



## Flow Rate Transmitter EVS 3100

Turbine

High accuracy

Additional measuring connections

For oils / viscous fluids

### Description:

The flow rate transmitters of the EVS 3100 series (aluminium series) are specially designed for use in hydraulic and other fluid power systems. They operate in accordance with the turbine principle, which means that the rpm of an impeller wheel rotating in the flow of the media is measured and converted into a 4 .. 20 mA analogue signal.

Two further G1/4 threaded holes in the turbine housing allow additional units to be connected, e.g. temperature and pressure sensors.

### Technical data:

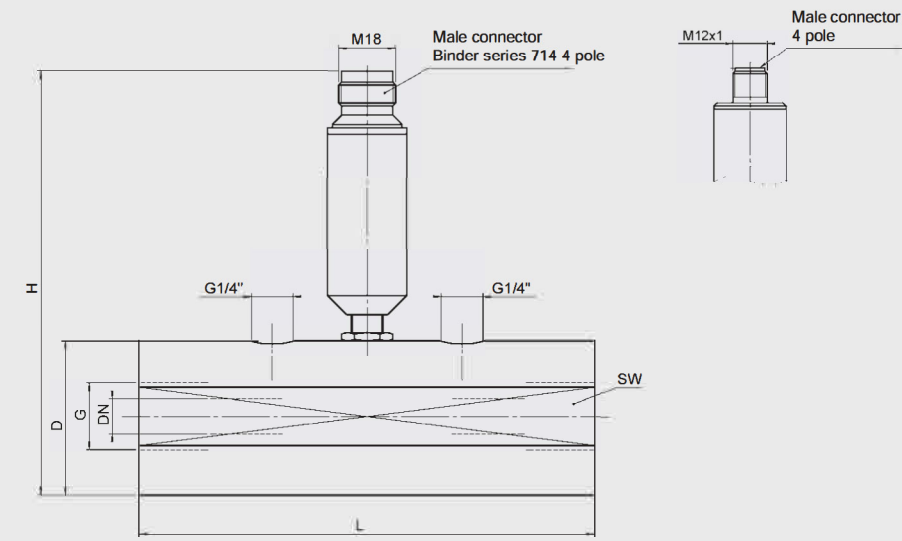
|                                                       |                                                                        |
|-------------------------------------------------------|------------------------------------------------------------------------|
| <b>Input data</b>                                     |                                                                        |
| Measuring ranges <sup>1)</sup> and operating pressure |                                                                        |
| 1.2 .. 20.0 l/min                                     | 400 bar                                                                |
| 6.0 .. 60.0 l/min                                     | 400 bar                                                                |
| 15.0 .. 300.0 l/min                                   | 400 bar                                                                |
| 40.0 .. 600.0 l/min                                   | 315 bar                                                                |
| Additional connection options                         | 2 x G1/4 female threads for pressure and/or temperature sensors        |
| Housing material                                      | Aluminium                                                              |
| <b>Output data</b>                                    |                                                                        |
| Output signal, permitted load resistance              | 4 .. 20 mA, 2-conductor<br>$R_{Lmax} = (U_B - 10 V) / 20 mA [k\Omega]$ |
| Accuracy                                              | ≤ 2 % of the actual value                                              |
| <b>Environmental conditions</b>                       |                                                                        |
| Compensated temperature range                         | -20 .. +70 °C                                                          |
| Operating temperature range                           | -20 .. +70 °C                                                          |
| Storage temperature range                             | -40 .. +100 °C                                                         |
| Fluid temperature range                               | -20 .. +90 °C                                                          |
| CE mark                                               | EN 61000-6-1 / 2 / 3 / 4                                               |
| Protection class acc. to DIN EN 60529 <sup>2)</sup>   | IP 65 (Binder male connector 714 M18)<br>IP 67 (M12x1 male connector)  |
| <b>Other data</b>                                     |                                                                        |
| Measuring medium <sup>3)</sup>                        | Hydraulic oils                                                         |
| Viscosity range                                       | 1 .. 100 cSt                                                           |
| Calibration viscosity                                 | 30 cSt                                                                 |
| Supply voltage                                        | 10 .. 32 V DC                                                          |
| Residual ripple of supply voltage                     | ≤ 5 %                                                                  |

Note: <sup>1)</sup> Other measuring ranges on request.

<sup>2)</sup> With mounted mating connector in corresponding protection class

<sup>3)</sup> Other measuring media on request

Dimensions:



| Model           | Measuring range<br>[l/min] | L<br>[mm] | H<br>[mm] | D / SW<br>[mm] | G    | Torque,<br>recommended<br>[Nm] | DN<br>[mm] |
|-----------------|----------------------------|-----------|-----------|----------------|------|--------------------------------|------------|
| EVS 310X-A-0020 | 1.2 .. 20                  | 117       | 135       | 47 / 46        | G¼"  | 60                             | 7          |
| EVS 310X-A-0060 | 6 .. 60                    | 144       | 135       | 48.5 / 46      | G½"  | 130                            | 11         |
| EVS 310X-A-0300 | 15 .. 300                  | 155       | 150       | 63.5 / 60      | G1¼" | 500                            | 22         |
| EVS 310X-A-0600 | 40 .. 600                  | 181       | 150       | 63.5 / 60      | G1½" | 600                            | 30         |

Model code:

EVS 3 1 0 X - A - XXXX - 000

Housing material

0 = aluminium

Electrical connection

4 = male, 4 pole Binder series 714 M18  
(mating connector not supplied)

6 = male M12x1, 4 pole  
(mating connector not supplied)

Output signal

A = 4 .. 20 mA, 2-conductor (4 mA  $\Delta$  0 l/min)

Measuring range

0020 = 1.2 .. 20 l/min

0060 = 6.0 .. 60 l/min

0300 = 15.0 .. 300 l/min

0600 = 40.0 .. 600 l/min

Modification number

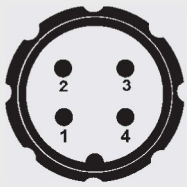
000 = standard

Accessories:

Appropriate accessories, such as mating connectors, can be found in the Accessories brochure.

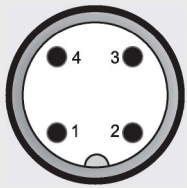
Pin connections:

Binder series 714 M18



| Pin | EVS 3104-A |
|-----|------------|
| 1   | Reserved   |
| 2   | Signal +   |
| 3   | Signal -   |
| 4   | Reserved   |

M12x1



| Pin | EVS 3106-A |
|-----|------------|
| 1   | Signal +   |
| 2   | Reserved   |
| 3   | Signal -   |
| 4   | Reserved   |

Note:

The information in this brochure relates to the operating conditions and applications described.

For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.