

FAS CHIPREG

Mass Flow Controller



- > Very compact size
<22mm
- > High accuracy and reliability
- > Analytical clean version available
- > For bioreactors, analytical and medical device applications



Technical features

Sensor:
Thermal MFC sensor

Flow ranges:
0-0,2 l_s/min
0-0,5 l_s/min
0-1 l_s/min
0-2 l_s/min
0-5 l_s/min
0-10 l_s/min

Standard conditions:
P=1013 mbar (1 atm), T=20°C

Operating gas:
Air, N₂, O₂, CO₂, Ar, neutral gases (*1)

Settling time:
<500 ms

Global accuracy at 25°C (*2)
± 0,3% of full scale (0-10% of max flow)
± 3,0% of reading (10%-100% of max flow)

Operating voltage:
24 VDC ±10%

Current supply:
< 100 mA

Electrical connection:
JST Connector BM06B-GHS-TBT

Analog input/output control:
0 ... 5 VDC

Pneumatic connections:
In line version (G1/8)
Manifold mount

Digital communication interfaces:
RS232
RS485
Other interfaces on request

Digital communication protocol:
Proprietary protocol

Seal material:
FPM

Gas temperature:
+10 ... +50°C (°50 ... +122°F)

Ambient temperature:
+10 ... +50°C (°50 ... +122°F)

Thermal drift:
±0,004% of full scale per °C (0-10% of max flow)
±0,04% of reading per °C (10-100% of max flow)

(*1) MFC are calibrated with Air at 5bar/20°C and conversion factors (K-factors) are applied for mentioned gases (other gases on request)

(*2) Accuracy includes error gain, linearity error and offset

Technical data - standard models

Flow range (l _s /min)	Max. operating pressure (bar)	Port type	Digital Communication Interface	Model
0 ... 0,2	8	G 1/8	RS232	40M2002CG2811 1110000
0 ... 0,5	8	G 1/8	RS232	40M5002CG2811 1110000
0 ... 1	8	G 1/8	RS232	40M0011CG2811 1110000
0 ... 2	5	G 1/8	RS232	40M0021CG2811 1110000
0 ... 5	5	G 1/8	RS232	40M0051CG2811 1110000
0 ... 10	5	G 1/8	RS232	40M0101CG2811 1110000

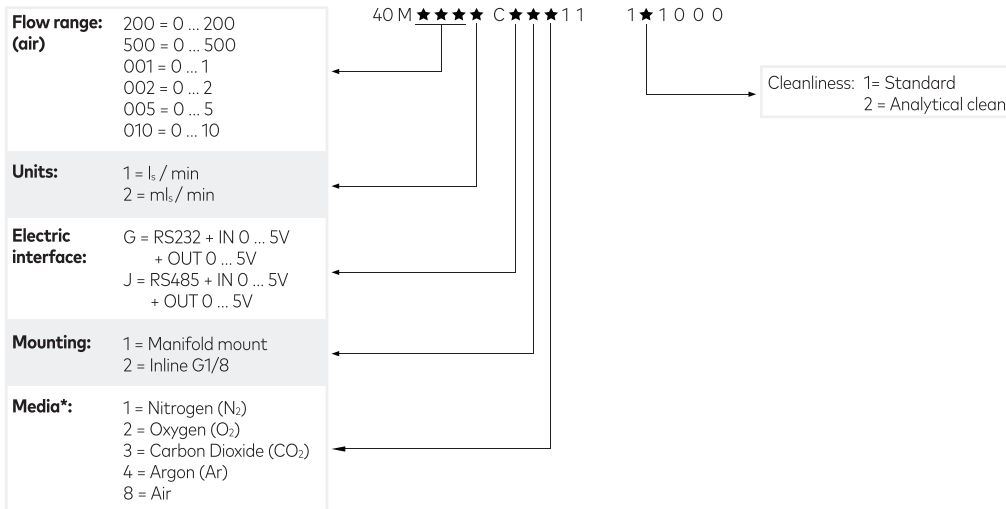
Electrical connection (optional)

Electrical connector
JST GHR-06V-S with 300mm flying leads



S401.0024

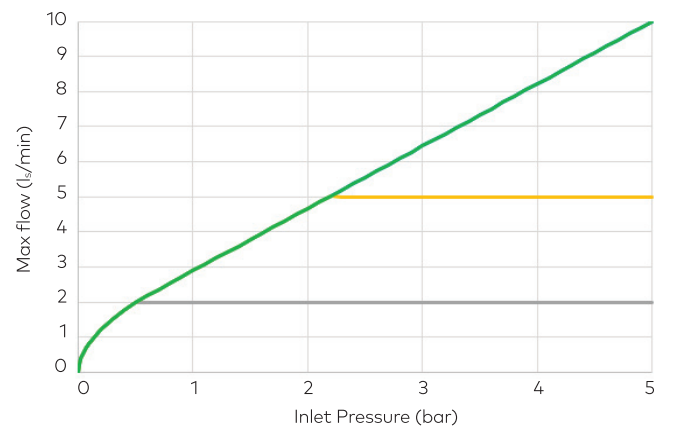
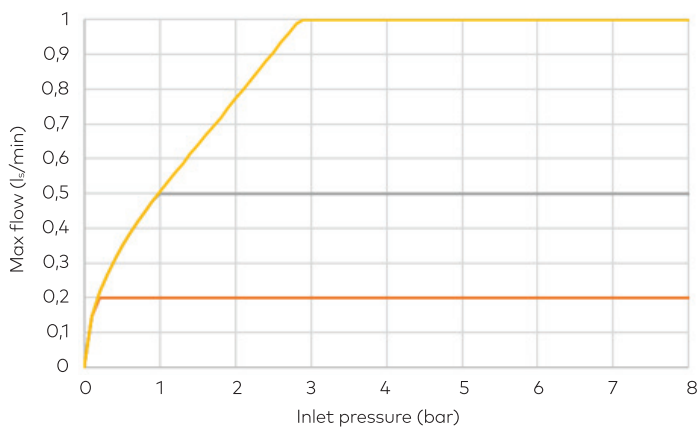
Codification and option selector



* Flow range will differ from air (standard), flow media correspondance available on request

Maximum Flow Rate

Flow rate may be limited by inlet pressure. Please ensure your inlet pressure is high enough to achieve your desired maximum flow rate as per below curves

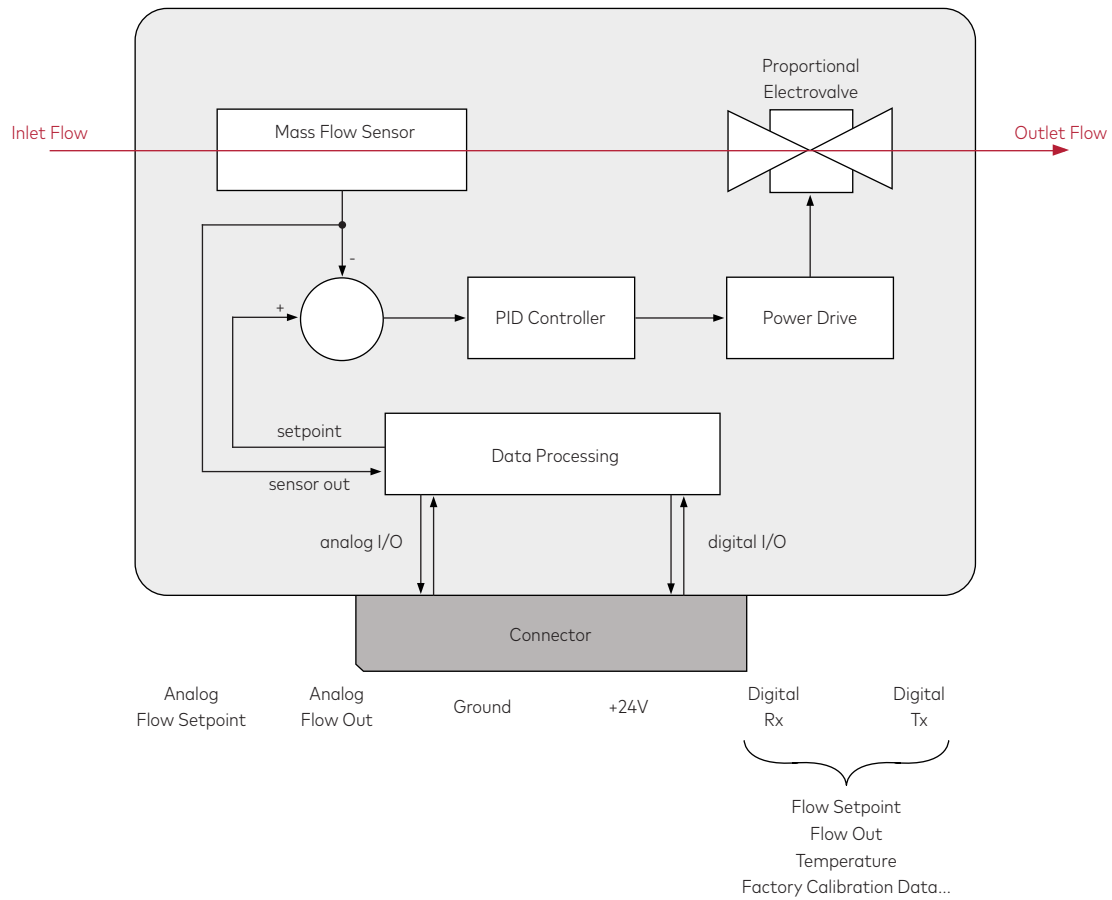


— CHIPREG 200ml/min — CHIPREG 500ml/min — CHIPREG 1l/min

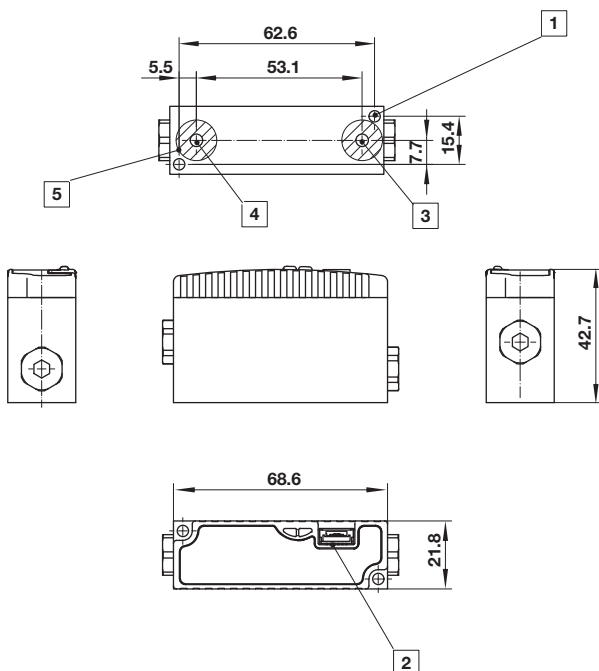
— CHIPREG 2l/min — CHIPREG 5l/min — CHIPREG 10l/min

Typical data for air at 20°C

Block diagram



Dimensions Manifold mount

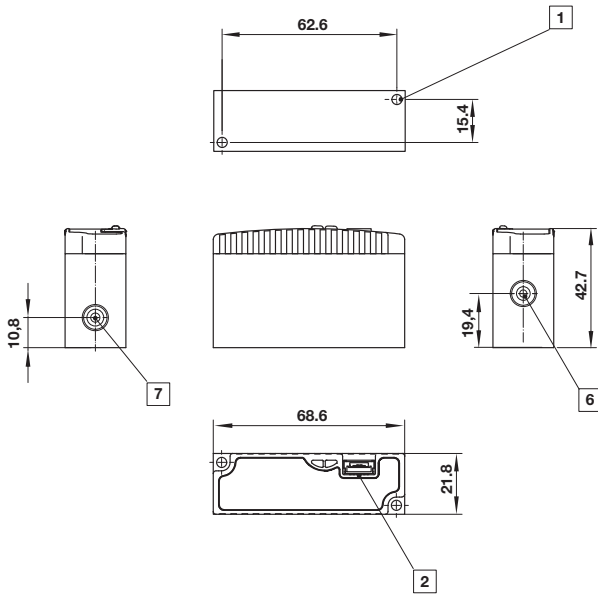


Dimensions shown in mm
Projection/First angle



- 1 \varnothing 3,6mm through hole (2x)
- 2 Connector JST BM06B-GHS-TBT (First pin on the left)
- 3 INLET \varnothing 4 mm
- 4 OUTLET \varnothing 4 mm
- 5 \varnothing 13 (2x) sealing area /Ra 0,8

Dimensions In line version (G1/8)



Dimensions shown in mm
Projection/First angle



- 1** \varnothing 3,6mm through hole (2x)
- 2** Connector JST BM06B-GHS-TBT (First pin on the left)
- 3** INLET \varnothing 4 mm
- 4** OUTLET \varnothing 4 mm
- 5** \varnothing 13 (2x) sealing area /Ra 0,8
- 6** OUTLET G1/8 Thread depth 9mm
- 7** INLET G1/8 Thread depth 9mm

Electrical connection

Pin#	Description - RS232	Description - RS485
1	+24V	+24V
2	Ground	Ground
3	Rx	A
4	Tx	B
5	Analog flow out	Analog flow out
6	Analog flow setpoint	Analog flow setpoint

Warning

These products are intended for use with aggressive sensitive media, Please contact FAS Medic SA for more compatibility requests. Do not use these products where pressures and temperatures can exceed those listed under „Technical features/data“. Before using these products with fluids other than those specified, for non-industrial applications, life-support systems or other applications not within published specifications, consult FAS MEDIC SA. Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure. System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided. System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.