Totalising Electronics

pulse input

ZOE

2" pipe mounting kit

Wall mounting kit

- Battery operation or external DC power supply
- LCD-display, background lighting
- 1 pulse input (NPN, PNP, NAMUR, reed switch)
- Scalable pulse output
- Sensor supply
- Free scaling
- Housing for wall or pipe mounting

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Description

The electronic units ZOE are specifically designed for the calculation and display and of flow rates and volume flow of flowmeters. The device operates via battery or external power supply. The ZOE can be connected with flowmeters with pulse or frequency output.

The electronic shows flow rate, daily counter (resettable) and total counter. Mass units can be set.

All customised programme settings remain saved even after a battery exchange. The housing of ZOE is weather resistant and has protection category IP66/67 (Nema 4X). The electronics is housed in a UV-resistant, glass-fibre reinforced nylon housing with stainless steel screws and FPM seals.

The instruments are suitable for harsh indoor or outdoor environments and comply with EU Directive 2004/108/EC (Electromagnetic Compatibility).

Significant Characteristics

- Scalable, resettable and total volume counter
- Plastic housing for wall or pipe mounting
- Universal pulse input
- Linearisation function
- MIN/MAX-function
- Battery life with 3,6 V AA lithium or 2 x AA standard alkaline cell
- Optional: wall or pipe mounting

Additionally for ZOE-ZE:

- External supply 9-28 V_{DC}
- Scalable pulse output
- Sensor supply
- Background lighting for LC display

Technical Details

External power supply:	9-28 V_{DC} power consumption max. 40 mA (only ZOE-ZE)
Battery for operation:	1 x 3.6 V lithium size AA or 2 x 1.5 V alkaline cell size AA
Battery life:	using 3.6 V lithium with 2200 mAh: up to 5 years (at 50µA); using 2 x alkaline cells with 2600 mAh each: up to 2 years (at 50µA)
Display:	LC display (for ZOE-ZE white background lighting) height of digits for: 5 digits volume flow: 13 mm 8 digits volume counter: 8 mm display of battery power
Mounting options:	meter mount, wall or pipe mounting
Measuring input:	universal, configurable (NPN, PNP, NAMUR Coil, reed switch or active) input frequency: 0.1 ... 1000 Hz, High-Low-threshold 1 V_{DC}
Measuring rate:	1 s
Units for volume flow:	ml/m, l/m, l/h, m^3/h, gpmUK, gpmUS, gphUK, gphUS, User
Units for volume counter:	ml, l, m^3, galUs, galUK, User
Control input (only ZOE-ZExxx3):	for part counter resetting
Linearisation:	1 ... 9 interpolation points, can be deactivated
Accuracy of volume flow measurement:	<0.1% of reading (depending on scaling and resolution)
Sensor supply (only ZOE-ZExxx3):	8 V_{DC}, max. 25 mA (for external supply >10 V_{DC})
Pulse output (only ZOE-ZExxx3):	NPN, Open Collector, max. 30 V_{DC}, max. 50 mA
Operation:	4 buttons
Housing:	plastic, PA6, GF-reinforced
Protection:	IP66/67
Cable entry:	3 x M20x1.5 or ½" NPT (prepared)
Electrical connection:	plug-in terminals wire size max. 0.75 mm^2
Retention of meter readings in case of power failure:	cyclic, non-volatile memory
Ambient temperature:	-20 °C ≤$T_{ambient}$ ≤80 °C
Storage temperature:	-25 °C ≤$T_{storage}$ ≤80 °C (without battery)

No responsibility taken for errors;
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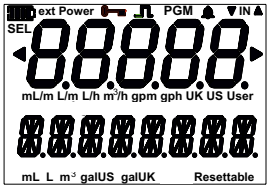
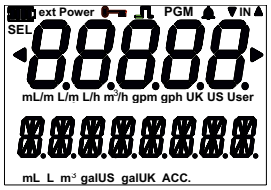
1/09 - 2017

Configurable Display Layouts

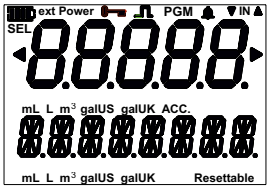
Rate/Part



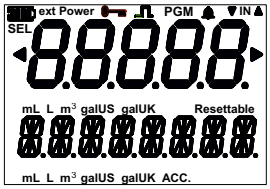
Rate/Total



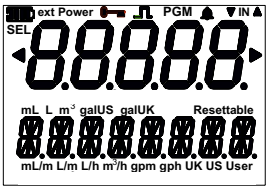
Total/Part



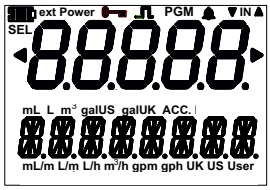
Part/Total



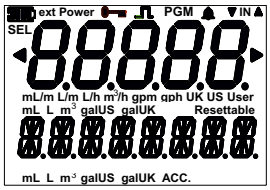
Part/Rate



Total/Rate

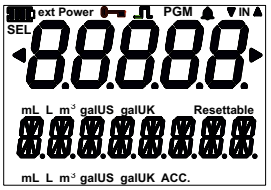


Alt/Total



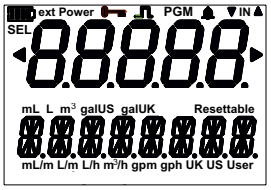
For this layout, the bigger display will alternate b/w partial totaliser and flow, while the smaller display is fix and will show accumulated totaliser.

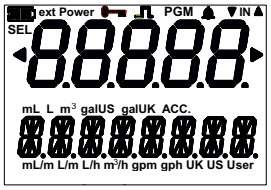
Part/Alt



For this layout, the smaller display will alternate b/w accumulated total and flow, while the bigger display is fix and will show partial totaliser.

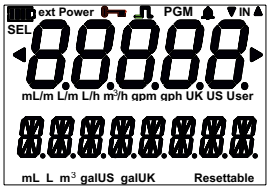
Alt/Rate

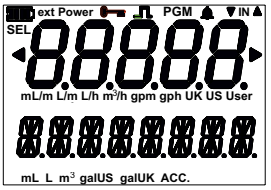




For this layout, the bigger display will alternate b/w partial and accumulated total, while the smaller display is fix.

Rate/Alt





For this layout, the smaller display will alternate b/w partial and accumulated total, while the bigger display is fix.

Configuration	5 digits display	8 digits display
Rate/Part	Rate display	Part
Total/Part	Total	Part
Part/Rate	Part	Rate display
Alternating/Total	Alternating display between Rate display and Part	Total
Alternating/Rate	Alternating display between Total and Part	Rate display
Rate/Total	Rate display	Total
Part/Total	Part	Total
Total/Rate	Total	Rate display
Part/Alternating	Part	Alternating display between Total and Rate
Rate/Alternating	Rate display	Alternating display between Total and Part

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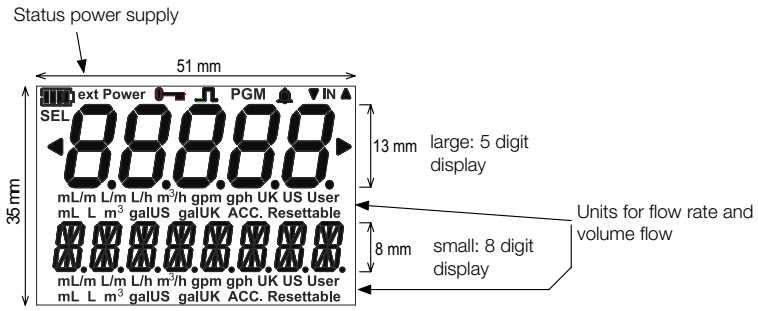


Order Details (Example: **ZOE-ZE K M F 3 0 0**)

Model	Electronics	Housing type	Electrical connection/ cable gland	Input	Power supply	Options	Special
ZOE-	**ZB** = rate totaliser without external power supply/with battery	**0** = universal mount (standard, round plastic without wall mounting kit) **K** = universal mount (round plastic with wall mounting kit) **M** = universal mount (round plastic for retrofitting DON)	**M** = 3x M20x1.5 cable entry **N** = 3x ½" NPT cable entry	**F** = pulse/ frequency input	**B**[1] = battery for operation	**0** = without	**0** = without **Y** = special (please specify in clear text)
	ZE = rate totaliser with external power supply/with battery				**3**[2] = 9-28 V_{DC}, battery for operation, pulse output		

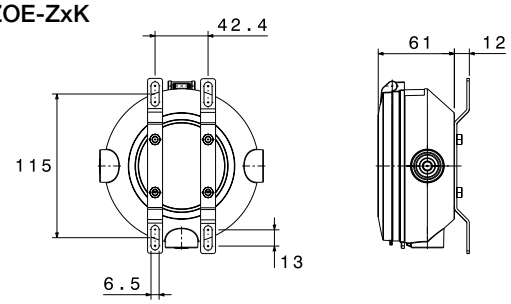
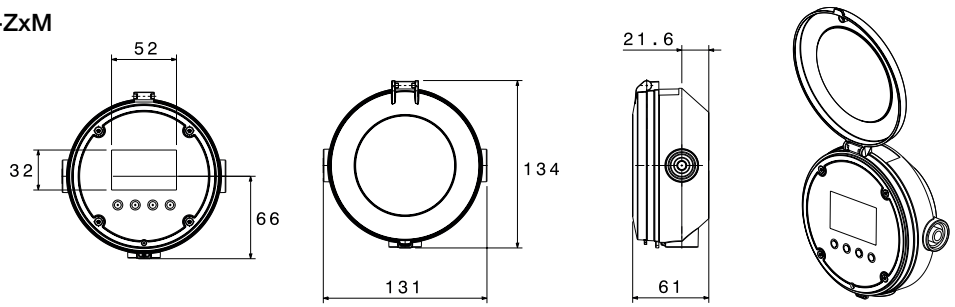
[1] Only available with ZOE-ZB
[2] Pulse output, sensor supply and LCD backlight only with external power supply. Only available with ZOE-ZE

Accessories

Description	Model
Stainless steel wall mounting kit	**ERS-ZOK-023618**
Stainless steel 2" pipe mounting kit	**ERS-ZOK-003402**

Dimensions [mm]

ZOE-ZxK



ZOE-ZxM