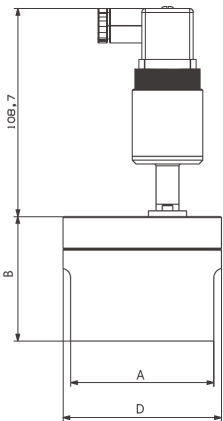


GEAR FLOWMETER, SEVEN SIZES, UP TO 400 BAR



- SEVEN SIZES, 50 ML/MIN TO 150 L/MIN · G1/4 TO G1 FEMALE
- $\pm 0.5 \%$ OF FULL SCALE · REPEATABILITY 0.1 %
- TWO-WIRE 4 ... 20 mA OR PULSE · 10 ... 400 BAR BY BODY MATERIAL

KEY DATA

Property	Value	Property	Value
Measuring range	50 mL/min ... 150 L/min in seven sizes	Accuracy	$\pm 0.5 \%$ of full scale
Output	4 ... 20 mA two-wire or pulse	Repeatability	$\pm 0.1 \%$ of full scale
Supply voltage	16 ... 30 Vdc	Medium temperature	-30 ... +120 °C · $\leq 140 \text{ °C}$ with code T
Pressure range	10 ... 400 bar, by body material	Materials	Aluminium · 304 · 316 · PP · seal FKM or PTFE
Process connection	G1/4 ... G1 female	Outlet	Hersman connector or M12 x 1 plug

Two meshing gears turn once per known volume; the count is the volume. The body material decides the pressure, from 10 bar in PP to 400 bar in stainless steel.



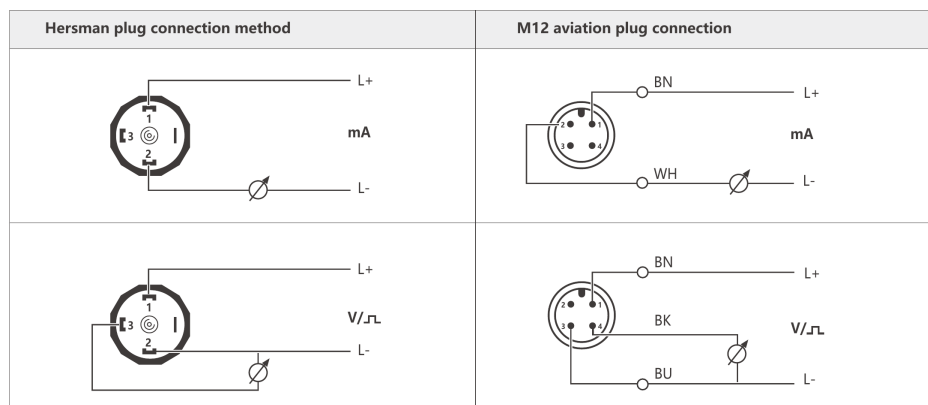
MEASUREMENT

Measuring principle	Positive displacement — two meshing gears, each turn a known volume. The reading does not depend on the flow profile, so no straight inlet run is needed
Measuring range	Seven sizes: 50 ... 2000 mL/min, 5 ... 2000 mL/min, 0.1 ... 4, 0.15 ... 8, 0.5 ... 20, 2 ... 50 and 5 ... 150 L/min
Accuracy	± 0.5 % of full scale
Repeatability	± 0.1 % of full scale
Media	Fuels, oils, fats, adhesives, solvents, inks and insecticides · viscosity up to 10 000 Pa·s
Pulse output	$Q = f \times 60 / K$, with f the output frequency in Hz and K the pulses per litre

MATERIALS AND PROCESS

Body	Aluminium, 304, 316 or PP
Pressure by material	PP 10 bar · aluminium 40 bar · 304 and 316 each 100, 250 or 400 bar, chosen in the order code
Seal	FKM as standard, PTFE for corrosive media
Medium temperature	-30 ... +120 °C as standard · ≤ 140 °C with order field T. Aluminium and PP are excluded from the high-temperature version
Connection	Female thread G1/4 ... G1 · two tapped holes in the base, 2 × M5, M6 or M8 by size

WIRING



The four connections. Left the Hersman connector, right the M12 plug; above the two-wire 4 ... 20 mA loop, below the three-wire pulse.

ELECTRICAL PROPERTIES

Supply voltage	16 ... 30 Vdc
Output A	4 ... 20 mA, two-wire — the meter sits in the supply loop
Output P	Pulse, three-wire on the M12 outlet: brown supply +, black signal, blue supply –
Outlet Hersman	Rectangular "Hersman" connector, factory default
Outlet M12	M12 × 1, four pins, order field M

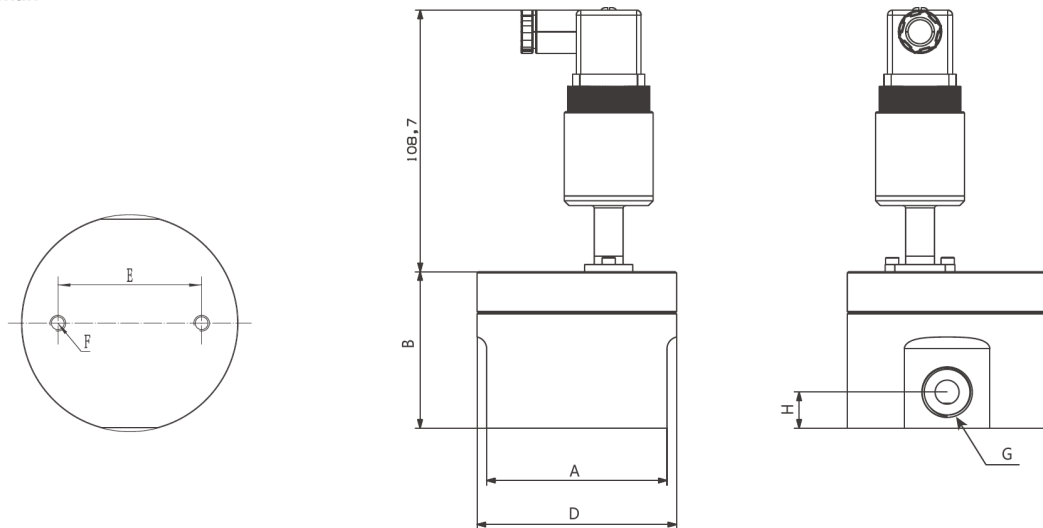
DISPLAY

Display	None — the meter has no display and no keys
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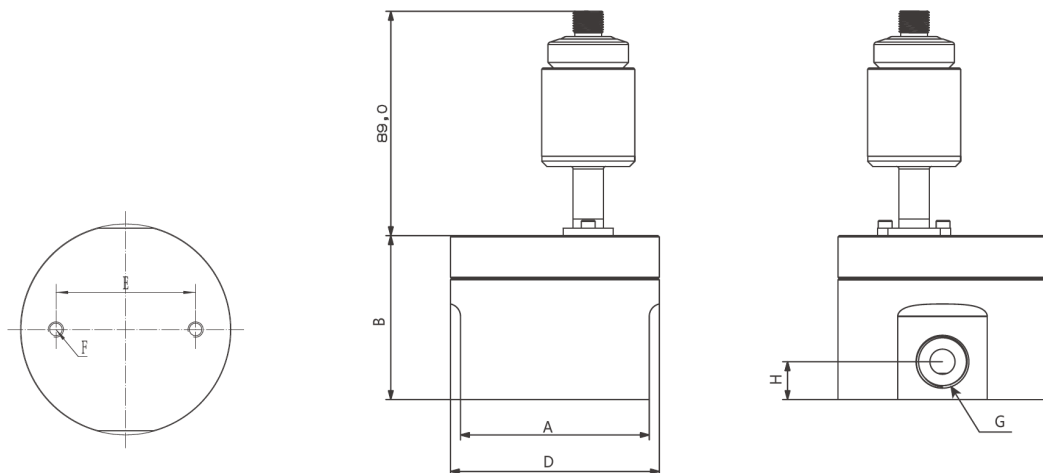
DIMENSIONS (mm)

Hersman



The Hersman version in three views: onto the base with the two tapped holes E and F, from the side with the body height B and the width A over the flats D, and from the port side with the thread G at the height H. The 108.7 mm is the overall height with the connector.

Aviation plug



The same three views for the M12 version. The head is lower: 89.0 mm against 108.7. Everything below the head — body, base and thread — is the table below.

A is the body width, B its height, D the width over the flats, H the height of the port centre, E the hole spacing in the base, F the tapped holes and G the pipe thread.



SIZES AND DIMENSIONS (mm)

Size	A	B	D	H	E	F	G	Range
M2	80	55	83	16	40	2×M6	G1/4	50 ... 2000 mL/min
M2S	83	43	88	10	44	2×M5	G1/4	5 ... 2000 mL/min
M4	80	55	83	16	55	2×M6	G3/8	0.1 ... 4 L/min
M6	80	62	83	14	55	2×M6	G1/2	0.15 ... 8 L/min
M10	80	65	83	14	55	2×M6	G1/2	0.5 ... 20 L/min
M15	110	65	113	28	90	2×M6	G3/4	2 ... 50 L/min
M25	124	70	138	29	100	2×M8	G1	5 ... 150 L/min



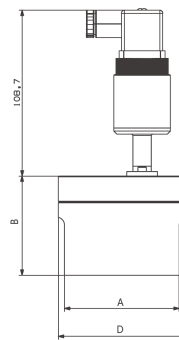
COMPLIANCE AND CERTIFICATION

Measuring principle	Positive displacement, two meshing gears
Accuracy	± 0.5 % of full scale
Repeatability	± 0.1 % of full scale
Supply voltage	16 ... 30 Vdc
Pressure rating	10 to 400 bar by body material
Medium temperature	-30 ... +120 °C · ≤ 140 °C with order field T
Viscosity	Media up to 10 000 Pa·s
Wetted materials	Aluminium, 304, 316 or PP with an FKM or PTFE seal

ACCESSORIES AND ORDER CODE

Accessories

- The accessories are electrical: M12 leads and self-wiring sockets.



Pressure
10 ... 400 bar

Accuracy
± 0.5 % F.S.

The M12 leads come in two families; their factory standards are ZL02-PC02G-P and ZL03-PC02G.

ELECTRICAL ACCESSORIES

Electrical accessory	Material	Straight (G)	Angled (W)
M12 × 1, 4-pin, 2 m	PUR	ZL02-PU02G-P	ZL02-PU02W-P
M12 × 1, 4-pin, 5 m	PUR	ZL02-PU05G-P	ZL02-PU05W-P
M12 × 1, 4-pin, 10 m	PUR	ZL02-PU010G-P	ZL02-PU010W-P
M12 × 1, 4-pin, 2 m	PVC	ZL02-PC02G-P	ZL02-PC02W-P
M12 × 1, 4-pin, 5 m	PVC	ZL02-PC05G-P	ZL02-PC05W-P
M12 × 1, 4-pin, 10 m	PVC	ZL02-PC010G-P	ZL02-PC010W-P
M12 × 1, 4-pin, 2 m	PUR	ZL03-PU02G	ZL03-PU02W
M12 × 1, 4-pin, 5 m	PUR	ZL03-PU05G	ZL03-PU05W
M12 × 1, 4-pin, 10 m	PUR	ZL03-PU010G	ZL03-PU010W
M12 × 1, 4-pin, 2 m	PVC	ZL03-PC02G	ZL03-PC02W
M12 × 1, 4-pin, 5 m	PVC	ZL03-PC05G	ZL03-PC05W
M12 × 1, 4-pin, 10 m	PVC	ZL03-PC010G	ZL03-PC010W
Self-wiring socket, Pg7 / Pg9	—	GL04	WL04

Example: QZKD-M2-A-F-L-----. The pressure is not a field of its own; it follows from the body field.



ORDER CODE

Field	Code	Meaning
1 Series	QZKD	QZKD gear flowmeter
2 Size	M2 · M2S	50 ... 2000 mL/min · 5 ... 2000 mL/min
	M4 · M6	0.1 ... 4 L/min · 0.15 ... 8 L/min
	M10 · M15	0.5 ... 20 L/min · 2 ... 50 L/min
	M25	5 ... 150 L/min
3 Output	P · A	Pulse · 4 ... 20 mA two-wire
4 Seal	F · P	FKM · PTFE
5 Body	L · P	Aluminium 40 bar · PP 10 bar
	S · S1 · S2	304 stainless at 100 · 250 · 400 bar
	S3 · S4 · S5	316 stainless at 100 · 250 · 400 bar
6 Temperature	— · T	≤ 120 °C · ≤ 140 °C, not with aluminium or PP
7 Outlet	— · M	Hersman connector · M12 x 1 plug

