

Paddle-wheel flow sensor/switch with optical principle for ON/OFF control



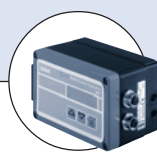
- Indication, monitoring, transmitting and ON/OFF control in one device
- Programmable outputs (Transistor or relay)
- Optical measurement principle:
 - Insensitive to magnetic fields
 - Flow sense detection
 - insensitive to ferromagnetic particles in the fluid

Type 8039 can be combined with...



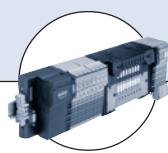
Type 2702 (8630)

Control valve with TopControl



Type 1067

Continuous SideControl



Type 8644-P AirLINE

Valve Island with electronic I/O



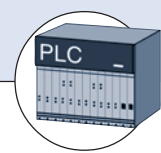
Type 2655 (8631)

Ball valve with control head



Type 6014

Solenoid valve



PLC

This intelligent sensor/switch with an extra-large display is specially designed to switch a valve and to establish a monitoring system or an On/Off control loop. The version with a frequency output makes it possible to transmit the paddle-wheel rotation

speed (2 pulses/paddle wheel rotation) directly to a PLC. Switching points can be programmed with the 3-key keypad under the display and the connection to the process in the piping is done with standard fittings.

Fitting data	
Pipe diameter	1/2 in up to 2 in (DN 6 up to DN50)
Measuring range	1.0 f/s up to 32.8 f/s (0.3 up to 10 m/s)
Fitting	Brass & PVDF - Burkert INLINE type S039
Sensor element	Paddle-wheel without magnet
Materials wetted parts	PVDF, ceramic, FKM
Medium data	
Medium temperature	max. 212°F (100°C)
Fluid pressure max.	140 PSI (PN10) at 68°F (20°C)
Electronic module data	
Switching accuracy	
Teach-In	± 1% f.s.*
Standard K-factor	± 1% f.s.*, ± 3% of measured value
Programming mode	Threshold, window or hysteresis
Repeatability	0.4%
Voltage supply	12-30 VDC
Reversed polarity of DC	Protected
Outputs 8039	
Transistor for threshold (programmable)	NPN and/or PNP, open collector, 5-30 VDC, 700 mA max. protected against short circuits
Relay (programmable)	3A/250 VAC or 3A/30VDC
Frequency	Transistor NPN, open collector, 5-30 VDC, 700 mA max.
Current consumption	Max. 80 mA (no load)
Materials	
Housing	PC +20% glass fiber
Front panel folio	Polyester

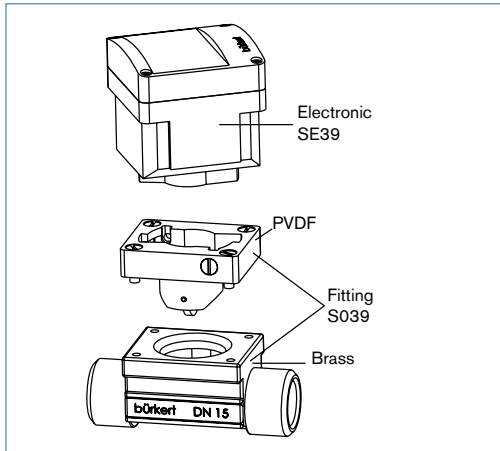
Electrical connections	
Cable plug	Cable grommet plug 2508, DIN43650A
Multipin	5 pin M12
General data	
Ambient temperature	32°F up to 140°F (0°C to 60°C)
Voltage supply cable	
Cross-section	0.14 up to 0.5 mm ²
Recommended length	Max. 328 ft (100m), shielded
Protection class	IP65 with connectors plugged-in
Standards	
EMC	EN 50081-1, 50082-2
Security	EN 61010-1
Vibration	EN 60068-2-6
Shock	EN 60068-2-27

*f.s. = full scale

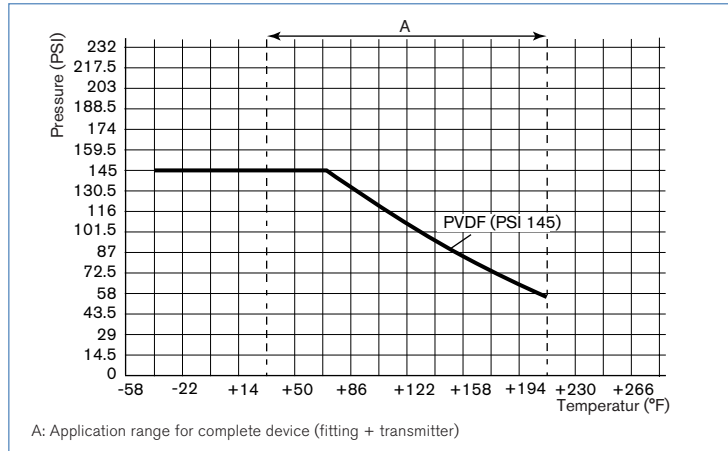
The Burkert Quarter-Turn technology

DTS 1000082581 EN Version: - Status: RL (released | freigegeben | validé) printed: 11.01.2018

Design

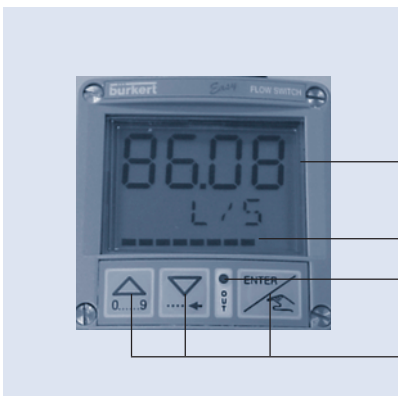


Pressure/temperature chart



Main features

Display



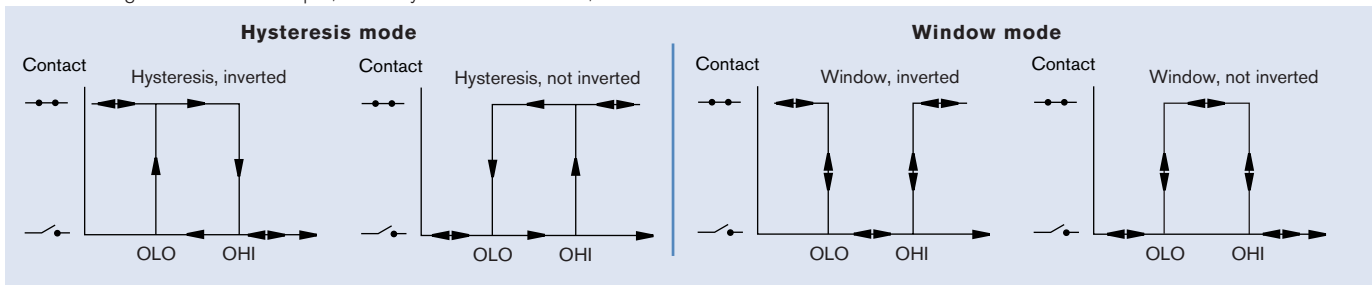
- Large digital display with 8 characters (4 digital characters and 4 alphanumeric characters)
- Bargraph
- Status of the switching output (red LED)
- 3 keys to go through the menus and program the device

Software main features

- International measuring units
- 10-segment bargraph
- Teach-In for a better accuracy
- Simulation mode to test the programming of the switching points, in dry conditions

8039 with standard On/Off output

- 2 switching modes for the output, either hysteresis or window, inverted or not



- Programmable delay before switching
- Possible outputs depending on the version: relay, transistor NPN, transistor PNP, frequency

Ordering chart for Display/Electronics

Display and Electronic Type SE39- for fitting Type S039

Voltage supply	Output	Connector	Item no. (standard)
12-30 VDC	NPN	Cable grommet plug DIN43650	440 378 Z
	PNP	Cable grommet plug DIN43650	440 379 S
	NPN and PNP	M12 plug 5 pins	440 377 Q
	Relay	M12 plug 5 pins and cable plug DIN43650	440 382 E
	Relay and frequency	M12 plug 5 pins and cable plug DIN43650	447 806 T

Note:

A complete device Type 8039 consists of a fitting Type S039 and an electronic module Type SE39. Please order the two required units separately. If a cable connector (connection M12) is needed please order that too.

Ordering chart for Fitting S039 (to be ordered separately, other versions on request)

INLINE Fitting (Brass housing & PVDF paddle-wheel holder)

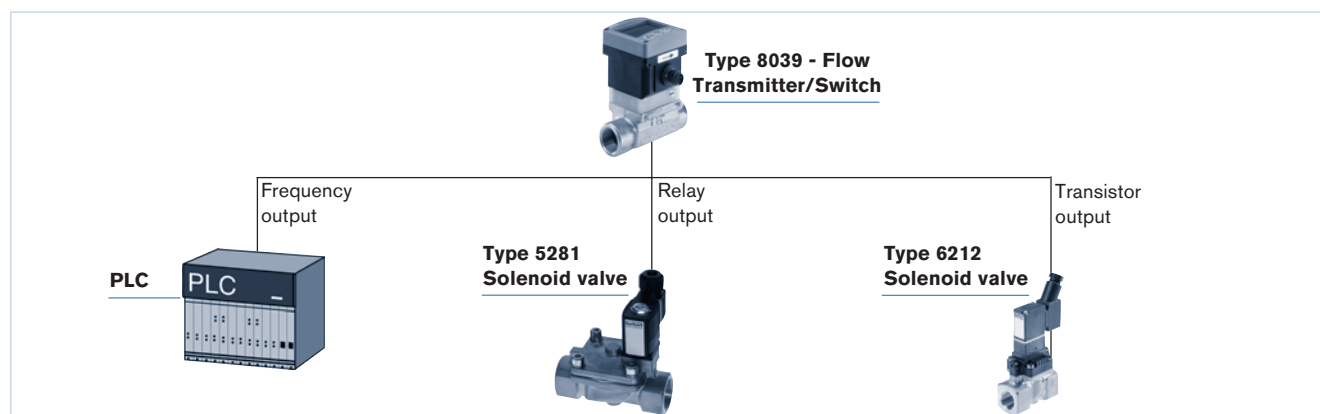
Specification	Item no. / Orifice						
	DN 8*	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50
	1/2"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
G-port connection	444 670 J	440 645 M	440 646 N	440 467 P	440 648 Y	440 649 Z	440 650 W
NPT-port connection	444 671 F	444 672 G	444 673 H	444 674 A	444 675 B	444 676 C	444 677 D

* Only version with external thread

Ordering chart for Accessories (to be ordered separately)

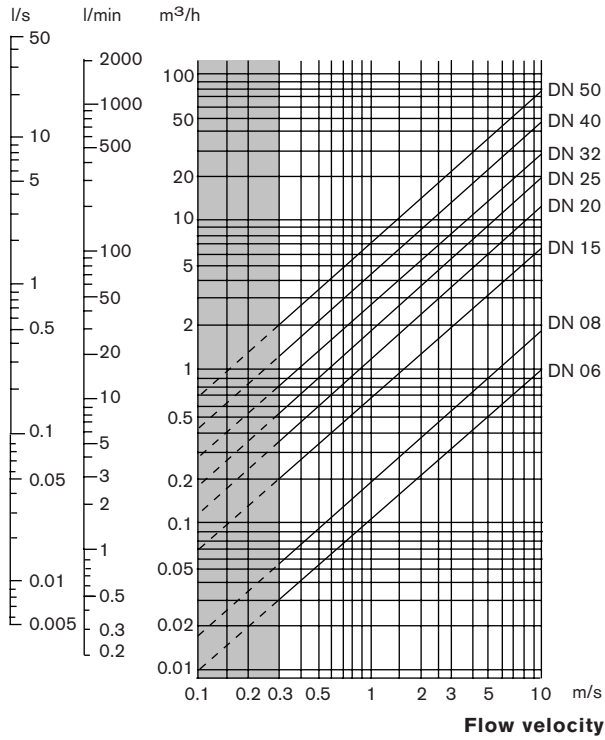
Accessories	Item no. (standard)
5 pin M12 female cable connector with plastic threaded locking ring	917 116 D
5 pin M12 female connector moulded on cable (2m., shielded)	438 680 F
Female cable plug type 2508 - DIN 43650 with cable gland	438 811 N
Female cable plug type 2509 - DIN 43650 with 1/2" NPT conduit	162 673 E

Interconnection possibilities with the Type 8039

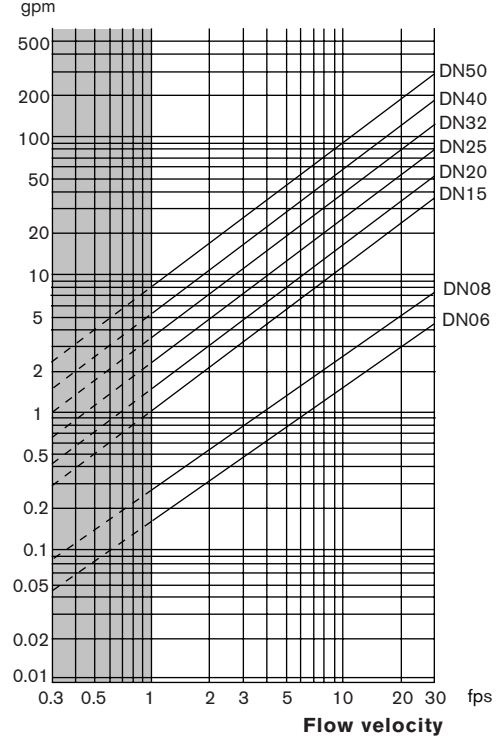


Selection of fitting/pipe size

Flow rate

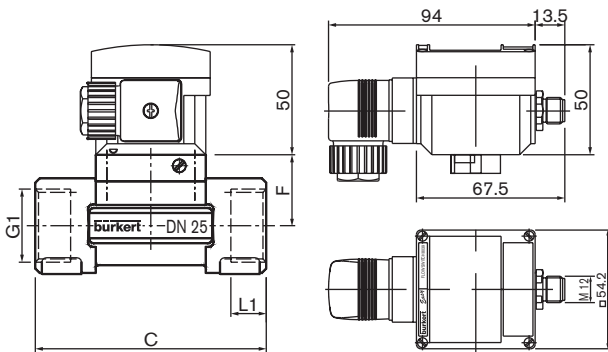


Flow rate

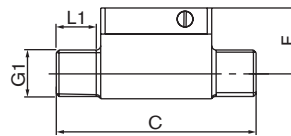


Dimensions

Internal threaded port



External threaded port (DN8)



Variable dimensions

DN	C	F	G1		L1
			[mm]	[inch]	
8	90	29.7	G1/2	NPT 1/2	M16 x1.5 14.0
15	84	34.5	G 1/2	NPT 1/2	- 16.0
20	94	32.0	G 3/4	NPT 3/4	- 17.0
25	104	32.2	G 1	NPT 1	- 23.5
32	119	35.8	G 1 1/4	NPT 1 1/4	- 23.5
40	129	39.6	G 1 1/2	NPT 1 1/2	- 23.5
50	149	45.7	G 2	NPT 2	- 27.5

In case of special application conditions, please consult for advice.

We reserve the right to make technical changes without notice.

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