

Solid State Flow Switch

UQS7 Series

Features

- ▶ Flow and volume flow monitoring
- ▶ Ultrasonic sensor with digital display
- ▶ Integrated 4-20 mA analog output
- ▶ Easy to read LED display
- ▶ Fully configurable via keypad
- ▶ 2 set points and analog output
- ▶ Suitable for water-based fluids
- ▶ IP 65 protection

Applications

- ▶ OEM applications
- ▶ Cooling systems
- ▶ Test systems



General Specifications*

Accuracy:	2.5% f. s.
Linearity Error:	±2.5% f. s. at 77°F (+25°C)
Repeatability:	±0.1% f. s.
Sensor Element:	Ultrasonic sensor
Material:	
Wetted Parts:	Brass
Housing (electronics):	Aluminum die-cast
Seals (media):	Klingersil®
Push Buttons:	Polyester
Measuring ranges:	
g/min:	2.6 / 6.6 / 10.5 / 26.4 / 44.9
l/min:	(10 / 25 / 40 / 100 / 170)
Process connection:	G 3/4, G 1, G 1-1/4, G 2
Electrical Connection:	Plug M 12 x 1, 5-pin
Power Supply:	15-32 VDC, reversed polarity protected
Power Consumption:	Appr. 50 mA (without load)
A/D-Converter:	
Scanning Rate:	500 ms (for peak value memory)
Analog Output:	
Scanning Rate:	500 ms
Resolution:	10 bit (1024 steps per measuring span)
Current Output (standard):	4-20 mA
Load:	max. RI = (Ub-12 V) / 20 mA RI = 600 Ohm at Ub = 24 VDC
Load Influence:	0.3% / 100 Ohms
Voltage Output (optional):	0 to 10 VDC
Rating (optional):	max. 10 mA, short circuit-proof
Adjustment Range:	25% to 100% f. s.
Switching output(s):	
Switching Function (adjustable):	Normally open/normally closed, standard/windows-mode
Adjustment Range:	0% to 125% f. s.
Hysteresis:	0% to 125% f. s.

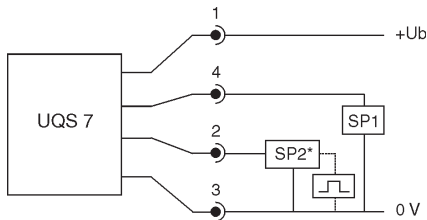
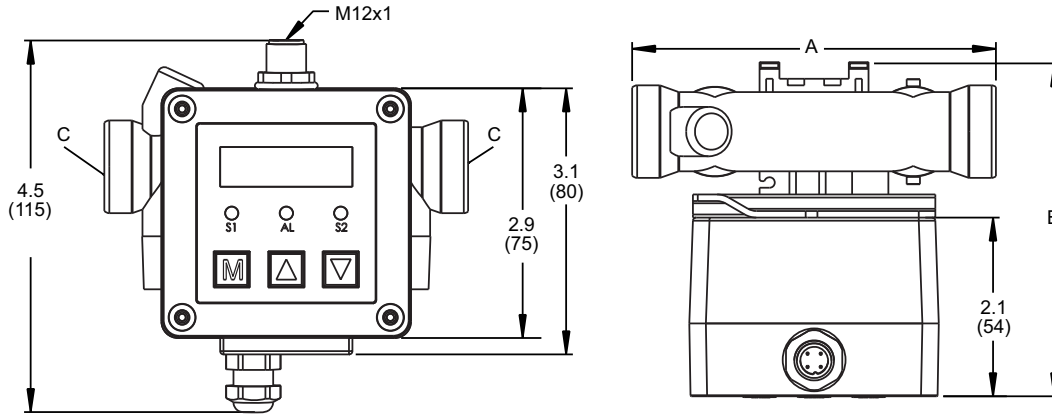
Switching output(s) Cont.:	
Diagnosis Function:	0 to 125% f. s.
Switching Frequency:	max. 100 Hz
Rating:	max. 500 mA, short circuit-proof
Delay:	0.0 to 9.9 s adjustable
Status Display(s):	LED(s) green
Digital Display:	4-digit 7-segment LED-display height 0.5 in., red
Error Display:	LED yellow and alphanumeric display,
Display Rate:	500 mS
Operating Elements:	3 easy response push buttons
Temperature Range:	39°F to 266°F
Electronics:	14°F to 158°F
Storage:	-22°F to 176°F
Temperature Influence:	±0.2% f. s. /10K
Compensation Range:	14°F to 158°F (-10° to +70°C)
Protection Class:	IP65
Dimensions (Housing):	3.9 in. X 4.3 in. (UQS7-10)
Inlet - Outflow Zone:	Integrated in the measuring device
Media:	Water and similar media, max. pressure 360 psi (25 bar) (higher pressures on request)
Options:	Electrical plug, adapters
Additional Features:	7-segment LED display, microprocessor-controlled, self-monitoring with error display. All parameters are configured by keypad. Tamper proof, keypad lock, rugged construction, vibration-proof and shock-proof, long term stability, display unit rotatable in steps of 90°.

* See product configurator for additional options.

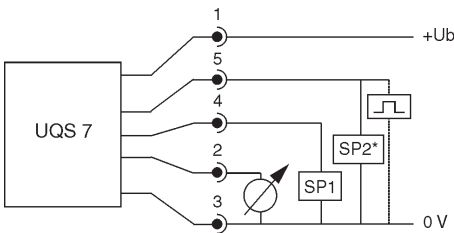
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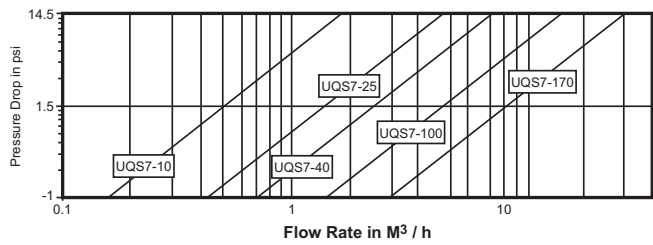
Technical Drawings



*SP2 = pulse outlet



*SP2 = pulse outlet



Product Configurator

Example **UQS7** **-40-G4-2**

Base Model

UQS7

Flow Rate & Connections

-10-G3-2	10 l/min, G3/4 & no analog output
-10-G3-3	10 l/min, G3/4 & 4-20mA analog output
-25-G3-2	25 l/min, G3/4 & no analog output
-25-G3-3	25 l/min, G3/4 & 4-20mA analog output
-40-G4-2	40 l/min, G1 & no analog output
-40-G4-3	40 l/min, G1 & 4-20mA analog output
-100-G5-2	100 l/min, G1-1/4 & no analog output
-100-G5-3	100 l/min, G1-1/4 & 4-20mA analog output
-170-G8-2	170 l/min, G2 & no analog output
-170-G8-3	170 l/min, G2 & 4-20mA analog output

Accessory

Order #	Description
239263	- 5 Pin, M12 electrical mating connector

Connection Chart

Plug M 12 X 1 4/5 pin	Model with 2 switching outputs	Model with 2 switching outputs and 1 analog output	Model with 1 switching output and 1 pulse output	Model with 1 switching output, 1 pulse output and 1 analog output
Pin 1	+Ub (15 - 32 V DC)	+Ub (15 - 32 V DC)	+Ub (15 - 32 V DC)	+Ub (15 - 32 V DC)
Pin 2	SP2 0.5 A max.	Analog	Pulse output	Analog
Pin 3	0 V	0 V	0 V	0 V
Pin 4	SP1 0.5 A max.	SP1 0.5 A max.	SP1 0.5 A max.	SP1 0.5 A max.
Pin 5	-	SP2 0.5 A max.	-	Pulse output