KRACHT

Volume counter VCA 2 FC R1

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Principle of operation

The measuring unit of the KRACHT Volume counter consists of a pair of gears, driven by the liquid flow on the principle of a gear motor. The plain bearings provide both axial and radial support to the gears. The movement of the gears is sampled without contact by means of a sensor located in the cover. A special gearing geometry ensures low pressure drop and minor sound emission of the volume counters.

Typical applications

Consumption measurement
Controlling of metering processes
Monitoring of lubrication systems

Materials

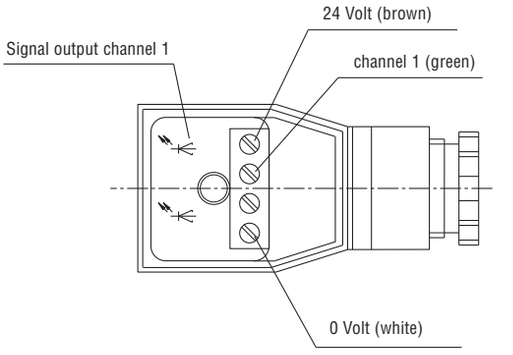
Housing:	Aluminium
Gears:	Steel
Bearing:	Multi component plain bearing (P 10)

General characteristics

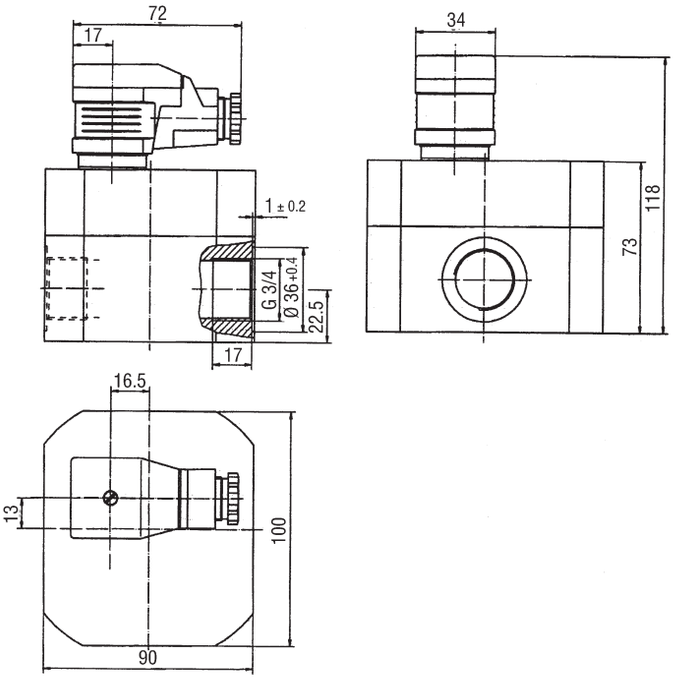
Geometric tooth volume	V_{gZ}	=	2 cm³
Max. operating pressure	p_{max}	=	160 bar
Peak pressure	$\hat{p}$	=	200 bar
Measuring range	Q	=	1...65 l/min
Start of measuring unit at	Q	=	0.120 l/min (ν = 34 mm²/s)
	Q	=	0.040 l/min (ν = 100 mm²/s)
Liquid temperature	ϑ_m	=	-10 ... +80 °C
Viscosity	ν_{min}	=	20 mm²/s
	ν_{max}	=	4000 mm²/s higher viscosities on request
Flow resistance	Δp	=	see flow resistance curve
Sound pressure level	L_A	=	< 60 dB (A)
Measuring accuracy			+/- 2.5 % at flow range of Q = 1...65 l/min
Reproducibility			< 0.1 % < 0.3 % (Q < 3 l/min and ν < 30 mm²/s) at Q, P, ν = constant
Weight	m	=	1.9 kg

Electrical characteristics

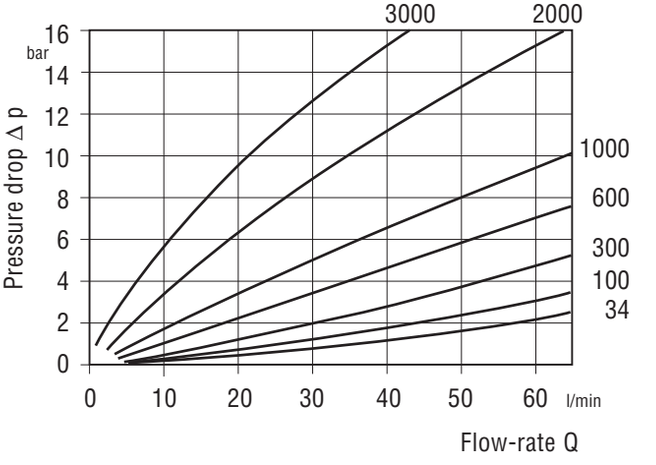
Number of measuring channels			1
Operating voltage	U_B	=	12...30 V DC polarized
Pulse amplitude	U_A	=	≥ 0.8 U_B
Pulse shape with symm. output signal			square wave pulse duty factor/channel 1:1 +/-15%
Power requirement	P_{bmax}	=	0.6 W
Output power channel	P_{amax}	=	0.3 W short-circuit-proof
Degree of protection std.			IP 65 DIN 40050



Dimensions



Flow resistance Parameter: Viscosity (mm²/s)



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