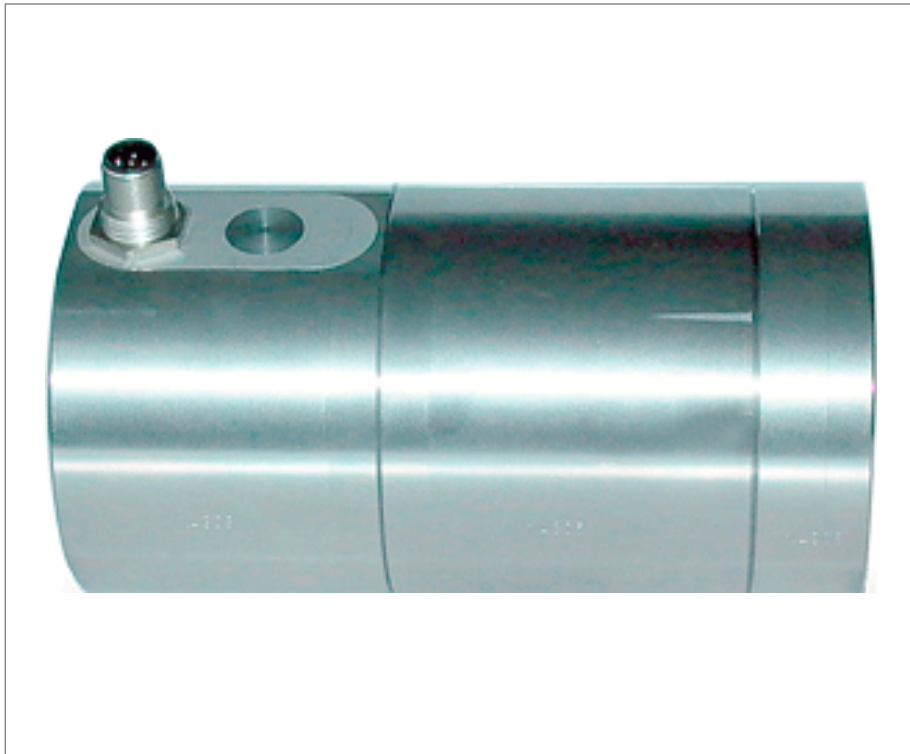


Certified according to DIN EN ISO 9001

Technical Datasheet



SRZ*** Compact Helical Flow Meter with Integrated Electronics

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Description

The helical flow meters SRZ*-Compact are positive displacement meters with built in HALL sensors. They provide a high resolution and a reverse flow detection.

For the reverse flow detection the SRZ provide 2 frequency outputs with 90° phase shift (pinning “A” and “N”) or a dedicated signal “direction” (pinning “C” and “R”).

The SRZs are perfectly suited for media with high viscosity (30 mm²/s up to 1x10⁶mm²/s). They provide high accuracy and low pressure drop.

The meters do not produce pulsations and are insensitive to pulsations.

Application

- Flow measurement of highly viscose media
- Flow measurement with high resolution
- Measuring of net consumption

Highlights

- Forward- backward detection
- Pulsation free
- Very high resolution

Technical Data

Type / Size	Measuring range ^{1,2} ltr./min	K-Factor ³ Pulses/ltr.	Frequency range ⁴ in Hz
SRZ 40-*-A/C/R	0.40 up to 40	7,000	40 up to 4,800
SRZ 40-*-H1N	0.40 up to 40	33,000	200 up to 22,000
SRZ 40-*-H2 N/A/C/R	0.40 up to 22	66,000	400 up to 25,000
SRZ 40-*-H3 N/A/C/R	0.40 up to 11	132,000	800 up to 25,000
SRZ 100-*-A/C/R	1.0 up to 100	1,700	28 up to 2,900
SRZ 100-*-H1N	1.0 up to 100	8,000	120 up to 14,000
SRZ 100-*-H2 N/A/C/R	1.0 up to 90	16,000	240 up to 25,000
SRZ 400-*-A/C/R	4.0 up to 400	428	14 up to 1,800

Measuring media:	Fluids free of ferro-magnetic particles (version H1 – H3)
Linearity:	±0.5% of actual flow at 30 mm ² /s or higher ±0.25% of actual flow at 100 mm ² /s or higher
Repeatability:	±0.1% at 30 mm ² /s or higher
Operating temperature:	-20 up to +70°C
Materials:	SS 303 or SS316Ti / SS316L
Ingress protection:	IP67

Notes

- 1) Extension of the measuring range to lower flows upon request
- 2) With the versions H2 and H3 the maximum flow is limited by the maximum output frequency
- 3) Typical output frequency for the specified flow range. The operating frequency range of the pickup and the output stage is 0.5Hz < f < 25,000Hz.

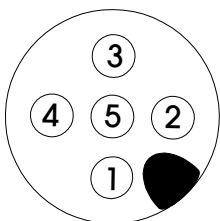
Electrical Data

Supply voltage:	15 V DC or 24 V DC
Allowed supply voltage range:	12 to 30 V DC
Supply current:	typically < 20 mA without load
Output stage pin 2 and 4	
Type:	Push-pull, asymmetrical output resistance 470 / 720 Ω
Max. load current:	> 10 mA (typically up to 20 mA)
Output level low:	1 V @ 1 mA 5 V @ 10 mA
Output level high:	22 V @ 1 mA load and 24 V supply 16 V @ 10 mA load and 24 V supply
Output short circuit:	to GND: infinite to +24 V: < 1s
Output stage pin 5	
Type:	Push pull, 470 Ω output resistance
Max. load current:	> 10 mA (typically up to 20 mA)
Output level low:	1 V @ 1 mA 5 V @ 10 mA
Output level high:	22 V @ 1 mA load at 24 V supply 19 V @ 10 mA load at 24 V supply
Output short circuit:	to GND or to +24 V: < 1 s

Pin assignment

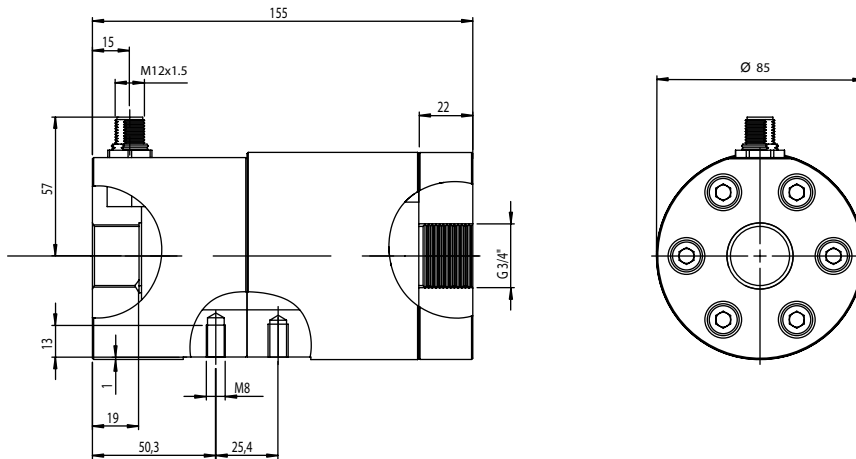
Type	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5
SRZ-*A	+ UB	½ f _A	GND	f	½ f _B ¹
SRZ-*C	+ UB	direction ²	GND	f	PE ³
SRZ-*R	+ UB	direction ²	GND	f	n. c.
SRZ-*N	+ UB	f _B ¹	GND	f _A	n. c.

- 1) At flow in direction of the arrow f_B lags f_A by 90°
- 2) At flow in direction of the arrow "direction" is "low"
- 3) The protective ground at pin 5 must only be used additionally to a proper grounding of the housing

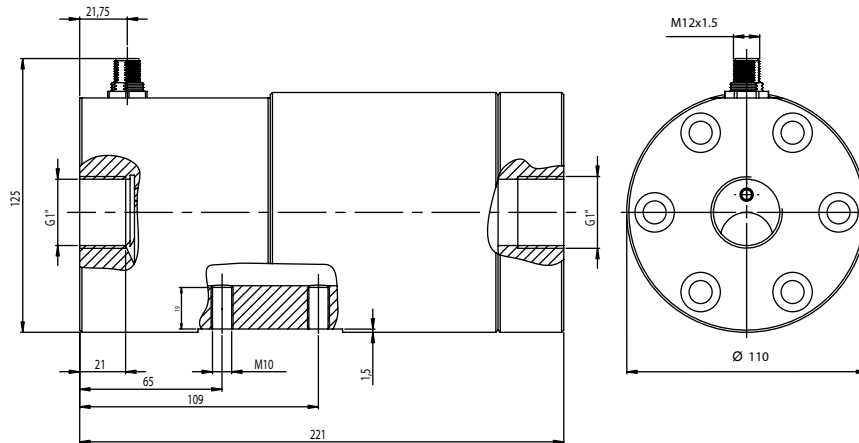


Dimensional Drawings (mm)

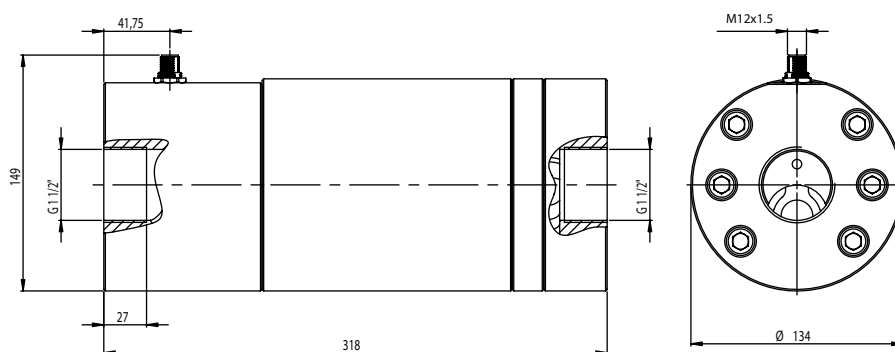
SRZ 40 Compact:



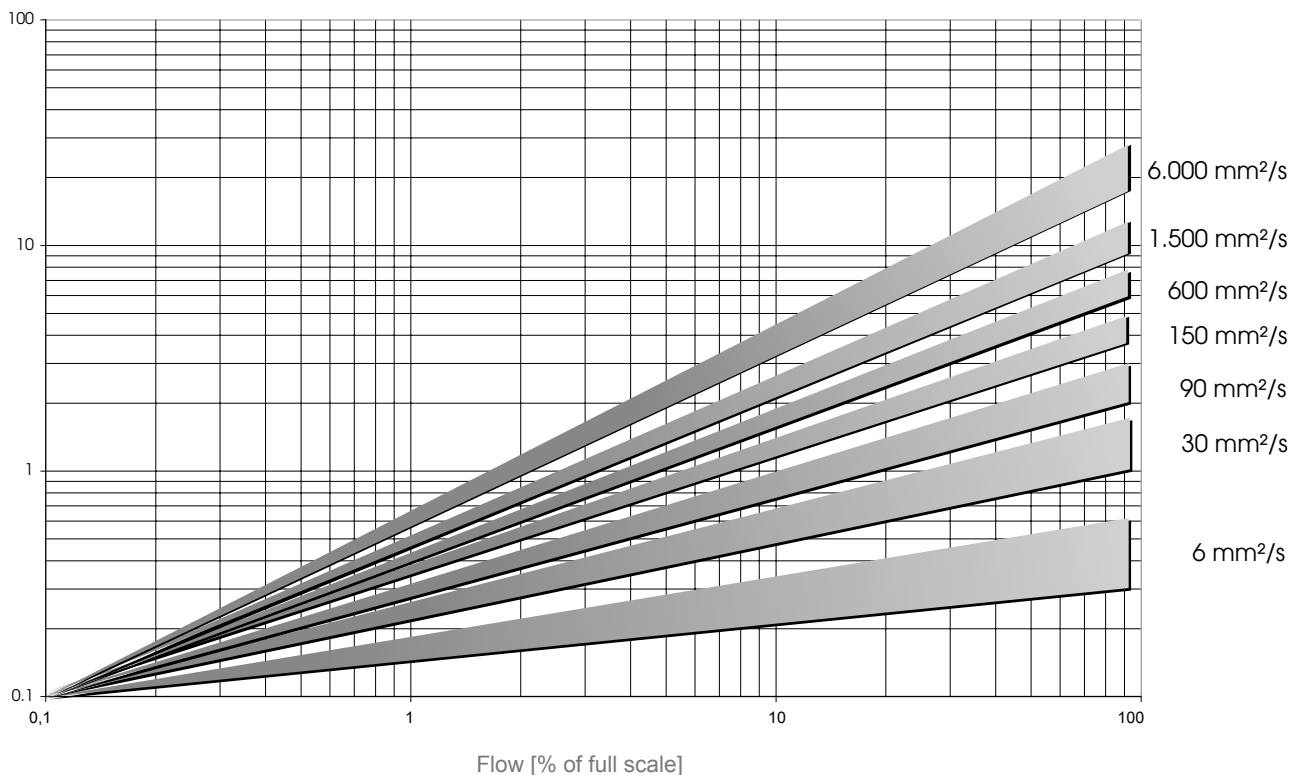
SRZ 100 Compact:



SRZ 400 Compact:



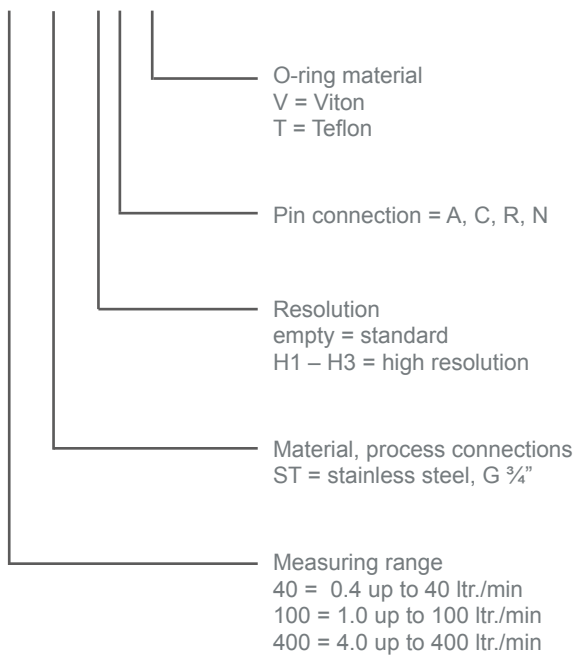
Pressure Drop:
bar (typical values)



SRZ 40	0.4	4.0	40	ltr. /min
SRZ 100	1.0	10.0	100	ltr. /min
SRZ 400	4.0	40.0	400	ltr. /min

Ordering Codes:

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