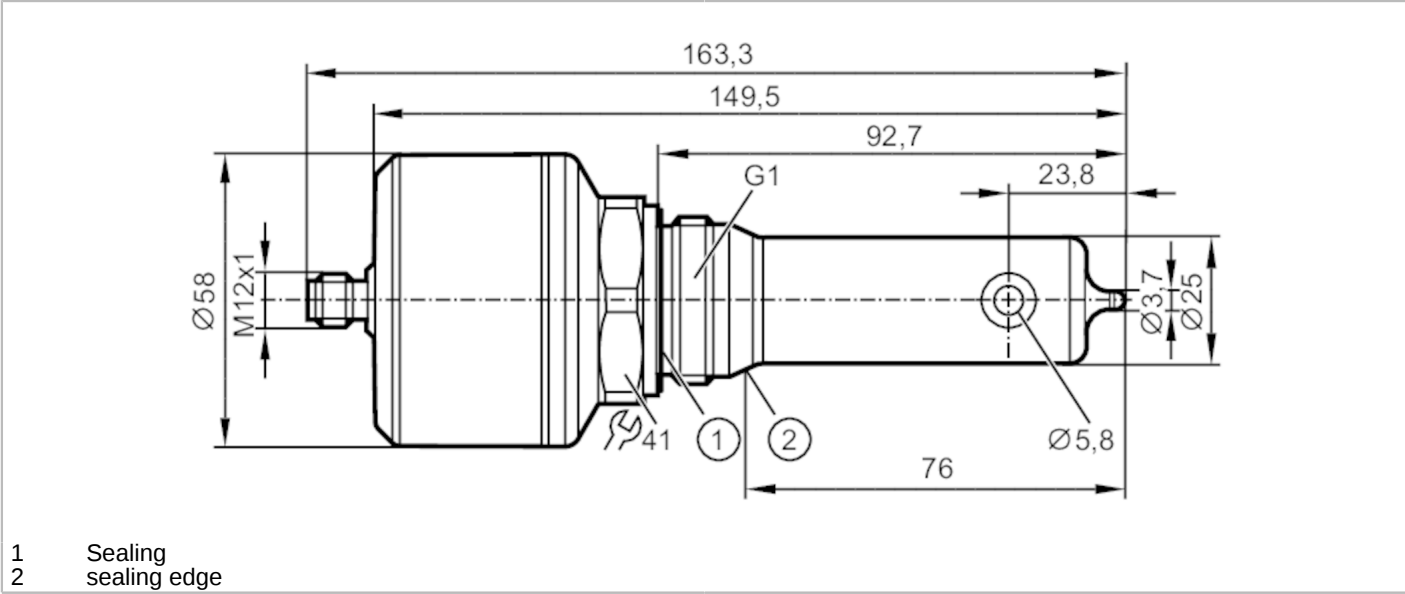




Inductive conductivity sensor

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                                                               |
| Pressure rating [MPa]        | 1.6                                                              |
| 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          | inductive                                                        |
| Inputs / outputs             |                                                                  |
| Number of inputs and outputs | Number of analogue outputs: 1                                    |



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IND CONDUCTIVITY HYG ASF-V 077

| Outputs                           |  |                                                                  |          |
|-----------------------------------|--|------------------------------------------------------------------|----------|
| Total number of outputs           |  | 1                                                                |          |
| 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 [Ω]                     |  | 500                                                              |          |
| Measuring/setting range           |  |                                                                  |          |
| Conductivity measurement          |  |                                                                  |          |
| Measuring range [μS/cm]           |  | 100...1000000                                                    |          |
| Resolution [μS/cm]                |  | 0...10.000                                                       | 1        |
|                                   |  | 10.000...100.000                                                 | 10       |
|                                   |  | 100.000...1.000.000                                              | 100      |
| Temperature measurement           |  |                                                                  |          |
| Measuring range [°C]              |  | -25...150                                                        |          |
| Accuracy / deviations             |  |                                                                  |          |
| Conductivity measurement          |  |                                                                  |          |
| Accuracy (in the measuring range) |  | 2 % MW ± 25 μS/cm                                                |          |
| Drift [%/K]                       |  | 0,1 %/K MW ± 25 μS/cm                                            |          |
| Repeatability                     |  | 1 % MW ± 25 μS/cm                                                |          |
| Long-term stability               |  | 0,5 % MW ± 25 μS/cm                                              |          |
| Temperature measurement           |  |                                                                  |          |
| Accuracy [K]                      |  | 20...50 °C: < ± 0,2 K;<br>-25...150 °C: < ± 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      |



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| Operating conditions                                                                |                   |                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient temperature                                                                 | [°C]              | -40...60                                                                                                                                                                                         |
| 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 (316L/1.4404); 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

IND CONDUCTIVITY HYG ASF-V 077

### Connection



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