

# Checking Device for Force, Torque, Displacement and Pressure TRANS CAL

Model 7280

|           |           |
|-----------|-----------|
| Code:     | 7280 EN   |
| Delivery: | ex stock  |
| Warranty: | 24 months |



- **Sensors: Strain gauge/standard signal 10 V/0/4-20 mA**
- **Accuracy 0.1 % F.S.**
- **Up to 10 sensor parameter sets storable**
- **Data logger to 15,000 measuring values**
- **Min/Max memory**
- **Mobile use with accumulator or battery, but also operable with power supply**
- **Manifold accessories optionally available**
- **DKD/DAkKS/manufacturer calibration certificate for the complete measurement chain available (option)**

## Application

The portable digital indicator TRANS CAL model 7280 is an universal checking device for instrumentation examination of mechanical components like presses, equipment of torque and so on. The fields of application range from quality assurance over start-up installations to process monitoring.

Very fast reaction times to the measuring signals are possible with the high measuring rates available. A min/max-memory enables this device for further applications. An universal configurable data logger can store up to 15,000 measured values.

In order to have traceable results from this measurement chain a DKD/DAkKS/manufacturer calibration certificate (option) can be provided. The traceability of the calibration is based on the references applied.

## Description

The TRANS CAL model 7280 can either be battery- or accumulator-operated in the field or supplied with an external power supply unit. High measuring accuracy paired with fast measuring rate are ensured by the employment of highly precise amplifiers, the 16 bit A/D converter and a microprocessor. The handy digital indicator model 7280 supports sensors on strain gauge basis and active sensors up to 10 V/20 mA. The 10 mm high LCD main display will inform about the presently measured value. An existing basic load can be tared away with the function tare. Due to its high measurement accuracy the device can be used in highly accurate measurements. For a measuring chain we recommend to use the tension/compression load cell model 8524.

Depending on the existing press force this load cell features measuring ranges from 500 N up to 200 kN (divided in 9 levels).

7280 EN

**Technical Data**

|   |   |
|---|---|
| Accuracy:                               | 0.1% F.S. ± 1 digit   |
| Measuring rate:                         | 1/10/100/1000/sec.  |
| Average value:                          | x/1, x/2, x/4, x/8, x/16, x/32                                  |
| Display counts:                         | ± 9.999 + 3 dig. unit   |
| Zero point alignment:                   | automatic/manual  |
| Sensor selection for measurement mode:  | 10  |
| Data logger mode:                       | window, diagram, manual, auto                                   |
| Memory values:                          | max. 15.288   |
| Bridge resistance of the strain gauges: | 350 ... 2000 Ω  |
| Sensitivity, passive:                   | ± 3.3 mV/V  |
| Sensitivity, active:                    | ± 10 V  |
| Sensitivity, current:                   | 0/4 ... 20 mA at 75 Ω   |
| Connection technology:                  | 2 or 3 wire   |
| Voltage supply passive/active:          | 5 V/20 mA / ± 12V / over 100 mA<br>± 12 V altogether max 120 mA |

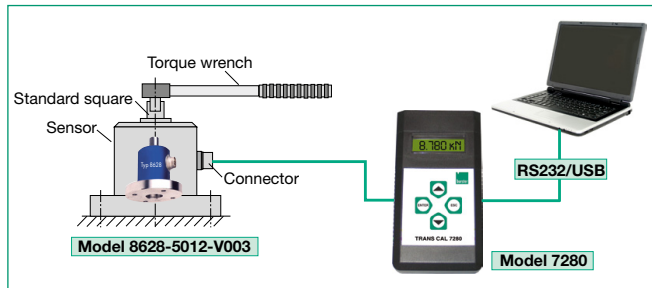
Working time with 50 % cyclic duration with accus:  
 passive sensors > 20 h  
 active sensors > 8 h

|                                 |                     |
|---------------------------------|---------------------|
| Nominal temperature range:      | + 15 °C ... + 35 °C |
| Range of operating temperature: | + 5 °C ... + 45 °C  |
| Storage temperature range:      | - 10 °C ... + 70 °C |
| Dimensions [D x W x H]:         | 200 x 100 x 40 [mm] |
| Protection class:               | IP40                |
| Weight:                         | 500 g               |

**Applications**

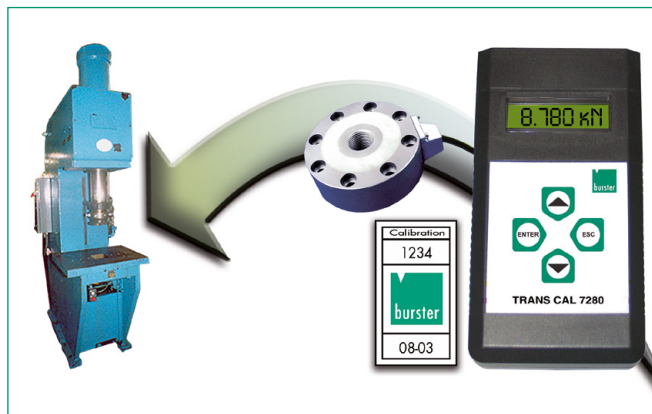
**Test object - torque wrench**

Measuring range 0 ... 12 Nm



With torque wrenches the desired torque is set through turning the handle. The tolerance of the torque and the repeating accuracy must therefore be examined at regular intervals before and during use. With TRANS CAL model 7280 and torque sensor model 8628 these values can be determined with high accuracy fast and economically.

**Test object - hydraulic press**



The model TRANS CAL 7280 together with a load cell is a universal reference measuring chain for the calibration of hydraulic presses. During calibration on-site the reference force is brought into the flux of the press-fit measurement system. For traceability reasons a DKD/DAkKs or manufacturer calibration certificate can be supplied.

**Order Information**

Digital indicator TRANS CAL model 7280 with battery and test certificate including traceability verification **Model 7280**

**Order Example**

**Measuring range 20 kN with manufacturer calibration in compression direction:**

|   |                          |
|---|--------------------------|
| Tension and compression load cell                             | <b>Model 8524-6020</b>   |
| Connector   | <b>Model 9900-V280</b>   |
| Mounting of connector   | <b>Model 99004</b>       |
| Checking device   | <b>Model 7280</b>        |
| Calibration of entire measuring chain                         | <b>Model 72ABG</b>       |
| Load button   | <b>Model 8580-V012</b>   |
| Manufacturer Calibration in 20 % steps, compressive direction | <b>Model 85WKS-85DXM</b> |

**Accessories**

|  |                        |
|--|------------------------|
| 6 V plug-in mains adapter and accumulator charging                       | <b>Model 7280-Z001</b> |
| Accumulator set 4x Mignon 1,2 V/2300 mA                                  | <b>Model 7280-Z002</b> |
| MIN D connector plug 15 pin for sensor connection                        | <b>Model 9900-V280</b> |
| Complete set of mating plugs   | <b>Model 7280-Z003</b> |
| Measuring and evaluation software for model 7280 via RS232/USB interface | <b>Model 7280-P001</b> |
| USB connection cable   | <b>Model 9900-K349</b> |
| RS232 connection cable   | <b>Model 9900-K380</b> |

Adapter cable, length 0.2 m; for TRANS CAL model 7280 to strain gauge sensors with 12 pin connector model 9941 **Model 99280-540A-0090002**

Adapter cable, length 0.2 m; for TRANS CAL model 7280 to strain gauge sensors with 9 pin Min D connector model 9900-V209 **Model 99280-609A-0090002**

Aluminium case for TRANS CAL model 7280 and accessories



**Model 4493-V005**

For a large selection of load cells see section 8.4 and 8.5 in our catalog.

**DKD/DAkKs Calibration Certificate**

DKD/DAkKs Calibration Certificate for force to 200 kN, pressure to 5000 bar and torque to 5 kNm

**Manufacturer Calibration Certificate**

Manufacturer Calibration Certificate for force to 200 kN, pressure to 5000 bar, torque to 5 kNm and displacement to 300 mm