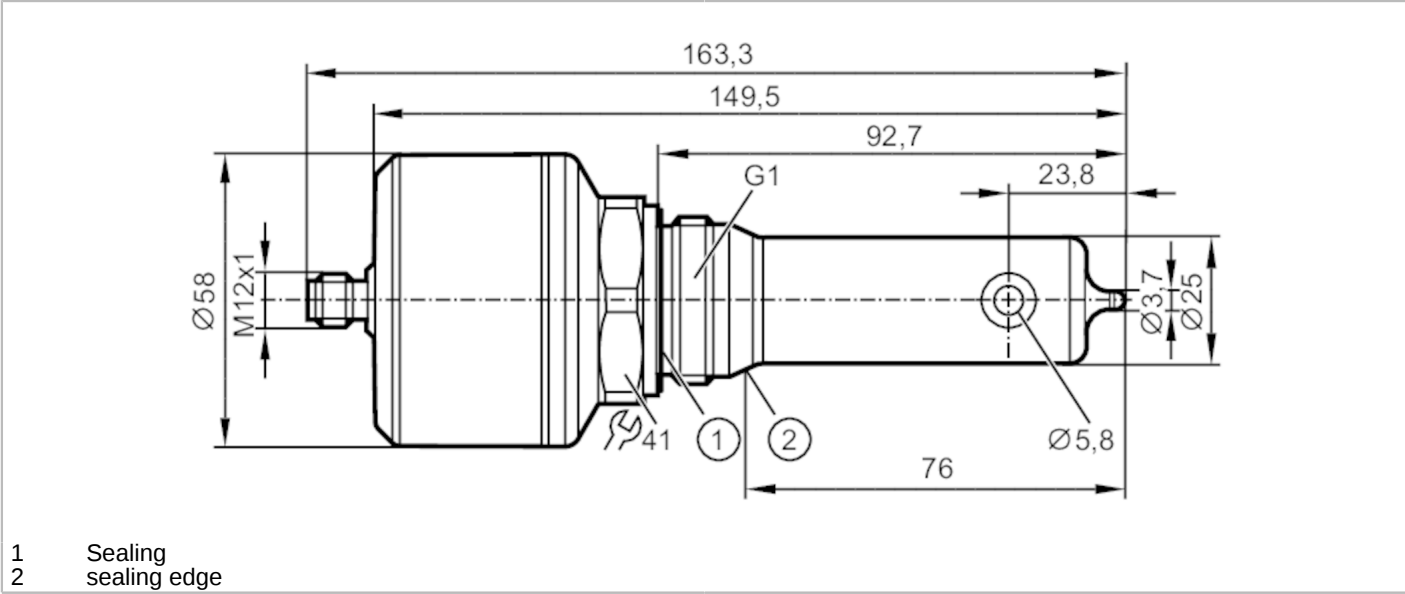




Inductive conductivity sensor

IND CONDUCTIVITY HYG ASF-V 077

Digital meets analogue: integrating modern IO-Link sensors the analogue way. The EIO104 allows you to realise two analogue signals from intelligent IO-Link sensors with several process values.



Product characteristics

|                              |                                      |
|------------------------------|--------------------------------------|
| Number of inputs and outputs | Number of analogue outputs: 1        |
| Process connection           | G 1 external thread Aseptoflex Vario |

Application

|                          |                                                                  |
|--------------------------|------------------------------------------------------------------|
| Special feature          | Gold-plated contacts                                             |
| Media                    | conductive liquids                                               |
| Note on media            | water                                                            |
|                          | milk                                                             |
|                          | CIP liquids                                                      |
| Cannot be used for       | See the operating instructions, chapter "Function and features". |
| Medium temperature [°C]  | -25...100; (< 1 h: 150)                                          |
| Pressure rating [bar]    | 16                                                               |
| Vacuum resistance [mbar] | -1000                                                            |

Electrical data

|                             |            |
|-----------------------------|------------|
| Operating voltage [V]       | 18...30 DC |
| Current consumption [mA]    | < 50       |
| Protection class            | III        |
| Reverse polarity protection | yes        |
| Power-on delay time [s]     | 2          |
| Measuring principle         | induktiv   |

Inputs / outputs

|                              |                               |
|------------------------------|-------------------------------|
| Number of inputs and outputs | Number of analogue outputs: 1 |
|------------------------------|-------------------------------|

Outputs

|                         |   |
|-------------------------|---|
| Total number of outputs | 1 |
|-------------------------|---|



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|                              |                                                                  |
|------------------------------|------------------------------------------------------------------|
| Output signal                | analogue signal; IO-Link                                         |
| Output function              | analogue output; scalable; selectable conductivity / temperature |
| Number of analogue outputs   | 1                                                                |
| Analogue current output [mA] | 4...20                                                           |
| Max. load [ $\Omega$ ]       | 500                                                              |

## Measuring/setting range

|                                        |               |
|----------------------------------------|---------------|
| Conductivity measurement               |               |
| Measuring range [ $\mu\text{S/cm}$ ]   | 100...1000000 |
| Temperature measurement                |               |
| Measuring range [ $^{\circ}\text{C}$ ] | -25...150     |

## Accuracy / deviations

|                                   |                                                                                             |
|-----------------------------------|---------------------------------------------------------------------------------------------|
| Conductivity measurement          |                                                                                             |
| Accuracy (in the measuring range) | 2 % MW $\pm$ 25 $\mu\text{S/cm}$                                                            |
| Resolution [ $\mu\text{S/cm}$ ]   | 1 (0...10000)                                                                               |
|                                   | 10 (10000...100000)                                                                         |
|                                   | 100 (100000...1000000)                                                                      |
| Drift [%/K]                       | 0,1 %/K MW $\pm$ 25 $\mu\text{S/cm}$                                                        |
| Repeatability                     | 1 % MW $\pm$ 25 $\mu\text{S/cm}$                                                            |
| Long-term stability               | 0,5 % MW $\pm$ 25 $\mu\text{S/cm}$                                                          |
| Temperature measurement           |                                                                                             |
| Accuracy [K]                      | 20...50 $^{\circ}\text{C}$ : $< \pm 0,2$ K;<br>-25...150 $^{\circ}\text{C}$ : $< \pm 1,5$ K |
| Repeatability [K]                 | 0,2                                                                                         |
| Resolution [K]                    | 0.1                                                                                         |

## Response times

|                          |                            |
|--------------------------|----------------------------|
| Conductivity measurement |                            |
| Response time [s]        | $< 2$ ; (T09; Damping = 0) |
| Temperature measurement  |                            |
| Response time [s]        | $< 40$ ; (T09)             |

## Interfaces

|                              |                                                |          |
|------------------------------|------------------------------------------------|----------|
| Communication interface      | IO-Link                                        |          |
| Transmission type            | COM2 (38,4 kBaud)                              |          |
| IO-Link revision             | 1.1                                            |          |
| SDCI standard                | IEC 61131-9                                    |          |
| Profiles                     | Measuring Sensor, Identification and Diagnosis |          |
| SIO mode                     | no                                             |          |
| Required master port type    | A                                              |          |
| Process data analogue        | 1                                              |          |
| Min. process cycle time [ms] | 5.6                                            |          |
| Supported DeviceIDs          | Type of operation                              | DeviceID |
|                              | Default                                        | 922      |

## Operating conditions

|                                            |          |
|--------------------------------------------|----------|
| Ambient temperature [ $^{\circ}\text{C}$ ] | -40...60 |
|--------------------------------------------|----------|



## Inductive conductivity sensor

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|                     |                                                            |          |
|---------------------|------------------------------------------------------------|----------|
| Storage temperature | [°C]                                                       | -40...85 |
| Protection          | IP 68; IP 69K; (7 days / 3 m water depth / 0.3 bar: IP 68) |          |

### Tests / approvals

|                      |                   |                        |
|----------------------|-------------------|------------------------|
| EMC                  | DIN EN 61000-6-2  |                        |
|                      | DIN EN 61000-6-3  | in a closed metal tank |
| Shock resistance     | DIN EN 60068-2-27 | 50 g (11 ms)           |
| Vibration resistance | DIN EN 60068-2-6  | 20 g (10...2000 Hz)    |
| MTTF                 | [years]           | 129                    |
| UL approval          | File number UL    | E364788                |

### Mechanical data

|                          |                                                 |       |
|--------------------------|-------------------------------------------------|-------|
| Weight                   | [g]                                             | 749.7 |
| Materials                | stainless steel (1.4404 / 316L); PEEK; PEI; FKM |       |
| Materials (wetted parts) | PEEK                                            |       |
| Process connection       | G 1 external thread Aseptoflex Vario            |       |

### Remarks

|               |                                                                                                                                                                                                  |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Remarks       | MW = measured value                                                                                                                                                                              |
| Notes         | Digital meets analogue: integrating modern IO-Link sensors the analogue way. The EIO104 allows you to realise two analogue signals from intelligent IO-Link sensors with several process values. |
| Pack quantity | 1 pcs.                                                                                                                                                                                           |

### Electrical connection

Connector: 1 x M12 (EN 61067-2-101); coding: A; Contacts: gold-plated





## Inductive conductivity sensor

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### Connection



|      |                             |
|------|-----------------------------|
| OUT1 | IO-Link                     |
| OUT2 | analogue output             |
|      | colours to DIN EN 60947-5-2 |
|      | Core colours :              |
| BK = | black                       |
| BN = | brown                       |
| BU = | blue                        |
| WH = | white                       |