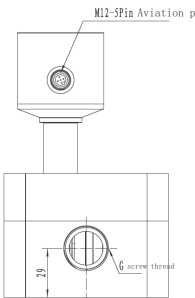


GEAR FLOWMETER, 2 TO 350 L/MIN



- SIX SIZES, 2 ... 350 L/MIN · G1/2 TO G2 OR M42 × 2 · 150 OR 400 BAR
- ± 0.5 % OF FULL SCALE · REPEATABILITY 0.1 %
- 4 ... 20 mA · PULSE · PNP/NPN · OLED DISPLAY · FLAMEPROOF VERSION

KEY DATA

Property	Value	Property	Value
Measuring range	2 ... 350 L/min in six sizes	Accuracy	± 0.5 % of full scale
Output	4 ... 20 mA · pulse · PNP/NPN	Repeatability	± 0.1 % of full scale
Supply voltage	16 ... 30 Vdc	High-temperature version	150 °C, order field T
Pressure range	150 bar aluminium · 400 bar stainless	Materials	Aluminium or stainless · seal FKM or PTFE
Process connection	G1/2 ... G2 female or M42 × 2	Display	OLED, with the PAF and NAF outputs

Two meshing gears turn once per known volume.



MEASUREMENT

Measuring principle	Positive displacement — two meshing gears, each turn a known volume. No straight inlet run is needed
Measuring range	Six sizes: 2 ... 25, 5 ... 50, 10 ... 100, 20 ... 200 and twice 30 ... 350 L/min, the last two differing only in the thread
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

MATERIALS AND PROCESS

Body	Aviation aluminium or aluminium, 304 or 316L stainless
Pressure	150 bar with the aluminium body, 400 bar with stainless
Seal	FKM as standard, PTFE for corrosive media
High-temperature version	150 °C, order field T
Connection and fixing	Female thread G1/2 ... G2 or M42 x 2. Two M6 threads 52 mm apart on the small body, four M12 on a 180 x 100 pattern on the large one

ELECTRICAL PROPERTIES

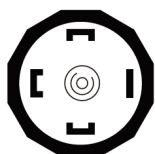
Supply voltage	16 ... 30 Vdc
Plug	Hessman: 1 +, 2 output for 4 ... 20 mA; 1 +, 2 -, 3 output for the pulse. Or M12 x 1, five pins: 1 brown +, 3 blue -, 2, 4 and 5 outputs
Output PAF / NAF	PNP or NPN switch, pulse and 4 ... 20 mA together, with the OLED display
Output HP / HA / MP / MA	One output only: pulse or 4 ... 20 mA, on the Hessman connector or on the M12 plug

DISPLAY AND FLAMEPROOF VERSION

Display	OLED, with the PAF and NAF outputs only
Flameproof version	Order field E. A cast housing about 125 mm across and 165 mm high with two cable entries and a terminal board



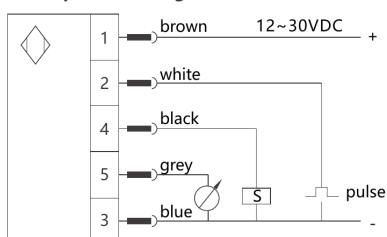
WIRING



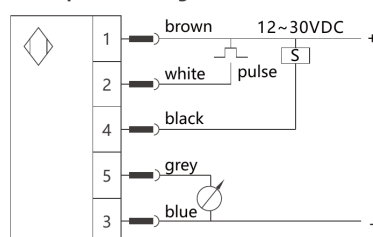
	4-20mA	pulse
positive electrode	1	1
negative electrode		2
output	2	3

The Hessman connector: pins 1 and 2 for the 4 ... 20 mA loop, pins 1, 2 and 3 for the pulse.

PNP+pulse+analog

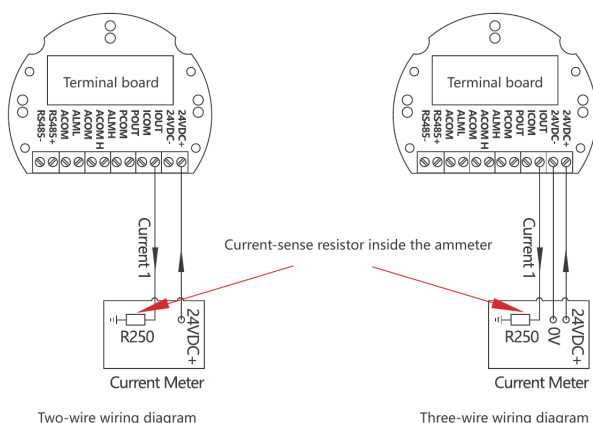


NPN+pulse+analog

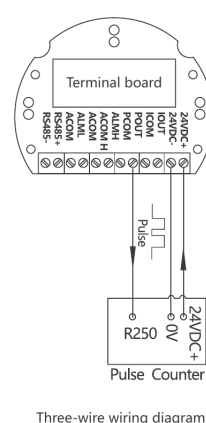


The five-pin M12 plug of the PAF and NAF versions, PNP on the left and NPN on the right.

4-20mA Current output wiring diagram



Pulse output wiring diagram

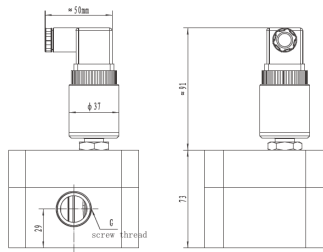


The terminal board of the flameproof version: 4 ... 20 mA as a two-wire and as a three-wire loop, and the pulse as a three-wire circuit, all at 24 Vdc over a 250 Ω sense resistor.

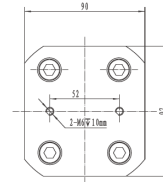
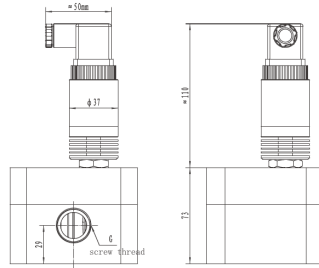


DIMENSIONS (mm)

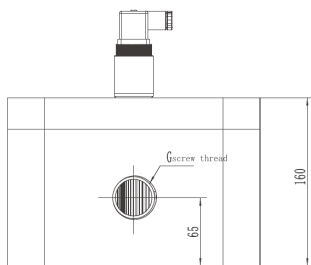
Standard (-20~100°C)



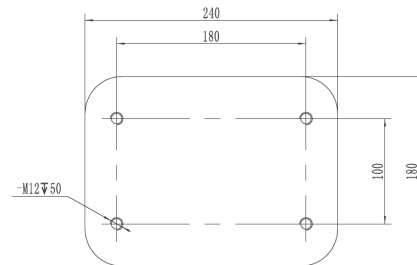
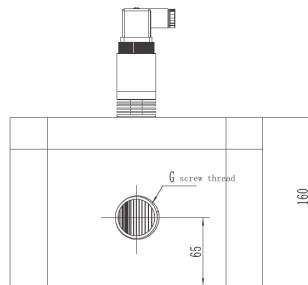
High temperature (-40~150°C)



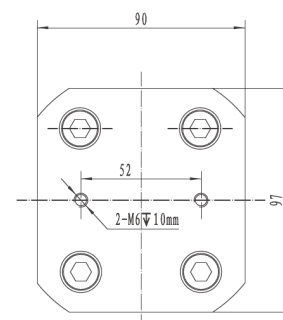
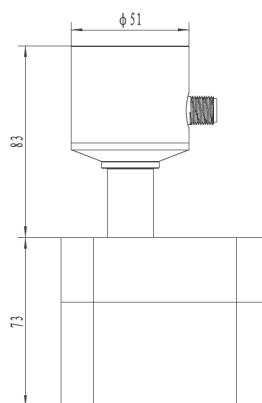
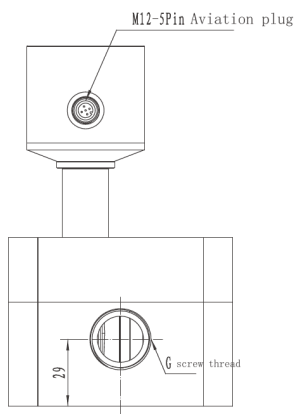
30-350L/min (-20~100°C)



High temperature 30-350L/min (-40~150°C)



Above the standard and the high-temperature head on the small body, with the plan view of that body;
below the same two heads on the 30 ... 350 L/min body.

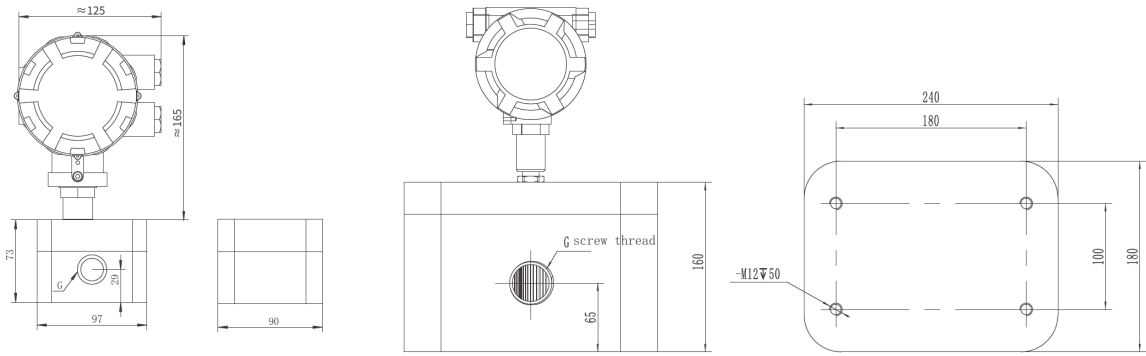


The M12 version on the small body: a Ø51 head, 83 mm over the body, and the same 97 x 90 mm plan with two M6 threads 52 mm apart.



Standard

Flow range: 30-350L/min



The flameproof version, about 125 mm across and 165 mm over the body, with two cable entries. Below it the same small body as every other version.

The head sits on top of the body and adds: about 91 mm over a Ø37 head with the Hessman connector, about 110 mm with the high-temperature head, 83 mm over a Ø51 head with the M12 plug, and about 165 mm for the flameproof housing, which is also about 125 mm across.

BODY DIMENSIONS (mm)

Version	Plan mm	Body height	Port centre	Fixing
2 ... 200 L/min	97 × 90	73	29	2 × M6, 10 deep, 52 apart
30 ... 350 L/min, both threads	240 × 180	160	65	4 × M12, 50 deep, 180 × 100



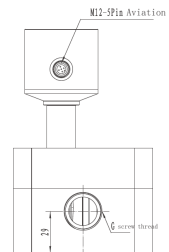
COMPLIANCE AND CERTIFICATION

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	150 bar aluminium · 400 bar stainless
Viscosity	Media up to 10 000 Pa·s
Wetted materials	Aluminium or stainless with an FKM or PTFE seal

ACCESSORIES AND ORDER CODE

Accessories

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



Pressure
150 / 400 bar

Accuracy
± 0.5 % F.S.

ELECTRICAL ACCESSORIES

Electrical accessory	Material	Straight (G)	Angled (W)
M12 × 1, 5-pin, 2 m	PUR	ZL05-PU02G	ZL05-PU02W
M12 × 1, 5-pin, 5 m	PUR	ZL05-PU05G	ZL05-PU05W
M12 × 1, 5-pin, 10 m	PUR	ZL05-PU010G	ZL05-PU010W
M12 × 1, 5-pin, 2 m	PVC	ZL05-PC02G	ZL05-PC02W
M12 × 1, 5-pin, 5 m	PVC	ZL05-PC05G	ZL05-PC05W
M12 × 1, 5-pin, 10 m	PVC	ZL05-PC010G	ZL05-PC010W
Self-wiring socket, 4-pin	Pg7 / Pg9 gland	GL04	WL04
Self-wiring socket, 5-pin	Pg7 / Pg9 gland	GL05	WL05

The six sizes as the order code lists them. The two 30 ... 350 L/min sizes differ only in the thread.



SIZES, RANGES AND THREADS

Size	Range	Standard thread
M25	2 ... 25 L/min	G1/2 female
M50	5 ... 50 L/min	G3/4 female
M100	10 ... 100 L/min	G1 female
M200	20 ... 200 L/min	G1/4 female
M350A	30 ... 350 L/min	G2 female
M350B	30 ... 350 L/min	M42 x 2 female

Example: QZKF-M25-PAF-F-L—. The pressure is not a field; it follows from the body: 150 bar for aluminium, 400 bar for stainless.

ORDER CODE

Field	Code	Meaning
1 Series	QZKF	QZKF gear flowmeter
2 Size	M25 · M50	2 ... 25 L/min · 5 ... 50 L/min
	M100 · M200	10 ... 100 L/min · 20 ... 200 L/min
	M350A · M350B	30 ... 350 L/min, G2 · 30 ... 350 L/min, M42 x 2
3 Output	HP · HA	Pulse · 4 ... 20 mA, on the Hessman connector
	MP · MA	Pulse · 4 ... 20 mA, on the M12 plug
	PAF · NAF	PNP or NPN plus pulse plus analogue, with the OLED display
	E	Flameproof version
4 Seal	F · T	FKM · PTFE
5 Body	L · H	Aluminium · aviation aluminium
	S · S1	304 stainless · 316L stainless
6 Temperature	— · T	Standard · 150 °C

