



GF100 TÖMEGÁRAM SZABÁLYZÓ

Széria GF80, GF81, GF100, GF101, GF120,
GF120XSL, GF120XSD, GF121, GF125, GF126,
GF135

GF-120

Tömegárammérő – GF-120

- Minden típusú gázhoz 34 bar-ig max. 50 ° C-ig
- 0,003–36 000 l / perc tartomány
- Teljes körű áramlási területek 300 sl / percig (ref. N2)
- 0-10V, 4-20 mA kimenet
- Nagy pontosság, stabilitás és válaszidő



TERMÉKLEÍRÁS

A Brooks GF-100-120-125 termikus tömegáramlás-szabályozó/tömegárammérő a legtöbb alkalmazásra felhasználható, amikor bármilyen típusú gázok mérésére és szabályozására van szükség.

Megrendelésével és bővebb felvilágosításért forduljon Bjarne Österberghez a bjarne.osterberg@oemautomatic.se e-mail címen vagy a +46 075 242 4251-es telefonszámon.

Model Code		
Code	Description	Option
I. Base Model Code		GF40 Elastomer / Range Flow (0-50 slpm)
		GF80 Metal / Range Flow (0-50 slpm)
II. Configurability		C Multiflo Capable. Standard Bins or specific gas range may be selected.
		X Not Multiflo Capable. Specific gasrange required.
III. Special Application		XX Standard
IV. Valve Configuration		C Normally Closed Valve
		O Normally Open Valve (GF40 only)
		M Meter (No Valve)
V. Multiflo Bin & Range or Gas & Range (Standard)		XXXX XXXX Specific Gas Code & Range, example: "0004" = Argon and "010L" = 10 slpm
		SA40 010C Standard Configuration #40, 7-10 sccm N2 Eq. @ 0 deg C Ref Temp.
		SA41 030C Standard Configuration #41, 11-30 sccm N2 Eq. @ 0 deg C Ref Temp.
		SA42 092C Standard Configuration #42, 31-92 sccm N2 Eq. @ 0 deg C Ref Temp.
		SA43 280C Standard Configuration #43, 93-280 sccm N2 Eq. @ 0 deg C Ref Temp.
		SA44 860C Standard Configuration #44, 281-860 sccm N2 Eq. @ 0 deg C Ref Temp.
		SA45 2-4L Standard Configuration #45, 861-2600 sccm N2 Eq. @ 0 deg C Ref Temp.
		SA46 7-2L Standard Configuration #46, 2601-7200 sccm N2 Eq. @ 0 deg C Ref Temp.
		SA47 D15L Standard Configuration #47, 7201-15000 sccm N2 Eq. @ 0 deg C Ref Temp.
		SA48 D10L Standard Configuration #48, 15001-10000 sccm N2 Eq. @ 0 deg C Ref Temp.
		SA50 D50L Standard Configuration #50, 30001-50000 sccm N2 Eq. @ 0 deg C Ref Temp.
VI. Fitting		XX 9/16" - 18 UNF (GF40 Only)
		CX 1-1/8" C Seal 9/2mm (GF80 Only)
		TL 1/8" tube compression (GF40 Only)
		T2 1/8" tube compression (GF40 Only)
		T3 3/8" tube compression (GF40 Only)
		T4 1/2" tube compression (GF40 Only)
		T6 6 mm tube compression (GF40 Only)
		T8 10 mm tube compression (GF40 Only)
		R2 1/4" RC (RG9) (GF40 Only)
		VX 1/4" VCR (GF40, GF80)
		O2 1/4" VCO (GF40 Only)
		N2 1/8" NPT (GF40 Only)
VII. Downstream Condition		A Atmosphere
		V Vacuum
		P Positive Pressure
VIII. External Seals, Valve Seat		B Seal Buna / Seat Buna (GF40 Only)
		F Seal FPM / Seat FPM (GF40 Only)
		K Seal Kalrez / Seat Kalrez (GF40 Only)
		N Seal Neoprene / Seat Neoprene (GF40 Only)
		V Seal Viton / Seat Viton (GF40 Only)
		M Seal Metal / Seat PEEK (GF40 Only)
		Z Seal Nickel / Seat Kalrez (GF80 Only)
IX. Communications / Connector		PS Profibus / Analog (Input 0-5 V; Output 0-5 V); 9-Pin Female D conn. / 15-Pin Male D conn.
		PD Profibus / Analog (Input 0-20 mA; Output 0-20 mA); 9-Pin Female D conn. / 15-Pin Male D conn.
		PA Profibus / Analog (Input 4-20 mA; Output 4-20 mA); 9-Pin Female D conn. / 15-Pin Male D conn.
		ES EtherCAT / Output 0-5 V; 24VDC signal 2-Pin power
		D5 DeviceNet / Analog (Output 0-5 V); 5-Pin micro signal and power / 3-Pin analog signal
		S5 RS485 (S-Protocol)/Analog (Input 0-5 V; Output 0-5 V); 15-Pin Male D (Pin alignment with Brooks SLA SSI)
		T1 RS485 (S-Protocol)/Analog (Input 0-10 V; Output 0-10 V); 15-Pin Male D (Pin alignment with Brooks SLA SSI)
		S0 RS485 (S-Protocol)/Analog (Input 0-20 mA; Output 0-20 mA); 15-Pin Male D (Pin alignment with Brooks SLA SSI)
		S4 RS485 (V-Protocol)/Analog (Input 4-20 mA; Output 4-20 mA); 15-Pin Male D (Pin alignment with Brooks SLA SSI)
		L5 RS485 (L-Protocol)/Analog (Input 0-5 V; Output 0-5 V); 15-Pin Male D (Pin alignment with Brooks SLA SSI)
		L1 RS485 (L-Protocol)/Analog (Input 0-10 V; Output 0-10 V); 15-Pin Male D (Pin alignment with Brooks SLA SSI)
		I0 RS485 (I-Protocol)/Analog (Input 0-20 mA; Output 0-20 mA); 15-Pin Male D (Pin alignment with Brooks SLA SSI)
		I4 RS485 (I-Protocol)/Analog (Input 4-20 mA; Output 4-20 mA); 15-Pin Male D (Pin alignment with Brooks SLA SSI)
		A5 RS485 (A-Protocol)/Analog (Input 0-1 V; Output 0-1 V); 15-Pin Male D (Pin alignment with Brooks SLA SSI)
		A3 RS485 (A-Protocol)/Analog (Input 0-10 V; Output 0-10 V); 15-Pin Male D (Pin alignment with Brooks SLA SSI)
		A0 RS485 (A-Protocol)/Analog (Input 0-20 mA; Output 0-20 mA); 15-Pin Male D (Pin alignment with Brooks SLA SSI)
		A4 RS485 (A-Protocol)/Analog (Input 4-20 mA; Output 4-20 mA); 15-Pin Male D (Pin alignment with Brooks SLA SSI)
X. Customer Special Request	XXXX	Customer Special Request Number
XI. Auto Shut-Off (Included)		A Auto Shut-Off (Included)
		X Auto Shut-Off (Not Included)
XII. Auto Zero		A Auto Zero (Included)
		X Auto Zero (Not Included)
XIII. Reference Temperature		DDC 0°C Reference
		15C 15°C Reference
		20C 20°C Reference
		70F 21.1°C Reference / 70°F Reference

Example Model Code												
I	II	III	IV		V	VI	VII	VIII	IX	X	XI	XII
GF40	C	XX	C	-	001300C	-	T2	A	V	PS	-	XXXX X A - 20C

MŰSZAKI ADATOK

Állapotjelzés	MFC-státusz, hálózati státusz
Betáplálás	DNet: + 11–25 V DC, 545 mA max. @ 11 V DC, 250 mA (max.) @ 24 V DC, analóg/RS485: + 15 V DC. (+10%), 6 W (max.)
Data	RS485, DeviceNet
Diagnosztikai/szervizport	RS-485 via 2.5mm jack
Differenciálynomás	3-860 mln/min = 7-45 psid, 861-7 200 mln/min = 10-45 psid, 7 201-55000 mln/min = 15-45 psid
Elektromos csatlakozás	Analóg/RS-485 9 pólusú „D” érintkezőn keresztül, DeviceNet™ 5 pólusú „M12”-n keresztül
Felületkiképzés	5 µm Ra
Hőmérsékleti együttható	Mérési tartomány: 0,005% F.S/°C, Nullapont: 0,001% F.S/°C
Jóváhagyások	CE, RoHS, SEMI F20 kompatibel, EN61010-1, EN61326: 2006 (FCC Part 15 & Canada IC-subset of CE testing)
Kijelző	Felülre szerelt integrált LCD
Kijelző	Áramlás (%), hőm. (0 °C), nyomás (psia, kPa) / 0,1 (egység)
Külső szivárgás	1x10-10 atm. cc/sec He

Közeghőmérséklet eddig:	50 °C
Közeghőmérséklet ettől:	10 °C
Linearitás	±0,5% F.S (pontosságba belefér)
Lökésszerű nyomás	206 bar
Max. szállítási távolság	0,003 l/min
Max. üzemi hőmérséklet	50 °C
Max. üzemi nyomás	34 bar
Megismételhetőség	< + 0,15% S.P
Min. üzemi hőmérséklet	10 °C
Nulla üzemi ingadozás	< + 0,5% F.S évente
Nyomásérzéketlenség	nem alkalmazható
Nyomástartomány max. értéke	55 bar
Pontosság	±1% S.P. > 35–100%, ±0,35% F.S. 2–35%
Rendszerint nyitott szelep bezár	< 2%F.S
Rendszerint zárt szelep bezár	<1%F.S
Riasztások	Érzékelő kimeneti jele, szabályozószelep kimeneti jele, túlmelegedés, Power Surge/Sag, hálózati kimaradás
Szabályozási tartomány	2-100 % (NC) 3-100 % (NO)
Szelep típusa	NC/NO
Többkörös működés	Szabvány
Válaszidő	< 1 s
Vízzel érintkező alkatrészek anyaga	Rozsdamentes acél 304, Rozsdamentes acél 316, Hastelloy

Model Code			
Code Description	Code	Option	Description
1. New Model Code	G480	Primary	Range Size 10-15 ft (m)
	G480	Secondary	Range Size 10-15 ft (m)
A. Configuration	0	Multiple Configs	Standard Area or specific area range may be selected
	0	Multiple Configs	Specific range selection
B. Special Application	XX	Standard	
C. Value Configuration	0	Normally Closed	0
	0	Normally Open	1000000000
	0	Wave Alarm	0
D. Multiple Bus & Range (Can & Range Standard)	XXXX	XXXX	XXXX = 4 Range numbers, "XXXX" = Range and "XXXX" = 4 Range numbers
	X480 X100	Control Configuration Area 1	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 2	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 3	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 4	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 5	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 6	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 7	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 8	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 9	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 10	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 11	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 12	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 13	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 14	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 15	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 16	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 17	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 18	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 19	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 20	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 21	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 22	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 23	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 24	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 25	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 26	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 27	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 28	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 29	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 30	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 31	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 32	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 33	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 34	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 35	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 36	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 37	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 38	1-1000000000, 10-1000000000, 10-1000000000, 10-1000000000
	X480 X100	Control Configuration Area 39	1-1000000000, 10-1

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