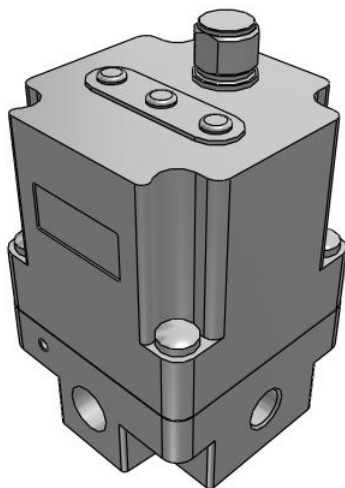


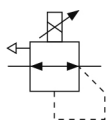


## ITV1000/2000/3000, Electro-Pneumatic Regulator ITV1050-31F1N

### Datasheet

### General series information

- Pressure range: 0.005 to 0.9 MPa
- Maximum flow rate: 4000 l/min (ANR)
- Port sizes: 1/8, 1/4, 3/8, 1/2
- Applicable fieldbus protocols: IO-Link, CC-Link, DeviceNet™, PROFIBUS, RS-232C.



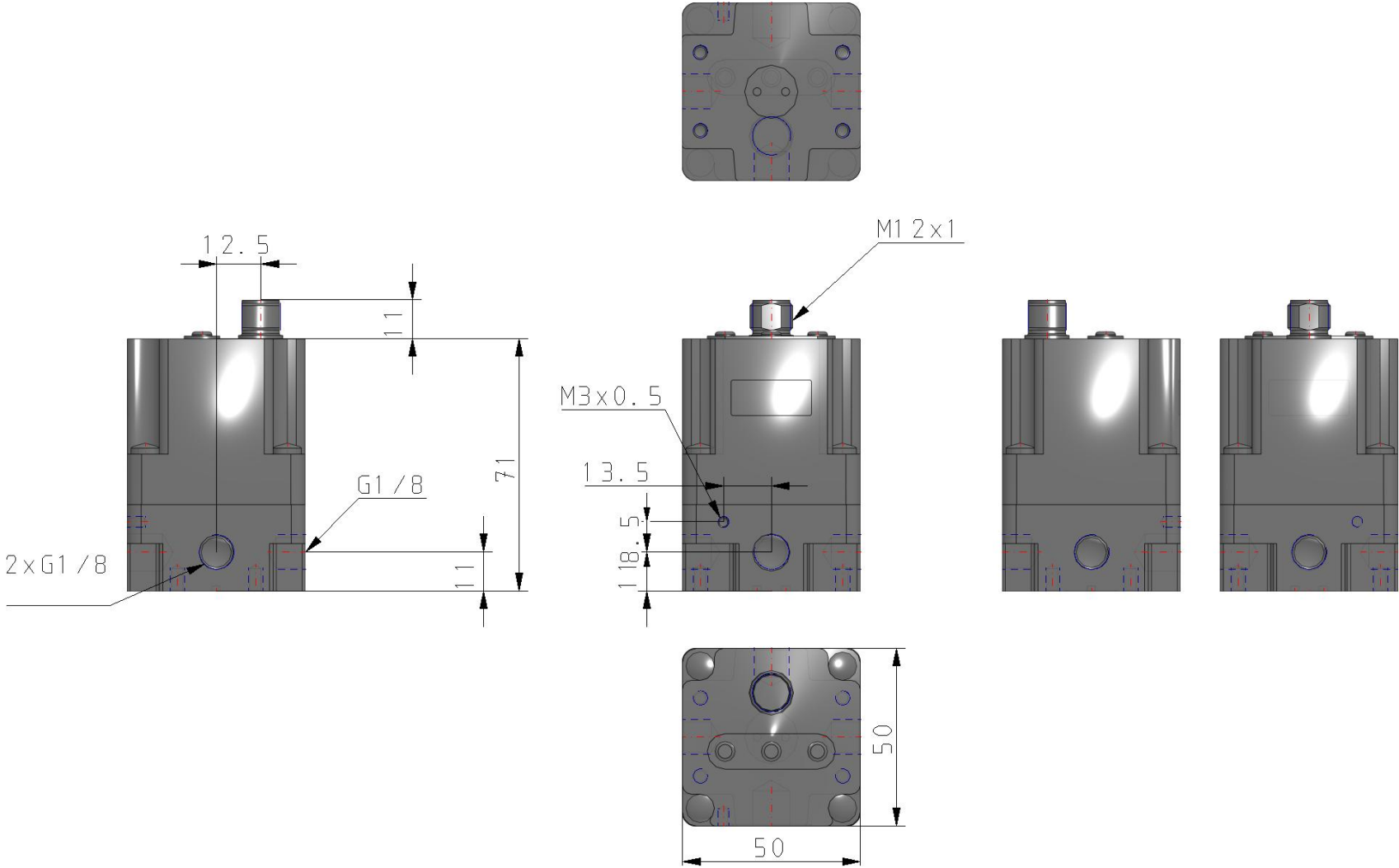
Electro-pneumatic regulator

### Standard specifications

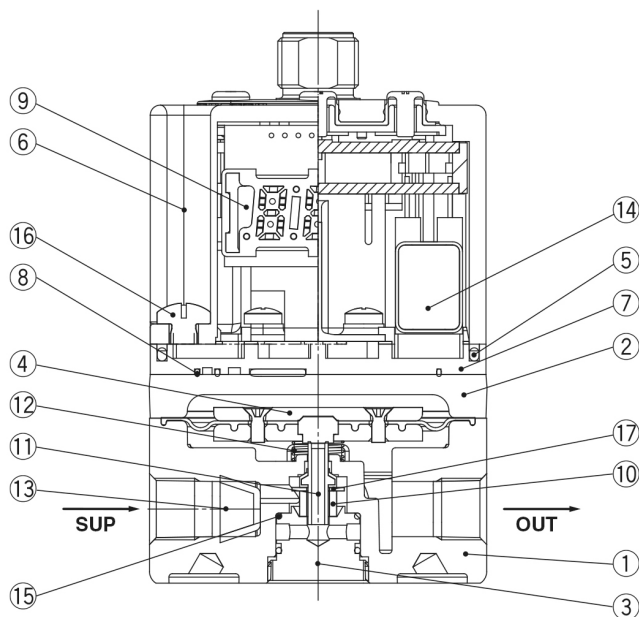
|                                        |                            |
|----------------------------------------|----------------------------|
| Model                                  | 10 (200 L/min [ANR])       |
| Pressure Range                         | 5 (0.005~0.9MPa)           |
| Power Voltage                          | 0 (24VDC)                  |
| Input Signal                           | 3 (Voltage Style 0~10VDC)  |
| Monitor Output                         | 1 (Analogue Output 1~5VDC) |
| Thread                                 | F (G[PF])                  |
| Port Size                              | 1 [1/8 (1000)]             |
| Accessory                              | None                       |
| Cable Connector                        | N (w/oCable Connector)     |
| Pressure Display Unit                  | MPa                        |
| Options                                | None                       |
| Maximum temperature of pressure medium | 50 °C                      |
| Minimum temperature of pressure medium | 0 °C                       |
| Maximum operating pressure             | 1.0 MPa                    |
| Maximum ambient temperature            | 50 °C                      |
| Minimum ambient temperature            | 0 °C                       |
| Approvals                              | CE                         |
| Protection class with connector        | IP65                       |
| Current consumption                    | 0.12 A                     |

|                              |                                                                                             |
|------------------------------|---------------------------------------------------------------------------------------------|
| Enclosure                    | IP65                                                                                        |
| Sensitivity                  | 0.2% (F.S.)                                                                                 |
| Repeatability                | ±0.5% (F.S.)                                                                                |
| Set pressure range           | 0.005 - 0.9 MPa                                                                             |
| Linearity                    | ±1% (F.S.)                                                                                  |
| Power supply voltage         | 24 VDC ±10%                                                                                 |
| Min. supply pressure         | Set pressure +0.1 MPa                                                                       |
| Accuracy                     | ±2%F.S. ±1 digit                                                                            |
| Temperature characteristics  | ±0.12% (F.S.)/C                                                                             |
| Minimum display unit         | 0.001                                                                                       |
| Hysteresis                   | 0.5% (F.S.)                                                                                 |
| Input signal Voltage type    | 0 - 10 VDC                                                                                  |
| Input impedance current type | 250 Ω                                                                                       |
| Input impedance Voltage type | 6.5 kΩ                                                                                      |
| Output signal Analogue       | 1 to 5 VDC (Output impedance: Approximately 1 kΩ)<br>Output accuracy within ±6% (Full span) |
| Weight                       | 0.250 Kg                                                                                    |

Dimensions



## Constructions



### Main Component Parts

| No.  | Description               | Material        |
|------|---------------------------|-----------------|
| ◆ 1  | Body                      | Aluminum alloy  |
| 2    | Cover                     | Aluminum alloy  |
| ◆ 3  | Valve guide               | Aluminum alloy  |
| ◆ 4  | Diaphragm assembly        | Aluminum alloy  |
|      |                           | HNBR            |
| 5    | Seal                      | Steel           |
| 6    | Bowl assembly             | NBR             |
| 7    | Sub-plate                 | Resin           |
| 8    | Seal                      | Silicone rubber |
| 9    | Control circuit assembly  | Resin           |
| ◆ 10 | Bumper                    | NBR             |
| ◆ 11 | Valve                     | Stainless steel |
|      |                           | HNBR            |
| ◆ 12 | Bias spring               | Stainless steel |
| ◆ 13 | Filter                    | Stainless steel |
| 14   | Solenoid valve            | —               |
| ◆ 15 | O-ring                    | —               |
| 16   | Round head Phillips screw | NBR             |
| ◆ 17 | Flat washer               | Steel           |
|      |                           | Stainless steel |

\* Parts in contact with fluid are indicated with a mark ◆.

## Additional information

|                           |                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Catalogue                 | <a href="#">ITV-G_EU.pdf</a>                                                                                                                                                                                                                                                                                                                                              |
| Declaration of conformity | <a href="#">newDoC_ITVx000-G_EN.pdf</a><br><a href="#">newDoC_ITVx000-H_EN.pdf</a><br><a href="#">newDoC_ITVx000_IO-Link-EN.pdf</a><br><a href="#">DoC_ITVx_TF00023-B.pdf</a>                                                                                                                                                                                             |
| Installation manuals      | <a href="#">IM_ITVx000_EN-A.pdf</a><br><a href="#">IM_ITVx000-IO-Link_EN.pdf</a><br><a href="#">IM_ITV3000_EN-A.pdf</a>                                                                                                                                                                                                                                                   |
| Operation manuals         | <a href="#">OM_ITVx000-60_EN-C.pdf</a><br><a href="#">OM_ITVx000-CC-Link_EN-B.pdf</a><br><a href="#">OM_ITVx000-DeviceNet_EN-C.pdf</a><br><a href="#">OM_ITVx000_EN-C.pdf</a><br><a href="#">OM_ITVx000-PROFIBUS-DP_EN-A.pdf</a><br><a href="#">OM_ITVx000-52_53_EN-C.pdf</a><br><a href="#">OM_ITVx000-RS-232C_EN.pdf</a><br><a href="#">OM_ITVx000-IO-Link_EN-E.pdf</a> |