

FEATURES

SENTRONIC^{PLUS} is a highly dynamical 3-way proportional valve with digital control.

SENTRONIC^{PLUS} stands for:

- Digital communication and control
- Direct operated valve
- Dynamic behaviour (high speed)

A special feature of the SENTRONIC^{PLUS} is its *DaS* software supplied for optimum adjustment over PC and viewing of setpoint and feedback signals. Other functions are valve diagnostics, parameter setting and maintenance.

GENERAL

Fluids Air or inert gas, filtered at 50 µm, condensate-free, lubricated or unlubricated

Ports G1/8 - G1/4 - G1/2 - G1

Max. allowable pressure See table below

Pressure range See table below

Fluid temperature 0...60 °C

Ambient temperature 0...60 °C

Setpoint - analog 0 - 10 V (impedance 100 KΩ)

0 - 20 mA/4 - 20 mA (impedance 250 Ω)

Hysteresis 0,5 % of span

Linearity / pressure measurement ± 0,5 % of span

Repeatability ± 0,5 % of span

EXPLOSION SAFETY

Safety code Ex II 2D Ex tb IIIC T135 °C Db

Ex II 3G Ex nA IIC T4 Gc, 0 ≤ Ta ≤ +50 °C

EC type examination certificate no.:

IBExU07ATEX1173

CONSTRUCTION

Body Direct operated poppet valve

Internal parts See table below

Seals Stainless steel and brass

FPM and NBR

ELECTRICAL CHARACTERISTICS

| nominal diameter DN | stabilised voltage * | max. power (W) | max. current (mA) | insulation class | degree of protection | electrical connection |
|------------------------|-------------------------|-------------------|----------------------|---------------------|-------------------------|--|
| 3 | 24 V = 24 V = +/-10% | 12 | 500 | F | IP65 | 5-pin M12 connector or 7-pin DIN connector |
| 6 | | 24 | 1000 | | | |
| 12 | | 34 | 1400 | | | |
| 20 | | 44 | 1800 | | | |

* Max. ripple: 10 %

SPECIFICATIONS

| pipe size | orifice size (mm) | flow | |
|--------------|-------------------------|--|---------------------------|
| | | coefficient Kv (Nm ³ /h) | at 6 bar (l/min - ANR) |
| G 1/8 | 3 | 0,18 | 210 |
| G 1/4 | 6 | 0,60 | 700 |
| G 1/2 | 12 | 1,20 | 1400 |
| G 1 | 20 | 4,80 | 5600 |

CATALOGUE NUMBER

6 1 4 3 5 7 B A S I D P P

B: CONTROL PANEL

- D = M12 with display - non-explosionproof
- E = M12 without display - explosionproof (ATEX)
- F = DIN connector, 7-pin, with display - non-explosionproof
- G = DIN connector, 7-pin without - non-explosionproof

A: VERSION (ports), body

- | | |
|--------------------------|--------------------------------------|
| 0 = DN6 (G 1/4), Alu | 6 = DN20 (NPT 1"), Alu |
| 1 = DN12 (G 1/2), Alu | 7 = DN3 (G 1/8), Brass |
| 2 = DN20 (G 1), Alu | 8 = DN6 (G 1/4), Brass |
| 3 = DN6 (ISO 1), Alu | 9 = DN3 (NPT 1/8), Brass |
| 4 = DN6 (NPT 1/4"), Alu | A = DN6 (NPT 1/4"), Brass |
| 5 = DN12 (NPT 1/2"), Alu | C = DN6 (G 1/4), St. steel |
| | H = DN6 (G 1/4), Brass ²⁾ |

S: SETPOINT

- 0 = 0 ... 10 Volt
- 1 = 0 ... 20 mA
- 2 = 4 ... 20 mA

I: FEEDBACK

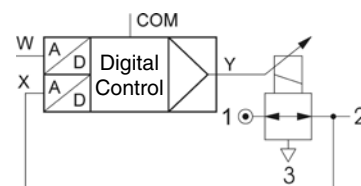
- 1 = Feedback output 0 ... 10 Volt
- 2 = Feedback output 0 ... 20 mA
- 3 = Feedback output 4 ... 20 mA
- 4 = Feedback input 0 ... 10 Volt
- 5 = Feedback input 0 ... 20 mA
- 6 = Feedback input 4 ... 20 mA

PP: PRESSURE RANGE

| Relative pressure | Max. allowable pressure (bar) | Vacuum (relative) |
|-------------------------------|----------------------------------|-------------------|
| 40 = 0 - 100 mbar | 2 | V3 = 0 ... -1 bar |
| 50 = 0 - 500 mbar | 2 | shut-off |
| 60 = 0 - 1 bar | 2 | valve |
| 02 = 0 - 2 bar | 3 | |
| 03 = 0 - 3 bar | 8 | |
| 05 = 0 - 5 bar | 8 | |
| 06 = 0 - 6 bar | 12 | |
| 10 = 0 - 10 bar | 12 | |
| 12 = 0 - 12 bar | 14 | |
| 16 = 0 - 16 bar ¹⁾ | 18 | |
| 20 = 0 - 20 bar ¹⁾ | 22 | |
| 3H = 0 - 30 bar ²⁾ | 40 | |
| 5H = 0 - 50 bar ²⁾ | 60 | |
| V3 = 0 - (-1) bar | | |

D: DIGITAL OUTPUT


- 1 = Pressure switch output
PNP ± 5 %



01432GB-2013/R01
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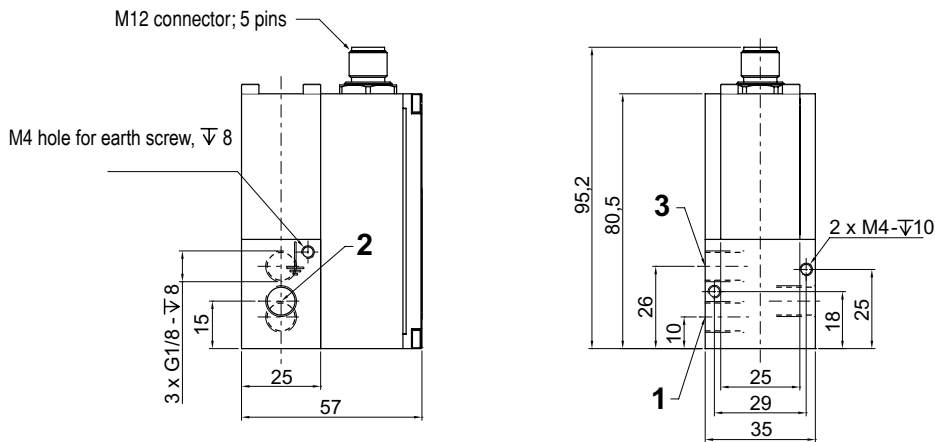
Notes:

- ¹⁾ Only for DN3 and DN 6
 - ²⁾ Only for DN6, Ms
- Other versions available on request.

DIMENSIONS (mm), WEIGHT (kg) 

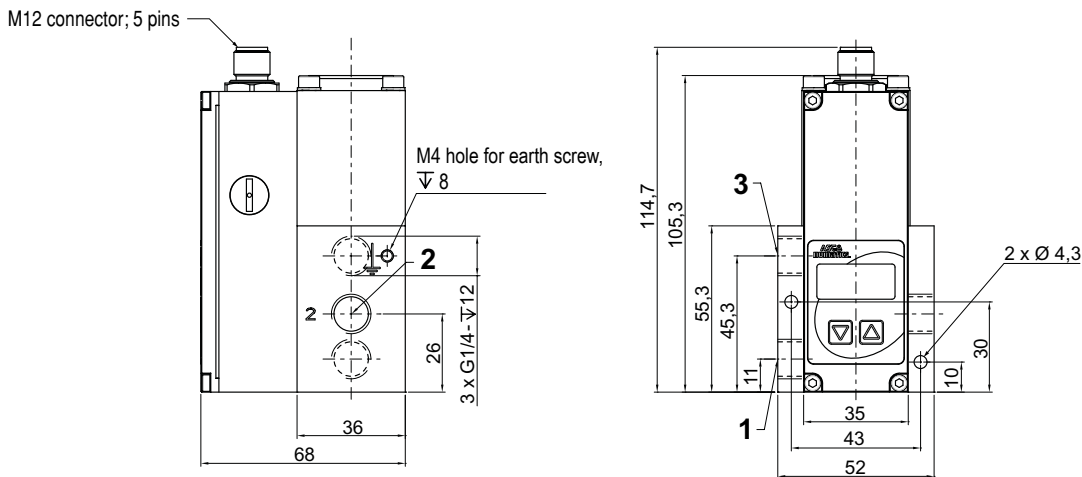
G 1/8

Weight: 0,550 kg



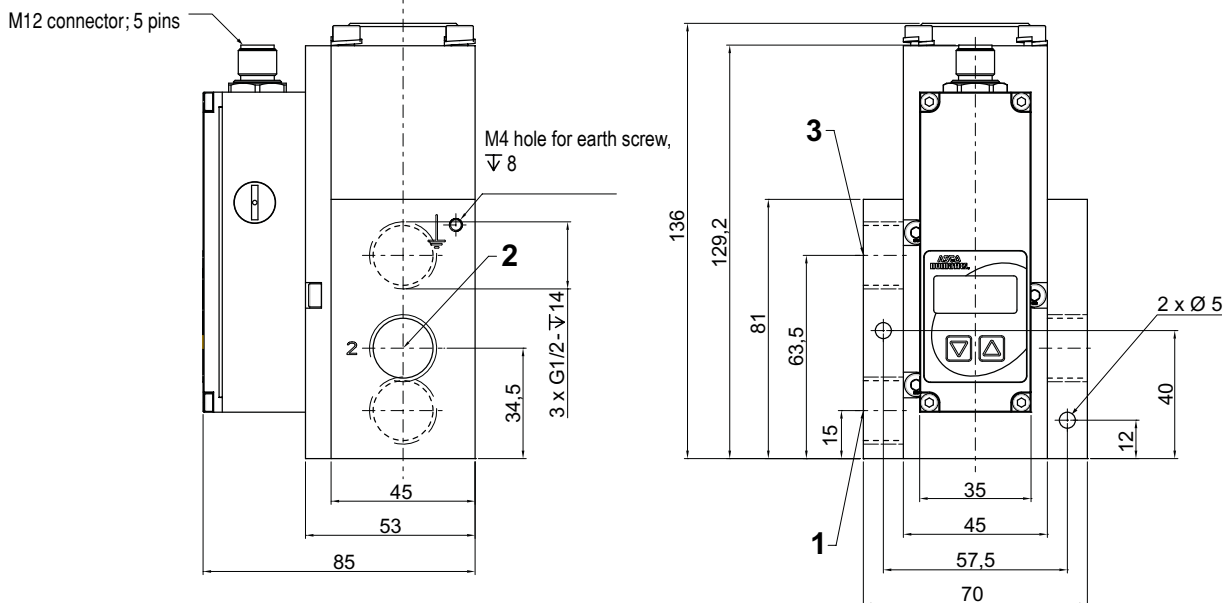
G 1/4

Weight: 0,850 kg



G 1/2

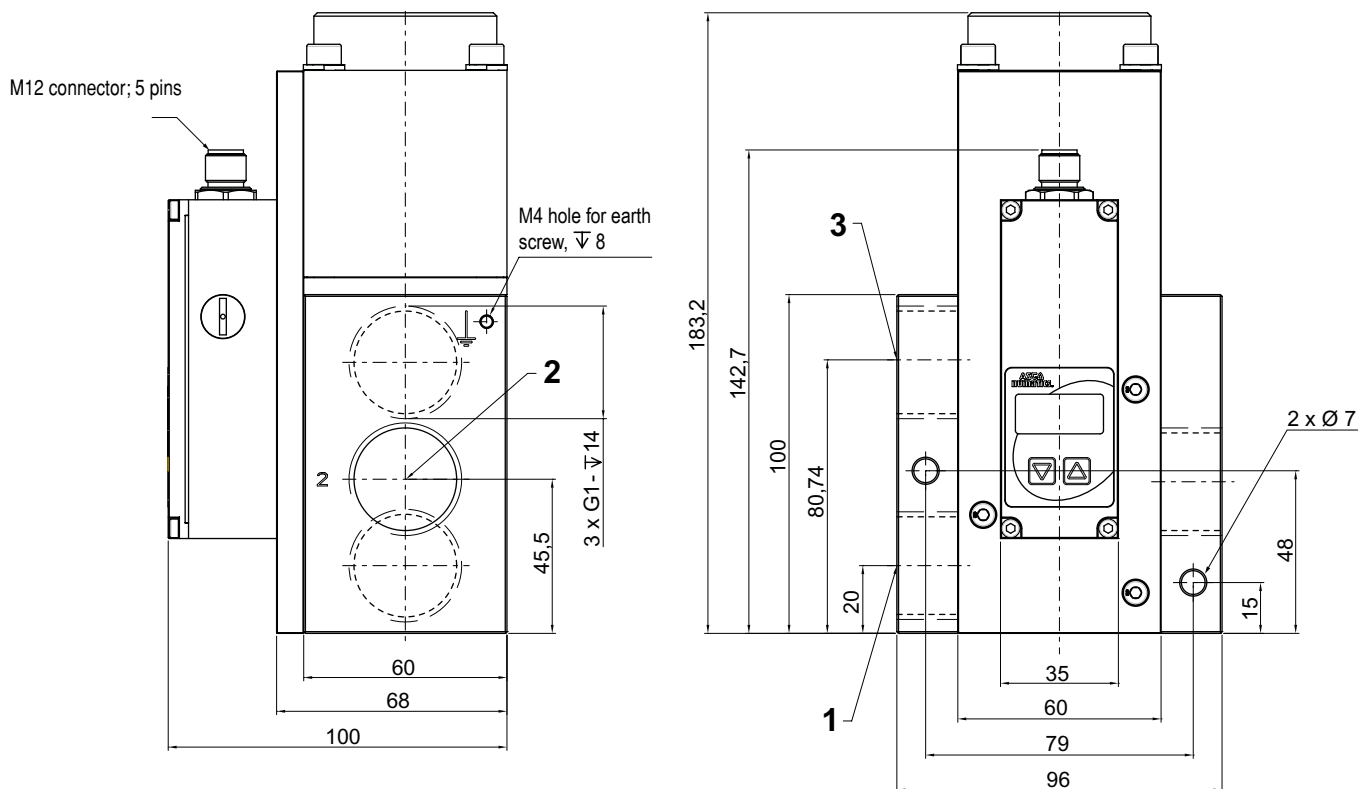
Weight: 1,650 kg



DIMENSIONS (mm), WEIGHT (kg)

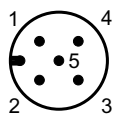
G 1

Weight: 3,400 kg




C

CONNECTOR PINNING / CABLE WIRING



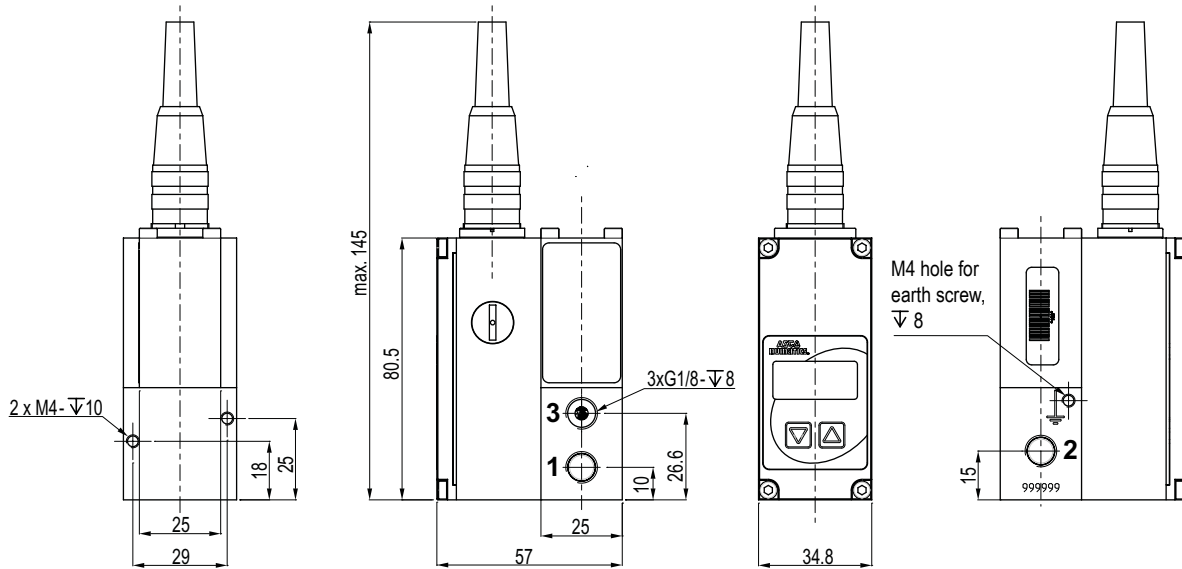
| Pin | Description | 5-wire cable (2 m) | 6-wire cable (5 m, 10 m) |
|------|----------------------------------|--------------------|--------------------------|
| 1 | 24 V voltage supply | brown | brown |
| 2 | Analog setpoint input | white | white |
| 3 | Supply ground | blue | green |
| | Analog ground * | - | yellow |
| 4 | Analog output (Feedback) | black | pink |
| 5 | Digital output (Pressure switch) | grey | grey |
| Body | EMV screen | shield | shield |

*) A 6-wire cable with separate analog ground is used for cable lengths over 2 m to set off the voltage drop for the setpoint.

DIMENSIONS (mm), WEIGHT (kg) 

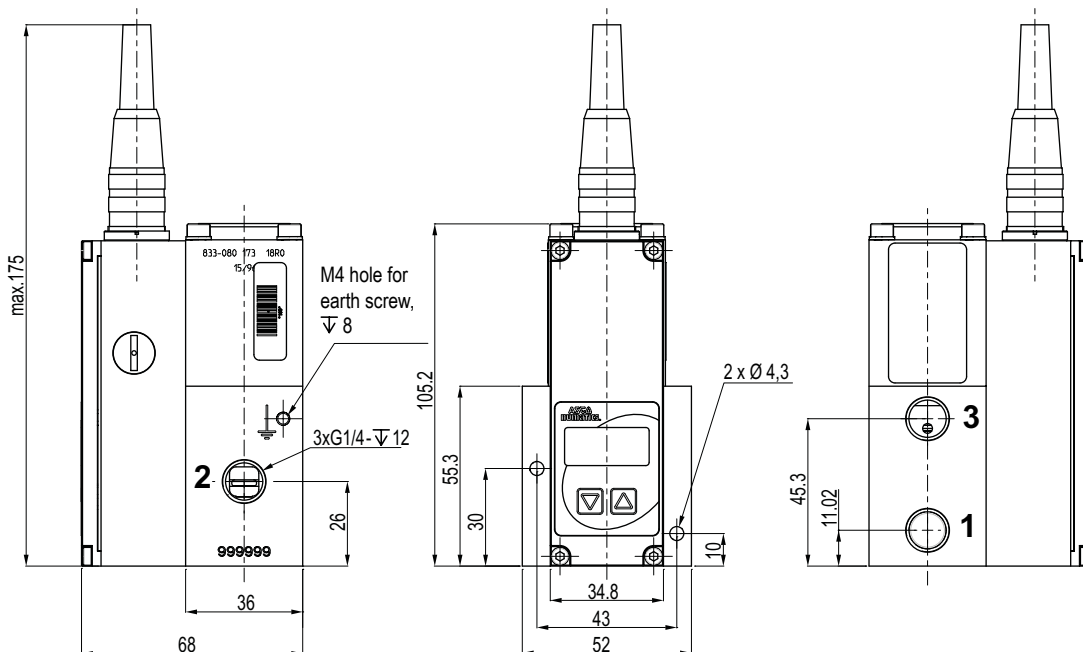
G 1/8

Weight: 0,550 kg



G 1/4

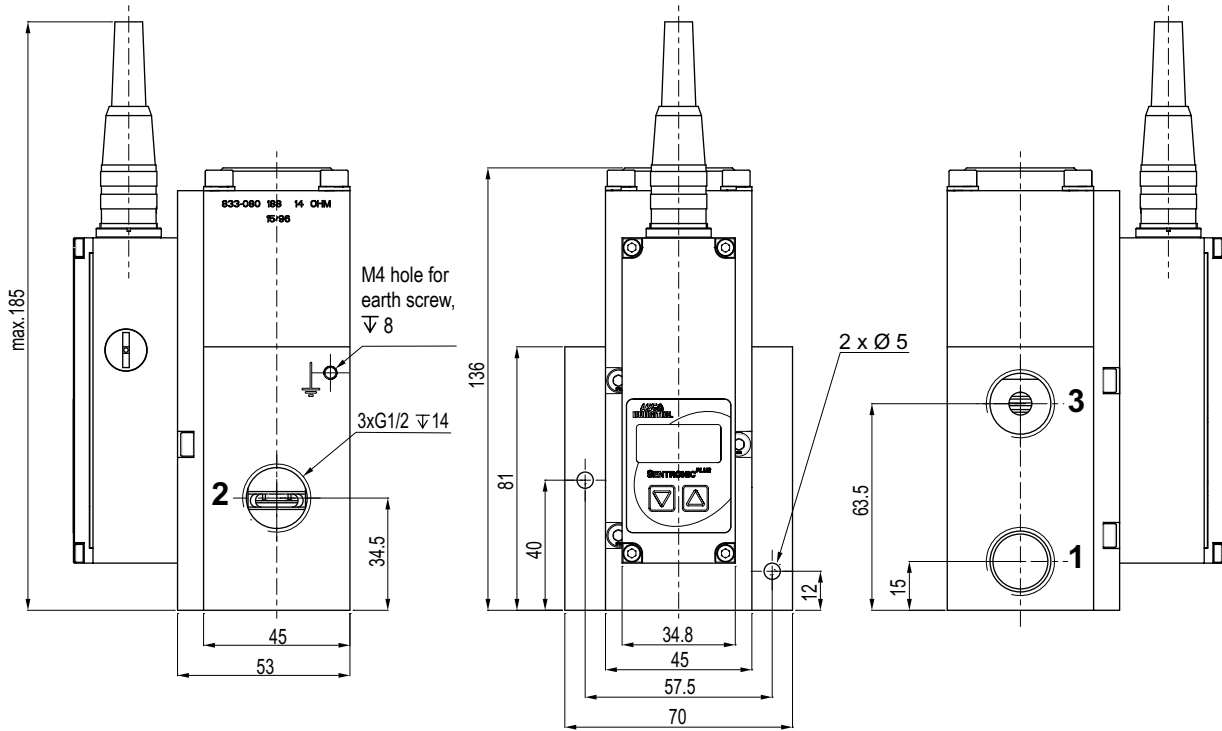
Weight: 0,850 kg



DIMENSIONS (mm), WEIGHT (kg)

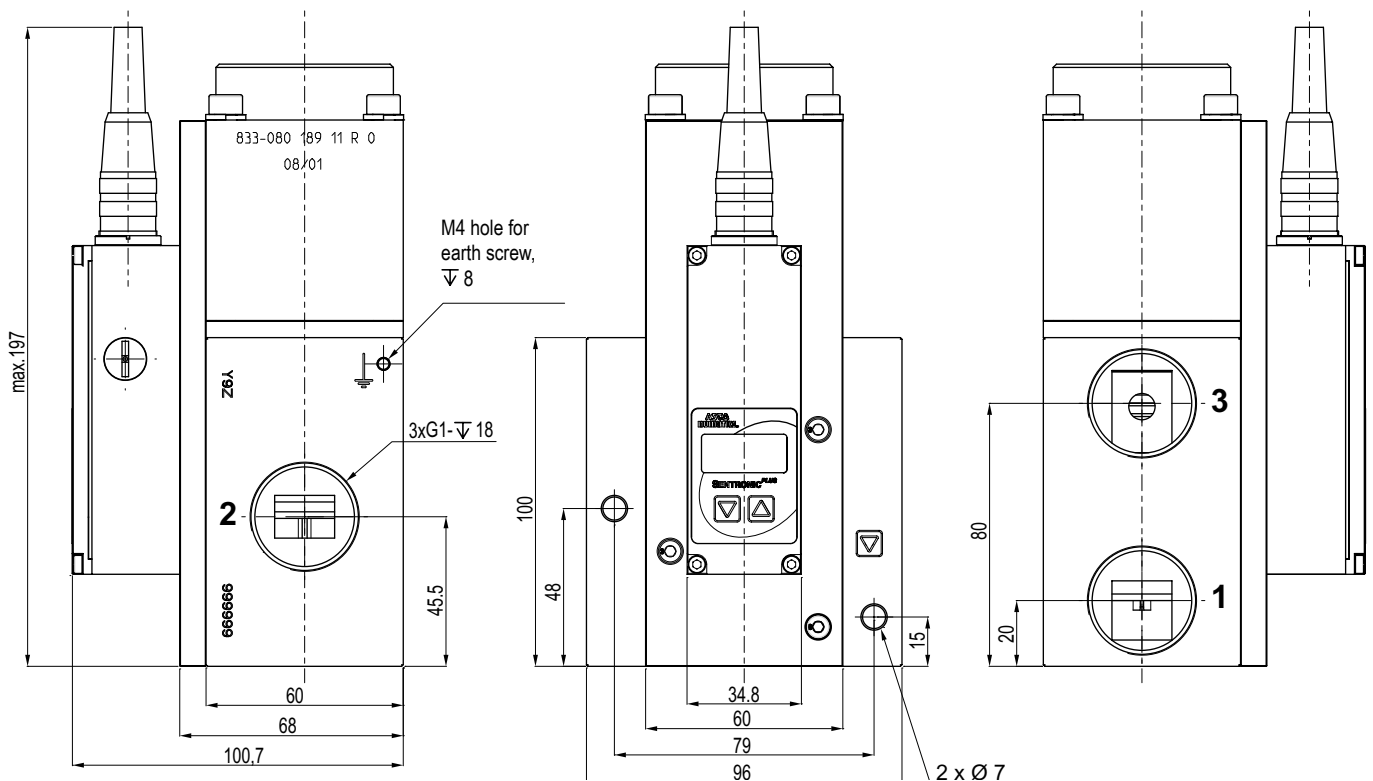
G 1/2

Weight: 1,650 kg



G 1

Weight: 3,400 kg



ACCESSORIES

| description | catalogue number |
|--|------------------|
| Straight M12 female connector, 5 pins, with screw terminals | 88100256 |
| Right-angle M12 female connector, 5 pins, with screw terminals | 88100725 |
| Supply cable 2 m; 5x0,25 mm ² ; straight connector | 88100726 |
| Supply cable 2 m; 5x0,25 mm ² ; right-angle connector | 88100727 |
| Supply cable 5 m; 6x0,50 mm ² ; straight connector | 88100728 |
| Supply cable 5 m; 6x0,50 mm ² ; right-angle connector | 88100729 |
| Supply cable 10 m; 6x0,50 mm ² ; straight connector | 88100730 |
| Supply cable 10 m; 6x0,50 mm ² ; right-angle connector | 88100731 |
| RS 232 cable converter; 2 m cable with 9-pin Sub-D (plug connector) | 88100732 |
| RS 232 cable converter; 2 m cable with 9-pin Sub-D (screw connector) | 88100970 |
| DaS Light: Data Acquisition Software for SENTRONIC^{PLUS} - basic parameters - CD-ROM | 99100110 |
| DaS Expert: Data Acquisition Software for SENTRONIC^{PLUS} - full parameters - CD-ROM | 99100111 |