

FLOW SWITCH WITH A DIGITAL DISPLAY



KEY DATA

Property	Value	Property	Value
Media	Water · oil · air	Output	One switch, PNP or NPN, NO or NC, all settable
Switching load	< 200 mA	Supply voltage	12 ... 30 Vdc
Response time	1 ... 13 s	Protection grade	IP67
Materials	Probe 304 stainless · housing plastic	Medium temperature	-20 ... +85 °C
Display	Three-digit LED, reading in per cent	Process connection	G or R male · M18 x 1.5 female · clamp

A thermal flow switch with a three-digit display and keys on the device.



MEASUREMENT

Measuring principle	Thermal — the signal is conditioned and put out as a standard industrial signal
Media	Water, oil and air
Display	Three-digit LED, red, reading a percentage
Setting	Two keys on the device, marked – and +
Response time	1 ... 13 s

MATERIALS AND PROCESS

Materials	Probe and process connection 304 stainless · housing engineering plastic, moulded in one piece
Process connection	G1/2 or G1/4 male · R1/2 or R1/4 male · M18 × 1.5 female · clamp 25.4 mm (1/2 inch) or 50.5 mm (1.5 inch), to ISO 2852:1993
Probe length	30 · 50 · 60 · 70 · 80 · 100 mm · 30 mm not with the M18 version
Medium temperature	-20 ... +85 °C · ambient -20 ... +80 °C · storage -30 ... +80 °C
Housing	Turns through 330°, so the plug can be aimed after installation
Protection grade	IP67

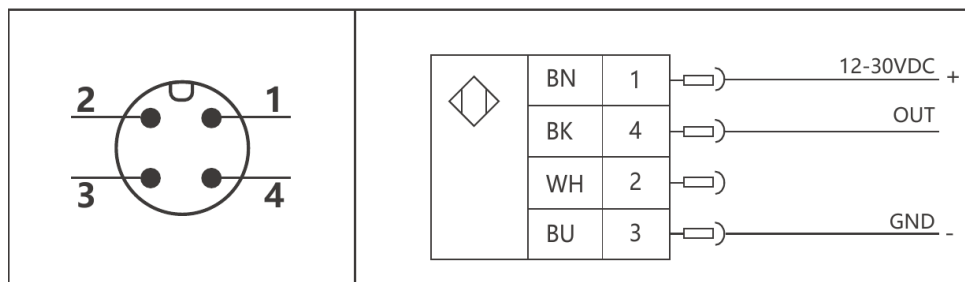
ELECTRICAL PROPERTIES

Supply voltage	12 ... 30 Vdc
No-load current	≤ 30 mA at 24 Vdc
Plug	M12 × 1: 1 BN supply +, 3 BU supply –, 4 BK output
Output	One switch output on pin 4. PNP is the factory setting, NPN can be set; normally open or normally closed can be set as well
Switching load	< 200 mA
Protection	Reverse polarity, overload and short circuit

LED INDICATOR

Display	Three red digits, high brightness, reading in per cent
Keys	Two, marked – and +, for setting the switching point

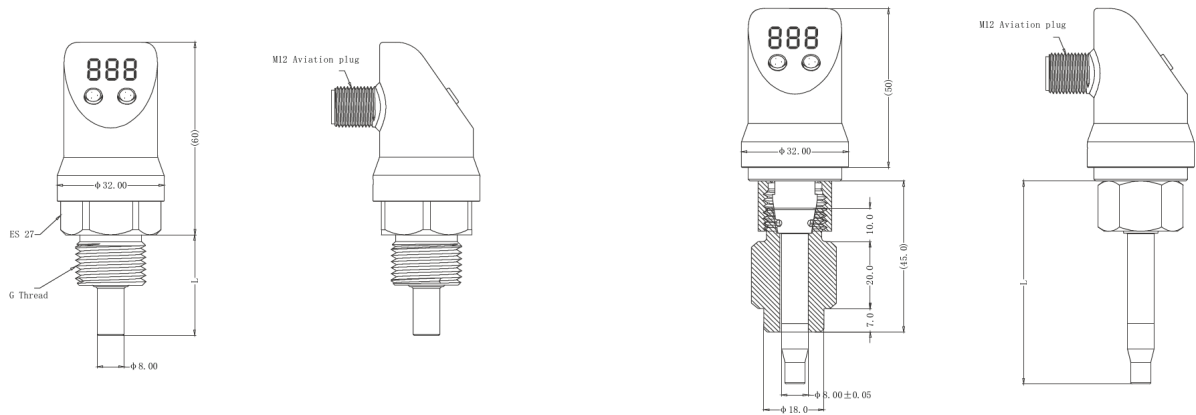
WIRING, SETTING AND INSTALLATION



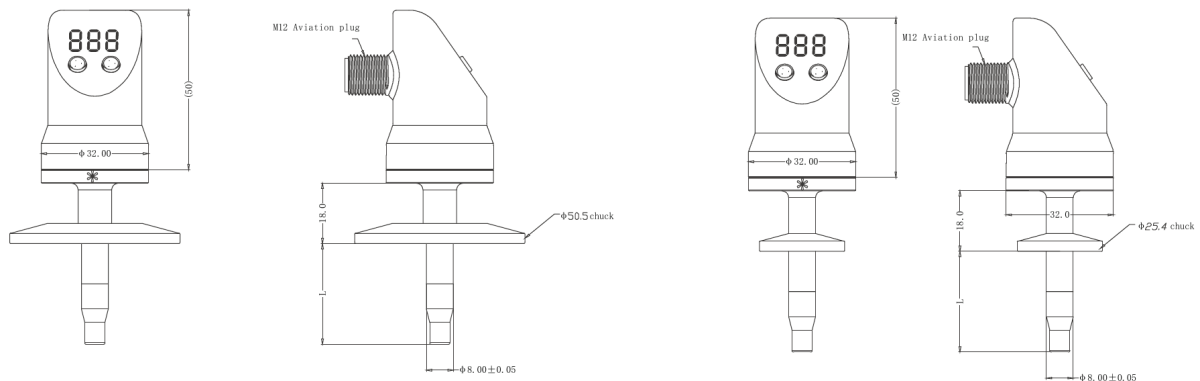
The M12 × 1 plug seen from the front: 1 brown supply plus, 3 blue supply minus, 4 black the switch output. PNP is the factory setting; NPN, normally open and normally closed are set at the keys.



DIMENSIONS (mm)



The male-thread version on the left, the M18 x 1.5 female version on the right.



The two clamp versions, Ø50.5 mm and Ø25.4 mm, to ISO 2852:1993.

Four versions are drawn: G or R male thread, M18 x 1.5 female, and two clamp connections.



OVERALL DIMENSIONS (mm)

Feature	mm	Note
Overall height, male thread	(60)	Reference dimension
Overall height, other versions	(50)	Reference dimension
Height over the clamp	(45.0)	Reference dimension
Housing diameter	Ø32.00	The same on all four versions
Across flats	27	Marked ES 27 on the male-thread version
Thread length	20.0	Male-thread version
Sealing face	10.0 · 7.0	M18 version, two steps
Shoulder diameter	Ø18.0	M18 version
Clamp collar	18.0 · 32.0	The two clamp versions
Clamp diameter	Ø25.4 · Ø50.5	1/2 inch and 1.5 inch, ISO 2852:1993
Probe diameter	Ø8.00 ± 0.05	
Probe length L	30 · 50 · 60 · 70 · 80 · 100	See the order code

COMPLIANCE AND CERTIFICATION

Measuring principle	Thermal
Protection grade	IP67
Wetted materials	304 stainless probe and process connection; housing engineering plastic
Clamp connections	Ø25.4 and Ø50.5 mm, to ISO 2852:1993
Switching load	< 200 mA

ZL03-PC02G, two metres of PVC, is the factory standard.

ELECTRICAL ACCESSORIES

Electrical accessory	Material	Straight (G)	Angled (W)
M12 × 1, 4-pin, 2 m	PUR	ZL03-PU02G	ZL03-PU02W
M12 × 1, 4-pin, 5 m	PUR	ZL03-PU05G	ZL03-PU05W
M12 × 1, 4-pin, 10 m	PUR	ZL03-PU010G	ZL03-PU010W
M12 × 1, 4-pin, 2 m	PVC	ZL03-PC02G	ZL03-PC02W
M12 × 1, 4-pin, 5 m	PVC	ZL03-PC05G	ZL03-PC05W
M12 × 1, 4-pin, 10 m	PVC	ZL03-PC010G	ZL03-PC010W
Self-wiring socket, 4-pin	Pg7 / Pg9 gland	GL04	WL04



The welded bases and the M18 tees are tied to one thread family: the M18 parts serve the female version only, the others the male versions only.

MOUNTING ACCESSORIES

Mounting accessory	Note	Material	Order number
Welded base, M18 × 1.5 female	For the M18 version only	304 stainless	FA002-M18
Welded base, G1/4	For a male-thread version	304 stainless	FA002-G14
Welded base, G1/2	For a male-thread version	304 stainless	FA002-G12
Welded base, G1/2 high pressure	For a male-thread version	304 stainless	FA002-G12H
Welded base, Rc1/4	For a male-thread version	304 stainless	FA002-R14
Welded base, Rc1/2	For a male-thread version	304 stainless	FA002-R12
Welded base, M12 × 1	For a male-thread version	304 stainless	FA002-M12
Adapter M18 female to G1/4 male	Probe insertion 15 mm	304 stainless	FA004-M18G14S
Adapter M18 female to G1/4 male	Probe insertion 15 mm	Brass	FA004-M18G14T
Adapter M18 female to G1/2 male	Probe insertion 15 mm	304 stainless	FA004-M18G12S
Adapter M18 female to G1/2 male	Probe insertion 15 mm	Brass	FA004-M18G12T
Tee, M18 female with G1/4 branch	For the M18 version only	304 stainless	FA003-M18G14
Tee, M18 female with G3/8 branch	For the M18 version only	304 stainless	FA003-M18G38
Tee, M18 female with G1/2 branch	For the M18 version only	304 stainless	FA003-M18G12
Tee, M18 female with G3/4 branch	For the M18 version only	304 stainless	FA003-M18G34

The conventional stainless tees are rated 40 bar and the high-pressure stainless tees 200 bar.

MOUNTING ACCESSORIES · TEES

Mounting accessory	Note	Material	Order number
Tee G1/4, small bore 4 mm	—	PP	FA010-04G14
Tee G1/4, straight bore 6 mm	—	PP	FA010-06G14
Tee G1/4, small bore 8 mm	—	PP	FA010-08G14
Tee G1/2, straight bore 10 mm	—	PP	FA010-10G12
Tee G1/2, straight bore 12 mm	—	PP	FA010-12G12
Tee adapter G1/4, gas only	—	PP	FA012-01
Tee R1/2, DN15	40 bar	Stainless steel	FA013-R12K
Reducing tee R3/4 – R1/2 – R3/4, DN20	40 bar	Stainless steel	FA013-R12KR34K
Reducing tee R1 – R1/2 – R1, DN25	40 bar	Stainless steel	FA013-R12KR1K
Reducing tee R1.2 – R1/2 – R1.2, DN32	40 bar	Stainless steel	FA013-R12KR1.2K
Tee G1/2, DN15	200 bar	Stainless steel	FA014-G12K
Reducing tee G3/4 – G1/2 – G3/4, DN20	200 bar	Stainless steel	FA014-G12KG34K
Reducing tee G1 – G1/2 – G1, DN25	200 bar	Stainless steel	FA014-G12KG1K



Example: QSKE-G12M-L030-. PNP or NPN and normally open or closed are set at the device, with PNP as the factory setting.

ORDER CODE

Field	Code	Meaning
1 Series	QSKE	QSKE electronic flow switch with a display
2 Connection	G12M · G14M	G1/2 male thread · G1/4 male thread
	R12M · R14M	R1/2 male thread · R1/4 male thread
	M18K	M18 × 1.5 female thread, for use with the mounting accessories
3 Probe length	H25 · H50	Clamp Ø25.4 mm (1/2 inch) · Ø50.5 mm (1.5 inch), ISO 2852:1993
	L030	30 mm, not with M18K
	L050	50 mm
	L060 · L070	60 mm, M18K from DN32 down · 70 mm, M18K from DN40 up
	L080 · L100	80 mm, M18K from DN50 up · 100 mm, M18K from DN80 up
4 Output	—	One switch output

