

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 neutral gases, filtered at 50 µm, condensate-free, lubricated or unlubricated
G1/8 - G1/4 - G1/2 - G1

Ports

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 IIC 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 ²⁾	1000 ²⁾			
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 9

B A S I D P P

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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 display - non-explosionproof

A: VERSION (ports), body

- | | |
|--------------------------|--------------------------------------|
| 0 = DN6 (G 1/4), Alu | 7 = DN3 (G 1/8), Brass |
| 1 = DN12 (G 1/2), Alu | 8 = DN6 (G 1/4), Brass |
| 2 = DN20 (G 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 |
| 6 = DN20 (NPT 1"), Alu | H = DN6 (G 1/4), Brass ²⁾ |

S: SETPOINT

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

I: FEEDBACK

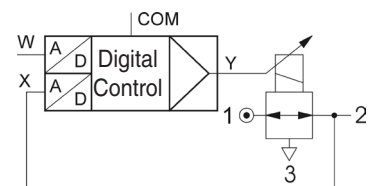
- 1 = Feedback output 0 ... 10 Volt
- 2 = Feedback output 0 ... 20 mA
- 3 = Feedback output 4 ... 20 mA

PP: PRESSURE RANGE

Relative pressure	Max. allowable pressure (bar)	Vacuum (relative)
40 = 0 - 100 mbar	2	V1 = 0 ... -1 bar shut-off valve
50 = 0 - 500 mbar	2	(vacuum at port 3)
60 = 0 - 1 bar	2	
02 = 0 - 2 bar	3	V2 = 0 ... -1 bar bypass version
03 = 0 - 3 bar	8	
05 = 0 - 5 bar	8	
06 = 0 - 6 bar	12	V3 = 0 ... -1 bar shut-off valve
10 = 0 - 10 bar	12	(vacuum at port 1)
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	


D: DIGITAL OUTPUT

- 1 = Pressure switch output
PNP ± 5 %



Notes:

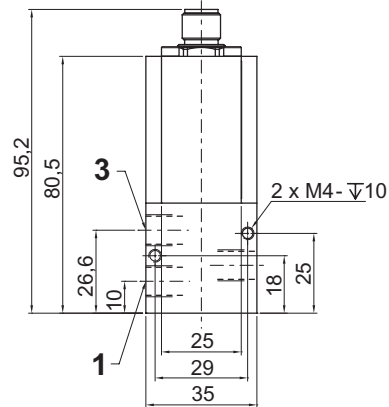
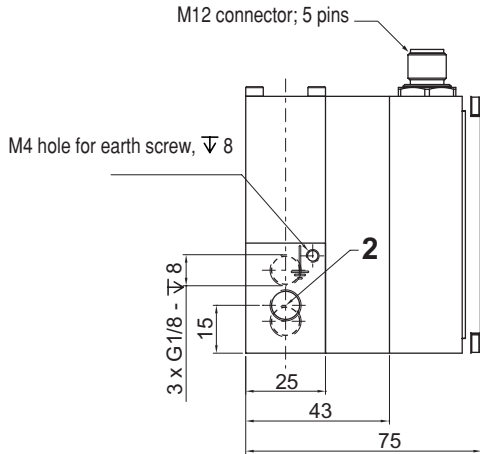
- 1) Only for DN3 and DN 6
- 2) Only for DN6, brass / 1,8 A 44 W
Other versions available on request.

DIMENSIONS (mm), WEIGHT (kg) 

[Configurator - CAD Files](#)

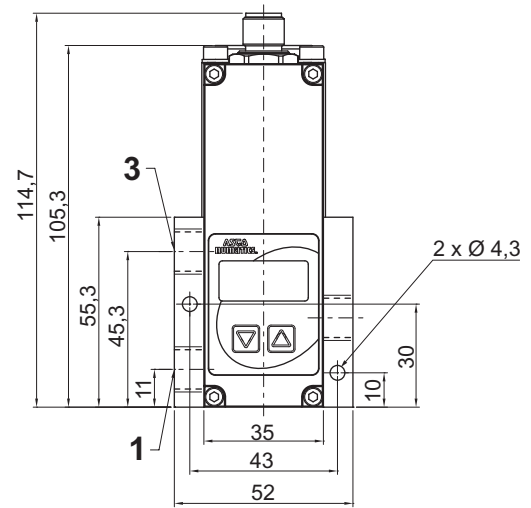
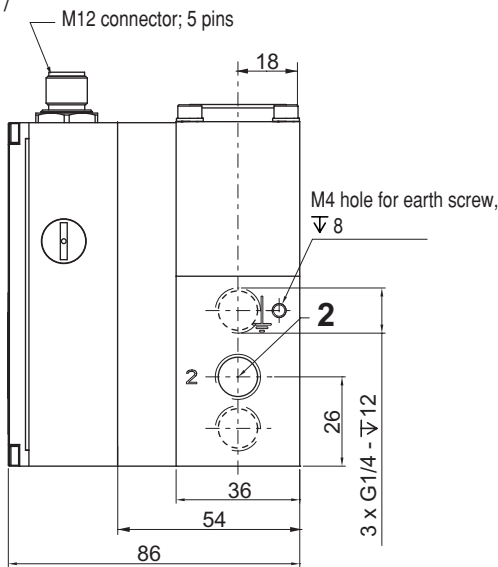
G 1/8

Weight: 0,700 kg



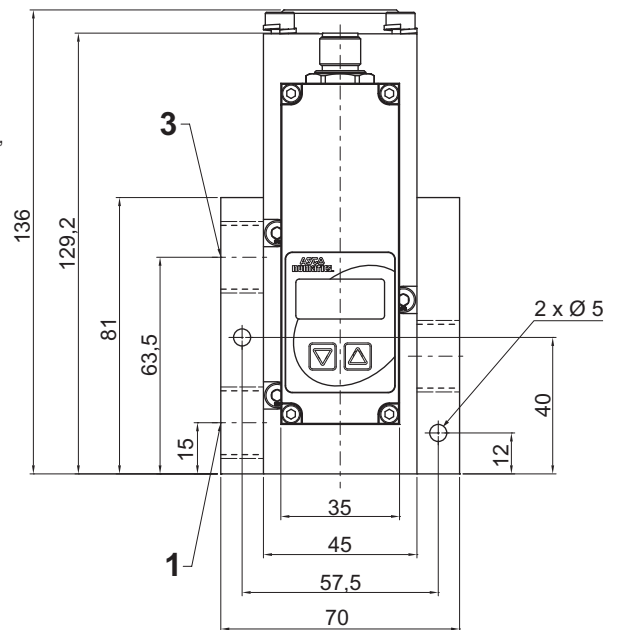
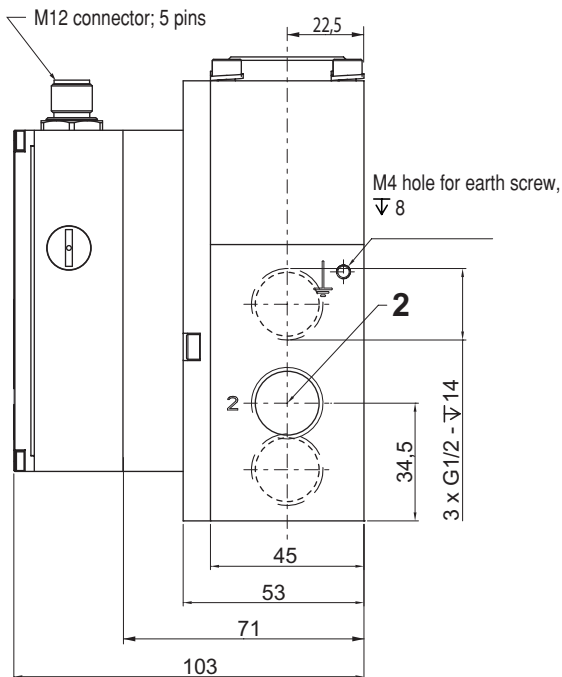
G 1/4

Weight: 1,000 kg aluminium /
1,700 kg brass



G 1/2

Weight: 1,800 kg

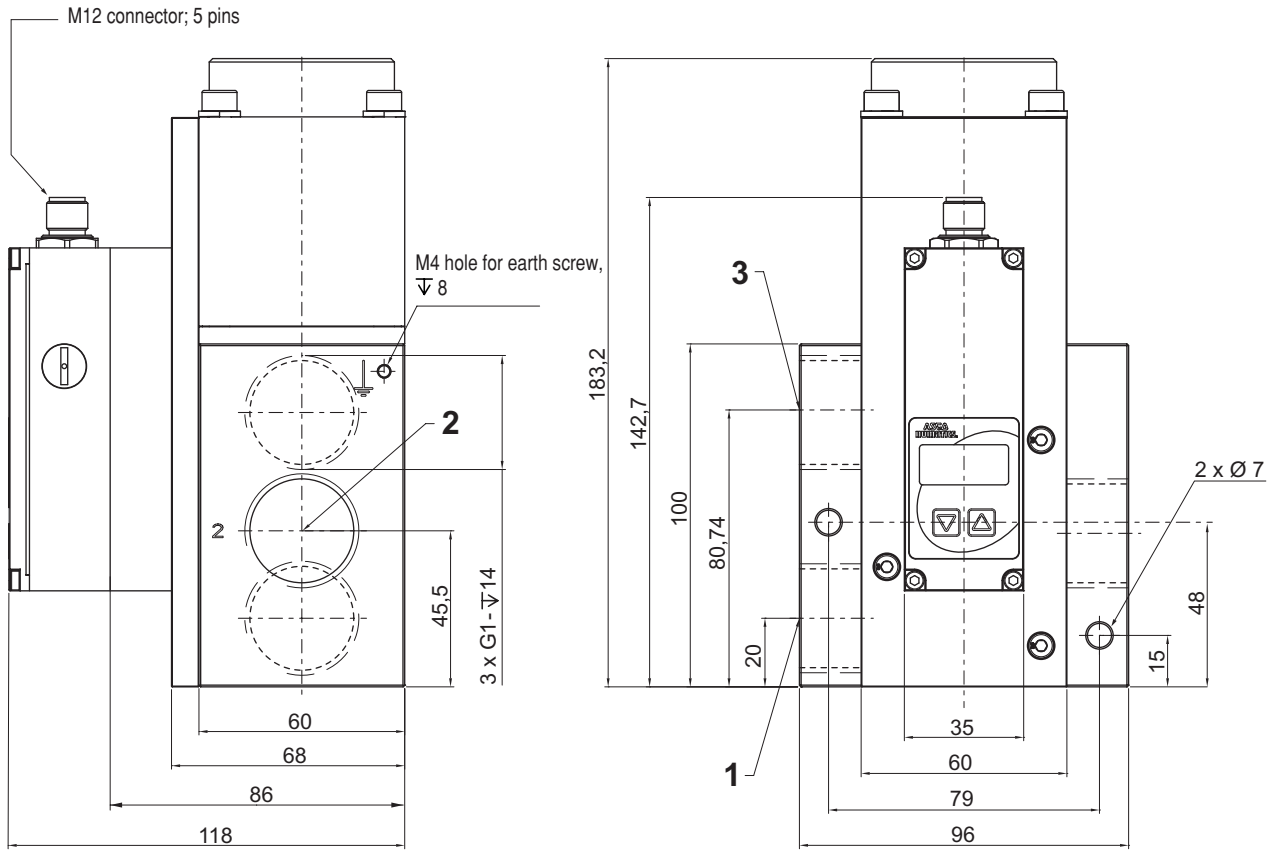


DIMENSIONS (mm), WEIGHT (kg)

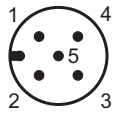
[Configurator - CAD Files](#)

G 1

Weight: 3,550 kg




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	EMC screen	shield	shield

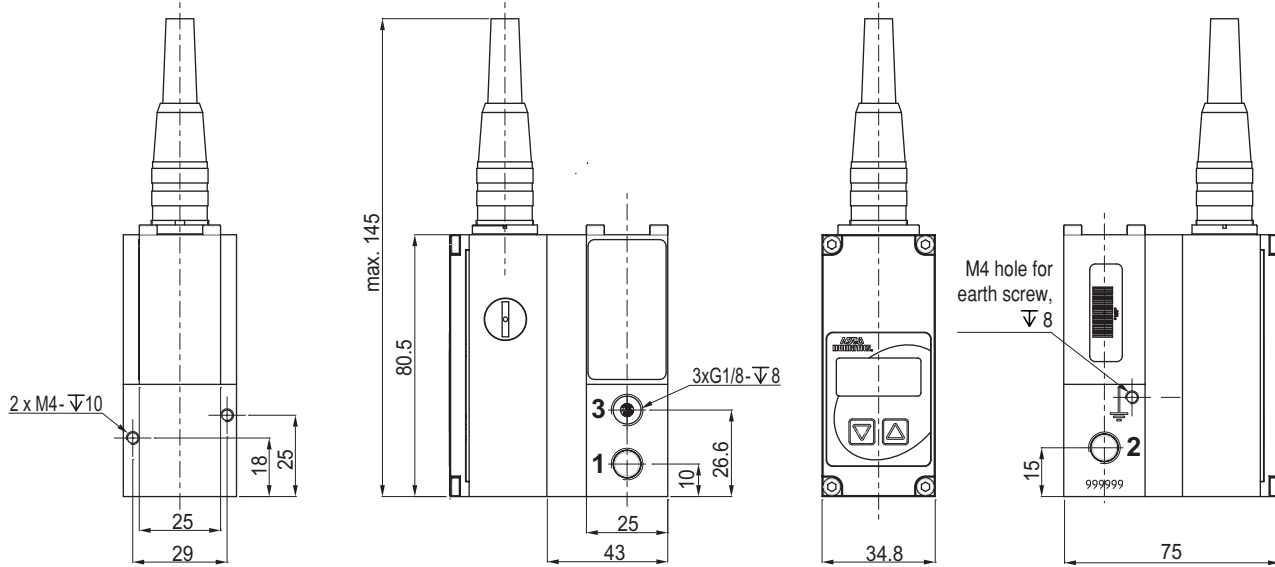
^{*}) A 6-wire cable with separate analog ground is used for cable lengths over 2 m to set off the voltage drop for the setpoint.

DIMENSIONS (mm), WEIGHT (kg) 

[Configurator - CAD Files](#)

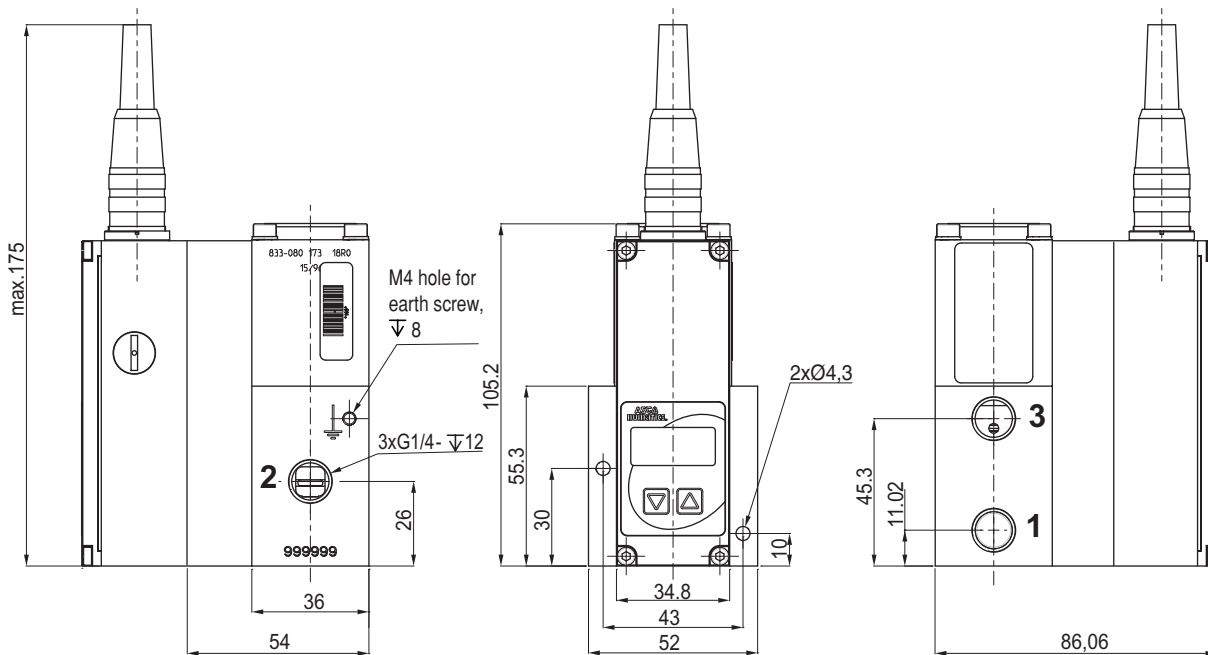
G 1/8


Weight: 0,700 kg



G 1/4

Weight: 1,000 kg aluminium / 1,700 kg brass

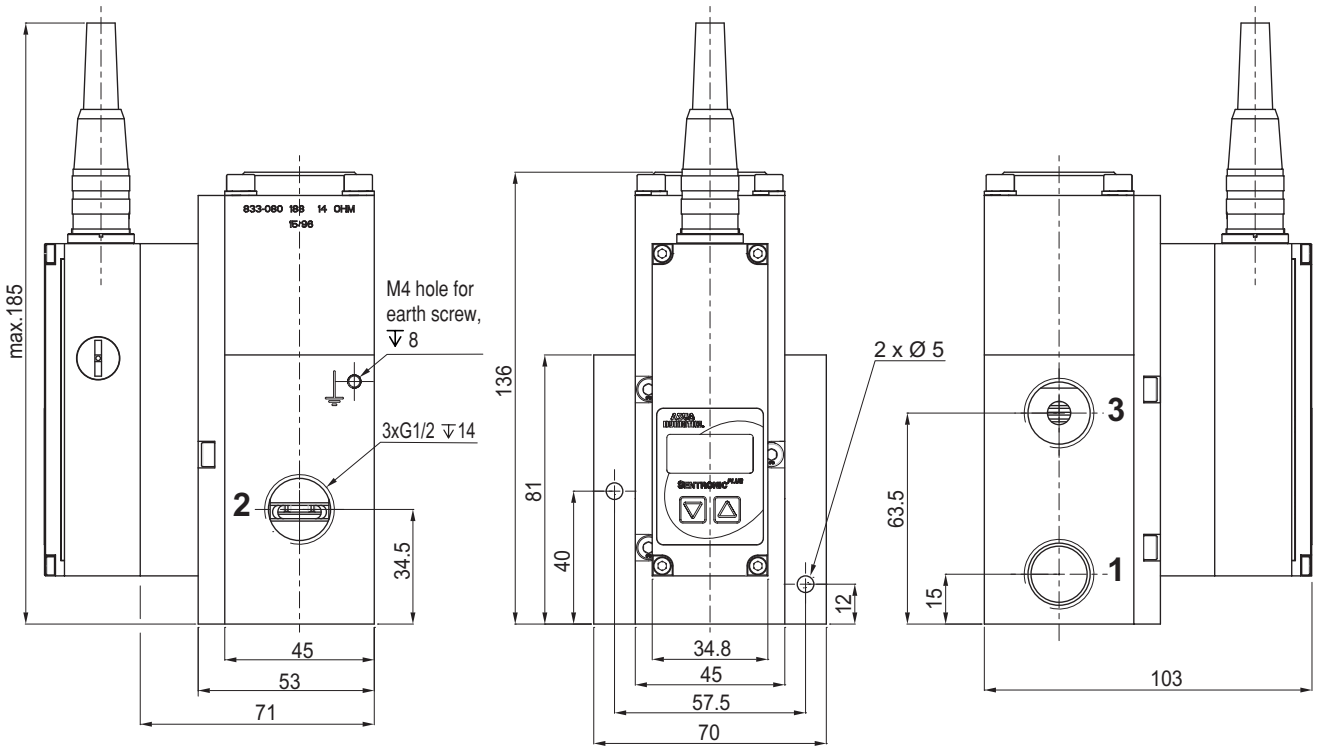


DIMENSIONS (mm), WEIGHT (kg) 

[Configurator - CAD Files](#)

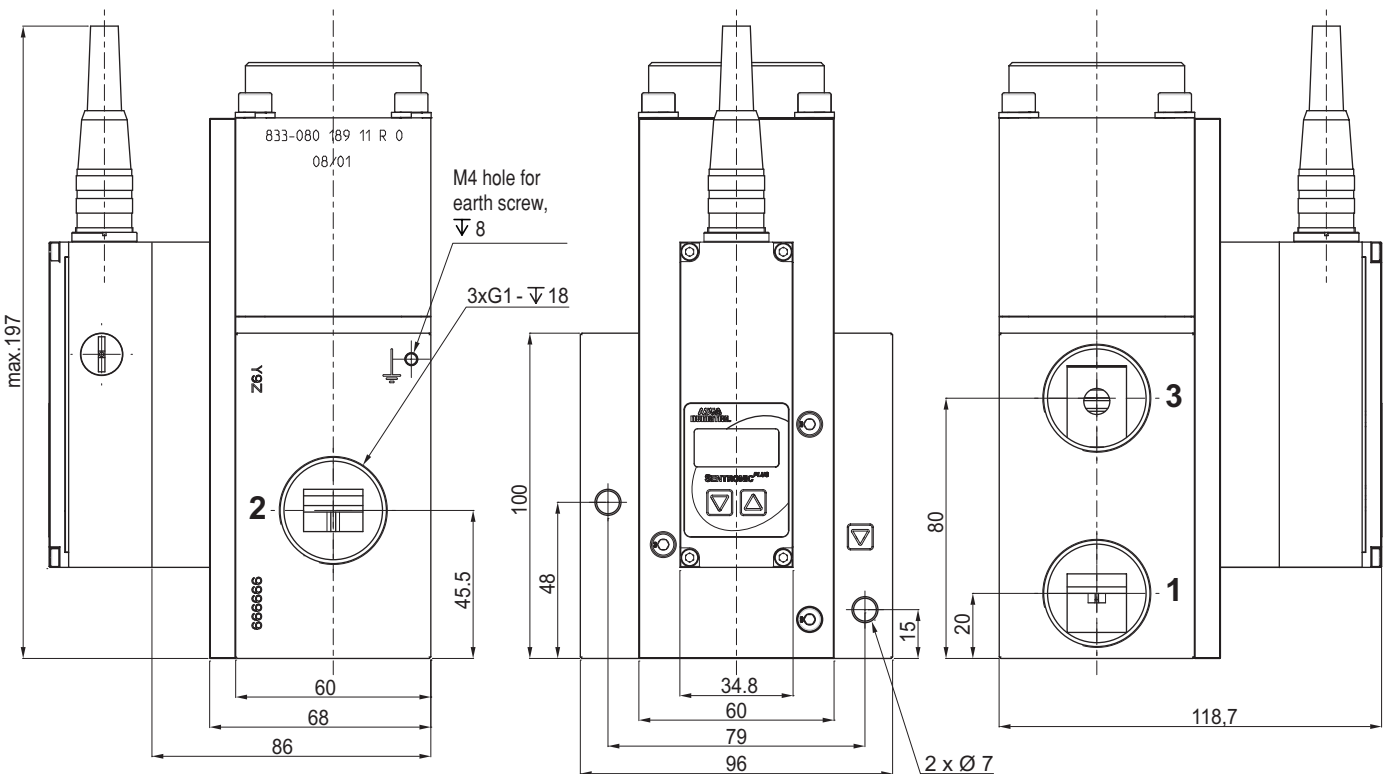
G 1/2

Weight: 1,800 kg



G 1

Weight: 3,550 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