MASS-STREAM

# D-6473/002AI

Direct Thermal Mass Flow Controller for Gases, IP65 protected





# **Technical specifications**

#### Measurement & control

Type of media	almost all gases and gas-mixes, compatible with chosen materials
Flow range	min. 2100 l <sub>n</sub> /min
	max. 201000 l <sub>n</sub> /min
Accuracy	±1.0% Rd plus ±0.5% FS
Repeatability	< ±0.2% FS
Turndown ratio	1:50
Multi fluid capability	up to 8 calibration curves
Settling time (in control, typical)	< 5 sec.
Control stability	< 0.2% FS typical
Response time (sensor)	approx. 0.9 seconds
Operating temperature	0+50°C
Temperature sensitivity	±0.1% Rd/°C (Air)
Leak integrity, outboard	< 2 x 10 <sup>-8</sup> mbar l/s He
Pressure sensitivity	±0.3% Rd / bar typical (Air)
Max. Kv-value	0.04 0.4
Mounting	at 90° deviation from horizontal max. error 0.2% at 1 bar typical N2
Warm-up time	30 minutes
Storage/transport conditions	0+50°C, max. 95% RH (non-condensing)

#### Mechanical specs

Pressure rating (PN)	20
Ingress protection	IP65
Material wetted parts	Aluminum EN AW-6082-T6 or stainless steel SS316, elastomer seals
Sealing material	standard: FKM/Viton®; option: EPDM
Process connections	G1/2" (ISO1179-1 cavity) / compression type or face seal (VCR/VCO) couplings
Min. ΔP	1.3 bar(d)
Max. ΔP	20 bar(d)
Weight	Aluminum: 4.0 kg; Stainless steel: 5.0 kg

## **Electrical properties**

Power supply	+1524 Vdc ± 10 %						
Power consumption	3.5 W typical at 24 V						
	for fieldbus: add + 0.9 W						
	for display: add + 0.5 W						
Analog output	05 (10) Vdc or 0 (4)20 mA (sourcing)						
Analog setpoint	05 (10) Vdc or 0 (4)20 mA (sinking)						
Digital communication	standard: RS232 options: CANopen <sup>®</sup> ,						
-	DeviceNet <sup>™</sup> , EtherCAT <sup>®</sup> , PROFIBUS DP,						
	PROFINET, Modbus (RTU, ASCII or TCP/IP),						
	EtherNet/IP, POWERLINK or FLOW-BUS						

## **Electrical interfaces**

Po	wer	(mai	n co	nneo	ctor)					8-pi	n DIN	N (ma	ale)					
Fu	nctio	on (n	nain	conn	ecto	r)				Ana	log, I	RS23	2, RS	6485				
PF	OFI	BUS	DP							8-pi	n M1	2B (f	ema	le)				
CA	Nop	en /	Devi	ceNe	et					5-pi	n M1	2A (r	nale)					
Мо	odbu	s RT	U/AS	CII/F	LOW	-BUS	5			5-pi	n M1	2A (r	nale)					
				ther WERI			ther	CAT®	9/	2x 4	pin	M12I	) (fei	male	)			

#### Approvals

Marking										CE						

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