

UQS7

Solid State Flow Switch UQS 7 Series



- ✦ Integrated 4-20 mA Analog Output
- ✦ Easy to Read LED Display
- ✦ Fully Configurable via Keypad
- ✦ Suitable for water-based fluids
- ✦ IP 65 Protection

Barksdale's **UQS7 Solid State Flow Switch** provides a highly accurate monitoring and control solution for water-based fluids. Our **UQS7** combines two built-in switchpoints, a 4-20 mA analog output, and a digital display in a single, compact unit. Ultrasonic sensing technology measures time of flight between two discrete points, assuring highly accurate measurement with low insertion loss as compared to other types of flow sensors. Setpoints and dead-band are easily adjusted by using a built-in, user-friendly menu. Analog output is scalable from 25% to 100% of full scale range, providing a high degree of flexibility for a wide range of applications. A 10-bit microprocessor provides built-in self diagnostics and allows for switch time delays up to 9.9 seconds. For applications requiring accurate monitoring of water-based fluids, the UQS7 is an ideal choice.

Barksdale Exceeding Your Expectations Through Our People, Products and Performance
CONTROL PRODUCTS

UQS7

For flow and volume flow monitoring with ultrasonic sensor, digital display, 2 set points and analog output, accuracy class 2.5% f. s.

Features

7-segment LED display, microprocessor-controlled, self-monitoring with error display. DESINA® conformity (see also www.desina.de), all parameters are configured by keypad.

Additional Features

Tamper proof, keypad lock, rugged construction, vibration-proof and shock-proof, long term stability, display unit rotatable in steps of 90°.

Applications

OEM applications, automotive, automobile industry, cooling.

Technical Data

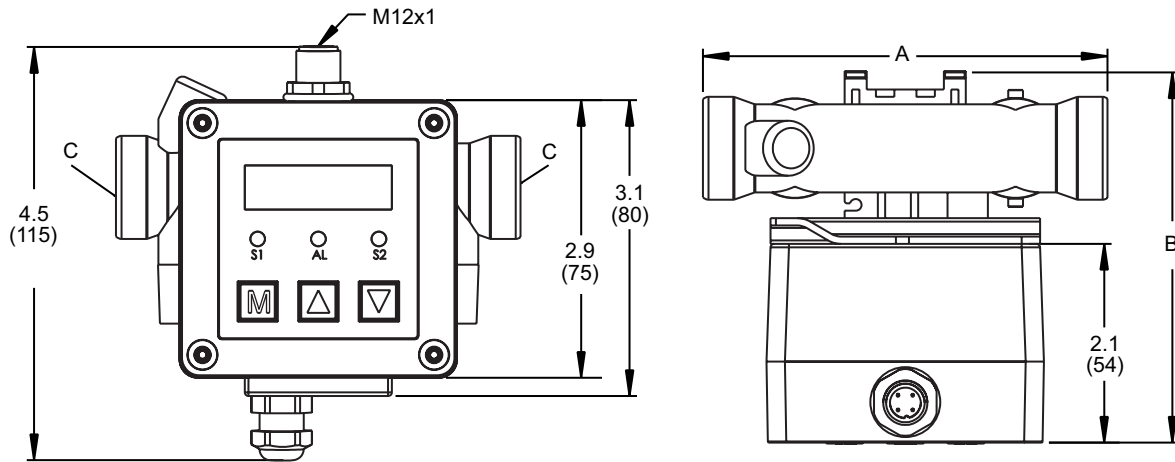
Sensor Element	: Ultrasonic sensor
Media	: Water and similar media, max. pressure 360 psi (25 bar) (higher pressures on request)
Materials	
Wetted parts	: Brass
Housing (Electronics)	: Aluminum die-cast
Seals (Media)	: Klingersil®
Pushbuttons	: Polyester
Operating Elements	: 3 easy response pushbuttons
Protection / Class	: IP65
Pressure Connection	: G 3/4, G 1, G 1-1/4, G 2
Dimensions	: 3.9 in. X 4.3 in. (UQS7-10)
Measure Ranges	
g/min	: 2.6 / 6.6 / 10.5 / 26.4 / 44.9
l/min	(10 / 25 / 40 / 100 / 170)
Linearity Error	: ±2.5% f. s. at 77°F (+25°C)
A/D-Converter	
Scanning Rate	: 500 ms (for peak value memory)
Electrical Connection	: Plug M 12 x 1, 5-pin, DESINA®-conformity
Temperature Influence	: ±0.2% f. s. /10K
Compensation Range	: 14°F to 158°F (-10° to +70°C)
Repeatability	: ±0.1% f. s.
Temperature Range	: 39°F to 266°F
Electronics	: 14°F to 158°F
Storage	: -22°F to 176°F
Inlet - Outflow Zone	: Integrated in the measuring device
Power Supply	: 15-32 V DC, reversed polarity protected



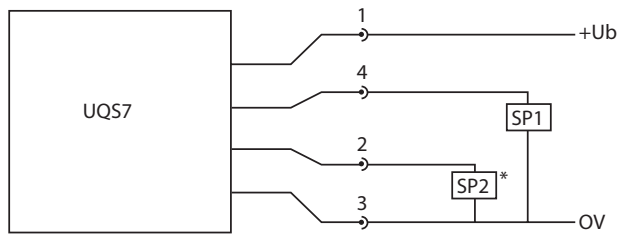
Digital Display	: 4-digit 7-segment LED-display height 0.5 in., red
Display Rate	: 500 mS
Error Display	: LED yellow and alphanumeric display, (diagnosis function acc. DESINA®)
Power Consumption	: appr. 50 mA (without load)
Analog Output	
Scanning Rate	: 500 mS
Resolution	: 10 bit (1024 steps per measuring span)
Current Output	: 4-20 mA
Load	: max. $RI = (U_b - 12 V) / 20 \text{ mA}$ $RI = 600 \text{ Ohm at } U_b = 24 \text{ V DC}$
Load Influence	: 0.3% / 100 Ohms
Options	
Voltage Output	: 0 to 10 V DC
Rating	: max. 10 mA, short circuit-proof
Adjustment Range	: 25% to 100% f. s.
Switching Output(s)	
Switching Function	: Normally open/normally closed, (adjustable) standard/windows-mode
Adjustment Range	: 0% to 125% f. s.
Hysteresis	: 0% to 125% f. s.
Diagnosis Function	: SP2 (DESINA®-model)
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
Options	: Electrical plug, adapters

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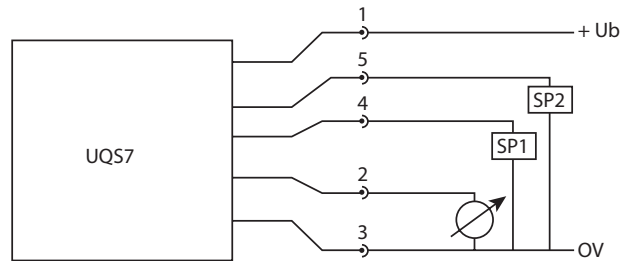
Dimensions in inches



Connection Scheme

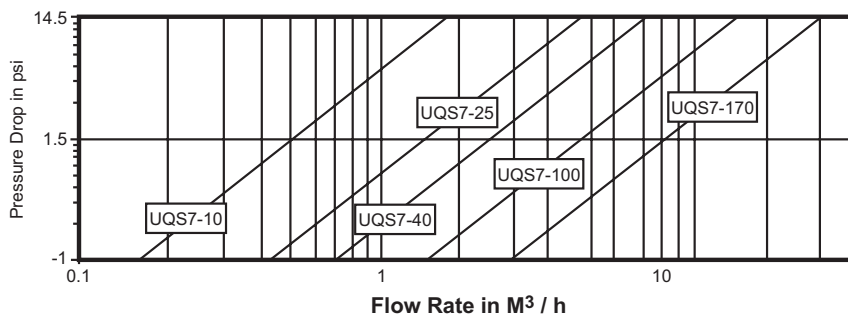


*SP2 = Diagnosis output (DESINA® version)



Optional: wiring acc. DESINA® standard

Pressure Drop



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Solid State Flow Switch

UQS 7 Series

MODEL	Flow Rate (L/MIN)	DIM "A"	DIM "B"	PROCESS CONNECTION	SWITCH POINTS	ANALOG OUTPUT (4-20 mA)	DESINA SIGNAL	WEIGHT (LB)
UQS7-10-G3-2	.04 TO 10	4.3 (110)	3.9 (100)	G 3/4	2	N/A	1	1.8
UQS7-10-G3-3	.04 TO 10	4.3 (110)	3.9 (100)	G 3/4	2	YES	N/A	1.8
UQS7-25-G3-2	.1 TO 25	4.3 (110)	3.9 (100)	G 3/4	2	N/A	1	1.8
UQS7-25-G3-3	.1 TO 25	4.3 (110)	3.9 (100)	G 3/4	2	YES	N/A	1.8
UQS7-40-G4-2	.16 TO 40	7.5 (190)	3.9 (100)	G1	2	N/A	1	2.6
UQS7-40-G4-3	.16 TO 40	7.5 (190)	3.9 (100)	G1	2	YES	N/A	2.6
UQS7-100-G5-2	.4 TO 100	10.2 (260)	5.1 (130)	G 1-1/4	2	N/A	1	6.6
UQS7-100-G5-3	.4 TO 100	10.2 (260)	5.1 (130)	G 1-1/4	2	YES	N/A	6.6
UQS7-170-G8-2	.4 TO 170	11.8 (300)	5.3 (135)	G2	2	N/A	1	8.8
UQS7-170-G8-3	.4 TO 170	11.8 (300)	5.3 (135)	G2	2	YES	N/A	8.8

Accessories

Description	Part Number
Mating Electrical connector (not included)	239263