

Description

Single point flow monitors with MIN/MAX monitoring function, suitable for water, oil, air and media with similar thermal conductivities (selectable by means of a medium switch). With either no delay, or with a 60 s switch-on delay or a 10 s change over delay.

Features

- Adjustable to a wide range of flow rates
- No moving parts in the flow
- Operation largely independent of pipe diameter
- LED status indication
- Fast response time
- MIN or MAX switch point
- Suitable for water, oil and air



SW118

SW119

TECHNICAL DATA

General data		SW118 Single Point Flow Monitor in a compact housing	SW119 Single Point Flow Monitor for surface mounting
Suitable for		liquids, gases	liquids, gases
Monitoring function	flow rate	1 switch point (MIN or MAX)	1 switch point (MIN or MAX)
	wire break/circuit failure		standard
Anzeigeart	flow rate	1 dual colour LED	1 dual colour LED
Temperaturbereich	medium	-25 ... +70 °C/-13 ... +158 °F	-40 ... +100 °C/-40 ... +212 °F
	electronic control unit	-25 ... +50 °C/-13 ... +122 °F	-25 ... +50 °C/-13 ... +122 °F
Electrical data			
Input voltage		AC 230, 115, 24 V 50/60 Hz +10 %, -15 % DC 24 V ±10 %	AC 230, 115, 24 V 50/60 Hz +10 %, -15 % DC 24 V ±10 %
Power consumption		approx. 1,2 VA	approx. 1,2 VA
Relay outputs	flow rate	1 SPDT contact AC 250 V/DC 30 V, max. load 5 A Overvoltage category II	1 SPDT contact AC 250 V/DC 30 V, max. load 5 A Overvoltage category II
Flow monitoring			
Flow response level adjustment (steplessly by means of a potentiometer)		gases: 0,5... 50 m/s / 1.64... 164 fps liquids: 0,01 ... 4 m/s / .0328... 13.1 fps	gases: 0,5... 50 m/s / 1.64... 164 fps liquids: 0,01 ... 4 m/s / .0328... 13.1 fps
Repeatability ⁽¹⁾		± 3 %	± 3 %
Response delay ⁽²⁾		2 s with water, 4 s with oil, 7 s with air selectable delay (no delay, 60 s switch-on delay or 10 s change over delay)	
Switch point drift through temperature change of the medium		approx. ± 0,7 %/°C / ± 1,26 %/°F	approx. ± 0,7 %/°C / ± 1,26 %/°F
Mechanical data			
Type and size of monitoring head		G1/2A, 1/2"NPT	G1/2A, 1/2"NPT, push-in type MKV
Pressure resistance of monitoring head ⁽³⁾		100 bar/1450 psi	100 bar/1450 psi
Degree of protection	monitoring head	IP67	IP67 (connector)
	electronic control unit	IP65	IP65
Materials	fitting	stainless steel 1.4571/AISI 316Ti	stainless steel 1.4571/AISI 316Ti
	sensor	stainless steel 1.4571/AISI 316Ti	stainless steel 1.4571/AISI 316Ti
	seals	laser welded	laser welded
	electronic control unit	housing	ABS
cover		polycarbonate	polycarbonate
Housing dimensions		80,5 x 82,5 x 55 mm/ 3.17 x 3.25 x 2.17 in.	120 x 80 x 55 mm/ 4.72 x 3.15 x 2.17 in.
Cable length to monitoring head	standard	-	2 m/6.56 ft (6 x 0.14 mm ² /AWG 26)
	max. length	-	100 m/328 ft

⁽¹⁾ Of the set value, at constant temperature and flow conditions, and stable thermal conductivity.

⁽²⁾ Delay with the switch point set to 1 m/s / 3.28 fps and the flow at 2 m/s / 6.56 fps, after a sudden complete stop.

⁽³⁾ Admissible operating pressure to DIN 2401, measured at the max. admissible temperature (= max. medium temperature)

1

Ordering information SW118

Single Point Flow Monitor	
SW118	in a compact housing, with integral monitoring head
Input voltage	
AC 230 V	50/60 Hz (standard)
AC 115 V	50/60 Hz
AC/DC24 V	(AC: 50/60 Hz)
Process connection	
MK G1/2A	(standard)
MK 1/2"NPT	
Monitoring head material	
ST11	only NPT thread
ST12	only G1/2A (standard)
SW118 - AC230V - MKG1/2A - ST12 ordering example	

Ordering information SW119

Electronic Control Unit	
Single Point Flow Monitor	
SW119	for surface mounting, with separate monitoring head
Input voltage	
AC 230 V	50/60 Hz (standard)
AC 115 V	50/60 Hz
AC/DC24 V	(AC: 50/60 Hz)
SW119 - AC230V ordering example	

Monitoring Head MK thread-mounted

Fitting size	
MK G1/2A	(standard)
MK 1/2"NPT	
Material	
ST11	only NPT thread
ST12	only G1/2A (standard)
MK G1/2A - ST12 ordering example	

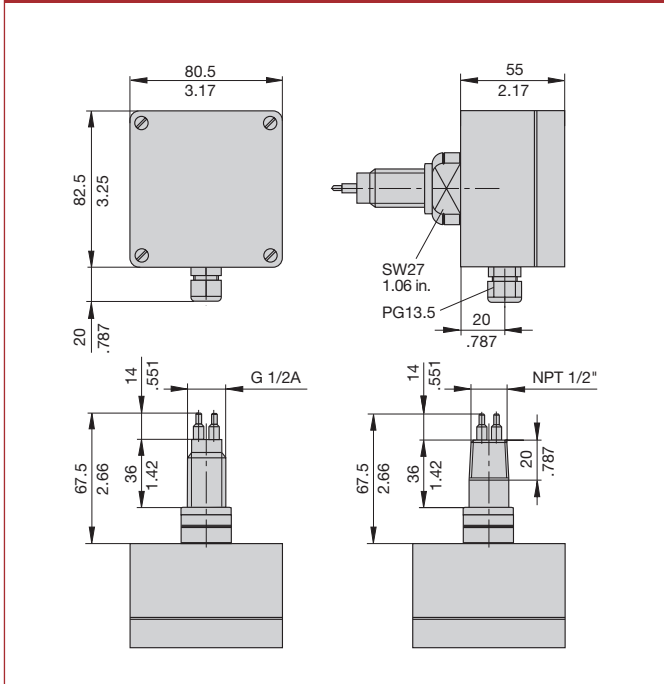
Monitoring Head MKV push-in type
(see separate page)

SW119 – Cable type 2 with connectors

Cable and plug	between monitoring head and control unit
Do + Ka type 2	7-pole round connector, PVC insulated cable type LiYCY 6x0.14 mm ² (AWG 26), RAL 7032
Available cable lengths	
...m	2 m, 3 m, 5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 40 m, 50 m, 60 m, 70 m, 80 m, 90 m and 100 m (up to max. 100 m/328 ft)
Do + Ka type 2 - 2 m/6.56 ft ordering example	

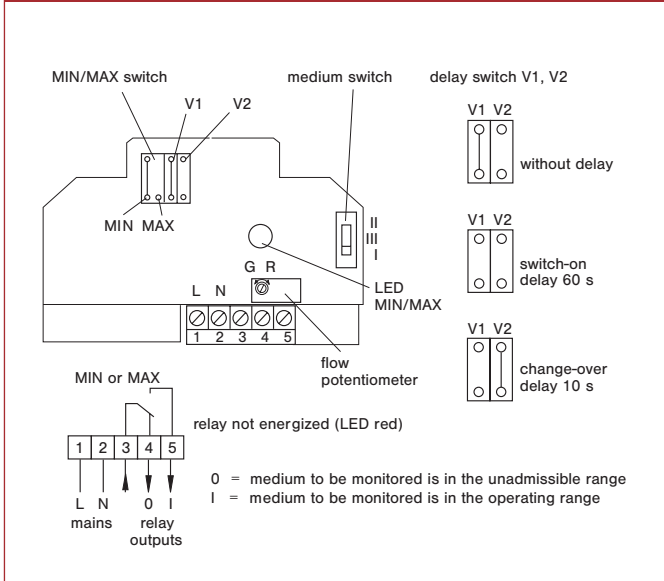
See data sheet monitoring head MKV.

Dimensions SW118

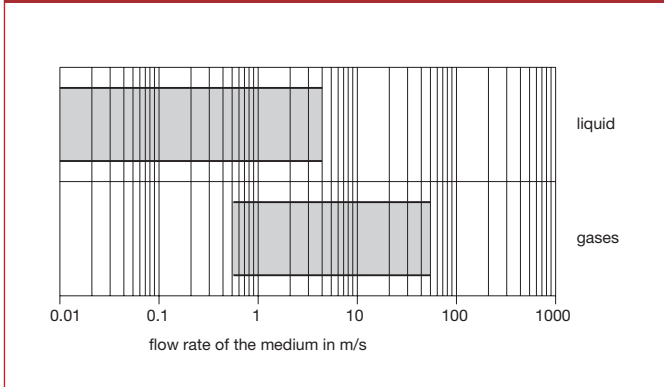


This is a metric design and millimeter dimensions take precedence ($\frac{mm}{inch}$)

Connection diagram SW118



Flow ranges



1

Calorimetric monitoring head



MKV-13

Technical data

Type of head	push-in
Nominal shank dia.	18 mm/.709 in. without thread
Length of shank	300 mm/11.8 in.
Length of sensor	14 mm/.551 in.
Suitable for (medium)	liquids and gases
Temperature range *)	-40 ... +100 °C/-40 ... +212 °F
(of medium)	
Pressure resistance ⁽¹⁾	100 bar/1450 psi
(of monitoring head)	
Pressure resistance ⁽¹⁾	25 bar/363 psi
(installation)	(with threaded installation bush)
Degree of protection ⁽²⁾	IP67
Material	stainless steel 1.4571
Cable to electronic unit	Do + Ka type 2 – 2 m/6.56 ft
	(up to max. 100m/328 ft)
Weight	710 g/1.57 lb

⁽¹⁾ Admissible operating pressure DIN 2401, measured at max. temperature (= max. medium temperature)

⁽²⁾ with mating connector

^{*)} max. +80 °C/+176 °F in the connector area

Description

Extended calorimetric monitoring head with variable immersion depth for use in larger pipe sizes (DN50 plus).

Caution: Fix with locking set 01 (see accessories).

Features

- Temperature range: -40 ... +100 °C/-40 ... +212 °F
- Material: stainless steel 1.4571

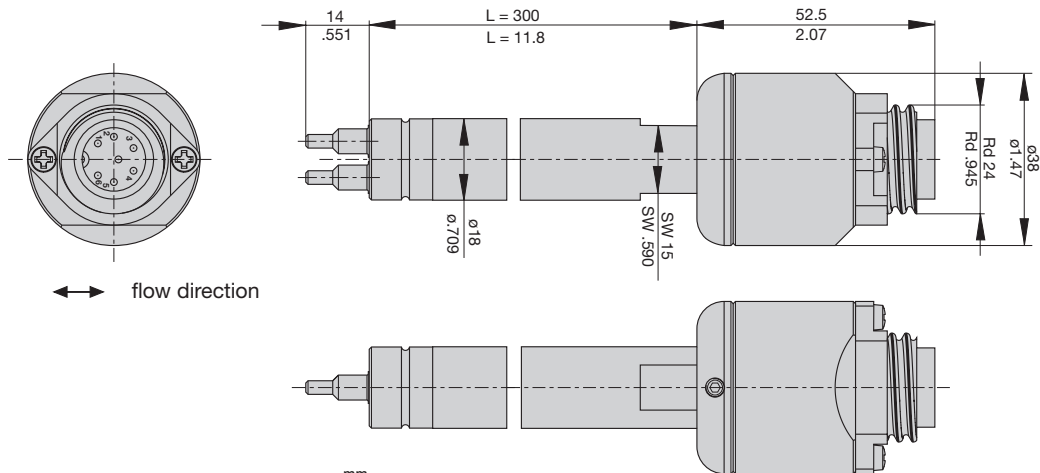
Ordering information

Type	MKV	Push-in type monitoring head with calorimetric sensors
Monitoring head design	13	Monitoring head with variable immersion depth
Medium	X	Liquids and gases
Material of areas exposed to medium	M1	stainless steel 1.4571
Process connection	00	without flange; see accessories for cable gland**)
Length of shank/thread	L30	300 mm/11.8 in. (standard) other lengths upon request
Electrical connection	E30	round connector Rd24, 7-pole (plug and cable to order separately)
Certification	T0	without certificate (standard) *)
Specification of medium	xxx	
MKV - 13 X M1 00 L30 E30 T0 - ... ordering example		

*) for detailed information please see section 0.

**) see next page.

Dimensions



This is a metric design and millimeter dimensions take precedence (mm/inch)

Description

Cable between push-in type monitoring head MKV and flow monitor SW119.

Cable type 2 with connectors



Do + Ka type 2

SW119 – Cable type 2 with connectors

Cable and plug	between monitoring head and control unit
Do + Ka type 2	7-pole round connector, PVC insulated cable type LiYCY 6x0.14 mm ² (AWG 26), RAL 7032
Available cable lengths	
...m	2 m, 3 m, 5 m, 8 m, 10 m, 15 m, 20 m, 25 m, 30 m, 40 m, 50 m, 60 m, 70 m, 80 m, 90 m and 100 m (up to max. 100 m/328 ft)

Do + Ka type 2 - 2 m/6.56 ft ordering example

See data sheet monitoring head MKV.

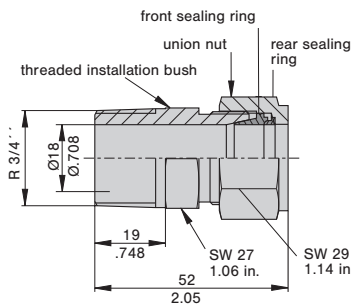
Technical data

Cable type 2	
Features:	flexible, fully shielded, electrical and thermal properties at +20 °C/+68 °F
Conductor resistance:	< 131 Ω/km
Insulation resistance:	> 200 MΩ
Operating voltage:	max. 350 V
Withstand voltage:	1200 V
Max. load:	1.5 A
Temperature range	-10 ... +80 °C/+14 ... +176 °F (processing and operation) -30 ... +80 °C/-22 ... +176 °F (transport and storage)

Accessories

Threaded installation bush
OZ122Z000196

Teflon sealing ring
OZ122Z000197

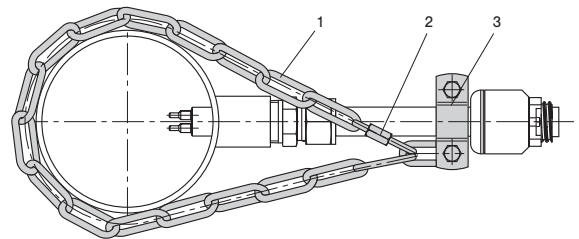


Suitable up to 25 bar/2.5 MPa/363 psi if used with stainless steel MK monitoring head. (Observe instructions for installation.)

Caution: Stainless steel ring is designed to cut into monitoring head. Pressure resistant to 25 bar/2.5 MPa/363 psi. Teflon ring can only be used from 0 to 2 bar/0,2 MPa/29 psi.

Please observe user manual and safety guidelines!

Locking set 01
OZ122Z000204



- 1 chain 4 x 32 DIN 5685 (approx. 1 m/3.28 ft)
- 2 catch for chain NG 5
- 3 clip with screw and nuts DN15 to DIN 11850

All dimensions without tolerances are for reference only. In the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved. Product markings may not be exactly as the ordering codes. Errors and omissions excepted.