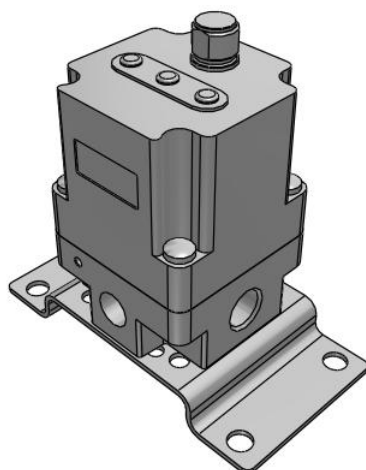


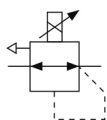


## ITV2000/3000, Electro-Pneumatic Regulator

### ITV2050-31F2BN3-X88

#### Datasheet

- Controls air pressure in proportion to an electric signal.
- Available in MPa, kgf/cm<sup>2</sup>, bar, PSI, and kPa units.
- Pressure range of 0.005 to 0.9MPa.
- Available port sizes 1/4 and 3/8.
- Mounting bracket option.

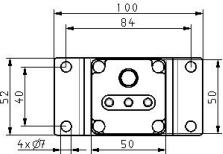
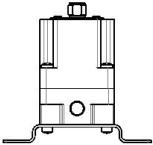
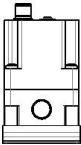
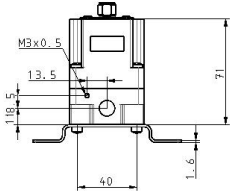
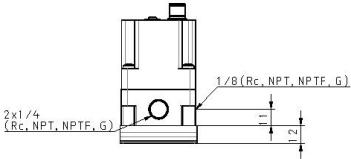
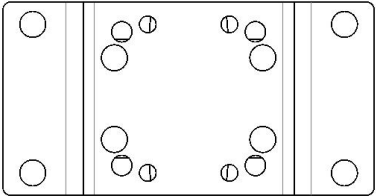


Electro-pneumatic regulator

## Standard specifications

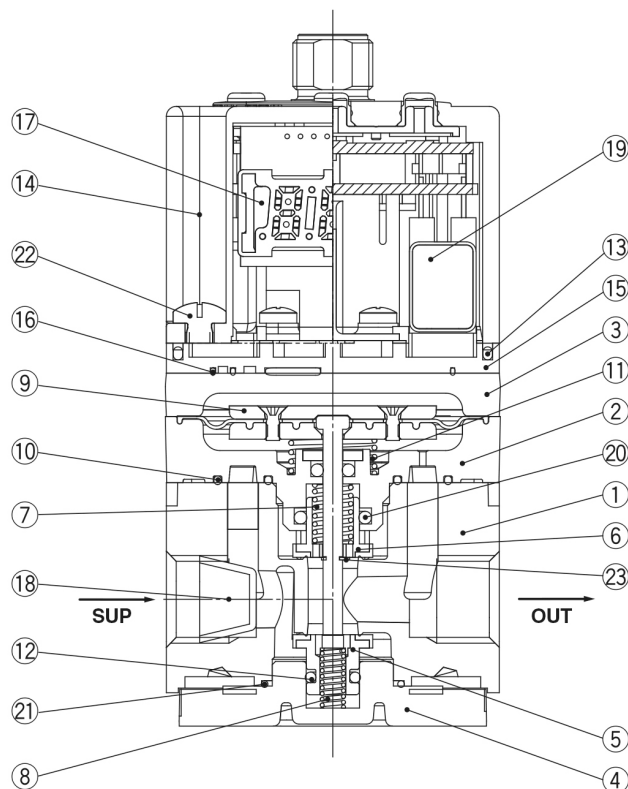
|                                        |                                |
|----------------------------------------|--------------------------------|
| Model                                  | 20 (1500 L/min)                |
| Pressure Range                         | 5 (0.005~0.9MPa)               |
| Power Voltage                          | 0 (24VDC)                      |
| Input Signal                           | 3 (Voltage Style 0~10VDC)      |
| Monitor Output                         | 1 (Analog Output 1~5VDC)       |
| Thread                                 | F (G[PF])                      |
| Port Size                              | 2 (1/4 [2000,3000])            |
| Accessory                              | B (Flat Bracket)               |
| Cable Connector                        | N (w/oCable Connector)         |
| Pressure Display Unit                  | 3 (Bar)                        |
| Options                                | X88 (High Speed Response Type) |
| Maximum temperature of pressure medium | 50 °C                          |
| Minimum temperature of pressure medium | 0 °C                           |
| Maximum operating pressure             | 1.0 MPa                        |
| Minimum operating pressure             | 0.1 MPa                        |
| Maximum ambient temperature            | 50 °C                          |
| Minimum ambient temperature            | 0 °C                           |
| General power supply                   | 24 VDC ±10%                    |
| Conform to the European RoHS Directive | Conform                        |

|                                 |                                                                                             |
|---------------------------------|---------------------------------------------------------------------------------------------|
| Approvals                       | CE                                                                                          |
| Protection class with connector | IP65                                                                                        |
| Flow rate of secondary exhaust  | 1500 NI/min                                                                                 |
| Enclosure                       | IP65                                                                                        |
| Sensitivity                     | 0.2% (F.S.)                                                                                 |
| Repeatability                   | ±0.5% (F.S.)                                                                                |
| Set pressure range              | 0.005 - 0.9 MPa                                                                             |
| Linearity                       | ±1% (F.S.)                                                                                  |
| Current consumption             | 0.12 A                                                                                      |
| Max. supply pressure            | 1.0 MPa                                                                                     |
| Min. supply pressure            | Set pressure +0.1 MPa                                                                       |
| Accuracy                        | ±2%F.S. ±1 digit                                                                            |
| Temperature characteristics     | ±0.12% (F.S.)/C                                                                             |
| Minimum display unit            | 0.01                                                                                        |
| Hysteresis                      | ±1% (F.S.)                                                                                  |
| Input impedance current type    | 250 Ω                                                                                       |
| Input impedance Voltage type    | 6.5 kΩ                                                                                      |
| Input impedance Preset input    | 4.7 kΩ                                                                                      |
| Input impedance Digital input   | 4.7 kΩ                                                                                      |
| Output signal Analogue          | 1 to 5 VDC (Output impedance: Approximately 1 kΩ)<br>Output accuracy within ±6% (Full span) |
| Weight                          | 0.418 Kg                                                                                    |



## Constructions

### ITV2000



#### Main Component Parts

| No.  | Description               | Material        |
|------|---------------------------|-----------------|
| ◆ 1  | Body                      | Aluminum alloy  |
| ◆ 2  | Intermediate body         | Aluminum alloy  |
| 3    | Cover                     | Aluminum alloy  |
| ◆ 4  | Valve guide               | Aluminum alloy  |
| ◆ 5  | Valve (Supply valve)      | HNBR/Brass      |
| ◆ 6  | Valve (Exhaust valve)     | HNBR/Brass      |
| ◆ 7  | Valve spring              | Stainless steel |
| ◆ 8  | Valve spring              | Stainless steel |
| ◆ 9  | Diaphragm assembly        | Stainless steel |
|      |                           | Aluminum alloy  |
|      |                           | HNBR            |
|      |                           | Steel           |
| ◆ 10 | Seal                      | NBR             |
| ◆ 11 | Bias spring               | Stainless steel |
| ◆ 12 | O-ring                    | NBR             |
| 13   | Seal                      | NBR             |
| 14   | Bowl assembly             | Resin           |
|      |                           | Silicone rubber |
| 15   | Sub-plate                 | Resin           |
| 16   | Seal                      | NBR             |
| 17   | Control circuit assembly  | —               |
| ◆ 18 | Filter                    | Stainless steel |
| 19   | Solenoid valve            | —               |
| ◆ 20 | O-ring                    | NBR             |
| 21   | O-ring                    | NBR             |
| 22   | Round head Phillips screw | Steel           |
| ◆ 23 | Retaining ring            | Stainless steel |

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

## Additional information

|                           |                                                                                                                                                                                                                                                                                                                 |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Catalogue                 | <a href="#">ITV-Ff_EU.pdf</a>                                                                                                                                                                                                                                                                                   |
| Declaration of conformity | <a href="#">DoC_ITVx_TF00023-B.pdf</a><br><a href="#">newDoC_ITV2000_3000_TF1Y106EN.pdf</a><br><a href="#">newDoC_ITV2000_3000_TF1V093EN.pdf</a>                                                                                                                                                                |
| Installation manuals      | <a href="#">IMM_ITV3000_54GB-A.PDF</a><br><a href="#">IMM_ITVx_TF112GB-A.pdf</a>                                                                                                                                                                                                                                |
| Operation manuals         | <a href="#">OM_ITV2_DeviceNet_EN-B.pdf</a><br><a href="#">OM_ITV2_PROFIBUS-DP_EN.pdf</a><br><a href="#">OM_ITV2_CC-Link_EN-A.pdf</a><br><a href="#">OM_ITV2_OM00068EN-C.pdf</a><br><a href="#">OM_ITV2_RS-232C_EN.pdf</a><br><a href="#">OM_ITV2_OM00109EN-C.pdf</a><br><a href="#">OM_ITV2_OM00112EN-C.pdf</a> |