

### GZO OIL METER RANGE

A comprehensive selection of oil & fuel flow meters at sensible prices.  
 Suitable for oil burner consumption measurement and general fuel consumption.

**Features:**

- » Practically constant measuring accuracy over a wide range of oil viscosities. +/-1% accuracy +/-0.2% Repeatability
- » Installation without the need for flow conditioning or straight pipe lengths.
- » Installation in vertical or horizontal pipework
- » Installation on pressure or suction side.

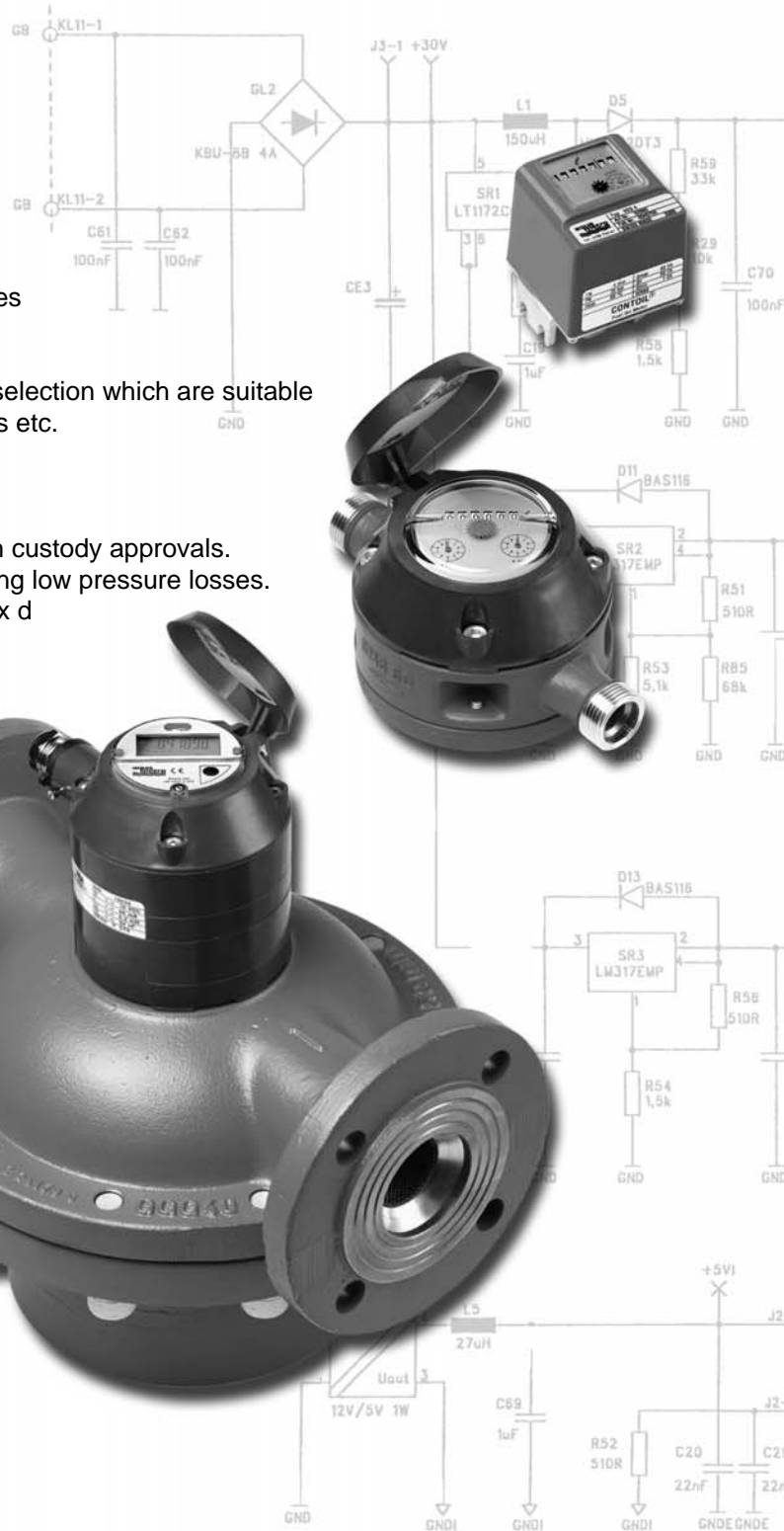
**Suitable Mediums:**

- » Heating fuel extra light / light / medium / heavy
- » Naptha
- » Diesel
- » Petrol
- » Plus other media which can be used for lubrication purposes

Many more models exist in this and other ranges within our selection which are suitable not only for oils and fuel, but water, chemicals and food stuffs etc.

**Further Options:**

- » High flow range models upto 1200 Litres/min available with custody approvals.
- » High Viscosity models upto 1 million centipoise and featuring low pressure losses.
- » ATEX certified models for hazardous areas EEx ia and EEx d



# GZO 4 ... 50 (Classic)

## GZO 4 and 8

### Technical data <sup>1)</sup>



- oil meter with inside thread connections located on the bottom plate
- with mechanical roller counter, volume display in litres
- meters in US-Gallons <sup>2)</sup>
- for mounting in horizontal, vertical an inclined positions

Option: Reed pulser 48 V

Type		GZO 4	GZO 4	GZO 8
		Q <sub>min</sub> 0,5		
<b>Nominal diameter</b>	<b>mm</b>	<b>4</b>	<b>4</b>	<b>8</b>
	inch	1/8	1/8	1/4
Connection threads of meter		inch 1/8		
Nominal pressure		bar 25		
Temperature		°C 60		
Maximum flow rate	Q <sub>max</sub> <sup>3)</sup>	l/h 40	80	200
<b>Nominal flow rate</b>	<b>Q<sub>n</sub> <sup>3)</sup></b>	<b>l/h 25</b>	<b>50</b>	<b>135</b>
Minimal flow rate	Q <sub>min</sub> <sup>4)</sup>	l/h 0,5	1	4
Approx. starting flow rate		l/h 0,3	0,4	1,6
Max. permissible error		± 1% of actual value <sup>4)</sup>		
Repeatability		± 0,2%		
Smallest readable amount	l	0,001	0,001	0,01
Registration capacity	m <sup>3</sup>	100	100	1000
Registration at Q <sub>n</sub> before return to zero		h 4 000	2 000	7 400
Safety filter mesh width		mm 0,125	0,125	0,150
<b>Dirt trap mesh width</b>		<b>mm 0,080</b>	<b>0,080</b>	<b>0,100</b>
Volume of the measuring chamber		approx. cm <sup>3</sup> 5	5	12,5
Weight without couplings		approx. kg 0,65	0,65	0,75
Reed pulsers	RE 1	l/pulse –	–	1
	RE 0,1	–	0,1	0,1
	RE 0,01	–	0,01	–
	RE 0,00125	–	0,00125	–
	RE 0,00311	–	–	0,00311
Pulse frequency for	RE 0,00125 <sup>5)</sup>	at Q <sub>max</sub> Hz	–	17,777
		at Q <sub>min</sub> Hz	–	0,222
Pulse frequency for	RE 0,00311 <sup>5)</sup>	at Q <sub>max</sub> Hz	–	17,864
		at Q <sub>min</sub> Hz	–	0,357

1) Manufacturer's specification, valid for the reference condition as specified under meter data (annex).

2) 1 US gallon corresponds to 3.785 litres

3) For burners and engines or motors, the meter must basically be selected for permanent flow. For higher viscosity, or if the meter is installed on the suction side, the pressure drop and any reduction in the measuring range must also be considered: see Chapters 5 and 8.

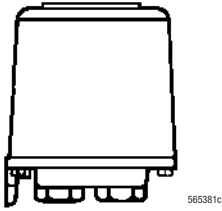
4) Max. permissible error: GZO 4 Q<sub>min</sub> 0,5: 0,5 l/h ... 2 l/h = + 1%/- 2%. GZO 4: 1 l/h ... 2 l/h = + 1%/- 2%.

5) Brief intervals when switched on have to be considered.

### Pressure drop curves

in chapter 5

### Dimensions in mm

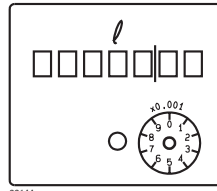


height = 79  
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depth = 65

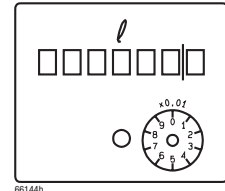
Detailed dimensional drawings in chapter 5

### Dial

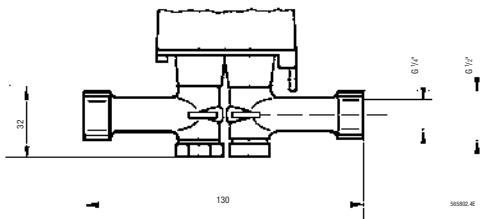
GZO 4



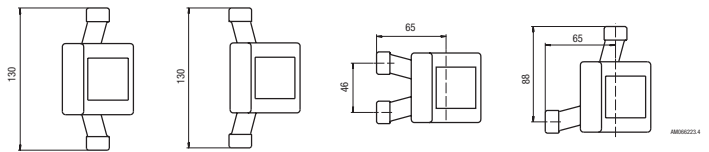
GZO 8



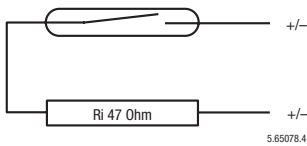
### Mounting Kit for GZO 8



Order No. 81130: some possible mounting positions



### RE Pulsers



Switching element:  
Switching voltage:  
Switching current:  
Static current:  
Switching power:  
ON-time:

- Reed switch with dry contact (inert gas)
- Max. 48 V AC/DC
- Max. 50 mA
- Open Contact
- Max. 3 VA
- GZO 4-RE 0.00125: 65...90 %
- GZO 4-RE 0.01: 10...30 %
- GZO 4-RE 1: 30...70 %
- GZO 8-RE 0.00311: 65...90 %
- GZO 8-RE 0.1: 10...30 %
- GZO 8-RE 1: 30...70 %

Temperature:  
Protection:

- Ambient -10 ... +60° C
- Meters without pulser:
- IP 65 (IEC 144) against water-jets and dust

Connection:

- Meters with pulser RE:
- IP 50 (IEC 144) against dust deposits
- On plug supplied with product for cable, 2 x 0,35 mm<sup>2</sup>

### Ordering specifications

Type	Order No.	Type	Order No.
GZO 4	92680	GZO 8	92630
GZO 4 RE 0,00125	89763	GZO 8 RE 0,00311	89733
GZO 4 RE 0,01	89760	GZO 8 RE 0,1	89730
GZO 4 RE 0,1	89761	GZO 8 RE 1	89731
GZO 4 Q <sub>min</sub> 0,5	92678		

### Special versions with gaskets FMP fluor elastomer

Type	Order No.
GZO 4 V	92487
GZO 4 V - RE 0,01	92488
GZO 4 V - RE 0,1	92489

## GZO 15 ... 50

### Technical data <sup>1)</sup>



- Volume display on roller register, in litres
- fuel oil meter with threaded or flanged ends
- for horizontal, vertical or inclined mounting

Option: Reed pulser or RV / IN pulser

Versions available on request:

- different flange drillings, such as ANSI, JIS
- meters in US Gallons <sup>2)</sup> (option)

Type			GZO 15	GZO 20	GZO 25	GZO 40	GZO 50
<b>Nominal diameter</b>	<b>DN</b>	<b>mm</b>	<b>15</b>	<b>20</b>	<b>25</b>	<b>40</b>	<b>50</b>
		inch	1/2	3/4	1	1 1/2	2
Installation length		mm	165	165	190	300	350
Nominal pressure with threaded ends	PN	bar	16				
	PN	bar	25, 40				
Maximum temperature		° C	130, 180				
Maximum flow rate	Q <sub>max</sub> <sup>3)</sup>	l/h	600	1500	3 000	9 000	30 000
<b>Nominal flow rate</b>	<b>Q<sub>n</sub> <sup>3)</sup></b>	<b>l/h</b>	<b>400</b>	<b>1000</b>	<b>2 000</b>	<b>6 000</b>	<b>20 000</b>
Minimal flow rate	Q <sub>min</sub>	l/h	10	30	75	225	750
Approx. starting flow rate		l/h	4	12	30	90	300
Max. permissible error			± 1% of actual value				
Repeatability			± 0,2%				
Smallest readable amount		l	0,01	0,1	0,1	0,1	1
Registration capacity		m <sup>3</sup>	1000	10 000	10 000	10 000	100 000
Registration at Q <sub>n</sub> before return to zero		h	2 500	10 000	5 000	1 667	5 000
Safety filter mesh width		mm	0,400	0,400	0,400	0,800	0,800
<b>Dirt trap mesh width</b>		<b>mm</b>	<b>0,250</b>	<b>0,400</b>	<b>0,400</b>	<b>0,600</b>	<b>0,600</b>
Volume of the measuring chamber		approx. cm <sup>3</sup>	12	36	100	330	1200
Housing finish			enamelled red RAL 3013				
Weight with threaded ends <sup>4)</sup>		approx. kg	2,2	2,5	4,2	17,3	–
	with flanges PN 25	approx. kg	3,8	4,5	7,5	20,3	41,0
	with flanges PN 40	approx. kg	4,4	5,5	7,8	20,5	42,0
Pulse values of pulsers:							
IN inductive according to DIN 19234		l/pulse	0,01	0,01	0,1	0,1	1
RV Reed		l/pulse	0,1	1	1	1	10
RV Reed		l/pulse	1	–	–	10	100
Pulse frequency IN	at Q <sub>max</sub>	Hz	16,667	41,667	8,333	25,000	8,333
	at Q <sub>min</sub>	Hz	0,278	0,833	0,208	0,625	0,208

1) Manufacturer's specification, valid for the reference condition as specified under meter data (annex).

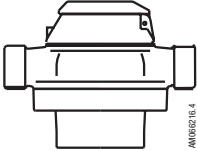
2) 1 US gallon corresponds to 3.785 litres

3) For burners and engines or motors, the meter must basically be selected for permanent flow. For higher viscosity, or if the meter is installed on the suction side, the pressure drop and any reduction in the measuring range must also be considered; see Chapters 5 and 8.

4) Weight without couplings.

### Pressure drop curves in main data sheet

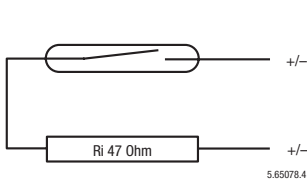
## Dimensions in mm

	Meter	Length	Width	Height of meters GZO					
				GZO ... 130° C			GZO ... 180° C		
					-RV	-IN		-RV	-IN
				L	W	H	H	H	H
GZO 15	165	105	106	130	185	147	171	225	
GZO 20	165	105	115	139	194	156	180	234	
GZO 25	190	130	142	166	221	183	207	261	
GZO 40	300	210	235	259	273	235	259	313	
GZO 50	350	280	291	315	329	291	315	369	

Detailed dimensional drawings in chapter 5

## RV Pulsers

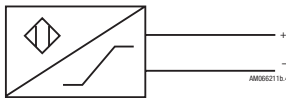
This pulser is integrated into the roller counter and is thus especially appropriate for remote totalisation. For other applications the use of the inductive pulser IN is preferable.



- Switching element: • Reed switch with dry contact (inert gas)
- Switching voltage: • max. 48 V AC/DC
- Switching current: • max. 50 mA (Ri = 47 Ohm/0,5 W)
- Static current: • Open Contact
- Switching power: • max. 2 W
- ON-time: • 50% ± 10%
- Temperature: • Ambient -10 ... +70° C
- Protection: • IP 65 (IEC 144) against water-jets and dust
- Connection: • Cast-in cable, length 3 m
- Cable cross section: • 2 × 0,14 mm<sup>2</sup>

## IN Pulsers

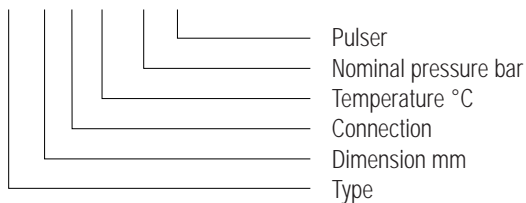
Pulser for industrial applications. Supplied with plug-in pulser sensor.



- Switching element: • Slot initiator according to DIN 19234
- Switching voltage: • 5 ... 15 V DC
- Residual ripple: • max. 5%
- Switching current: • > 3 mA bei 8 V DC / 1 kOhm
- Static current: • < 1 mA bei 8 V DC / 1 kOhm
- ON-time: • 50% ± 10%
- Temperature: • Ambient -10 ... +70° C
- Protection: • IP 65 (IEC 144) against water-jets and dust
- Connection: • Pulser supplied with special plug. Required cable min. 2 x 0.35 mm<sup>2</sup> and 4...6 mm external diameter or optional pn 80019 with mounted cable.
- Option: • Cable mounted, 2 x 0.5 mm<sup>2</sup>, PVC black, length 3 m (pn 80019)

## Type designation key

GZO 25 FL 130/25-IN ...



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