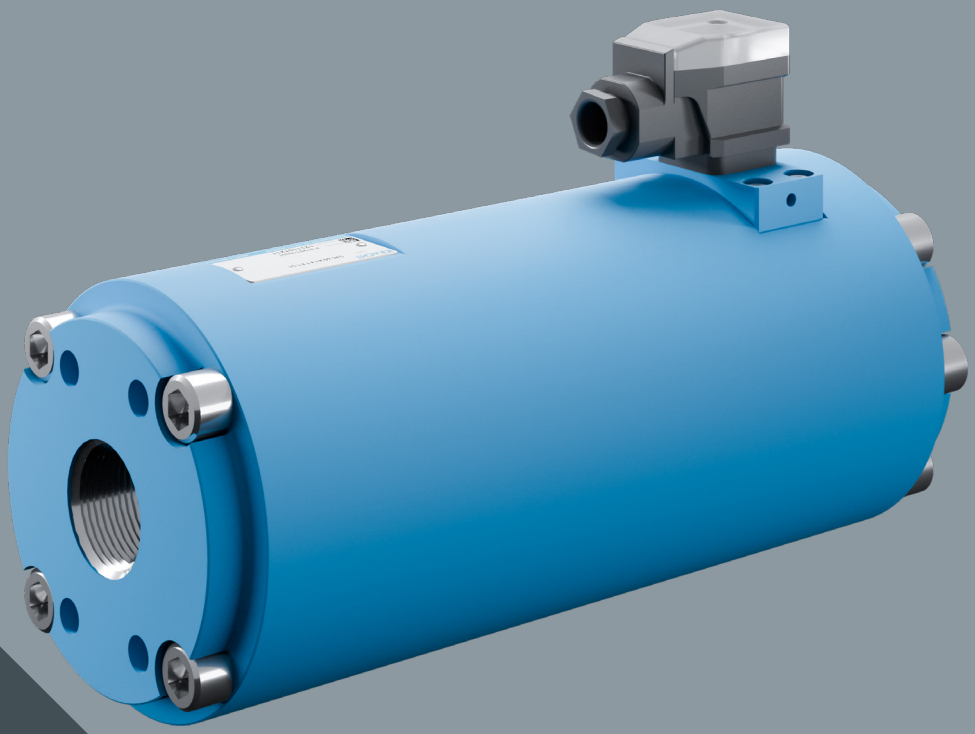
KRACHT®
FLUID TECHNOLOGY AND SYSTEMS

SVC
SCREW TYPE FLOW METERS



US

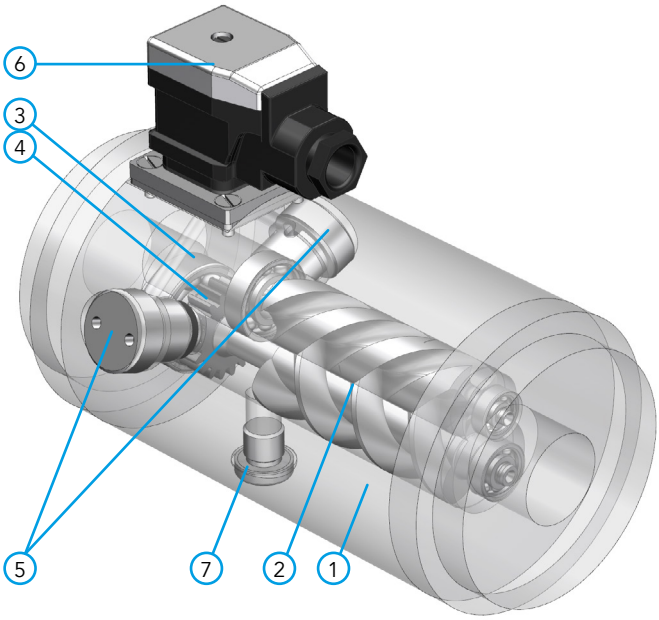
KRACHT®

FLUID TECHNOLOGY AND SYSTEMS

Content

General

Construction



1 Housing
2 Measuring system (screw spindles)
3 Bearing (ball bearings)
4 Sensing wheel
5 Sensors
6 Connector
7 Measuring connection (pressure, temperature, etc.)

General product characteristics

- High-precision measurements with excellent repeatability
- Pulsation-free measuring principle
- Maximal measurement resolution if used with encoder
- IO-Link technology available
- Analogue technology available
- Wide measurement ranges with appropriate design sizes
- Application-optimised specification
- Very low pressure drop
- Any flow direction
  (see preferred direction of encoder versions)
- Wide temperature range
- High working pressure
- Very low noise
- Highly-dynamic measurements
- Explosion-proof versions ATEX/IECEx
- Electronics in EMV-compliant version
- RoHS-compliant

Function

Two high-precision screw spindles (2) with rolling-element bearings (3) for low friction. The liquid flow makes the spindles rotate (displacement principle) and runs through the device in axial direction. Flow in and out takes place without hardly any deflection, which means the device only loses comparatively little pressure. The measuring principle does not cause any pressure or volume flow pulsation. Because there is no need for settling sections on the inlet and outlet side, machines/plants can be designed to be more compact. All moving parts are lubricated by the measuring medium.

The spindle-mounted sensing wheel is scanned by two contact-free sensors by default. The plug is equipped with a pre-amplifier that converts the sensor signal into a square-wave signal which serves as output signal. The dual-channel scanning facilitates a higher measuring resolution and detection of the direction of flow.

Alternatively available encoder specifications deliver maximal measurement resolution.

Approvals

	Description	Country
CE	EU compliance – EMV – Pressure equipment – RoHS	European Union
EAC	EAC EMV guideline	Eurasian Economic Community
	GOST metrology, measurement technology	Russia
IO-Link	IO-Link	International

General

Electronic versions

Standard version

Standard versions feature an integrated preamplifier. This converts the pulses from the magnetic sensor system into square wave signals, which are then processed by evaluation electronics to produce specific measured values.

Alternatively, a version with remote electronics is available, which is designed for extreme temperature ranges.

Encoder version with maximised measurement resolution

Compared to standard sensors, encoders are capable of generating significantly more pulses. This increases the measurement resolution many times over. SVC flow meters with encoders generate up to 2 500 pulses per revolution and also detect the direction of flow.

Like the standard versions, encoders supply square wave signals to the evaluation electronics.

IO-Link version with internal calculation of measured values

SVC flow meters with IO-Link technology are based on standard SVCs with two sensors. Unlike versions with a preamplifier, which only supply a square wave signal to the evaluation electronics, IO-Link devices are also capable of calculating specific measured values internally. This means that these flow meters can be used in both classic PLC and IO-Link infrastructures.

Detailed information can be found on page 14.

Analogue version

SVC flow meters from the analogue series provide an analogue 4 … 20 mA current signal that can be processed by many control and measuring devices. The analogue signal is used to determine the flow rate. In addition, SVC devices with two sensors are able to transmit the flow direction via an additional digital signal.

Detailed information can be found on page 13.

Technical data

General characteristics

Type of connection	Pipe connection, SAE flange, DIN flange
Mounting position	Any
Flow direction	Any
Preferred direction of flow (only for encoder versions)	Large bearing > small bearing

General parameters

Nominal sizes	4 · 10 · 40 · 100 · 250	
Typical measurement accuracy	+/- 0.2 % from 20 mm^2/s viscosity values	
Maximum pressure (standard versions)	SVC 10 SVC 40 SVC 100 SVC 250	250 bar 250 bar 140 bar 40 bar
Maximum pressure (high-pressure versions)	SVC 4 SVC 10 SVC 40	480 bar 480 bar 480 bar
Maximum permissible pressure loss	Temporary Permanent SVC 100 (ATEX version)	25 bar 7 bar (at 50 % of max. flow rate) 10 bar
Ambient temperature	-40 … 150 °C	
Media temperature	-40 … 210 °C	
Viscosity	… 2 500 000 mm^2/s (depending on flow)	
Sound pressure level	… 52 dB(A)	

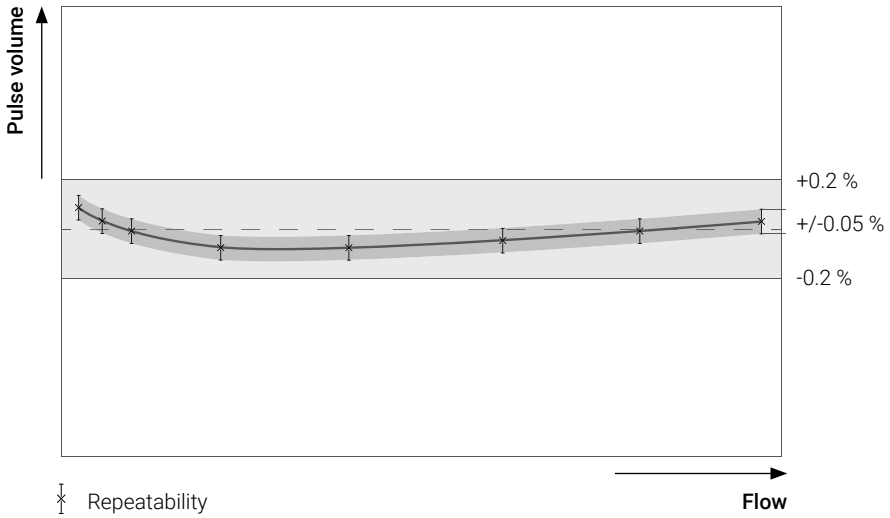
Materials

Housing and flanges	EN-GJS-400-15
Measuring spindles	Heat-treated steel
Ball bearing	Heat-treated steel
O-ring	FKM, EPDM, FEP, FKM low temperature

Accuracy characteristics

- The indicated measurement accuracy refers to the pulse volume, i.e. the percentage variance applies to the latest measurement value.
- The measurement accuracy is up to +/- 0.2 % of the measured value by default.
- Repeatability is +/- 0.05 % in stable conditions.
- The measurement accuracy tests performed can be traced to DAkkS (Deutsche Akkreditierungsstelle, German Accreditation Body).
- The measurement accuracy characteristics indicated by KRACHT is confirmed by DAkkS.
- A calibration is possible on request. The result of this calibration will be documented in the form of a measurement accuracy characteristic.

Typical measurement accuracy characteristic



Technical data

Operating parameters for standard versions

Nominal size	Pulse volume in cm^3/pulse	Resolution in pulse/l	Resolution 4-fold* in pulse/l	Pulse frequency at Q_{max} in Hz	Measuring unit starting in l/min		Measuring range in l/min
					Horizontal mounting position	Vertical mounting position	
10	1.4180	705.20	2 820.9	1 763	0.05	0.02	1.0 … 150
40	5.1300	194.90	779.7	1 950	0.10	0.02	4.0 … 600
100	9.8200	101.80	407.3	2 546	0.15	0.03	10.0 … 1 500
250	18.2500	54.80	219.2	3 425	0.90	0.06	25.0 … 3 750

Operating parameters for high-pressure versions

Nominal size	Pulse volume in cm^3/pulse	Resolution in pulse/l	Resolution 4-fold* in pulse/l	Pulse frequency at Q_{max} in Hz	Measuring unit starting in l/min		Measuring range in l/min
					Horizontal mounting position	Vertical mounting position	
4	0.2550	3 921.60	15 686.3	3 921	0.03	0.01	0.4 … 60
10	0.7085	1 410.44	5 641.8	3 534	0.05	0.02	1.0 … 150
40	5.1300	194.90	779.7	1 950	0.10	0.02	4.0 … 600

* Resolution with both measuring channels and 4-fold evaluation

Operating parameters for encoder versions

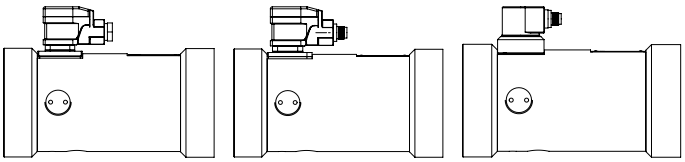
Nominal size	Sensor resolution* in pulse/rev	Pulse volume in cm^3/pulse	Resolution in pulse/l	Measured value resolution 4-fach** in pulse/l	Pulse frequency at Q_{nom} in Hz	Measuring unit starting in l/min		Measuring range in l/min
						Horizontal mounting position	Vertical mounting position	
10	512	0.078926	12 670	50 681	21 117	0.05	0.02	1.0 … 150
10	2 500	0.016164	61 866	247 463	103 110			
40	512	0.120234	8 317	33 268	84 466	0.10	0.02	4.0 … 600
40	2 500	0.024624	40 611	162 443	270 740			

* More sensor resolutions available on request
**Resolution with both measuring channels and 4-fold evaluation

Technical data

Temperature compatibility of sealing elements and electronics

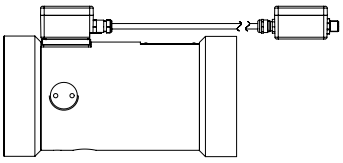
Versions with integrated electronics (Hirschmann / IO-Link / Analogue / Encoder)



	Electronic versions	Standard	High temperature	ATEX/IECEx	IO-Link	Without pre-amplifier	Encoder	Analogue
	Type key ID	S	H	X	L	V	E	A
		Medium temperature in °C						
Sealing materials	FKM	-30 … 120	-30 … 150	-15 … 80	-15 … 80	-40 … 120	-15 … 80	-40 … 80
	EPDM		-	-30 … 80	-30 … 80		-20 … 80	
	FEP		-30 … 150	-30* … 80	-30* … 80			
	FKM low temperature	-40 … 120	-40 … 150	-	-	-	-	-

		Ambient temperature in °C	
SVC versions	Standard	-40 … 80	
	IO-Link	-40 … 50 (higher temperatures on request)	
	ATEX/IECEx	FKM EPDM FEP* FKM low temperature	-15 … 60 -30 … 60 -30 … 60 -15 … 60
	Analogue	-40 … 60 for Supply voltages > 15 V -40 … 80 for Supply voltages < 15 V	

Versions with remote electronics



	Electronic versions	High temperature PLUS	ATEX/IECEx High temperature PLUS
	Type key ID	K	KX
		Medium temperature in °C	
Sealing materials	FKM	–	
	EPDM	–	
	FEP	-30 … 210	-30* … 180
	FKM low temperature	-40 … 150	-15 … 200

		Ambient temperature in °C	
SVC versions	Standard	-40 … 150 for SVC -40 … 80 for remote electronics	
	ATEX/IECEx	FKM EPDM FEP* FKM low temperature	-15 … 60 -30 … 60 -30 … 60 -15 … 60

* Devices produced up to and including 2019 can be used at temperatures of up to -15 °C

Technical data

Electrical parameters for standard versions

Number of measuring channels	1 or 2
Supply voltage	24 V +/- 20 % or 12 V +/- 20 % for versions with reduced supply voltage
Pulse amplitude	≥ 80 % of the supply voltage
Pulse with symmetric output signal	Square duty factor/channel 1:1 +/- 15 %
Signal output	PNP / NPN
Pulse offset between the two channels	90 ° +/- 30 °
Maximum power requirement	0.9 W
Maximum output power per channel	0.3 W short circuit-protected
Protection rating	IP 65

Electrical parameters for encoder versions

Number of measuring channels	2
Supply voltage	11 … 30 V
Pulse amplitude	Min_{High} ≥ Supply voltage - 3 V Max_{Low} ≤ 2.5 V
Pulse with symmetric output signal	Square, duty factor/channel 1:1 +/- 15%
Signal output	Push-Pull
Pulse offset between the two channels	90 ° +/- 30 °
Maximum load	+/-30 mA
Power consumption	Standard 45 mA Maximum 150 mA
Protection rating	IP 65

Electrical parameters for IO-Link versions

	IO-Link mode	**SIO mode**
Number of measuring channels	1 or 2	
Supply voltage	10 … 30 V	
Pulse amplitude	Min_{High} ≥ Supply voltage - 2 V Max_{Low} ≤ 2 V	
Pulse with symmetric output signal	–	Square, duty factor/channel 1:1 +/- 15 %
Signal output	active pull +/- 200 mA	
Pulse offset between the two channels	–	90 ° +/- 30 °
Maximum power requirement	1 W	
Protection rating	IP 65	

Electrical parameters for analogue versions

Number of measuring channels	1 or 2
Supply voltage	10 … 30 V DC (Reverse polarity protection up to 30 V DC)
Maximum load analogue output	793 Ω at 24 V DC
Maximum current digital output	100 mA (short circuit-protected)
Maximum power requirement	1.4 W (without analogue and digital output)
Output signals	Analogue output 0 … 24 mA (Measuring range 4 … 20 mA) Digital output High > Supply voltage - 3 V Low < 3 V
Protection rating	IP 65

Type key

SVC	10	K	1	F	1	R	2	S		H
1	2	3	4	5	6	7	8	9	10	11

1 Product	
SVC	Screw type flow meter

2 Nominal sizes
4 · 10 · 40 ·100 · 250

3 Bearings	
K	Ball bearing
T	Cupsuled ball bearing (only nominal sizes 4 and 10)

4 Materials		
1	Standard version	Housing spheroidal cast iron EN-GJS-400-15 / spindles steel
3	High-pressure version (higher resolution)	Housing spheroidal cast iron EN-GJS-400-15 / spindles steel

5 Sealings	
F	FKM
E	EPDM
P	FEP
L	FKM low temperature

6 Surfaces	
1	Standard (coated)
3	Without coating

7 Connection types	
R	Pipe connection
S	SAE
D	DIN

8 Sensor technologies	
2	2 sensors
5	Encoder (only nominal size 10 and 40)

9 Electronic versions (pre-amplifier)		Voltage	Media temperature	Conversion	Electrical connections
S	Standard	24 V	-40 … 120 °C	internal	
H	High-temperature	24 V	-40 … 150 °C	internal	
K	High-temperature PLUS	24 V	-40 … 210 °C	external	
X	ATEX/IECEx (isolating switching amplifier to be ordered separately)		-30 … 80 °C	internal	**H**
KX	ATEX/IECEx High-temperature PLUS		-30 … 200 °C	external	**V**
L	IO-Link	10 … 30 V	-30 … 80 °C	internal	**M**
V	Without pre-amplifier		-40 … 120 °C		
E	Encoder (only nominal sizes 10 and 40)	11 … 30 V	-20 … 80 °C	internal	**512 / 2500**
A	Analogue	10 … 30 V	-40 … 80 °C	internal	**F**

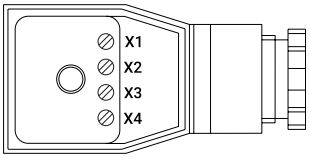
10 Cable lengths	
	Without cable between flow meter and electronic
2	With 2 m cable
5	With 5 m cable
10	With 10 m cable

11 Electrical connections (Connector and pre-amplifier case)		
H	Appliance socket (Hirschmann)	standard
M	Appliance socket (Hirschmann)	with M12x1, 4-pole connection
F	Appliance socket (Hirschmann)	with M12x1, 5-pole connection
C	Aluminium connection box	with Cannon plug KPTC
V	Without	
512	Encoder with 512 pulse/rev	with M12x1, 4-pole connection
2 500	Encoder with 2 500 pulse/rev	with M12x1, 4-pole connection

Electronics

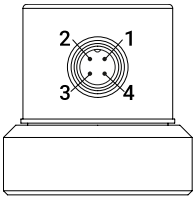
Electrical connections

Standard and high-temperature versions



X1	Supply voltage	brown
X2	Channel 1	green
X3	Channel 2	yellow
X4	GND	white

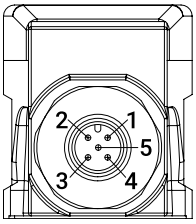
Encoder versions



1	Supply voltage
2	Channel 1
3	GND
4	Channel 2

Connection plug arrangement (M12x1 metal / 4-pole round connector)

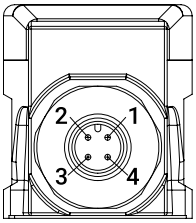
Analogue versions



1	Supply voltage
2	Analogue output
3	GND
4	Digital output
5	Digital input

Connection plug arrangement (M12x1 metal / 5-pole round connector)

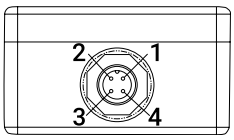
IO-Link versions



	IO-Link mode	SIO mode
1	Supply voltage	Supply voltage
2	I/Q	Channel 1
3	GND	GND
4	C/Q	Channel 2

Connection plug arrangement (M12x1 metal / 4-pole round connector)

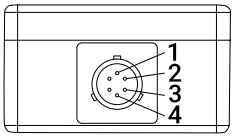
High-temperature PLUS and low-temperature versions



1	Supply voltage
2	Channel 1
3	GND
4	Channel 2

Connection plug arrangement (M12x1 / 4-pole round connector)

Cannon versions



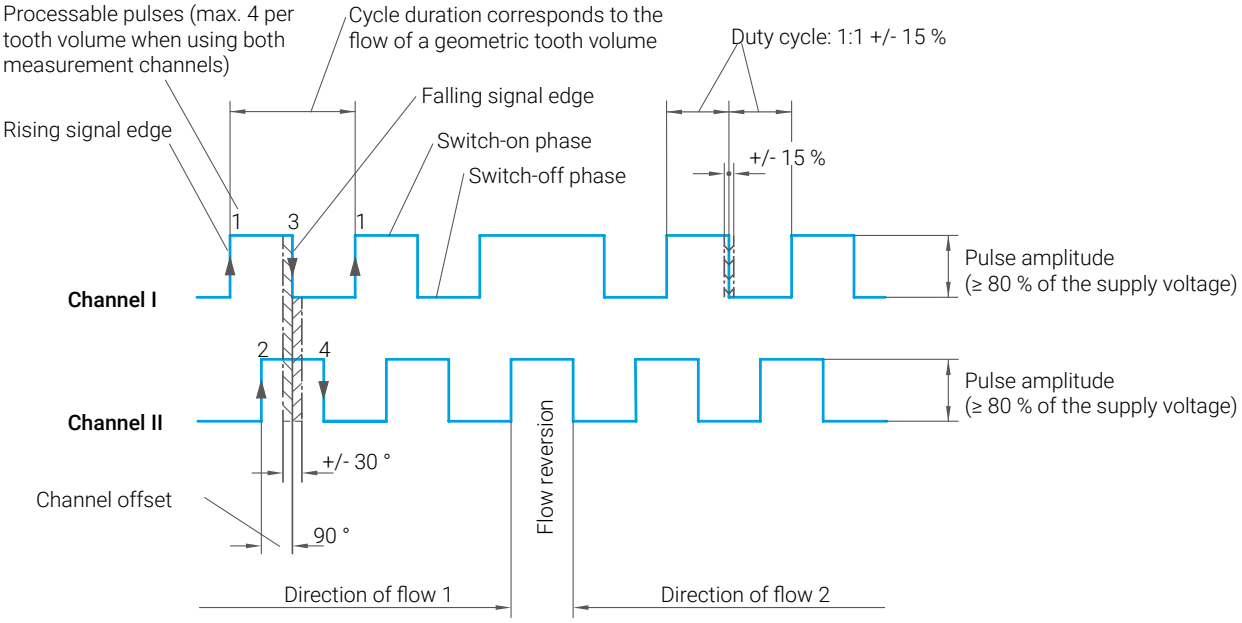
1	Supply voltage
2	Channel 1
3	Channel 2
4	GND

Electronics

Signal characteristics (standard, high-temperature, encoder, IO-Link versions in SIO mode)

Signal behaviour

The pre-amplifier generated square-wave signal enables application specific resolutions. Standard resolution means that the electronics will process one pulse from a channel/sensor per cycle time (rising signal edge in channel I). In contrast, the 4-fold evaluation uses the maximal pulse rate per cycle time, allowing for a resolution that is four time as high as in the standard evaluation. All characteristics of the signal (rising and falling signal edge of both sensors/channels) are exploited in the evaluation.



Electronics

Analogue versions

General

In addition to a digital signal indicating the flow direction, analogue technology enables an analogue 4 ... 20 mA current signal to be provided for flow rate determination. A SVC with two sensors and a digital input on the evaluation electronics are required for digital flow direction determination.

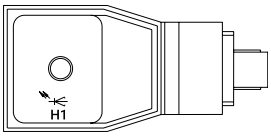
The 4 ... 20 mA range can be adapted to the application-specific measuring range.

Analogue technology has been specially developed for common analogue current inputs of controllers or measuring devices.

Charakteristika:

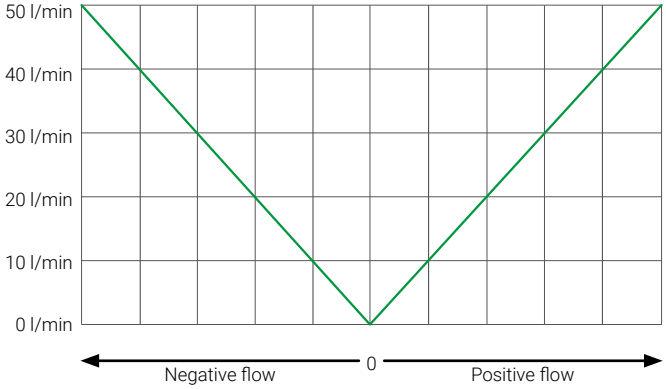
- Individualisation of the measuring range possible
- Universal application possibilities
- 16 bit resolution
- Cable break detection
- Display of flow rate and direction by proportional LED behaviour on the device

Connection plug

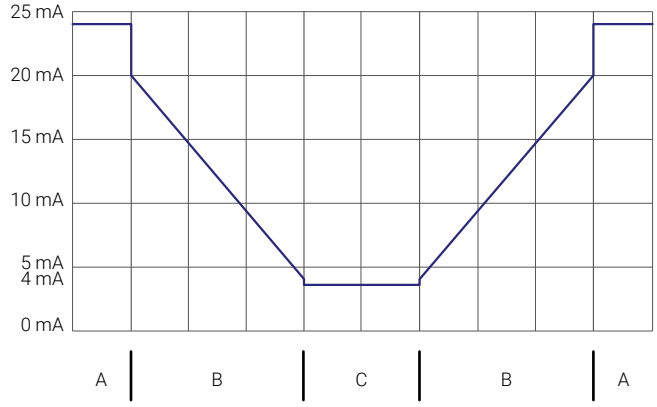


Signal behaviour

Actual flow rate

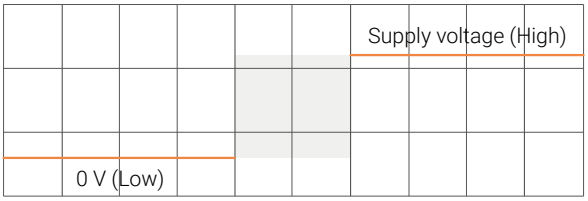


Analogue signal
based on a defined measuring range of 8 to 40 l/min



A Maximum flow exceeded
B Measurable flow range
C Minimum flow not reached

Digital signal



Below the minimum flow rate, the digital signal is undefined.

LED behaviour

	LED behaviour proportionally dependent on flow rate	
Blue	Continuous	Negative flow Maximum flow exceeded
Blue / Green	Flashing	Negative flow Flow within the measuring range
Green	Continuous	No measurable flow
Green / Red	Flashing	Positive flow Flow within the measuring range
Red	Continuous	Positive flow Maximum flow exceeded

Electronics

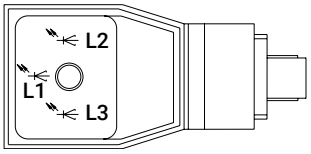
IO-LINK version

General

Thanks to its international standardisation (IEC 61131-9), the IO-Link technology offers a point-to-point connectivity with continuous monitoring between any desired control layer and the SVC-IO-Link assembly. Handling and startup is made easy by the associated IODD file (IO Device Description) strongly simplified.

The SVC-IO-Link assembly directly delivers all measured values with units. In the preset SIO mode (standard input output), the volume counter gives squarewave signals if the IO-Link mode is not enabled by an IO-Link master. This guarantees downward compatibility of the SVC-IO-Link assembly with the standard square-wave signal (see page 12).

Connection plug

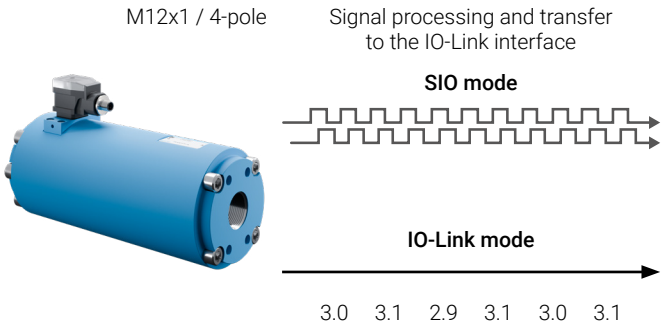


	IO-Link mode	SIO mode
L1 green	Flashing at 1/s	Continuous light, ready for operation
L2 red	Channel 1 gear detected = LED on gear not detected = LED off	
L3 red	Channel 2 gear detected = LED on gear not detected = LED off	

Technical characteristics

Manufacturer ID	0x0524
Device ID	0x000001
Name of manufacturer	Kracht GmbH
IO-Link connection plug	V1.1
Bit rate	COM3 / 230.4 kbit/s
Minimum cycle time	500µs
SIO mode supported	Yes
Use of indexed service data (IS DU)	Yes
Data storage (DS) possible	Yes

Communication of the assembly



SIO mode
- Same output of the two square-wave signals as in standard pre-amplifier

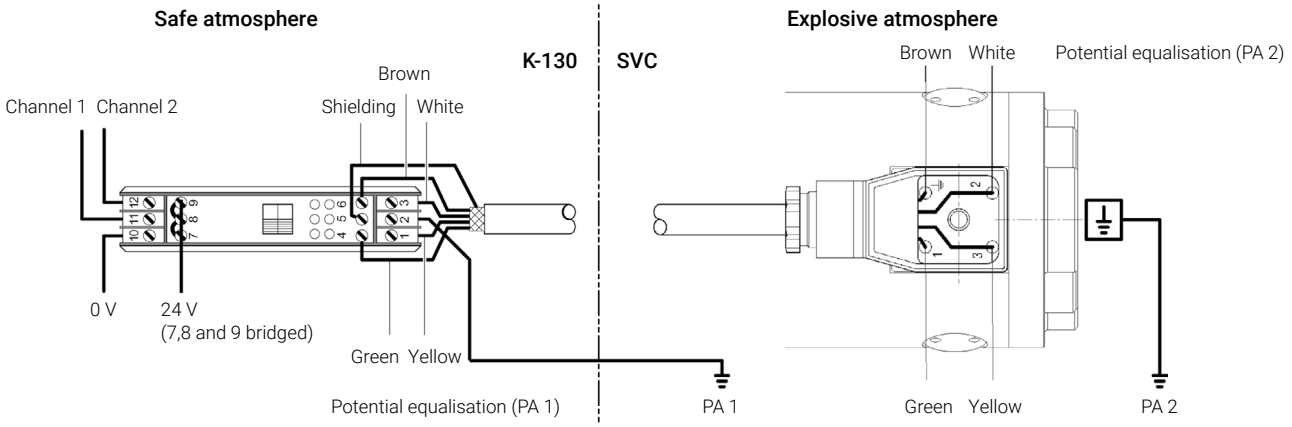
IO-Link mode
Signal output as described in IODD according to the following units:
- number of pulses
- litres

...

Explosion-proof version (ATEX/IECEx)

General

- All screw type flow meters are available as explosion-proof versions according to ATEX and IECEx certification.
- The explosion-proof version consists of the flow meter (intrinsically safe electric gear) and the switching amplifier K 130 (accessory electric gear). This layout meets the ignition protection type „intrinsic safety“.
- The flow meter is installed in the explosive atmosphere.
- The switching amplifier K 130 is assembled in the safe atmosphere.
- The flow meter is electrically connected with the switching amplifier. The switching amplifier analyses the sensor signals coming from the flow meter and converts them into square-wave signals.
- It is prohibited to deploy the flow meter in explosive atmospheres without switching amplifier.
- The cable between the flow meter and switching amplifier may be up to 400 m long.
- The switching amplifier features LEDs to monitor for line breakage / short circuit, channel switching state, and voltage supply.



BVS 17 ATEX E 106 X / BVS 17.0088X **CML 16 ATEX 2014X / IECEx CML 16.0011**

Notes
This drawing only serves as an example for the connection of the sensors to the isolating switching amplifier K 130. Observe the applicable standards when assembling a plant in an explosive atmosphere.
Ignition protection marking (device-dependent)
Ⓔx II 2G Ex ia IIC T4 Gb
Ⓔx II 2D Ex ia IIIC T135 °C Db

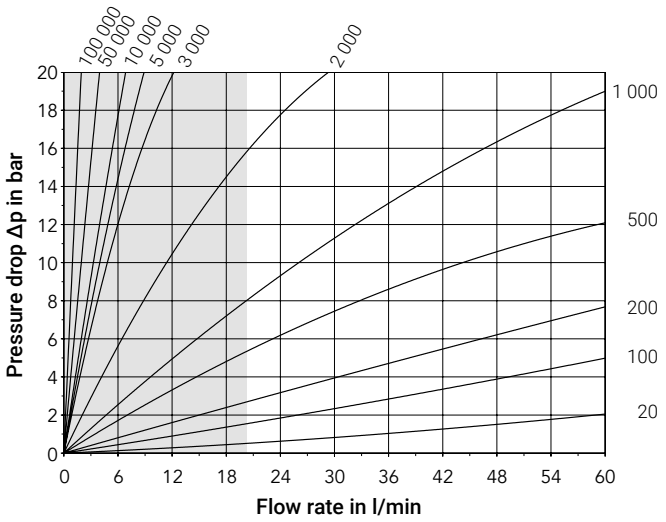
Switching amplifier K-130 technical characteristics

Supply	
Supply voltage terminal 7 (L+), terminal 10 (L-)	DC 24 Volt +/- 20 %
Output (not intrinsically safe) / nominal data terminals 9, 12, 8, 11	
Electronic outputs	Electrically isolated via photocoupler
Signal level 1-signal	Output voltage > 15 V
Signal level 0-signal	Output voltage ≤ 5 V
Ambient conditions	
Low threshold temperature	248 K (-25 °C)
High threshold temperature	333 K (+60 °C)
Mechanics	
Dimensions	114.5 x 99 x 22 mm
Mounting	Can be snapped on to 35 mm sectional rail, DIN EN 60715

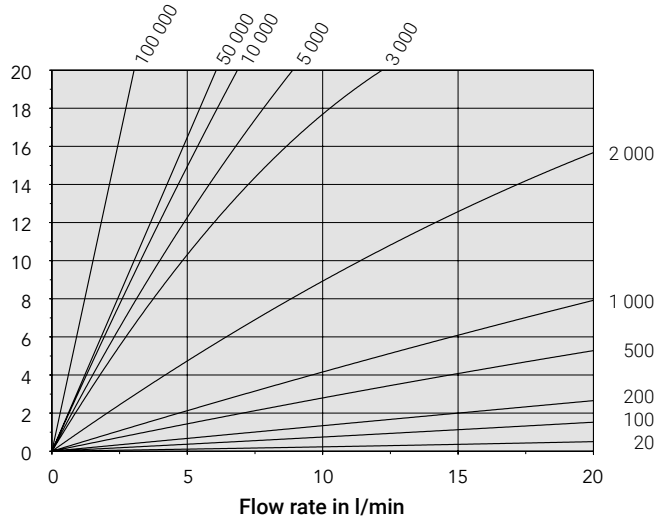
Pressure drop diagrams

SVC 4 … 40 / Parameter: Viscosity in mm^2/s

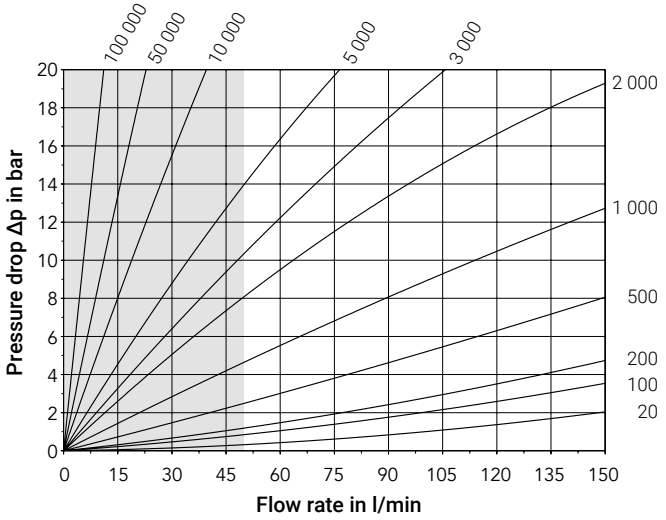
SVC 4



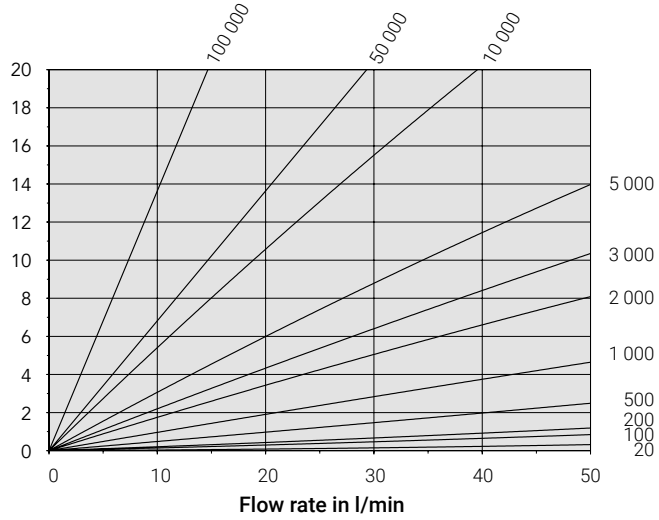
SVC 4 (section)



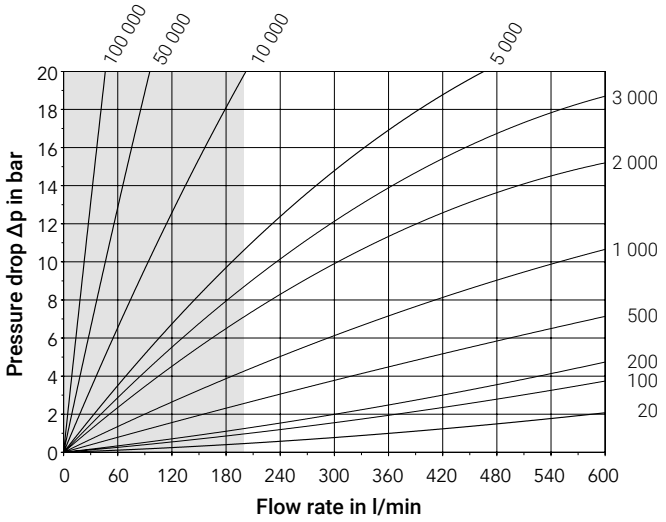
SVC 10



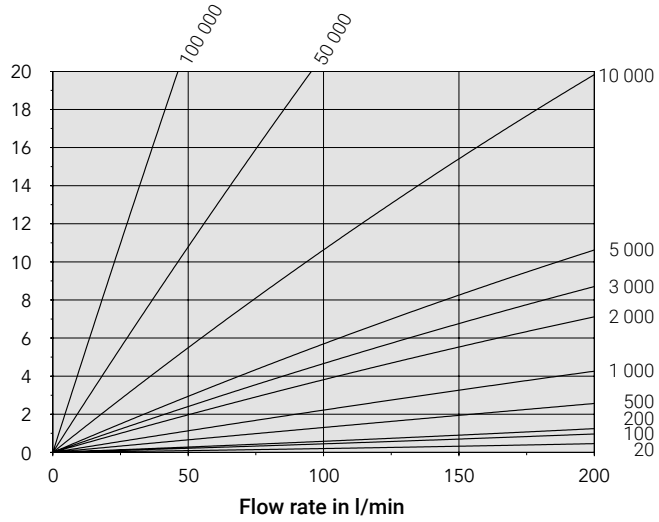
SVC 10 (section)



SVC 40



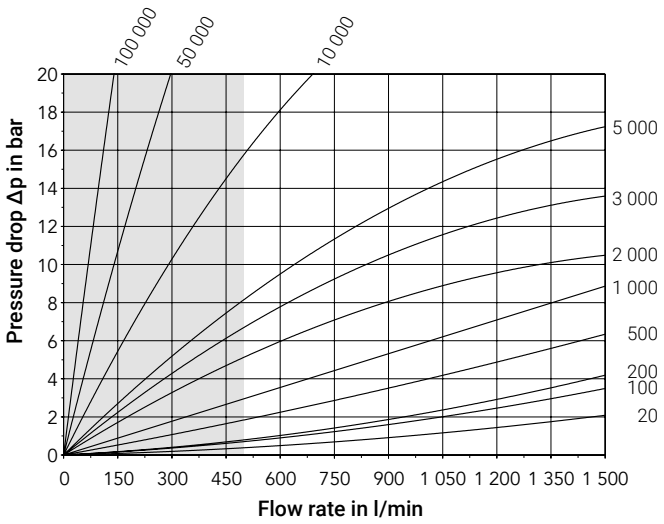
SVC 40 (section)



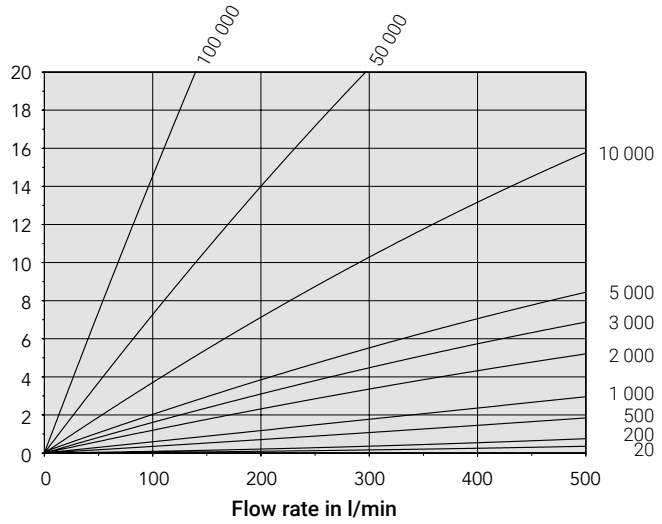
Pressure drop diagrams

SVC 100 … 250 / Parameter: Viscosity in mm^2/s

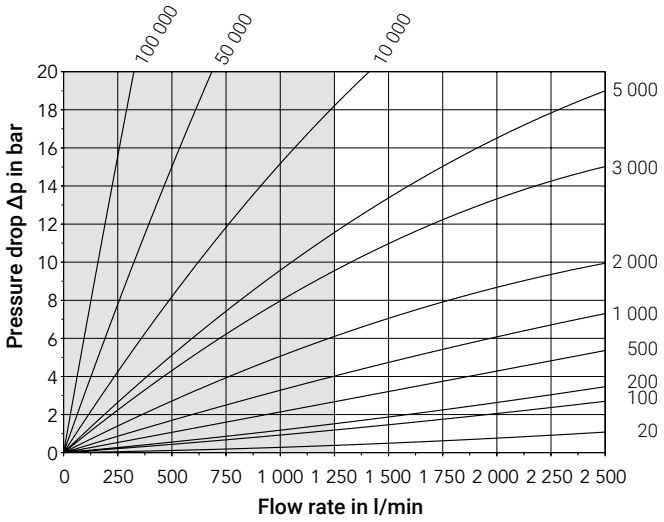
SVC 100



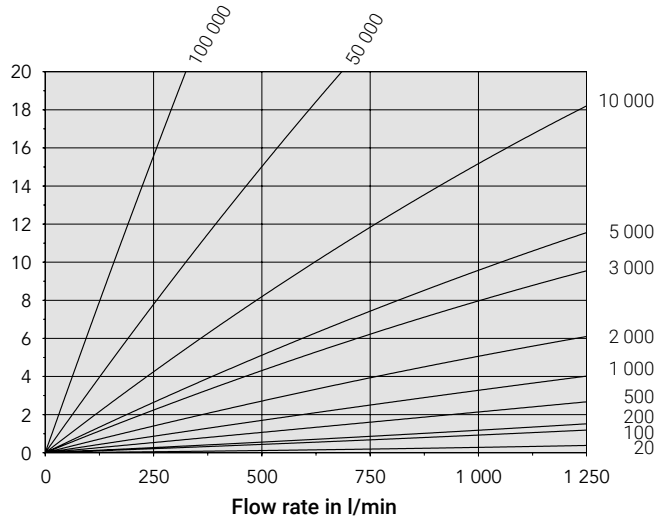
SVC 100 (section)



SVC 250



SVC 250 (section)



Technical drawings overview

Versions	Nominal sizes	Electronic versions	Pages
High-pressure versions with high-res sensors	4	• Standard • High-temperature • ATEX/IECEx • IO-Link • Analogue	**19**
High-pressure versions with high-res sensors	10	• Standard • High-temperature • ATEX/IECEx • IO-Link • Analogue	**20**
2-sensor versions	10	• Standard • High-temperature • ATEX/IECEx • IO-Link • Analogue	**21**
Versions with maximised sensor resolution	10	• Encoder	**22**
2-sensor high-pressure versions	40	• Standard • High-temperature • ATEX/IECEx • IO-Link • Analogue	**23**
2-sensor versions	40	• Standard • High-temperature • ATEX/IECEx • IO-Link • Analogue	**24**
Versions with maximised sensor resolution	40	• Encoder	**25**
2-sensor versions	100	• Standard • High-temperature • ATEX/IECEx • IO-Link • Analogue	**26**
2-sensor versions	250	• Standard • High-temperature • ATEX/IECEx • IO-Link • Analogue	**27**
Versions with remote electronic	4 … 250	• High-temperature PLUS • ATEX High-temperature PLUS	**On request**

Dimensions and weights

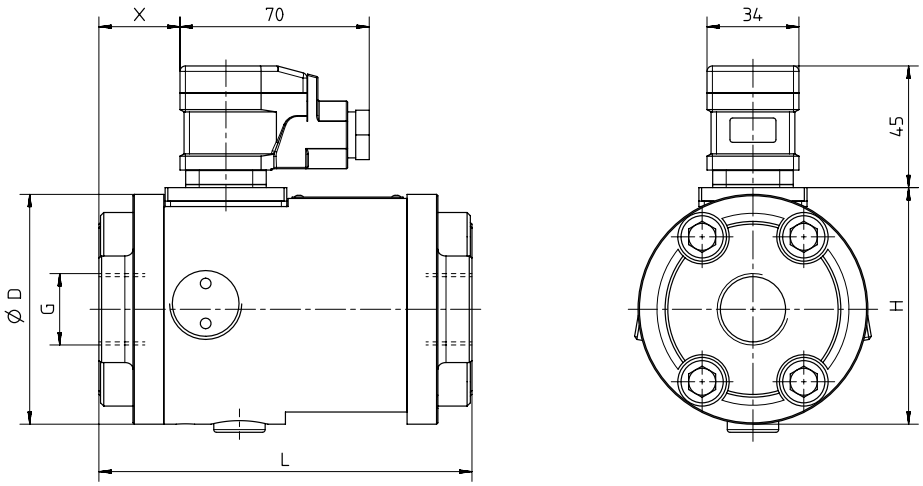
SVC 4

Electronic versions: Standard / High temperature / ATEX/IECEx / IO-Link / Analogue

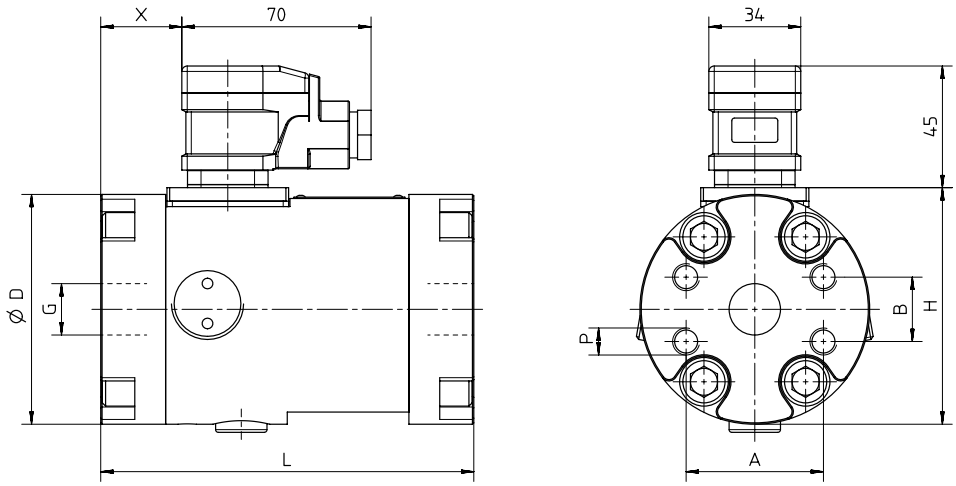
Type key ID			Dimensions								Weights
Material	Connection	Sensor	A	B	D	L	H	G	P	X	
3	R	2	-	-	85	138	87.5*	G¾	-	30	4.7
3	S	2	50.8	23.8	85	138	87.5*	SAE ¾"	M10 - 22 deep	30	5.0

* Electronics version H: plus 3 mm

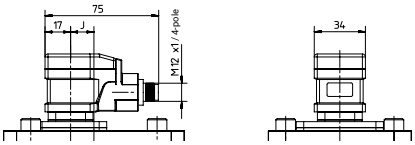
Pipe connection, high-pressure version, high-res sensor



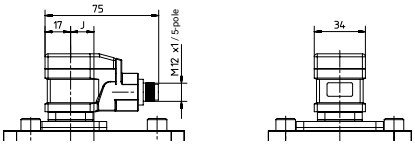
SAE connection (Code 62), high-pressure version, high-res sensor



Version with IO-Link connector



Version with analogue connector



Dimensions in mm / Weights in kg

Dimensions and weights

SVC 10

Electronic versions: Standard / High temperature / ATEX/IECEx / IO-Link / Analogue

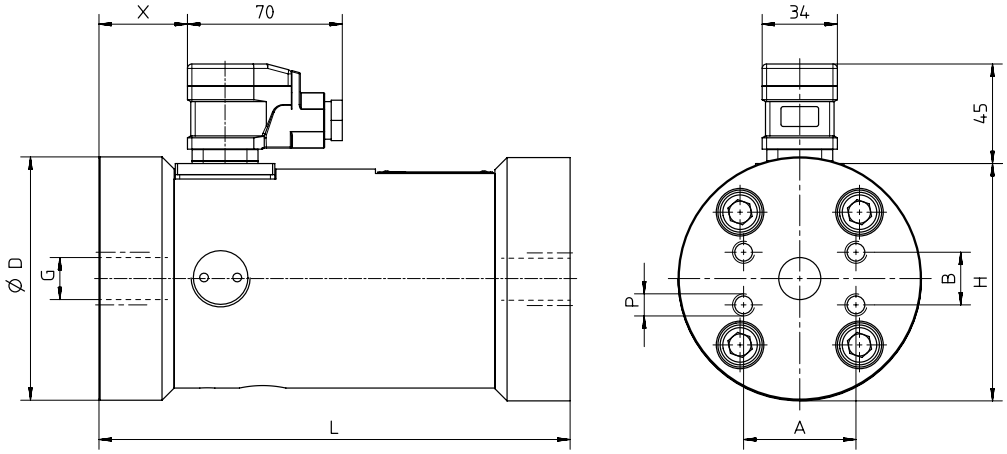
Type key ID			Dimensions										Weights
Material	Connection	Sensor	A	B	D	L	K	H	G	P	T	X	
1	R	2	-	-	99	196	-	101.5*	G1	-	19	33	9.6
1	S	2	52.4	26.2	99	197	-	101.5*	SAE 1″	M10 - 17 deep	-	32	9.6
1	D	2	-	-	140	265	100	167.0*	32	M16 - 25 deep	-	76	17.2
3	R	2	-	-	110	213	-	107.3*	G1	-	23	40	11.3
3	S	2	50.8	23.8	110	213	-	107.3*	SAE 3/4″	M10 - 15 deep	-	40	11.3

* Electronics version H: plus 3 mm

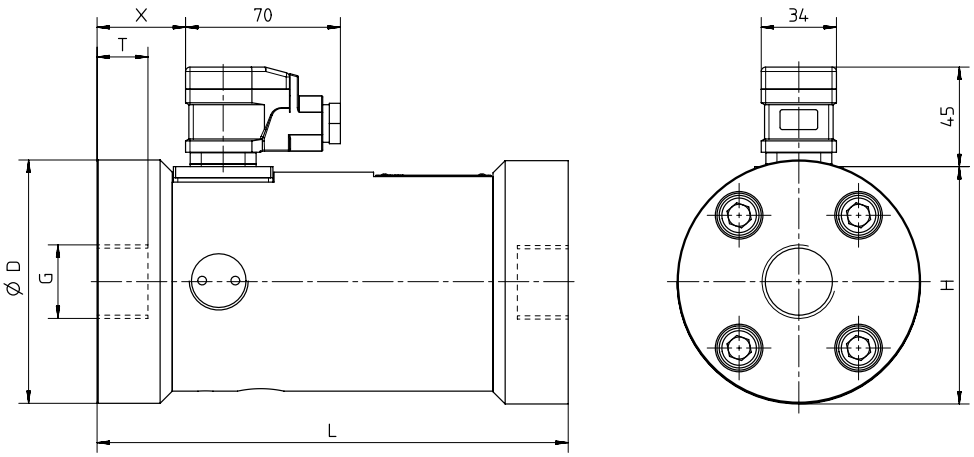
Available DIN flanges

Nominal bore DN	Pressure stage PN
32	40

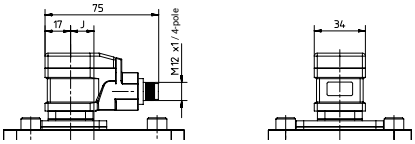
SAE connection (Code 62), high-pressure version, high-res sensor



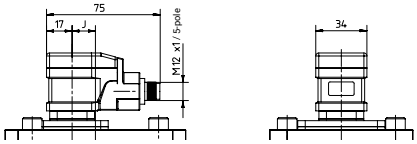
Pipe connection, high-pressure version, high-res sensor



Version with IO-Link connector



Version with analogue connector



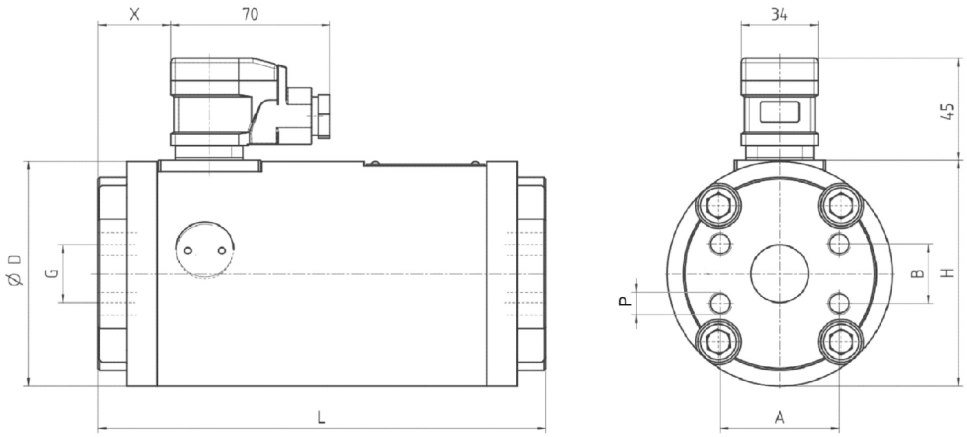
Dimensions in mm / Weights in kg

Dimensions and weights

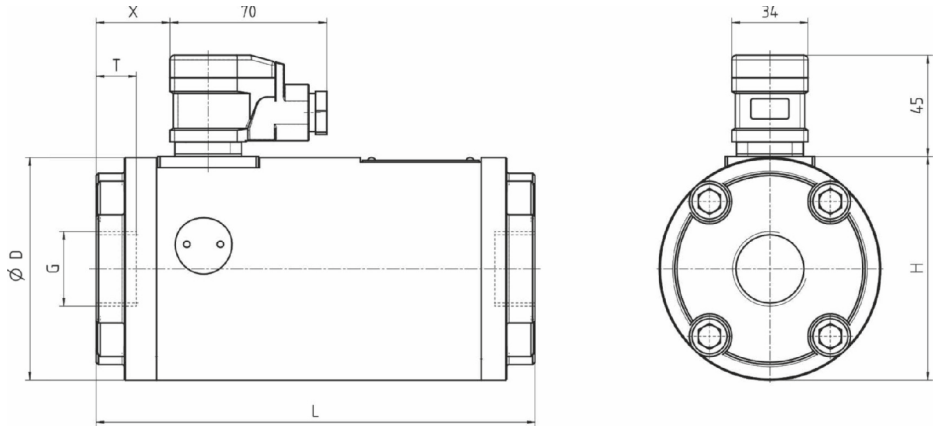
SVC 10

Electronic versions: Standard / High temperature / ATEX/IECEx / IO-Link / Analogue

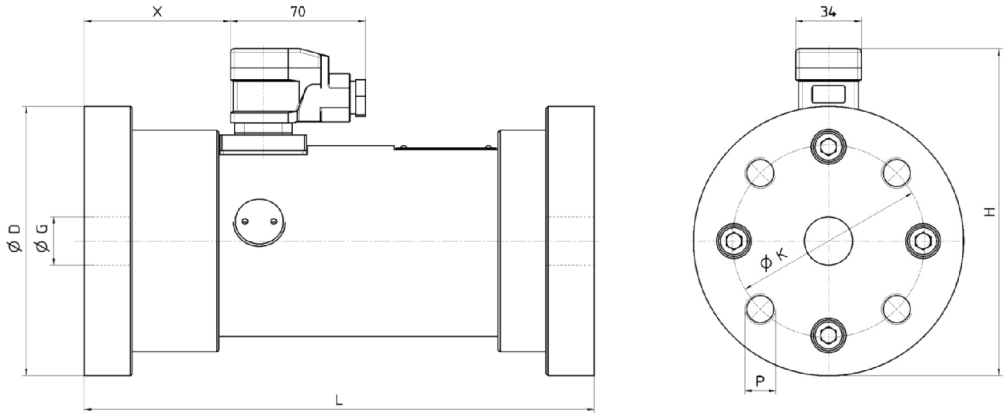
SAE connection (Code 61), 2 sensors



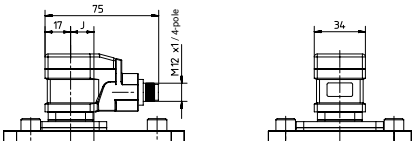
Pipe connection, 2 sensors



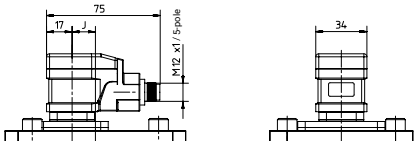
DIN connection, 2 sensors



Version with IO-Link connector



Version with analogue connector



Dimensions in mm / Weights in kg

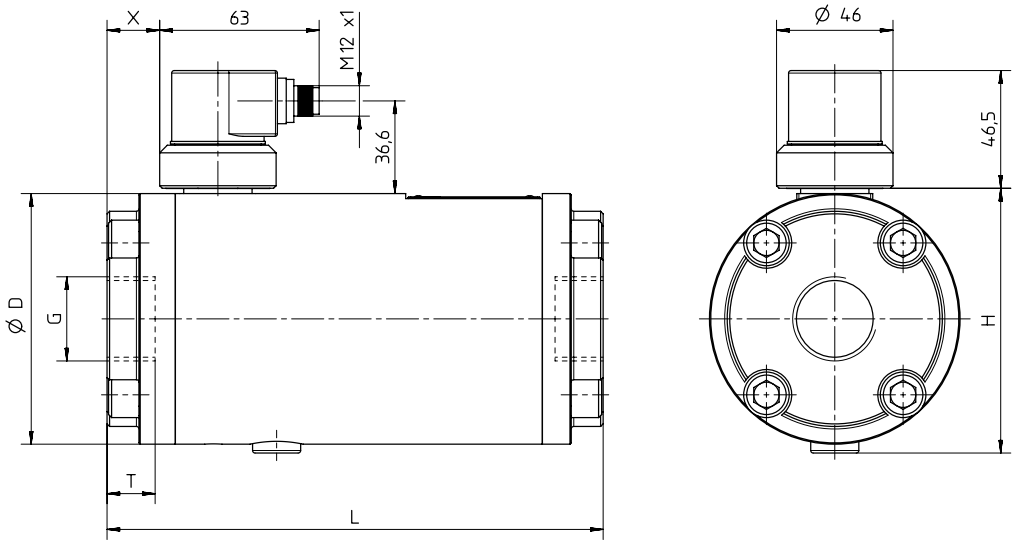
Dimensions and weights

SVC 10

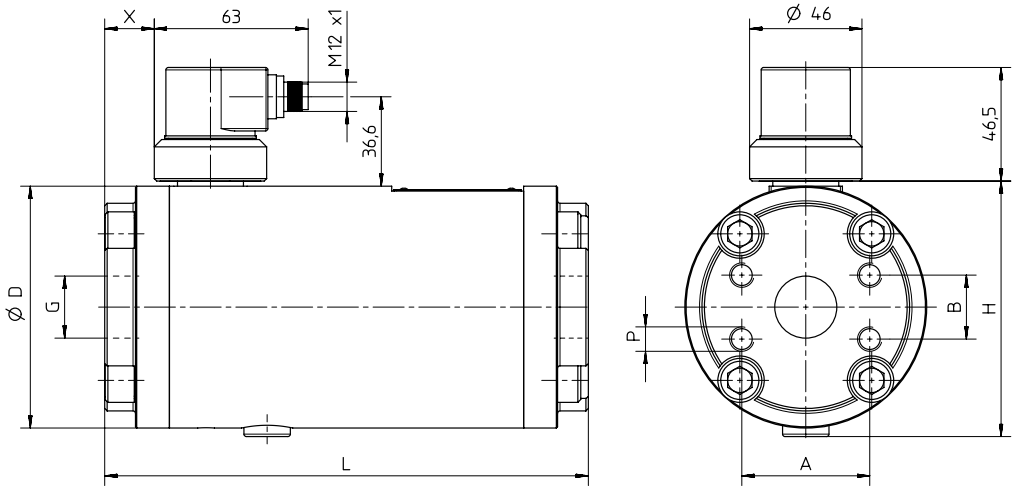
Electronic version: Encoder

Type key ID			Dimensions								
Material	Connection	Sensor	A	B	D	H	L	G	T	P	X
1	R	5	-	-	99.0	104.6	196.0	G1	19.0	-	20.5
1	S	5	52.4	26.2	99.0	104.6	198.0	SAE 1″	-	M10 - 17 tief	20.0

Pipe connection, maximised sensor resolution



SAE connector (code 61), maximised sensor resolution



Dimensions in mm / Weights in kg

Dimensions and weights

SVC 40

Electronic versions: Standard / High temperature / ATEX/IECEx / IO-Link / Analogue

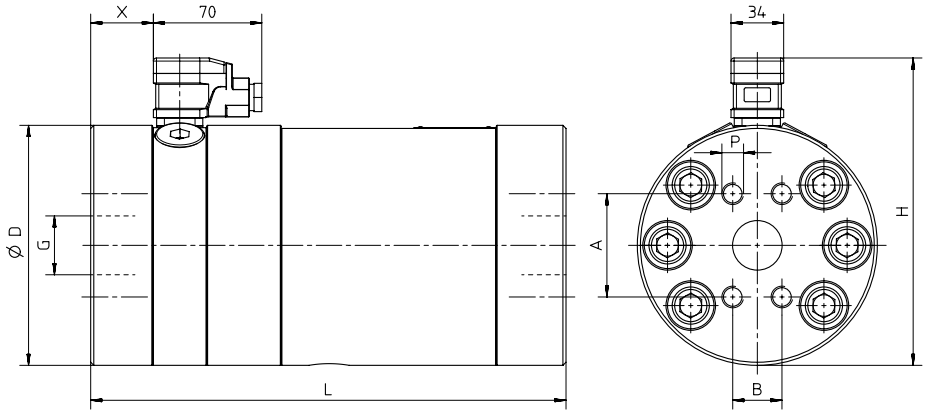
Type key ID			Dimensions										Weights
Material	Connection	Sensor	A	B	D	L	K	H	G	P	T	X	
1	R	2	-	-	121	265	-	123.5*	G1½	-	23	26.0	18.0
3	R	2	-	-	155	307	-	198.5	G1½	-	28	40.5	36.0
1	S	2	69.9	35.7	-	287	-	123.5*	SAE 1¹/₂"	M12 - 27 deep	-	38.0	18.9
3	S	2	66.7	31.8	155	307	-	198.5	SAE 1¹/₄"	M14 - 27 deep	-	40.5	36.0
1	D	2	-	-	150	285	110	183.0*	40	M16 - 20 deep	-	37.0	24.7

* Electronics version H: plus 11 mm

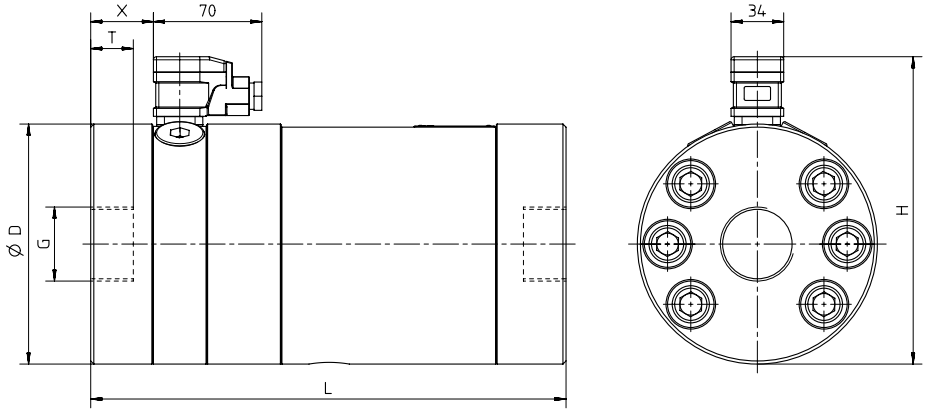
Available DIN flanges

Nominal bore DN	Pressure stage PN
40	40

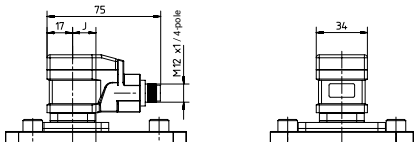
SAE connection (Code 62), high-pressure version, 2 sensors



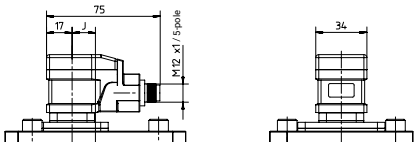
Pipe connection, high-pressure version, 2 sensors



Version with IO-Link connector



Version with analogue connector



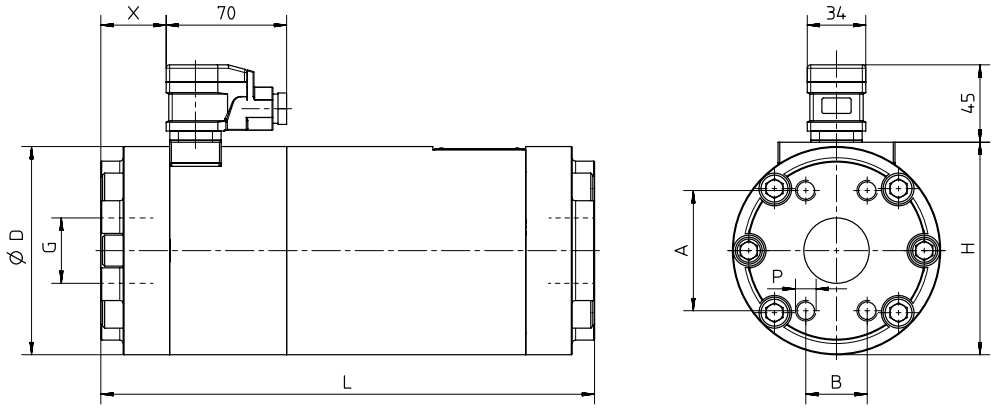
Dimensions in mm / Weights in kg

Dimensions and weights

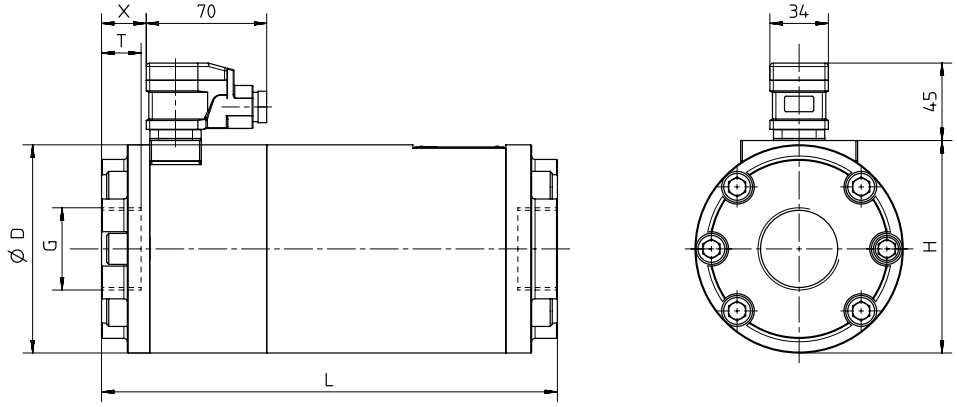
SVC 40

Electronic versions: Standard / High temperature / ATEX/IECEx / IO-Link / Analogue

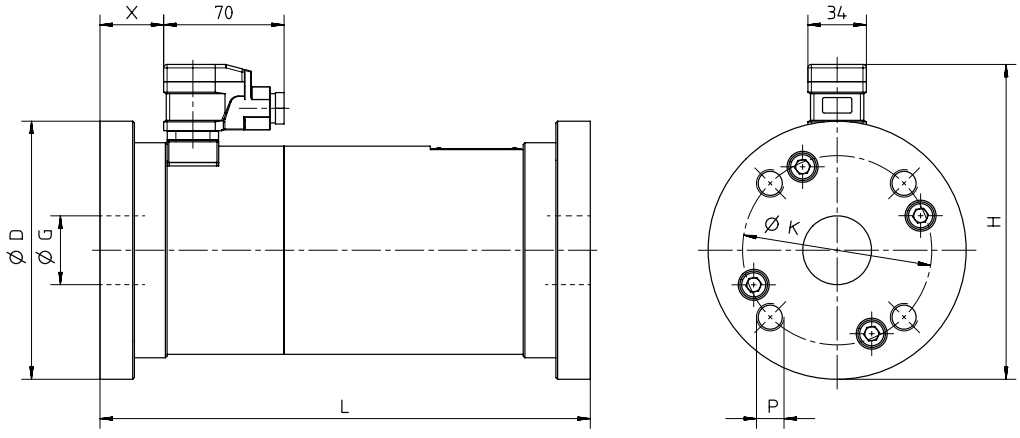
SAE connection (Code 61), 2 sensors



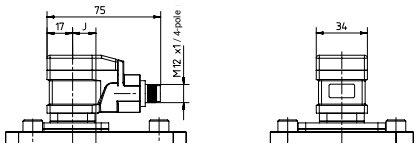
Pipe connection, 2 sensors



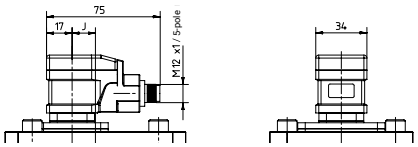
DIN connection, 2 sensors



Version with IO-Link connector



Version with analogue connector



Dimensions in mm / Weights in kg

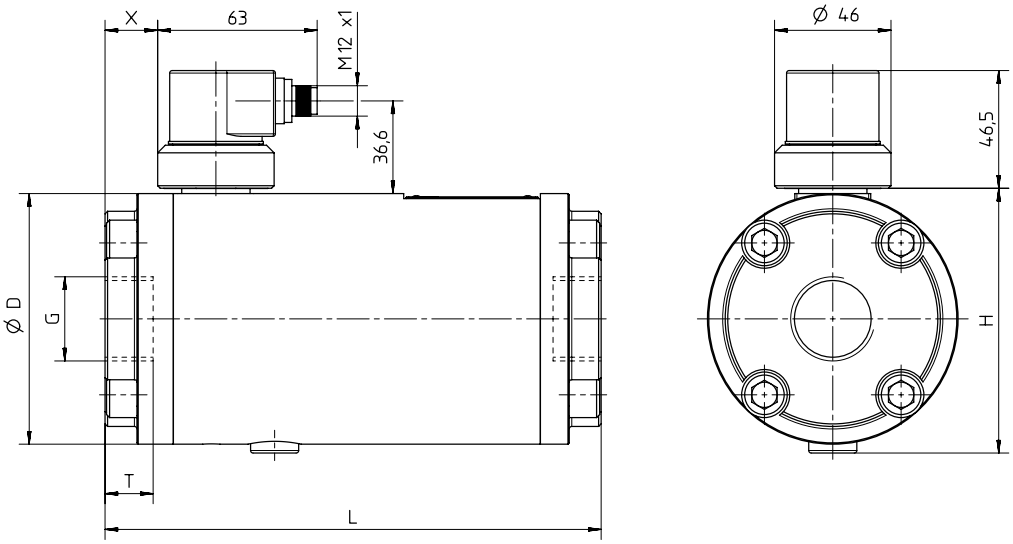
Dimensions and weights

SVC 40

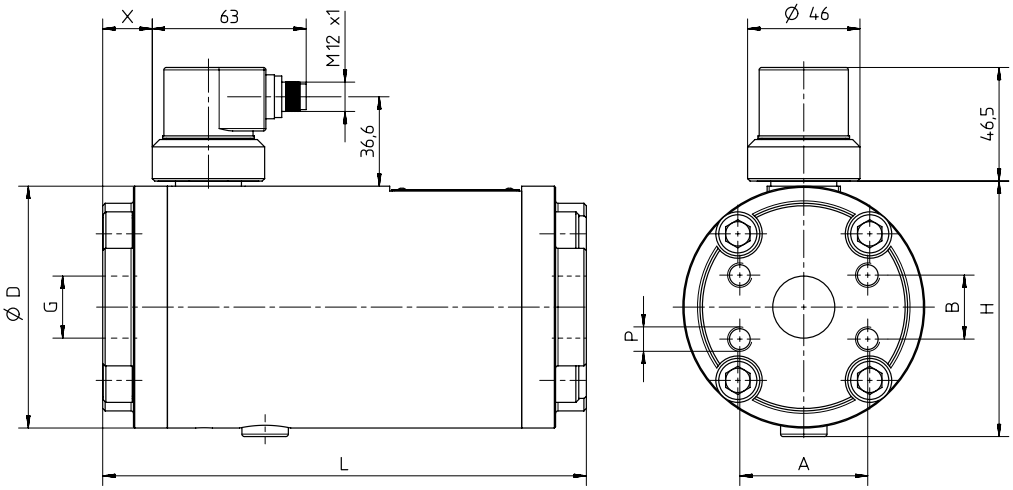
Electronic version: Encoder

Type key ID			Dimensions								
Material	Connection	Sensor	A	B	D	H	L	G	T	P	X
1	R	5	-	-	121.0	123.6	290.0	G1¹/₂	23.0	-	29.0
1	S	5	69.9	35.7	121.0	123.6	312.0	SAE 1¹/₂"	-	M12 - 27 tief	41.0

Pipe connection, maximised sensor resolution



SAE connector (code 61), maximised sensor resolution



Dimensions in mm / Weights in kg

Dimensions and weights

SVC 100

Electronic versions: Standard / High temperature / ATEX/IECEx / IO-Link / Analogue

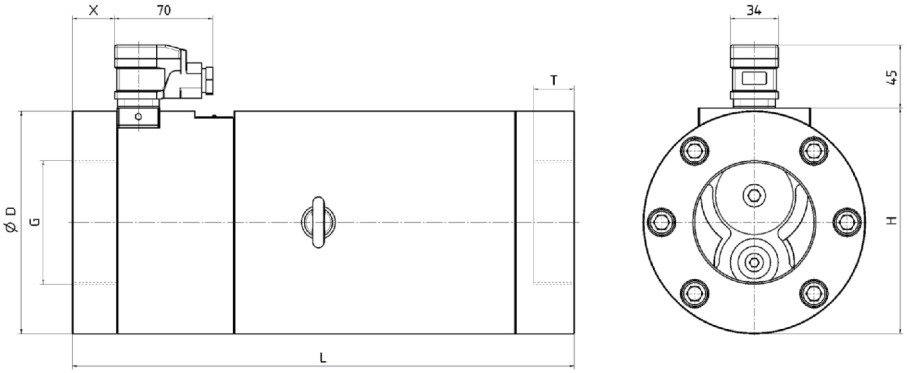
Type key ID			Dimensions										Weights
Material	Connection	Sensor	A	B	D	L	K	H	G	P	T	X	
1	R	2	-	-	158	357	-	160*	G3	-	32	30	39.1
1	S	2	106.4	61.9	158	347	-	160*	SAE 3″	M16 - 32 deep	-	32	38.7
1	D	2	-	-	200	365	160	226*	80	M16 - 25 deep	-	45	46.2

* Electronics version H: plus 11 mm

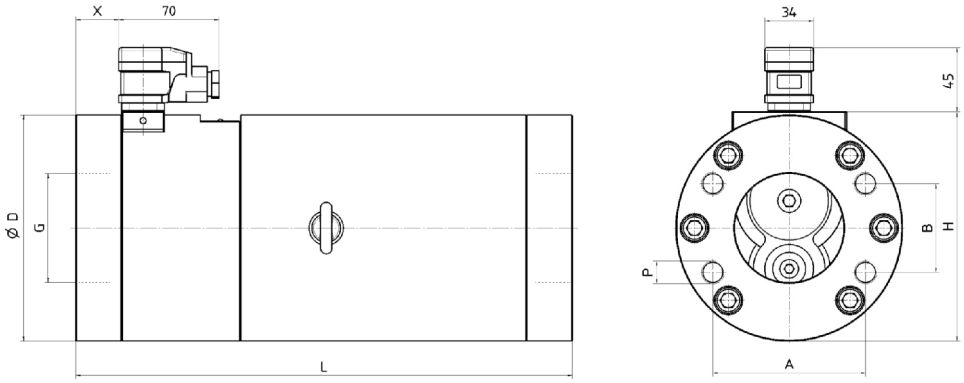
Available DIN flanges

Nominal bore DN	Pressure stage PN
80	40

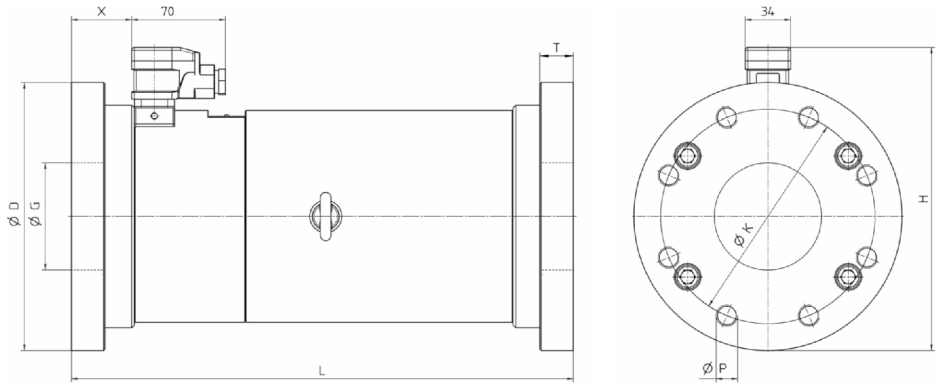
Pipe connection, 2 sensors



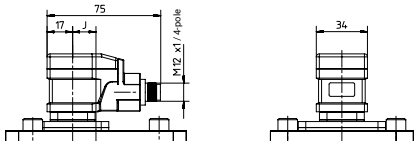
SAE connection (Code 61), 2 sensors



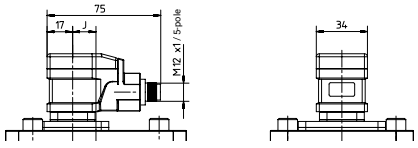
DIN connection, 2 sensors



Version with IO-Link connector



Version with analogue connector



Dimensions in mm / Weights in kg

Dimensions and weights

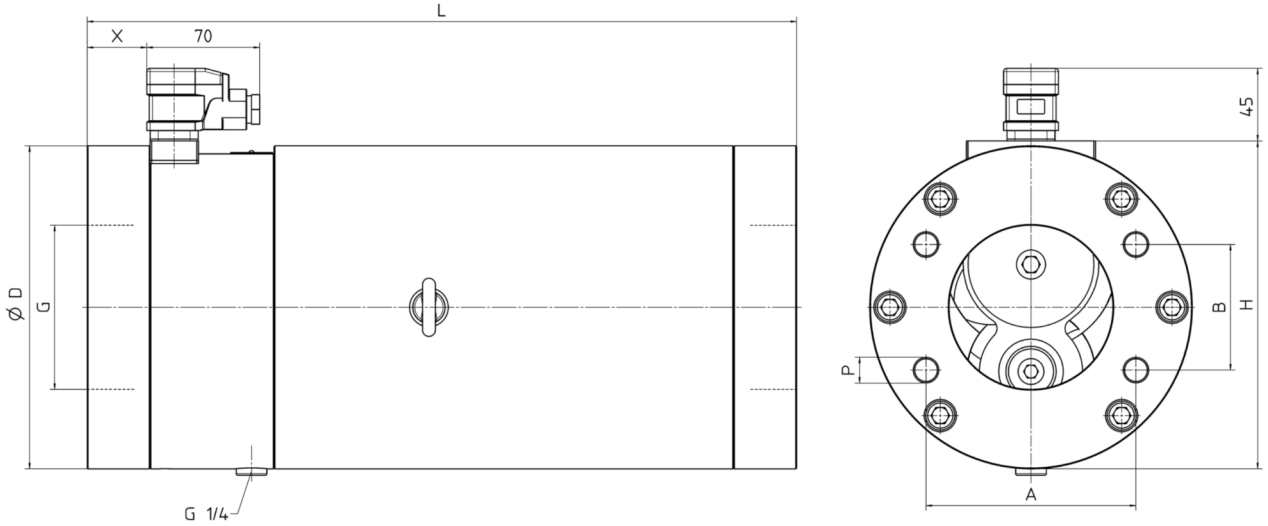
SVC 250

Electronic versions: Standard / High temperature / ATEX/IECEx / IO-Link / Analogue

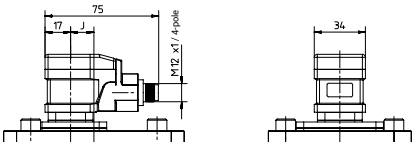
Type key ID			Dimensions								Weight
Material	Connection	Sensor	A	B	D	L	H	G	P	X	
1	S	2	130.2	77.8	200	440	203*	SAE 4"	M16 - 30 deep	37	76.0

* Electronics version H: plus 11 mm

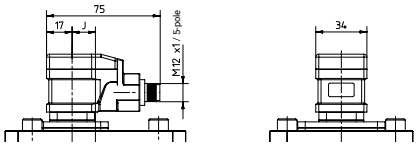
SAE connection (Code 61), 2 sensors



Version with IO-Link connector



Version with analogue connector



Dimensions in mm / Weights in kg

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SVC/US/03.2026

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