

## Low-Cost Measuring Chain

For basic force measurements

Digital indicator model 9186  
and load cell model 8532

Code: 8532-ANZ EN

Delivery: 1 week

Warranty: 24 months



- Measuring ranges between 0 ... 500 N and 0 ... 20 kN
- Extremely economical force indicator
- Compact sensor design
- Threaded holes for easy assembly
- Very good visual indication via 20 mm display
- Up to 2 limit values optionally possible
- Optionally as built-in or bench top housing
- Measuring chain is trimmed and ready for immediate use

8532-ANZ EN

### Application

The force measuring chain has been developed for applications where the requirements for precision are not the primary focus, but rather where an economical purchase price and simple functionality are the key criteria. The sensor's strain gauge technology allows both static and dynamically changing forces to be measured. The large display means that the force acting on the sensor can be read easily. The four integrated threaded holes allow the sensor to be integrated quickly and easily into existing production and assembly equipment.

Typical applications include

- ▶ Testing the strength of welded joints
- ▶ Sports medicine
- ▶ Monitoring the clamping force of hose connections

### Description

The body of the sensor is a flat, cylindrical disk, into which a domed force application knob is integrated. It is important that the force is applied axially to the center of the sensor. A full-bridge strain gauge is used as the measuring element inside the sensor, by means of which the force to be measured is converted into a proportional electrical voltage. This is indicated as a force on the display.

It has been possible to implement this extremely economical digital indicator through the use of the latest microprocessor technology. The simplicity of operation and adjustment need hardly be explained. The self-explanatory abbreviations allow even an inexperienced user to configure the device in a very short time.

## Technical Data

### Digital indicator model 9186

#### Strain gauge

Connection technology:	4 wire
Bridge resistance:	120 ... 1000 $\Omega$
Bridge voltage:	30 V / 300 mV choice per Menu
Sensor excitation:	5 V / 30 mA 10 V / 30 mA

#### General data

Measurement error:	0,1 % F. S. $\pm$ 4 Digit
Display:	- 1999 ... + 9999
Measurement rate:	25/s
Protection class front panel:	IP65

#### Standard function

TARA:	tare of an offset
Digital control input:	TARA

#### Auxiliary excitation

Panel version:	115 / 230 V AC 50-60 Hz
Desktop version:	115 / 230 V AC 50-60 Hz
Power consumption:	3 VA

#### Option

##### Digital limits

2 Relay contacts:	250 V AC / 150 V AC / 8 A, for 2 limits
Response time:	$\leq$ 10 ms (typ.)

Please refer to data sheet 9186 for further information.

## Technical Data

### Compressive load cell model 8532

Measurement range:	0 ... 500 N up to 0 ... 20 kN
Bridge resistance:	350 $\Omega$
Accuracy:	$<$ 1 % F.S.
Protection class accord. to EN 60529:	IP60
Length of cable:	3 m

Please refer to data sheet 8532, for further information.

### Order Information

Low-cost measuring chain completely configured for a range of 20 kN, in panel housing, without limits

1 x	<b>8532-6020-V400</b>
1 x	<b>9186-V0100</b>
1 x	<b>91ABG</b>

Low-cost measuring chain completely configured for a range of 20 kN, in desktop housing, with 2 limits

1 x	<b>8532-6020-V400</b>
1 x	<b>9186-V3102</b>
1 x	<b>9941</b>
1 x	<b>99004</b>
1 x	<b>91ABG</b>

## Application

### Checking welding seams

A component is welded to a beam. For checking the joint, this component is stressed by the test force  $F_P$  in parallel direction to the jointed surfaces. Now the reaction force  $F_R$  is measured by a load cell 8532. This is done by the help of a linear bearing. The digital indicator shows the test force in Newton (N).

