

GAS CYLINDER SCALE



- CAPACITY 250 · 500 KG
- 4 ... 20 MA HART · 2-WIRE
- 2 PNP LIMIT VALUE CONTACTS
- LED DISPLAY · OVERLOAD PROTECTION



VERSIONS

Capacity (kg)	Platform Ø (mm)	Height approx. (mm)	Weight approx. (kg)
250	245	80	7
500	410	95	19

Overload protection factory-set to approx. 250 or 500 kg. Manufacturer type: ME-GFW1 (250 kg), ME-GFW2 (500 kg).



OVERVIEW

Built for continuous operation: the liquefied gas cylinder stays on the scale, with display, limit values and overload protection built in.

The gas cylinder scale measures the weight of the cylinder on a round weighing platform and outputs it as 4 ... 20 mA with superimposed HART signal on the 2-wire current loop. Two electronic limit value contacts switch at freely adjustable values, and the 4-digit LED display shows the reading right at the scale. Settings are made with three keys or by software via HART.

250 · 500 kg 2 capacities	4 ... 20 mA HART, 2-wire	2 × PNP limit value contacts	IP65 at least, plugged
---	--	--	--

APPLICATIONS	EQUIPMENT
■ Weighing liquefied gas cylinders in continuous operation	■ 4-digit LED display, can be mirrored by 180°
■ Level measurement by weight in the industrial sector	■ Two limit value contacts, one LED each
■ The cylinder stays on the scale permanently	■ Overload protection adjustable via three locking rings
	■ Configuration with keys or HART software



TECHNICAL DATA

OUTPUT

Signal	4 ... 20 mA with superimposed HART signal
Type	2-wire current loop
Current range	3.8 ... 20.5 mA
Signal on error	3.6 mA (short circuit, underflow) · 21 mA (sensor break, overflow)
Accuracy, amplifier	0.3 % of range
Resolution	16 bit
Measuring rate	10 measurements/s
Response time	20 ms
Filter setting	0 ... 99 s
Linearisation	10 calibration points
Turn-on delay	< 5 s

LOAD CELL

Measuring range	250 kg · 500 kg
Combined error	0.02 % of range
Non-linearity	0.02 % of range
Hysteresis	0.02 % of range
Repeatability	0.02 % of range
Zero point error	1.5 % of range
Temperature error span	0.02 % of range / 10 °C
Overload	120 %
Ultimate overload	150 %
Insulation resistance	> 5000 M Ω (50 VDC)
Material	Aluminium alloy

ELECTRICAL CONNECTION (2 × M12x1, 5-PIN)

Pin 1 · 3	U+ · U- 12 ... 40 VDC current loop, 4 ... 20 mA HART
Pin 2 · 4 · 5	S2 · S1 · C electronic limit value contacts
Plug 1 and 2	same assignment; load cell factory-connected via M12x1, 4-pin
Single device	plug 1: 4 ... 20 mA HART and limit value contacts, plug 2 not used
Several scales	4 ... 20 mA per device, limit value contacts in parallel · or 24 VDC supply and limit value contacts in parallel

DISPLAY

Display	7 segment, 8.5 mm, red, 4 digits, can be mirrored by 180°
Resolution	-9999 ... 9999 digit
Error of measurement	±0.2 % of range, ±1 digit
Temperature drift	100 ppm/K
Memory	minimum and maximum values
Representation	xxxx · xxx.x · xx.xx · x.xxx

LIMIT VALUE CONTACTS

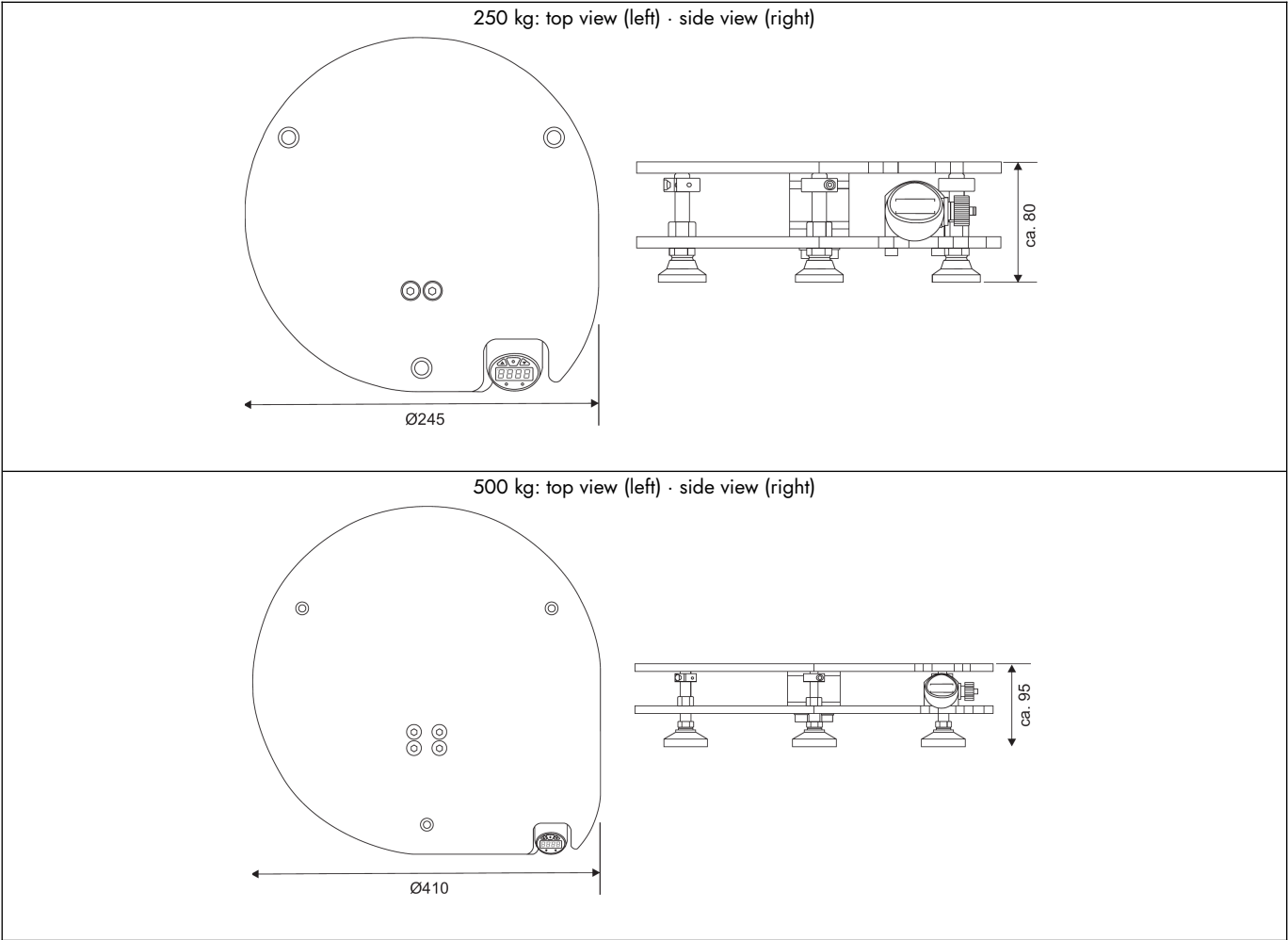
Type	2 × PNP electronic, 30 VDC, 200 mA
Indication	1 red LED per limit value
Voltage drop	< 1 V
Setting range	switch point and hysteresis anywhere within range
Switching delay	0.0 ... 999.9 s
Failsafe	adjustable
Galvanic isolation	outputs separated from the amplifier

SUPPLY AND ENVIRONMENT

Supply	12 ... 40 VDC from the HART current loop
Load	$R = (U_B - 12 \text{ V}) / 22 \text{ mA}$
Reverse polarity protection	available
Operating temperature	-20 ... +55 °C
Compensated	-10 ... +40 °C
Storage temperature	-20 ... +80 °C
Condensation	uncritical



DIMENSIONS (mm)



MECHANICS AND CONFIGURATION	
Feature	Design
Weighing and base platform	steel 1.0037, zinc plated
Flexible feet	steel zinc coated, blue chromated
Head of display	polycarbonate
Overload protection	adjustable via 3 locking rings
Mounting	on a level surface
Operation	3 keys or software via HART; functions according to VDMA 24574-1 to -4
Programmable	measuring range start/end, range and time of indication, decimal point, units, zero stabilisation, programming lock, calibration points, TAG number; limit value, hysteresis and delay per contact
Configuration	factory configuration; customised on request
Accessories	HART interface with USB and software on request

Dimensions in mm. The drawings are not to the same scale.

COMPLIANCE AND CERTIFICATION

Protection Rating at least IP65 (with electrical connections plugged)

