FLEXI-FLOW Compact FF-A20K

Measurement & control

Type of media

Turndown ratio

Multi fluid capability

Pre-installed gases

Control stability

Response time (sensor)

Operating temperature

Temperature sensitivity

Leak integrity, outboard

Long term stability

Pressure sensitivity

Pressure range sensor

Mounting

Warm-up time

Leak-by through closed valve

Storage/transport conditions

Settling time (in control, typical)

Flow range

Accuracy Repeatability

Pre-configured product, available with ModBus/FLOW-BUS or EtherNet based communication

> Gases 0...20 ln/min

< ±0.2% Rd

mixture of these gases

C3H6 #2 C3H8 C3H4 #2

0...+50 °C (32°F - 122°F)

tested < 2 x 10⁻⁹ mbar l/s He

typical < 1.10⁻⁴ mbar·l/s He

span 0.05% Rd/°C

1.500

<150 ms

<30 ms

per year

0...17 bar(a)

30 minutes

±0.8% Rd plus ±0.2% FS (N₂/Air/O₂)

embedded gas data for 22 unique gases plus any

C2H2 Air C3H4 #1 Ar CO2 CO C3H6 #1 D2 #1 C2H6 C2H4 He H2 Kr CH4 Ne N2 N2O O2 C3F8

Flow sensor: zero 0.015% FS/°C; span 0.05%

Rd/°C; Pressure sensors: zero 0.16 mbar/°C;

<0.5% FS over period of 3 years, then <0.2% FS

standard: < 0.15% Rd/bar typical N2; with

any position, attitude sensitivity negligible

0...+50°C, max. 95% RH (non-condensing)

pressure correction: typical factor 5 improved

 $< \pm 0.1\%$ FS (typical for 1 ln/min N2)

Technical specifications





Mechanical specs

Pressure rating (PN)	16
Ingress protection	IP40
Surface roughness wetted parts	<1.6 µm Ra (<0.8 µm Ra for stainless steel body)
Material wetted parts	aluminium, stainless steel, silicon nitride, epoxy, aluminiumoxide, glas, FKM
Sealing material	FKM 51415
Plunger material	FFKM with PI foil
Process connections	1/8"BSPP female thread (ISO1179-1); compression type, push-in or face seal (VCR/VCO) couplings to be ordered seperately
Max. ΔP	5 bar(d)
Weight	0.2

Electrical properties

Power supply	+24 Vdc ± 10%
Power consumption	2.5 Watt (typical, in control); add 0.9 Watt for EtherNet communication
Digital communication	Modbus-RTU, Modbus-ASCII, FLOW-BUS, EtherCAT®, EtherNet/IP, Modbus-TCP, POWERLINK, PROFINET

Electrical interfaces

Service interface	USB-C, Bluetooth
Power (main connector)	9-pin D-sub (male)
Function (main connector)	RS485
Modbus RTU/ASCII/FLOW-BUS	9-pin D-sub (male, main connection)
Modbus TCP / EtherNet/IP / EtherCAT®/ PROFINET / POWERLINK	2x RJ45

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