



Description

This fully electronic dynamometer is suitable for measuring tensile and compression loads. It is available for various load ranges between 50 kg and 500 kg. On request, this dynamometer can be supplied for use as a force gauge; the load ranges are then between 500 N and 5000 N. The dynamometer consists of a miniature sensor and a hand-held terminal which are connected by a spiral cable. The display of the hand-held terminal can show the current measured values as well as the peak values of both load directions.

The sensor, a shear-force load cell, is insensitive to transverse forces. This ensures that the dynamometer provides very accurate measurements. In many applications where space is limited, the miniature version of the shear-force load cell is extremely useful. The two mounting threads on the sensor offer numerous installation possibilities; we offer spherical rod ends and eye-bolts as accessories to aid installation.

You can request the firmware version, the date of the last calibration and the serial number of your device via an easy-to-use menu. In this menu, you can also set the auto-off time for saving the batteries, the desired measuring rate and the display contrast.

Four batteries of type AA which can be easily replaced by the user supply the dynamometers with power.

Features

- | Low self-weight
- | Nominal loads of 50 kg to 500 kg, or of 500 N to 5000 N
- | Zero positioning and taring
- | Measure the top load in positive and negative direction of force
- | 4 x batteries type AA
- | Requests/settings via one menu
- | Optional with spherical rod ends or eye-bolts

Applications

- | Dynamometer
- | Force gauge
- | Tensile and compression applications
- | Weighing operations or force measurement in many different fields

Selection table

Type	Nominal load	Sensitivity / display increments	Mounting threads	Self-weight (without mountings)	Material of sensor
ZW 5.0 / 50	50 kg / 500 N	0.01 kg / 0.1 N	2 x M8	0.5 kg	Al.
ZW 5.0 / 100	100 kg / 1000 N	0.1 kg / 1 N	2 x M8	0.5 kg	Al.
ZW 5.0 / 200	200 kg / 2000 N	0.1 kg / 1 N	2 x M10	0.5 kg	Al.
ZW 5.0 / 300	300 kg / 3000 N	0.1 kg / 1 N	2 x M10	0.6 kg	Steel
ZW 5.0 / 500	500 kg / 5000 N	0.1 kg / 1 N	2 x M10	0.6 kg	Steel

Technical data

Overload	1.2x nominal load
Display	12 digits, 2 lines
Accuracy	±0.25 % f.s. (under tension <i>or</i> compression) (under tension <i>and</i> compression available on request)
Measuring rate	configurable: 10, 20 or 100 Hz
Power supply	4 x battery type AA
Operating time	>8 h continuous operation
Auto-off time	configurable: 8, 30, 60 min / off
Operating temperature	0 °C to +50 °C
Storage temperature	-20 °C to +70 °C
Protection class	
of the hand terminal	IP 40
of the transducer	IP 67
Housing of the hand terminal	ABS
Hand terminal's dimensions	78 mm x 145 mm x 44 mm (w x l x h)
Dimensions of sensor	20 mm x 40 mm x 40 mm (w x l x h)
Spiral cable	Length 0.5 m / extended length 4 m

Calibration

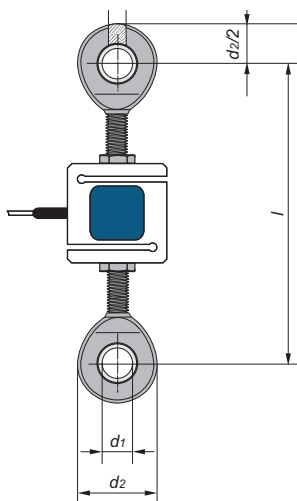
As dynamometer	
Under tension <i>or</i> compression:	display in kg
As force gauge	
Under tension <i>or</i> compression:	display in N
Under tension <i>and</i> compression:	display in N
	Accuracy on request

Options

Mechanical overload protection for compression loads
Accessories: spherical rod ends, eyebolts for installation

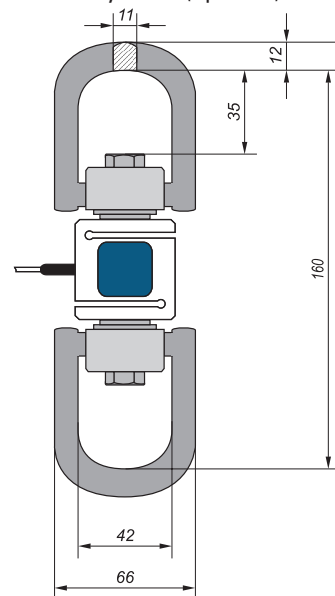
Dimensions

Sensor with spherical rod ends (optional)



Type	a	l	d1	d2
ZW 5.0 / 50 / 100	5	110	8	23
ZW 5.0 / 200 / 300 / 500	6	122	10	28

Sensor with eyebolts (optional)



Dimensions in mm