

Flow indicating switch Model UZ

WIKA data sheet FS-UZ

Applications

- Furnace
- Foundry
- Pumps
- Special purpose machines

Special features

- No primary elements
- Indication in desired flow units
- Threaded or flanged connection
- Control switching option
- Only for water flow measurement



Flow indicating switch, model UZ

Style UZ Direct Reading Flow Indicators/Indicating Switches are versatile instruments designed to accept different paddle sizes to handle a wide range of water flow. These are available with either 304 or 316SS wetted parts. Inline versions with screwed or flanged ends are available for line sizes from 15 to 50mm as standard.

The easy to fix design reduces installation cost and down time and also eliminates complexity involved in conventional flow measuring methods which warrant primary flow elements and secondary flow measuring devices. Simple mechanism ensures high reliability and near zero failures. A spring supported paddle is deflected by the flow which actuates the metering unit that is completely isolated from the flow chamber by

means of a metal bellows seal. The metering gear unit transduces the paddle movement into a pointer travel on a calibrated scale of $260^{\circ} \pm 10^{\circ}$ for direct flow indication.

One or two sub-miniature microswitches can be provided inside the case for setting control/alarm function. The switching point can be set between 10–90% of the scale range by adjusting a setting screw which can be locked later. The adjustable setting is achieved by varying the position of the microswitch against a cam assembly.

The adjustments are accessible from the front after removing the gauge glass. The switch function is indicated by an optional front mounted bicolour LED (red and green).

Standard version

<p>Type Flow indicator / indicating switch</p> <p>Dial size</p> <ul style="list-style-type: none"> ■ 6" Standard ■ 4" Optional <p>Case</p> <ul style="list-style-type: none"> ■ 304 SS weatherproof to IP:66 for 6" dial. ■ Pressed sheet steel weatherproof to IP:65 for 4" dial. <p>Window</p> <ul style="list-style-type: none"> ■ Toughened glass for 6" dial. ■ Clear acrylic for 4" dial. <p>Mounting Inline version suitable for vertical or horizontal pipes</p> <p>Process connection</p> <ul style="list-style-type: none"> ■ Screwed ■ Flanged <p>Refer Ordering Information.</p> <p>Maximum line pressure</p> <ul style="list-style-type: none"> ■ 16 bar static ■ 6 bar dynamic <p>Pressure Loss 200 mbar at maximum flow</p> <p>Maximum process temperature 110°C</p>	<p>Range Refer table</p> <p>Accuracy ±3% of maximum flow</p> <p>Switching Optional through snap acting SPDT microswitch. Refer table</p> <p>Switch rating 5A 250/125V AC</p> <p>Switching deadband Within 15% of maximum flow</p> <p>Electrical connection</p> <ul style="list-style-type: none"> ■ Standard through DIN 43650 Socket ■ Optional 1/2" NPTF through external terminal block. <p>Switch setting Between 10 – 90% FSR</p> <p>High Low gap 15% FSR</p> <p>Materials</p> <ul style="list-style-type: none"> ■ Body: 304 SS / 316 SS ■ Flange (optional): 304 SS / 316 SS ■ Paddle: 316 SS ■ Seal 'O' Ring: Nitrile / Viton® (optional)
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* Viton® is a registered trademark of DuPont Dow Elastomers

Range table

Size code	Screwed version thread size (BSPF)	Line pressure (BAR)		Maximum flow at 2m / sec velocity LPM (water)	Indicating / switching range LPM (water)			
		Static	Dynamic		Standard		Optional	
					Minimum	Maximum	Minimum	Maximum
015	1/2"	16	6	60	4	40	2	20
020	3/4"	16	6	100	6	60	4	40
025	1"	16	6	200	10	100	6	60
032	1¼"	16	6	300	20	200	10	100
040	1½"	16	6	400	30	300	20	200
050	2"	16	6	600	50	500	30	300
065	2½"	16	6	600	50	500	30	300

Ordering matrix

Type

Flow indicator / indicating switch _____ **UZ**

Line size

15 mm NB _____ **015**
 20 mm NB _____ **020**
 25 mm NB _____ **025**
 32 mm NB _____ **032**
 40 mm NB _____ **040**
 50 mm NB _____ **050**
 65 mm NB _____ **065**
 Non standard size (to specify) _____ □□□

Body Material

304 SS _____ **4**
 316 SS _____ **2**

Process connection

Screwed (with pipe thread same as nominal pipe size)

BSPF _____ **SL**
 NPTF _____ **SM**

Flanged (refer respective line size in page no.4 of 4)

3/4" ANSI 300 RF _____ **F0**
 1" ANSI 150 RF _____ **F1**
 1" ANSI 300 RF _____ **F2**
 1¼" ANSI 150 RF _____ **F3**
 1¼" ANSI 300 RF _____ **F4**
 1½" ANSI 150 RF _____ **F5**
 1½" ANSI 300 RF _____ **F6**
 2" ANSI 150 RF _____ **F7**
 2" ANSI 300 RF _____ **F8**
 2½" ANSI 150 RF _____ **F9**
 2½" ANSI 300 RF _____ **FA**

Switching

Not provided _____ **0**
 One switch (high or low) _____ **1**
 Two switches (high and low) _____ **2**
 Two switches (for DPDT action) _____ **3**

LED indication

None _____ **0**
 One LED for indication of one switch _____ **1L**
 Two LED for indication of two switches _____ **2L**

Dial size

6" standard _____ **A**
 4" optional _____ **B**

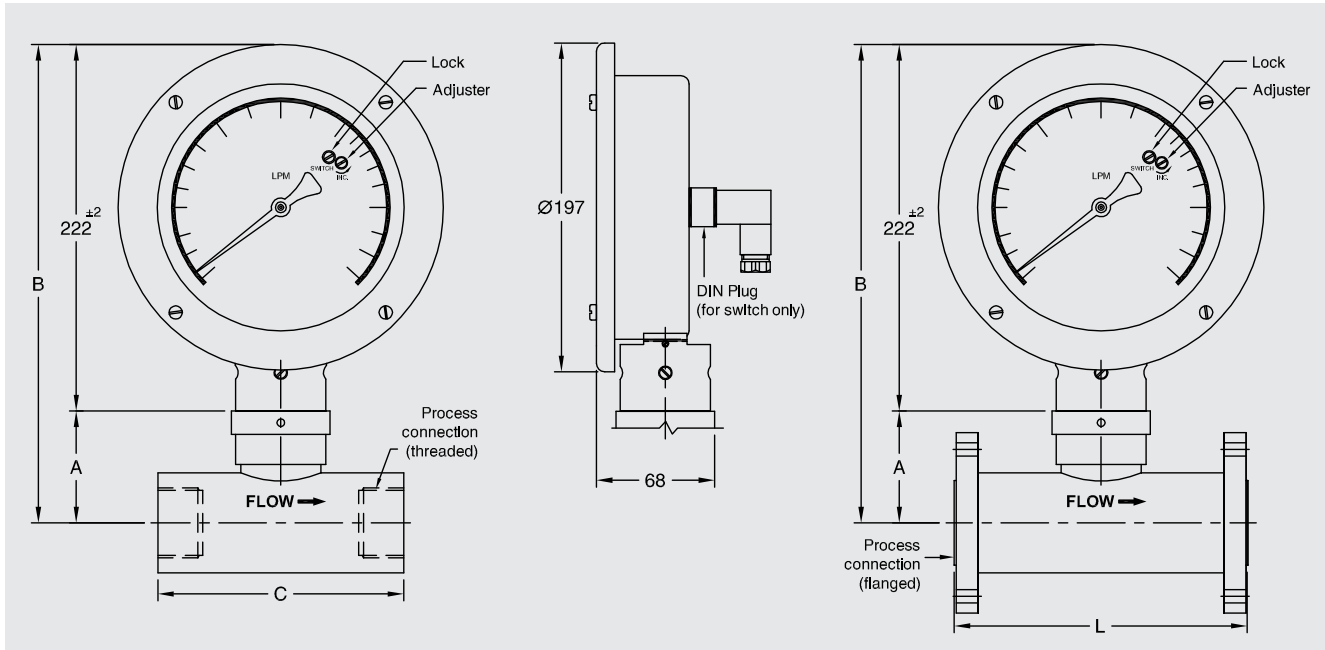
Seal 'O' ring

Buna-N _____ **OB**
 Viton _____ **OV**
 EPDM _____ **OE**

Electrical entry

Single entry through DIN connector _____ **O**
 Dual entry through DIN connector _____ **NO**
 Single entry through 1/2" NPTF external terminal box _____ **AE**
 Dual entry through 1/2" NPTF external terminal box _____ **NE**
 7 pin connector through external housing _____ **CE**

Dimensions in mm



Size code	Threaded connection (BSP)	A ^{±1}	B ^{±2}	C ^{±2}
15	1/2"	58	280	66
20	3/4"	63	285	74
25	1"	56	278	87
32	1 1/4"	66	288	104
40	1 1/2"	72	294	111
40 ... 50	2"	72	294	130
50	2"	84	306	130
50 ... 65	2 1/2"	84	306	130

Size code	Flanged connection	A ^{±1}	B ^{±2}	L ^{±2}
15	1" - 150	58	280	89
	1" - 300			96
20	1" - 150	63	285	97
	1" - 300			104
20	3/4" - 150	63	285	95
	3/4" - 300			101
25	1" - 150	56	278	110
	1" - 300			117
32	1 1/4" - 150	66	288	131
	1 1/4" - 300			137
40	1 1/2" - 150	72	294	140
	1 1/2" - 300			146
50	2" - 150	84	306	163
	2" - 300			170
40 ... 50	2" - 150	72	294	163
	2" - 300			170
50 ... 65	2 1/2" - 150	84	306	170
	2 1/2" - 300			176

Ordering information

Type / Line size / Body material / Process connection / Switching / LED indication / Dial size / Seal 'O' ring / Electrical entry

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