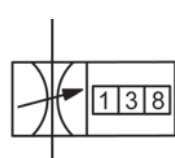


Description	Thermal mass flow meter based on high precision MEMS technology (CMOS sensor). Pressure and temperature-insensitive according to the CTA constant temperature principle. Also insensitive to pressure surges.		
Media	compressed air or non-corrosive gases	Operating pressure	max. 10 bar
Supply voltage	Standard AA battery or Micro-USB power supply (DIN62684), optionally external power +12 ...+30 V DC (max. 200 mA)		
Display	Touch-display 128 x 64 px, backlit only with external power supply (Micro-USB or 24 V DC)		
Electrical connector	optionally length 2.0 m, with free ends at 24 V DC	Function	totalisator included, physical units can be changed
Alarm functions	3 configurable alarms, programmable as : low alarm, high alarm, window alarm and totalizer alarm. The alarms can be configured with different parameters: delay and alarm duration. Relais: switching current up to 1A, switching voltage 30 V DC		
Accuracy	± 2% FS, from 200 l/min ± 3% FS	Response time	500 ms at 99% accuracy
Turndown ratio	1:50 (Eco) or 1:1000 (Special)	Protection class	IP 50
Flow regulation	manual fine adjustment by 15 turns	Mounting position	any, horizontal from 5 bar on
Temperature range	0 °C to 50 °C / 32 °F to 122 °F	Warm-up time	< 1 sec. for full accuracy
Material	Body: aluminium, optionally electropolished stainless steel 316 Elastomer: FKM, optionally EPDM		



**2 ... 100 ml/min/450 l/min
compressed air or gases
accurate to 2%**

Dimensions			Operating pressure	Accuracy	Connection thread	Flow rate	Order number
A	B	C					
mm	mm	mm	max. bar	%	G	ml/min / l/min	

Mass flow meter			with manual control valve, LCD-Display, needle valve battery mode, portable, aluminium, FKM			VGR*1	
114	44	12.5	10	2	G¼	2 ... 100 ml/min	VGR-A1
				2		4 ... 200 ml/min	VGR-A2
				2		10 ... 500 ml/min	VGR-A5
				2		0.02 ... 1 l/min	VGR-B1
				2		0.04 ... 2 l/min	VGR-B2
160	54	17.5	10	2		0.1 ... 5 l/min	VGR-B5
				2		0.2 ... 10 l/min	VGR-C1
				2		0.4 ... 20 l/min	VGR-C2
				2	G½	1 ... 50 l/min	VGR-C5
				3		2 ... 100 l/min	VGR-D1
				2		4 ... 200 l/min	VGR-D2
				3		4 ... 300 l/min	VGR-D3
				3		9 ... 450 l/min	VGR-D4



VGR-G¼
mass flow meter
with manual control valve



VGR-G½
mass flow meter

Special options, add the appropriate letter oder number

deviant volume flow	indicate on order	VGR-XX
limit switch	min. / max.-alarm, 1 A SPDT switch, incl. 24 V DC supply	VGR-..2G
stainless steel body	electropolished throughout	VGR-..S
EPDM elastomer	for VGR-A1 to -C5	VGR-..E
24 V DC supply	cable attached on the device, length 2 m, with free ends	VGR-..2
panel mounting	cut-out 48 x 96 mm, protection class IP50 in the front	VGR-..T
0.1% accuracy		VGR-..H
carbon dioxide	CO ₂	VGR-..03
argon	Ar	VGR-..05
nitrogen	N ₂	VGR-..07
helium	He	VGR-..09
hydrogen	H ₂	VGR-..11
methane	CH ₄	VGR-..13
oxygen	O ₂	VGR-..15
propane	C ₃ H ₈	VGR-..16
nitrous oxide	N ₂ O	VGR-..17
gases	see above	VGR- D ...

Specific gas calibration			
gas species			max. l/min
nitrogen	07	N ₂	450
oxygen	15	O ₂	450
argon	05	Ar	300
helium	09	He	450
hydrogen	11	H ₂	300
carbon dioxide	03	CO ₂	150
propane	16	C ₃ H ₈	80
methane	13	CH ₄	100

