

Description

Microcontroller operated Flow Meter to measure and monitor flow velocity, volume flow and temperature of water.

The RS232 interface allows configuration, operation and data logging by means of a PC software.



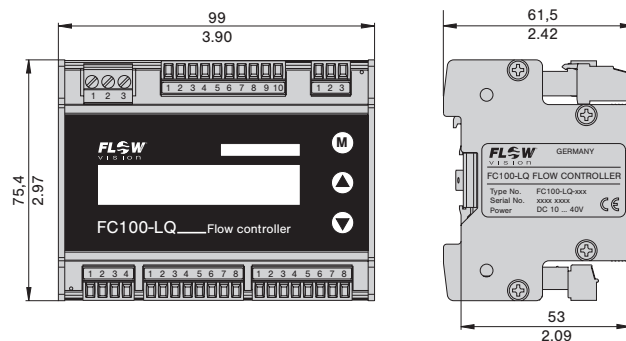
FC100-LQ
rail mounted housing surface mounted housing

Features

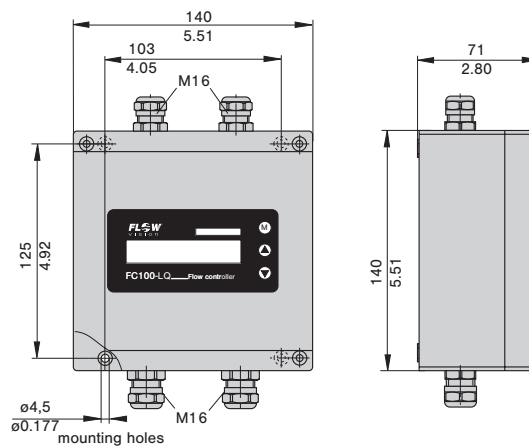
- Menu driven (keypads)
- LC display (2 x 16 digits) can show:
 - actual flow velocity, volume flow rate, temperature
 - directions for parameter assignment, configuration, diagnostics and error correction;
 - peak values indication
- Two scalable analogue outputs
- Minimum/maximum memory of flow velocity, volume flow and temperature
- Two freely selectable limit contacts
- Quantity dependent pulse output
- Totalizer (with external reset), power fail-safe
- display illumination
- RS232 interface allows configuration, operation and data logging by means of a PC software

Dimensions

FC100-LQ (rail mounted housing)



FC100-FH-LQ (surface mounted housing)



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

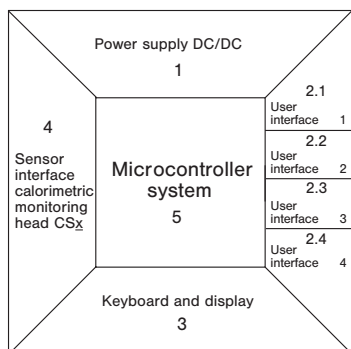
Ordering information

Type	
FC100-LQ	Flow Meter in rail mounted housing
FC100-FH-LQ	Flow Meter in surface mounted housing
Input voltage	
U1	DC 10 ... 40 V
Signal outputs	
R2	2 relay outputs (2 limit values)
T4	4 transistor outputs (2 limit values + 2 status or 2 limit values + 1 status + 1 pulse output)
Analogue outputs	
V1	0/1-5 Volt
V2	0/2-10 Volt
C1	0/4-20 mA (self-powered, galvanically isolated)
Serial interface	
K1	RS232 (with PC-Software)
FC100-LQ	- U1 R2 V1 K1 ordering example

TECHNICAL DATA

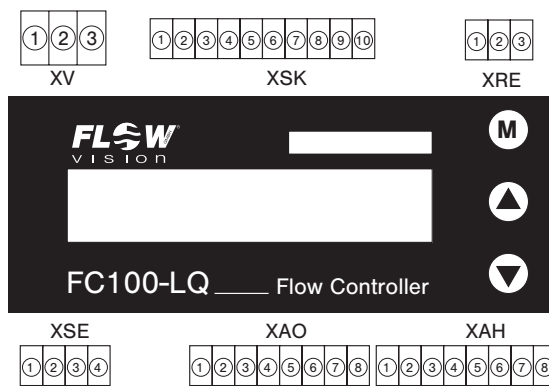
Flow Meter FC100-LQ		with monitoring head CSP and sensor adapter TP/ball valve BV	with monitoring head CSF
General data			
Suitable for		water	
Measuring functions		flow velocity, volume flow rate, temperature	
Display		2 x 16-digit LC display (illuminated)	
Configuration by		keypads or PC software	
Serial interface		RS232, PC-Software runs on Windows® XP/Windows Vista®/Windows® 7	
Ambient temperature range (electronic control unit)		+5 °C ... +50 °C/+41 °F ... +122 °F	
Electrical data			
Supply voltage		DC 10 ... 40 V	
Power consumption		DC 10 V: 650 mA; DC 24 V: 240 mA; DC 40 V: 150 mA	
Analogue outputs		flow and temperature 0/4-20 mA or 0/2-10 V or 0/1-5 V	
Signal outputs		2 relay outputs (2 limit values) 2 SPDT contacts AC/DC 50 V/1 A/50 W	
		4 transistor outputs (2 limit values + 2 status, or 2 limits values + 1 status + 1 pulse output) open collector outputs DC 36 V/150 mA/1,5 W	
MTTF (SN 29500)		54 ... 79 years, depends on device type, for details see MTTF-certificate	
Flow measurement			
Measuring range 0.05 ... 3 m/s / 0.164 ... 9.84 fps (display range 0 ... 4 m/s / 0 ... 13.1 fps)		in TP-01	0,02 - 2,2 (2,9) m³/h
		in TP-02	0,04 - 3,4 (4,5) m³/h
		in TP-03	0,05 - 5,3 (7,1) m³/h
		in TP-04	0,10 - 8,7 (11,6) m³/h
		in TP-05	0,14 - 13,6 (18,1) m³/h
		in TP-06	0,20 - 21,2 (28,3) m³/h
		see table flow measurement range (next page)	
Accuracy ⁽²⁾		see failure diagram	
Repeatability (5 % MRFV - 100 % MRFV) ⁽¹⁾		±1% of measured value ±0.5 % of measuring range final value	
Temperature drift of electronic control unit		0.05 % of measuring range final value/°C 0.09 % of measuring range final value/°F	
Temperature measurement			
Measuring range		-40 ... +130 °C/-40 ... +266 °F	
Accuracy		±1 % of measuring range	
Mechanical data (electronic control unit)			
Degree of protection		rail mounted	IP20
		surface mounted	IP65
Materials		rail mounted	Aluminium, display: polyester foil
		surface mounted	Aluminium/acrylic
Housing dimensions (LxWxH)		see dimensions (previous page)	
Weight		rail mounted	365 g/0.805 lb
		surface mounted	1200 g/2.65 lb
Cables		voltage supply	3x0,75 mm²/3x1.16·10 ⁻³ in. ² (AWG 18)
		to monitoring head	LifYCY 4x2x0,2 mm²/4x2x0.31·10 ⁻³ in. ² (AWG 24)
		analogue outputs	2 x LifYCY 2x0,25 mm²/2x0.388·10 ⁻³ in. ² (AWG 24)
		limit value outputs	2 x LifYCY 3x0,38 mm²/3x0.589·10 ⁻³ in. ² (AWG 22)
		Max. cable length to monitoring head	200 m/656 ft
⁽¹⁾ At constant temperature and flow conditions and stable thermal conductivity. ⁽²⁾ The accuracy values were determined under ideal conditions: - symmetrical complete flow profile - correct mounting in the pipe - inlets and outlets according to EN ISO 5167-1 MRFV=measuring range final value Windows and Windows Vista are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.			

Block diagram



- 1 Input voltage: DC 10 ... 40 V
- 2.1 User interface 1: relay outputs: 2 limit values
transistor outputs: 2 limit values + 1 error indication + 1 busy signal or pulse output (software selected)
- 2.2 User interface 2: analogue outputs: temperature and flow current or voltage
- 2.3 User interface 3: RS232 interface
- 2.4 User interface 4: totalizer reset: edge controlled potential free, normally open contact or voltage pulse DC10 ... 40 V
- 3 Keyboard/Display: keypads
LC display
2 x 16 digits
backlight (can be switched off)
- 4 Sensor interface: calorimetric monitoring head type CSx
- 5 Controller system: signal processing
I/O - controlling
monitoring
parameter memory
communication

Connection diagram



- XV - power supply
- XSK - calorimetric monitoring head
- XRE - totalizer reset
- XSE - RS232 communication interface
- XAO - analogue outputs
- XAH - signal outputs

Flow measurement range (CSF-11.. monitoring head)

The flow measurement range is determined by the inside pipe diameter (see table). It can be calculated with the following equation:

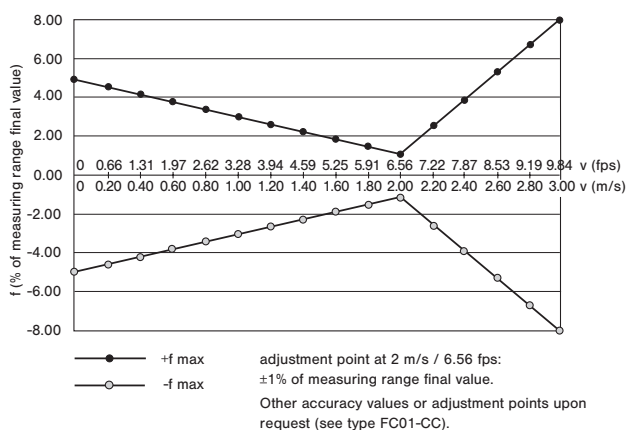
$$Q = V_N \times A_R$$

Q (m³/h) - flow quantity
 V_N (m/h) - average velocity
 A_R (m²) - inside pipe diameter

Setting range for inside pipe diameter:
 50.0 mm ... 999.9 mm/1.97 in. ... 39.4 in.
 velocity measuring range:
 0 ... 3 m/s (0 ... 4 m/s)/0 ... 9.84 fps (0 ... 13.1 fps)

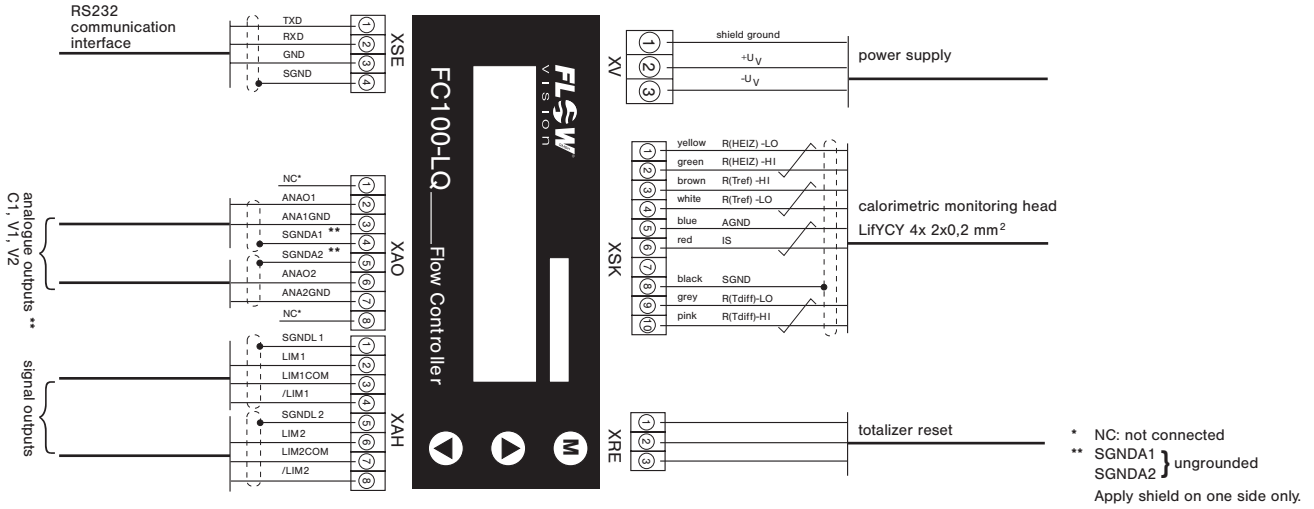
inside pipe diameter	measuring range	display range
D in mm	in m³/h	in m³/h
50	21	28
80	55	70
100	85	110
150	190	250
200	340	450
250	530	700
350	1040	1380
500	2120	2830

Failure diagram for water

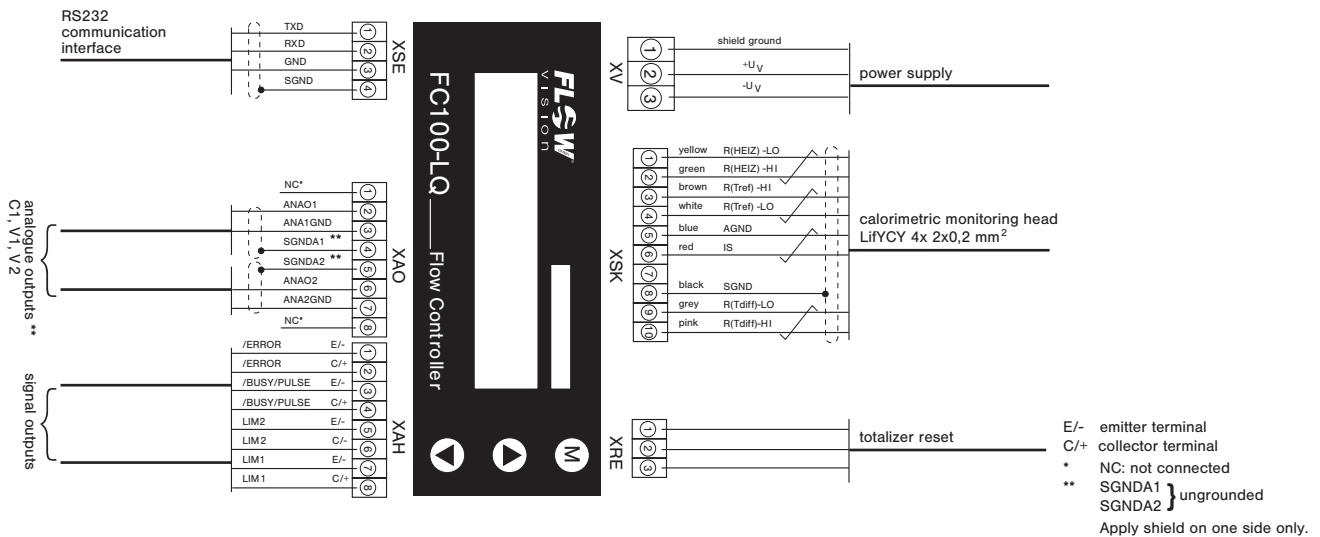


Connection diagrams

FC100-LQ with relay outputs

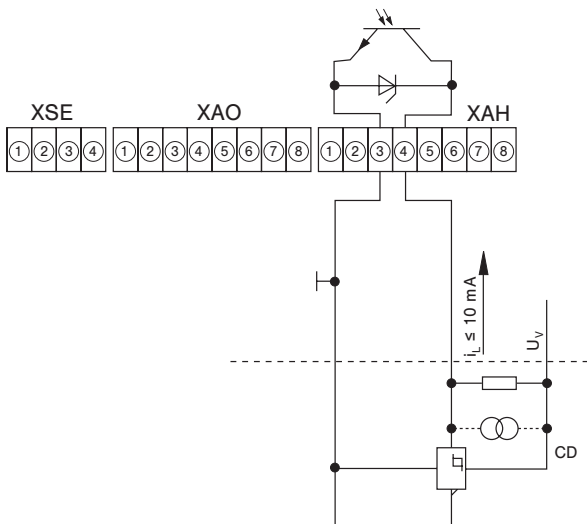


FC100-LQ with transistor outputs

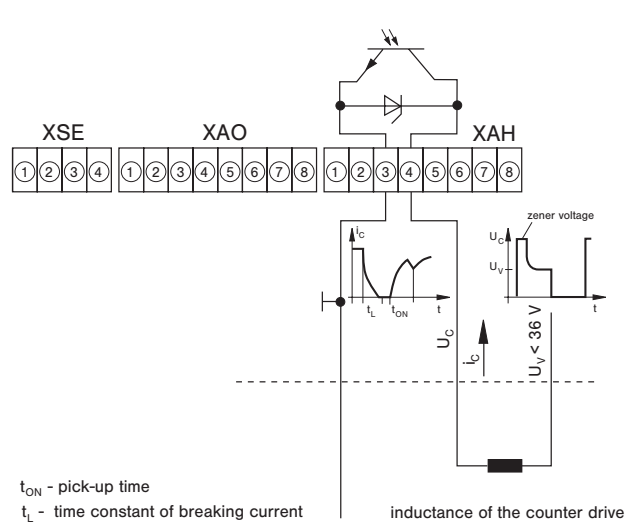


FC100-LQ - Recommended connection of pulse output

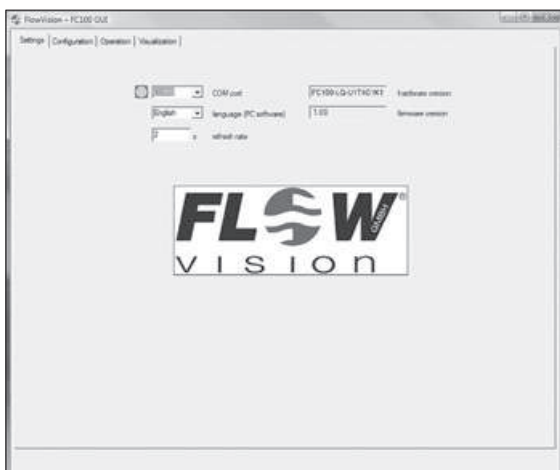
Electronic signal processing



Electromagnetic pulse counter

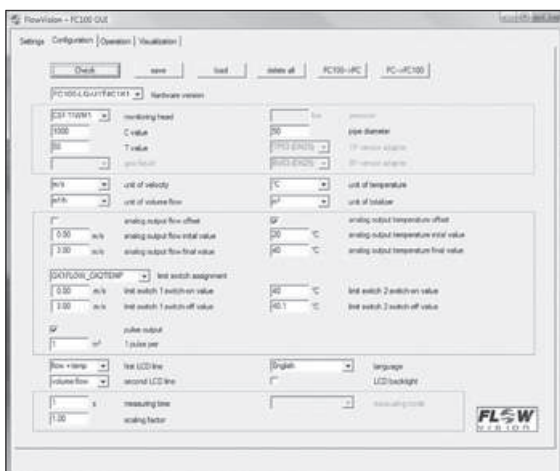


PC-Software



General Settings:

- Selection of the language of the PC software
- Definition how often measuring values are read from the FC100-LQ
- Indication of hardware and firmware version



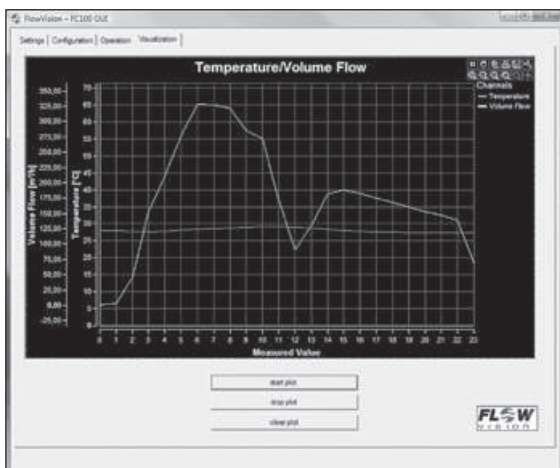
Configuration of the FC100-LQ:

- Basic settings (e.g. type of measuring head, pipe size)
- Selection of the units of all measured values
- Configuration of the analogue and signal outputs and the pulse output
- Settings of the display and further configuration possibilities



Operation of the FC100-LQ:

- Indication of the actual measured values and saved minimum and maximum values
- Indication of the actual condition of the signal outputs
- Logging of all measured values - export to Microsoft® Excel®



Visualization of the measured values:

- Plot of the measured values (volume flow and temperature)
- Flexible indication of the measured values (e.g. scale, zoom, scroll)

Microsoft and Excel are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

- A
- 1
- 2
- 3
- 4
- 5
- 6a
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- B

Description

Sensor adapters TP and ball valves BV facilitate correct positioning and exchange of CSP monitoring heads, FC03, FC04 or FS10 in pipes with process connection DN 15 ... DN 50. Ball valve BV enables pressure-free installation and removal of CSP monitoring heads and Flow Meters FC03, FC04 and Flow Monitor FS10 simply by closing the input and output pipe. The measuring points are suited to temporary measurements; after completion of the measuring cycle they can be closed by means of blanking plugs.

Features

- Correct positioning of sensor
- Ease of sensor replacement
- Measuring point can be closed if not used
- Sensor adapter available as screw-in or welding type
- Ball valve also serves as a shutoff valve (both input and output)

Ordering information

Type	
TP	Sensor adapter with internal thread
Process connection/Nominal size	
01	DN 15 G 1/2 internal thread length: 50 mm/1.97 in.
02	DN 20 G 3/4 internal thread length: 64 mm/2.52 in.
03	DN 25 G1 internal thread length: 78 mm/3.07 in.
04	DN 32 G1 1/4 internal thread length: 94 mm/3.70 in.
05	DN 40 G1 1/2 internal thread length: 110 mm/4.33 in.
06	DN 50 G2 internal thread length: 138 mm/5.43 in.
Material of the area exposed to medium	
M1	stainless steel 1.4571/AISI 316Ti PN 315 bar/4570 psi
M3	brass (not TP-03..) PN 25 bar/363 psi
M5	red brass (only TP-03..) PN 16 bar/232 psi
TP - 01	M3 ordering example

Ordering information

Type	
TP	Sensor adapter with welding nipples
Process connection/Nominal size	
01	DN 15 dia.d: 16 mm/.630 in. length: 80 mm/3.15 in.
02	DN 20 dia.d: 20 mm/.787 in. length: 70 mm/2.76 in.
03	DN 25 dia.d: 25 mm/.984 in. length: 80 mm/3.15 in.
04	DN 32 dia.d: 32 mm/1.26 in. length: 100 mm/3.94 in.
05	DN 40 dia.d: 40 mm/1.57 in. length: 110 mm/4.33 in.
06	DN 50 dia.d: 50 mm/1.97 in. length: 140 mm/5.51 in.
Material of the area exposed to medium	
M1	stainless steel 1.4571/AISI 316Ti
Process connection	
SA	welded connection
TP - 01	M1 - SA ordering example

Sensor adapter TP... / Ball valve BV...



TP-...

BV-...

Ordering information

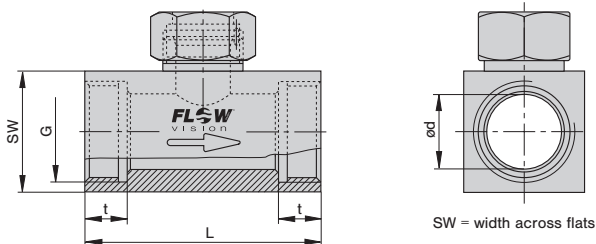
Type	
BV	ball valve with internal thread
Process connection/Nominal size	
03	DN 25 G1 internal thread length: 88 mm/3.46 in.
04	DN 32 G1 1/4 internal thread length: 100 mm/3.94 in.
05	DN 40 G1 1/2 internal thread length: 110 mm/4.33 in.
06	DN 50 G2 internal thread length: 131 mm/5.16 in.
Material of the area exposed to medium	
M3	nickel plated brass, Delrin seal
BV - 03	M3 ordering example

Accessories

Description	Ref. No.
Blanking plug, brass, with O ring	OZ121Z000186
Union nut, brass	Y 306 901 01
Blanking plug, stainless steel 1.4571/AISI 316 Ti, with viton O ring	OZ121Z000187
Union nut, stainless steel	Y 306 901 03

Dimensions

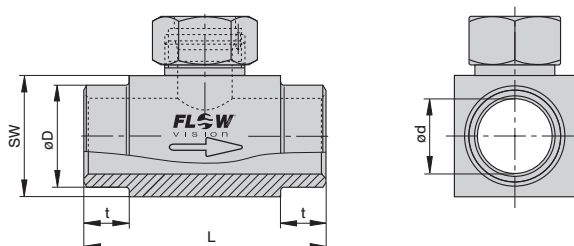
TP-... Sensor adapter with internal thread



Material stainless steel (-M1): PN 315 bar / 4570 psi
 Material brass (-M3): PN 25 bar / 363 psi
 Material red brass (-M5): PN 16 bar / 232 psi

Type	DN		dia. d		G	t		L		SW	
	mm	in.	mm	in.	in.	mm	in.	mm	in.	mm	in.
TP-01 ...	15	.591	16	.630	1/2"	11	.433	50	1.97	27	1.06
TP-02 ...	20	.787	20	.787	3/4"	12	.472	64	2.52	32	1.26
TP-03 ...	25	.984	25	.984	1"	14	.551	78	3.07	40	1.57
TP-04 ...	32	1.26	32	1.26	1 1/4"	15	.591	94	3.70	50	1.97
TP-05 ...	40	1.57	40	1.57	1 1/2"	15	.591	110	4.33	55	2.16
TP-06 ...	50	1.97	50	1.97	2"	19	.748	138	5.43	70	2.76

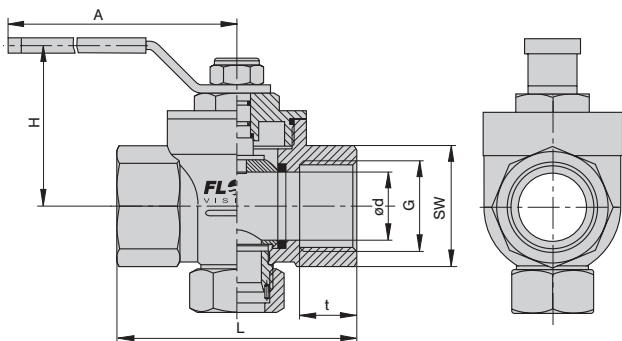
TP-..M1-SA Sensor adapter with welding nipples



PN 315 bar / 4570 psi

Type	DN		dia. d	dia. D	t		L		SW		
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
TP-01M1-S A	15	.591	16	21.3	.839	15	.591	80	3.15	27	1.06
TP-02M1-S A	20	.787	20	26.9	1.06	15	.591	70	2.76	32	1.26
TP-03M1-S A	25	.984	25	33.7	1.33	15	.591	80	3.15	40	1.57
TP-04M1-S A	32	1.26	32	42.4	1.67	15	.591	100	3.94	50	1.97
TP-05M1-S A	40	1.57	40	48.3	1.90	15	.591	110	4.33	55	2.16
TP-06M1-S A	50	1.97	50	60.3	2.37	15	.591	140	5.51	70	2.76

BV-...M3 Ball valve with internal thread



PN 25 bar / 363 psi

Type	DN		dia. d	G	t		L		SW		H		A		
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
BV-03M 3	25	.984	25	.984	1"	21	.827	88	3.46	41	1.61	59	2.32	115	4.53
BV-04M 3	32	1.26	32	1.26	1 1/4"	24	.945	100	3.94	50	1.97	65	2.56	115	4.53
BV-05M 3	40	1.57	40	1.57	1 1/2"	24	.945	110	4.33	54	2.13	77	3.03	150	5.91
BV-06M 3	50	1.97	50	1.97	2"	28	1.10	131	5.16	70	2.76	85	3.35	150	5.91

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

- A
- 1
- 2
- 3
- 4
- 5
- 6a
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- B

Description

Calorimetric plug-in type monitoring head for sensor adapter TP/BV and flow meter FC100-LQ, suitable for use with liquids and pipe sizes up to DN 50.
Calibrated in water.

Features

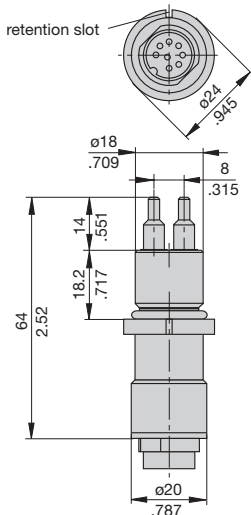
- Ease of installation
- Small physical size
- Medium temperature range -40 ... +130 °C/-40 ... +266 °F
- Material: stainless steel 1.4571/AISI 316 Ti
- Sealing: Viton o-ring

Ordering information

Type No.	
CSP	plug-in type monitoring head with calorimetric sensors
Process connection	
11	plug-in type
Medium	
W	water (standard)
Material of areas exposed to medium	
M1	stainless steel 1.4571/AISI 316 Ti (standard)
Length of shank/thread	
L05	18.2 mm/.717 in. (standard)
Electrical connection	
E10	round connector with tinned contacts (plug and cable to order separately)
Certification	
T0	without certificate (standard) *)
Specification of medium	
xxx	
CSP - 11 W M1 L05 E10 T0 - ...	ordering example

*) for detailed information please see section 0.

Dimensions



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

Monitoring head CSP



CSP-11

Technical data

Type of head	plug-in type
Shank diameter	18 mm/.709 in.
Length of shank	18.2 mm/.717 in.
Length of sensor	14 mm/.551 in.
Suitable for	water (other liquids upon request)
Temperature range *)	-40 ... +130 °C/-40 ... +266 °F
(of medium)	
Temperature drift	± < 0.05 % of measuring range/°C
of monitoring head	± < 0.09 % of measuring range/°F
	(T = +20 ... +80 °C/+68 ... +176 °F)
Measuring ranges	in TP-01 0.02 - 2.2 (2.9) m³/h
	in TP-02 0.04 - 3.4 (4.5) m³/h
	in TP-03 0.05 - 5.3 (7.1) m³/h
	in TP-04 0.1 - 8.7 (11.6) m³/h
	in TP-05 0.14 - 13.6 (18.1) m³/h
	in TP-06 0.2 - 21.2 (28.3) m³/h
Pressure resistance ⁽¹⁾	100 bar/1450 psi
Degree of protection ⁽²⁾	IP67
Material	
housing:	stainless steel 1.4571/AISI 316 Ti
	laser welded
o-ring:	Viton
Cable to electronic control unit	LifYCY 4x2x0.2 mm² (AWG 24)

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

⁽²⁾ with mating connector

^{*)} max. +85 °C/+185 °F in the connector area

Cable types 15/18 with connectors



Do + Ka type 15
Do + Ka type 18

Technical data

Cable type 15

Features: highly flexible, paired, fully shielded, electrical and thermal properties at +20 °C/+68 °F

Conductor resistance:	92 Ω/km
Insulation resistance:	20 MΩ x km
Operating voltage:	250 V
Withstand voltage:	500 V
Max. load:	2 A
Temperature range:	-10 °C ... +80 °C/+14 °F ... +176 °F (processing and operation) -30 °C ... +80 °C/-22 ° F ... +176 °F (transport and storage)

Cable type 18

Features: non-halogenous, highly flexible, cold- and heat resistant, paired, fully shielded, electrical and thermal properties at +20 °C/+68 °F

Conductor resistance:	80 Ω/km
Insulation resistance:	1200 MΩ x km
Operating voltage:	300 V
Withstand voltage:	1500 V
Max. load:	3 A
Temperature range:	-50 °C ... +180 °C/-58 °F ... +356 °F

Ordering information

Type between calorimetric monitoring heads **CSP** and **FC100-LQ, FC100-FH-LQ**

Do + Ka type 15 **PVC** insulated cable, type LifYCY 4x2x0,2 mm² (AWG 24) 8-pole round connector + 10-pole clamping connector

Do + Ka type 18 **silicone** insulated cable, type 4x2x0,2mm² (AWG 24) 8-pole round connector + 10-pole clamping connector

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, 100 m, 110 m, 120 m, 130 m, 140 m, 150 m, 160 m, 170 m, 180 m, 190 m, 200 m (up to max 656 ft)

Do + Ka type 15 - **2 m/6.56 ft** ordering example

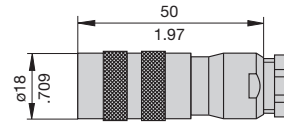
Description

Cable between Flow Meter FC100-xxx and calorimetric monitoring head type CSP.

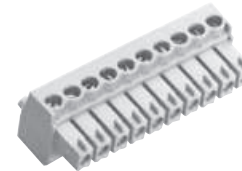
- Connection to monitoring head by means of 8-pole round connector
- Connection to FC100-xxx by means of 10-pole clamping connector (XSK)

Accessories

8-pole round connector
(without cable, for individual wiring by customer)
OZ112Z003124



10-pole clamping connector for cable types 15 and 18
(without cable, for individual wiring by customer)
OZ112Z000167



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

Standard warranty cover will be invalidated if the correct FlowVision monitoring head/control unit connecting cable is not used.

A

1

2

3

4

5

6a

7

8

9

10

11

12

13

14

15

16

17

18

19

B

Description

Extended calorimetric monitoring head with variable immersion depth for Flow Meter FC100-LQ, suitable for use in pipelines with process connections DN 50 plus.

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

Features

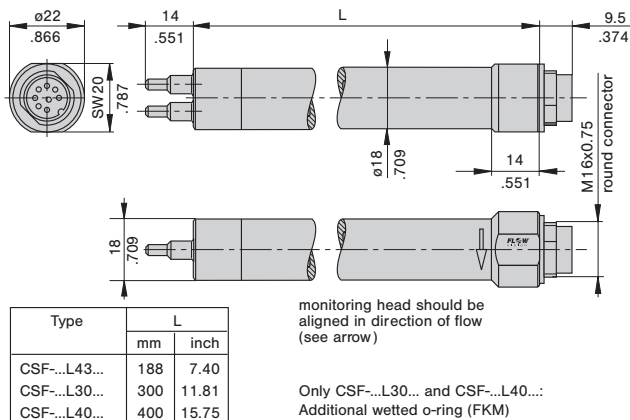
- Medium temperature range: -40 °C ... +130 °C/-40 °F ... +266 °F
- Material: stainless steel 1.4571/AISI 316 Ti

Ordering information

Type	CSF	Extended monitoring head with calorimetric sensors
		Monitoring head design
	11	Monitoring head with variable immersion depth
		Medium
	W	water
		Material of areas exposed to medium
	M1	stainless steel 1.4571/AISI 316 Ti
		Process connection
	00	without flange; see accessories for connections
		Length of shank/thread
	L43	188 mm/7.40 in. (standard) other lengths upon request
		Electrical connection
	E10	round connector with tinned contacts (plug and cable to order separately)
		Certification
	T0	without certificate (standard) *)
		Specification of medium
	xxx	
CSF - 11 W M1 00 L43 E10 T0 - ... ordering example		

*) for detailed information please see section 0

Dimensions



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

Monitoring head CSF



CSF-11
variable immersion depth

Technical data

Type of head	push-in
Shank diameter	18 mm/.709 in.
Length of shank	188 mm/7.40 in.
Length of sensor	14 mm/.551 in.
Suitable for	water
Temperature range*)	-40 °C ... +130 °C/-40 °F ... +266 °F (of water)
Temperature drift of sensor	± < 0.05 % of measuring range/°C ± < 0.09 % of measuring range/°F (T = +20 °C ... +80 °C/+68 °F ... +176 °F)
Measuring range	0 ... 3 m/s / 0 ... 9.84 fps
Pressure resistance ⁽¹⁾ (sensor)	100 bar/1450 psi
Pressure resistance (installation)	depending on connection (see accessories)
Degree of protection ⁽²⁾	IP67
Material	stainless steel 1.4571/AISI 316 Ti
Cable to electronic unit	LifYCY 4x2x0.2 mm ² /4x2x0.31·10 ⁻³ in. ² (AWG 24)

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

⁽²⁾ with mating connector

^{*)} max. +85 °C/+185 °F in the connector area

Cable types 15/18 with connectors



Do + Ka type 15
Do + Ka type 18

Technical data

Cable type 15

Features: highly flexible, paired, fully shielded, electrical and thermal properties at +20 °C/+68 °F

Conductor resistance:	92 Ω/km
Insulation resistance:	20 MΩ x km
Operating voltage:	250 V
Withstand voltage:	500 V
Max. load:	2 A
Temperature range:	-10 °C ... +80 °C/+14 ° F ... +176 °F (processing and operation) -30 °C ... +80 °C/-22 ° F ... +176 °F (transport and storage)

Cable type 18

Features: non-halogenous, highly flexible, cold- and heat resistant, paired, fully shielded, electrical and thermal properties at +20 °C/+68 °F

Conductor resistance:	80 Ω/km
Insulation resistance:	1200 MΩ x km
Operating voltage:	300 V
Withstand voltage:	1500 V
Max. load:	3 A
Temperature range:	-50 °C ... +180 °C/-58 °F ... +356 °F

Description

Cable between Flow Meter FC100-LQ-xxx and calorimetric monitoring head type CSF.

- Connection to monitoring head by means of 8-pole round connector
- Connection to FC100-LQ-xxx by means of 10-pole clamping connector (XSK)

Ordering information

Type between calorimetric monitoring heads CSF and FC100-LQ, FC100-FH-LQ

Do + Ka type 15	PVC insulated cable, type LifYCY 4x2x0.2 mm ² (AWG 24) 8-pole round connector + 10-pole clamping connector
Do + Ka type 18	silicone insulated cable, type 4x2x0.2 mm ² (AWG 24) 8-pole round connector + 10-pole clamping connector

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, 100 m, 110 m, 120 m, 130 m, 140 m, 150 m, 160 m, 170 m, 180 m, 190 m, 200 m/656 ft (up to max 656 ft)
-------------	---

Do + Ka type 15 - 2 m ordering example

A

1

2

3

4

5

6a

7

8

9

10

11

12

13

14

15

16

17

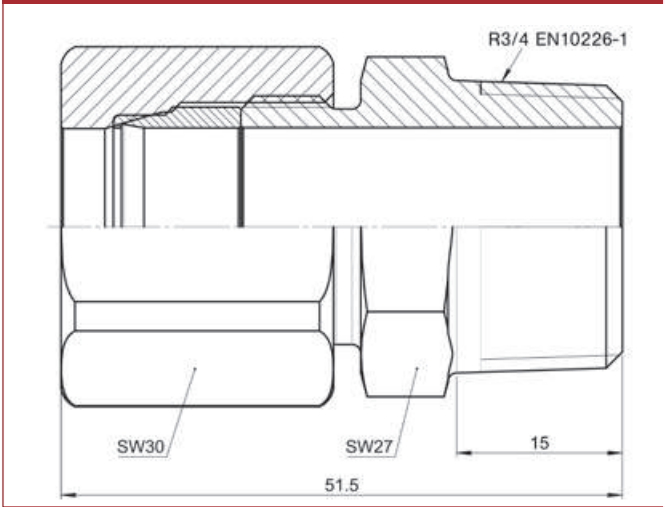
18

19

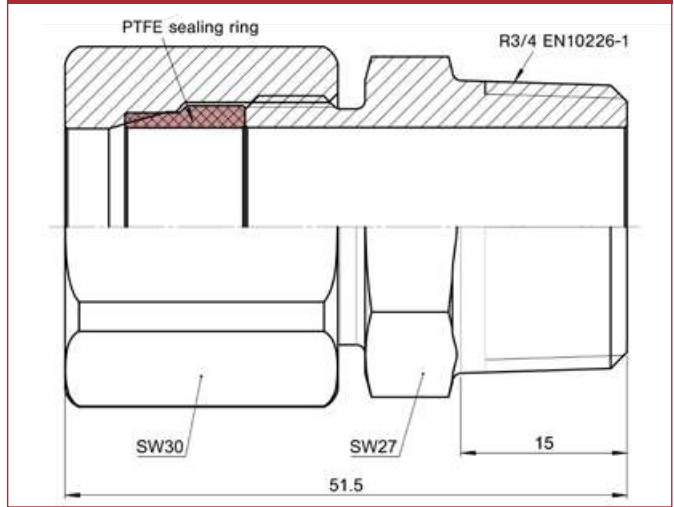
B

A

Threaded installation bush



PTFE sealing ring for threaded installation bush



Suitable up to 25 bar/363 psi abs. if used with push-in sensors.
Please observe assembly instructions and safety guidelines!
Metal sealing ring can't be disassembled after assembly.

Suitable for threaded installation bush VK-04D8
Applicable up to 2 bar/29 psi abs. if used with push-in sensors and threaded installation bush VK.
Ordering no.: Y50005101

1

2

3

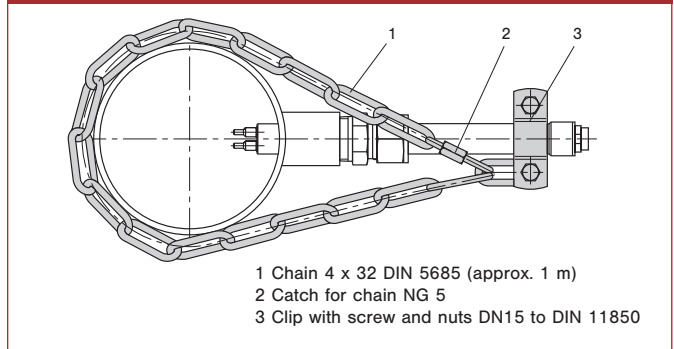
4

5

Ordering information – threaded installation bush

Type			
VK	threaded installation bush		
Process connection			
04	thread R3/4"		
Bore			
D8	18 mm		
Material			
M1	stainless steel 1.4571		
M3	Hastelloy C22 2.4602		
M14	tantalum (coating 50±20 µm), base material 1.4571		
M...	further materials upon request		
VK -	04	D8	M1 ordering example

Locking set



Locking set for push-in sensors.
Ordering no.: 0Z122Z000204

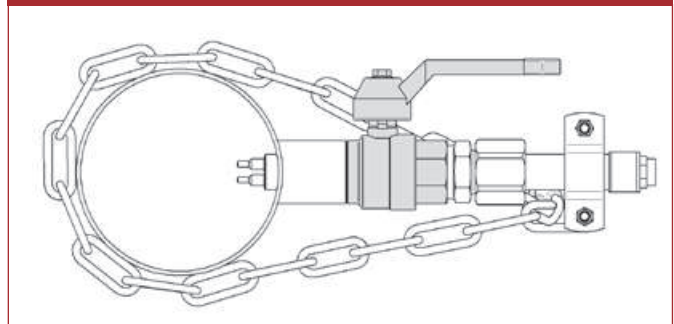
7

8

9

10

Ball valve for installation under pressure



Material (body, ball):
Brass nickel plated
Material (ball seal): PTFE
Length: 65 mm
Outside thread: G3/4", L = 13 mm
Inside thread: G3/4", L = 15 mm
Fluid temperature: -20...120 °C
Ambient temperature: 0...80 °C
Pressure: PN 25 bar (up to 80 °C)
Ordering number: BV-02M3-PI

Material (body, ball):
Stainless steel 1.4408, 1.4401
Material (ball seal): PTFE
Length: 78 mm
Outside thread: R3/4", L = 17 mm
Inside thread: Rp3/4", L = 13 mm
Fluid temperature: -30...180 °C
Ambient temperature: 0...80 °C
Pressure: PN 64 bar (up to 80 °C)
Ordering number: BV-02M15-PI

11

12

13

14

15

16

17

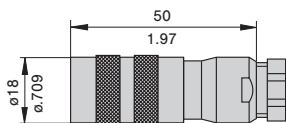
18

19

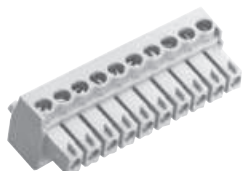
B

Further accessories

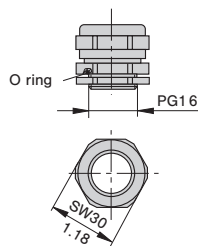
8-pole round connector
(without cable, for individual wiring by customer)
OZ112Z003124



10-pole clamping connector for cable types 15 and 18
(without cable, for individual wiring by customer)
Z00020



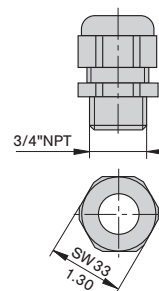
PG16 nickel-plated brass
(standard)
OZ122Z000128



pressure resistant up to 2 bar/29.0 psi

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

NPT3/4" moulded, black
OZ122Z000131



pressure resistant up to 2 bar/29.0 psi

Caution: Standard warranty cover will be invalidated if the correct FlowVision monitoring head/control unit connecting cable is not used.

- A
- 1
- 2
- 3
- 4
- 5
- 6a**
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- B