Value Masterbase

Measurement Module With Network Connection

- Measurement of torque, speed, angle of rotation, pressure, force or stroke
- Sockets for 2 sensors
- Control I/O port with output for PLC, for example
- Test operation on PC using software supplied by ETH
- Network connection via Ethernet
- with scope function
- Analog output ± 10 V for direction of rotation and drive speed setpoint

The ValueMaster measurement module turns your PC or Notebook into a full-fledged professional measurement device:

- Measurements can be displayed, evaluated according to preset limits and assessed graphically.
- Data from torque transducers with integrated ID chips are automatically loaded into the parameter set.
- Measurements are stored in a txt file. They can be compared at many levels in the archive.
- The device can be controlled externally via control inputs.
- Optical signals can be output or a nutrunner de-energized via a separate power supply.

Inputs

Sensor 1: Active torque sensor with or without speed- or angle recording, and with two ranges.

Sensor 2: Active torque sensor without speed- or angle recording, force sensor or stroke sensor.

If single-range transducers are used, both sensors can be connected simultaneously to the measurement module.

Custom software or non-standard functions can be provided upon request.

PM Instrumentation | 47 Avenue de l'Europe | F-92400 Courbevoie | France
+33(0)1 46 91 93 30 | contact@pm-instrumentation.com | www.pm-instrumentation.com

PM Instrumentation

Value Masterbase

Measurement Module With Network Connection

Technical Data ValueMaster$_{base}$

Supply voltage:	100 - 240 V / 50 - 60 Hz with plug-in power supply unit
Sensor power supply (per channel):	12 V DC / 200 mA
Analog input:	0 to ± 5 V or 0 to ± 10 V
Range:	0 to ± 6,25 V or 0 bis ± 12,5 V
Input resistance:	1 MΩ
Accuracy:	0,2 %
Nonlinearity:	0,1 %
Threshold frequency (3 dB):	35 kHz (with filter: 1 kHz)
Input signal speed or angle of rotation:	2-channel sinusoidal, cosine, TTL or open collector
Frequency range:	0 - 25 kHz
AD converter resolution:	11 bit + 1 sign bit
Digital input:	remote start
Digital outputs (optocouplers):	IO, NIO, motor start, ready max. 24 V / 150 mA
Analog output for direction of rotation and speed setpoint of the drive:	± 10 V 11 bit + 1 sign bit
Network connection:	Ethernet 100 MBit/s
Dimensions:	190 x 112 x 51 mm
Weight:	approximately 900 g

Order code:

ValueMasterBase

(crossover cable, plug-in power supply unit and soft-ware are all supplied.)

Supplied fittings:

cable
torque sensors
force sensors

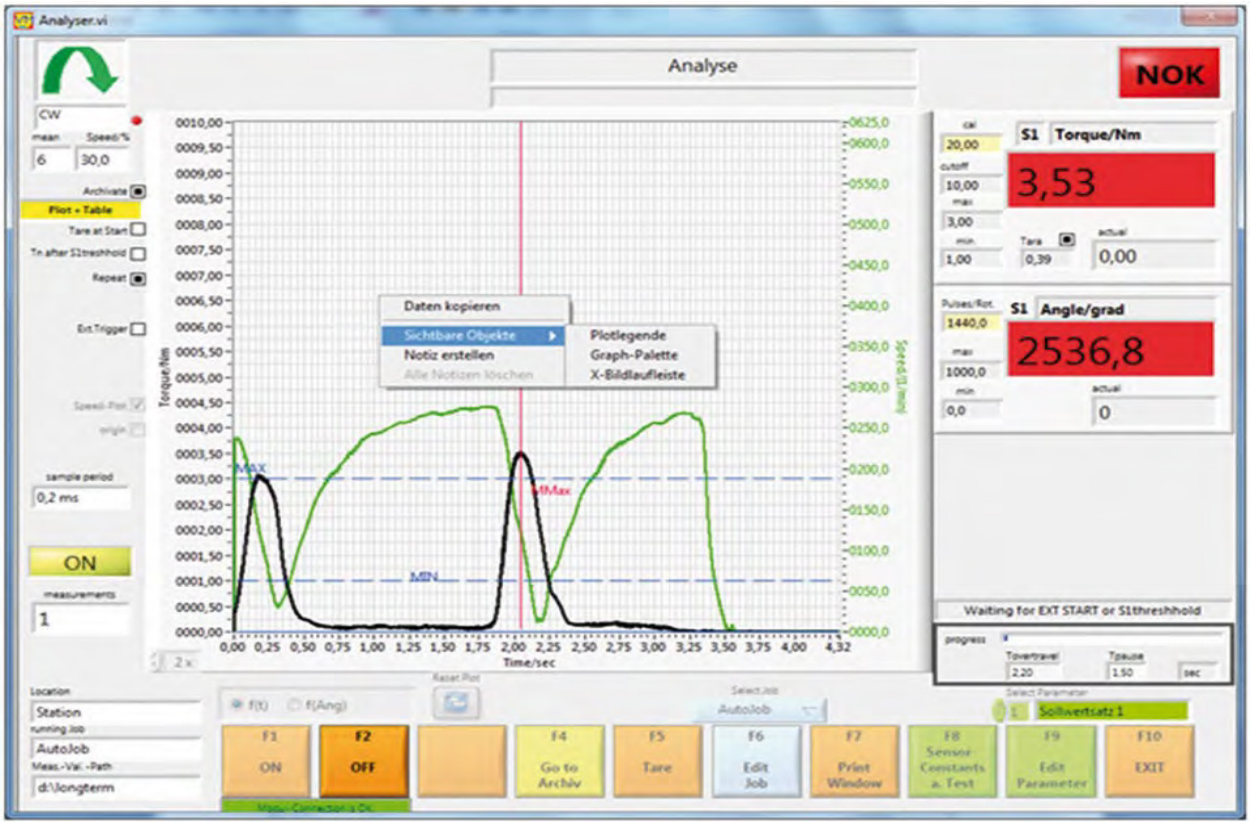
A selection of the numerous ValueMasterbase functions and plots are visualized on the following pages. Please follow the link to website/analyzers/ValueMaster_base for a complete user manual.

PM Instrumentation | 47 Avenue de l'Europe | F-92400 Courbevoie | France
+33(0)1 46 91 93 30 | contact@pm-instrumentation.com | www.pm-instrumentation.com

PM Instrumentation

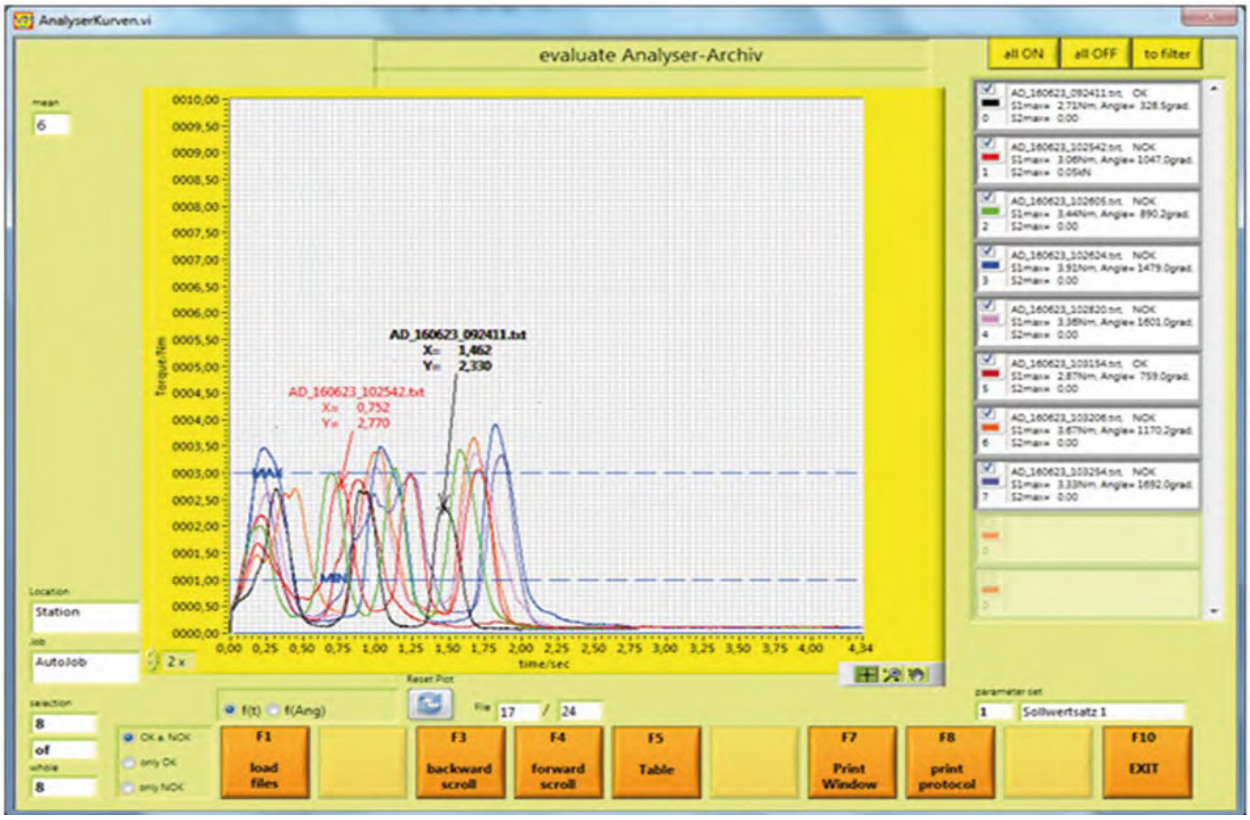
Value Masterbase

Measurement Module With Network Connection

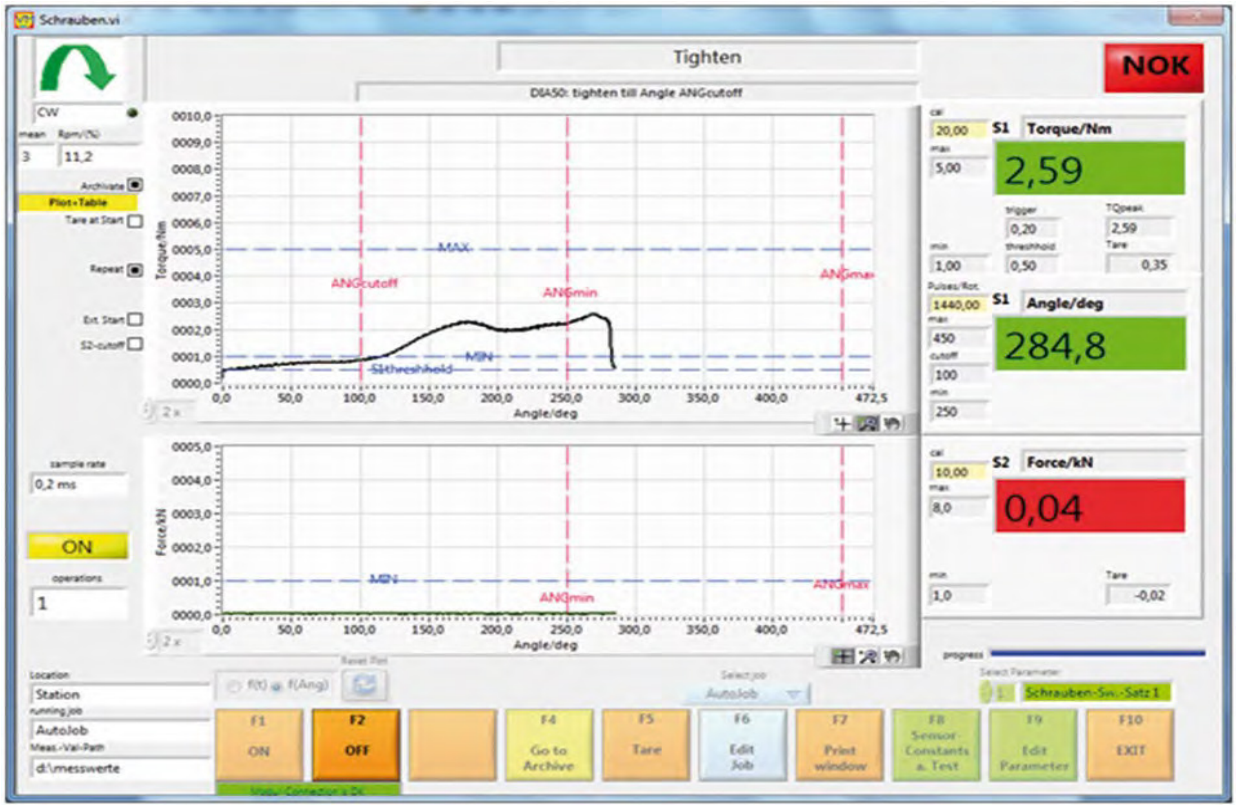


▲ The standard test is performed with the setpoint record. It can be started and stopped any number of times with “F1 ON” and “F2 OFF”, respectively.

▼ Analysis screen for up to 24 archived torque plots for the “Analysis” function with plot legend.

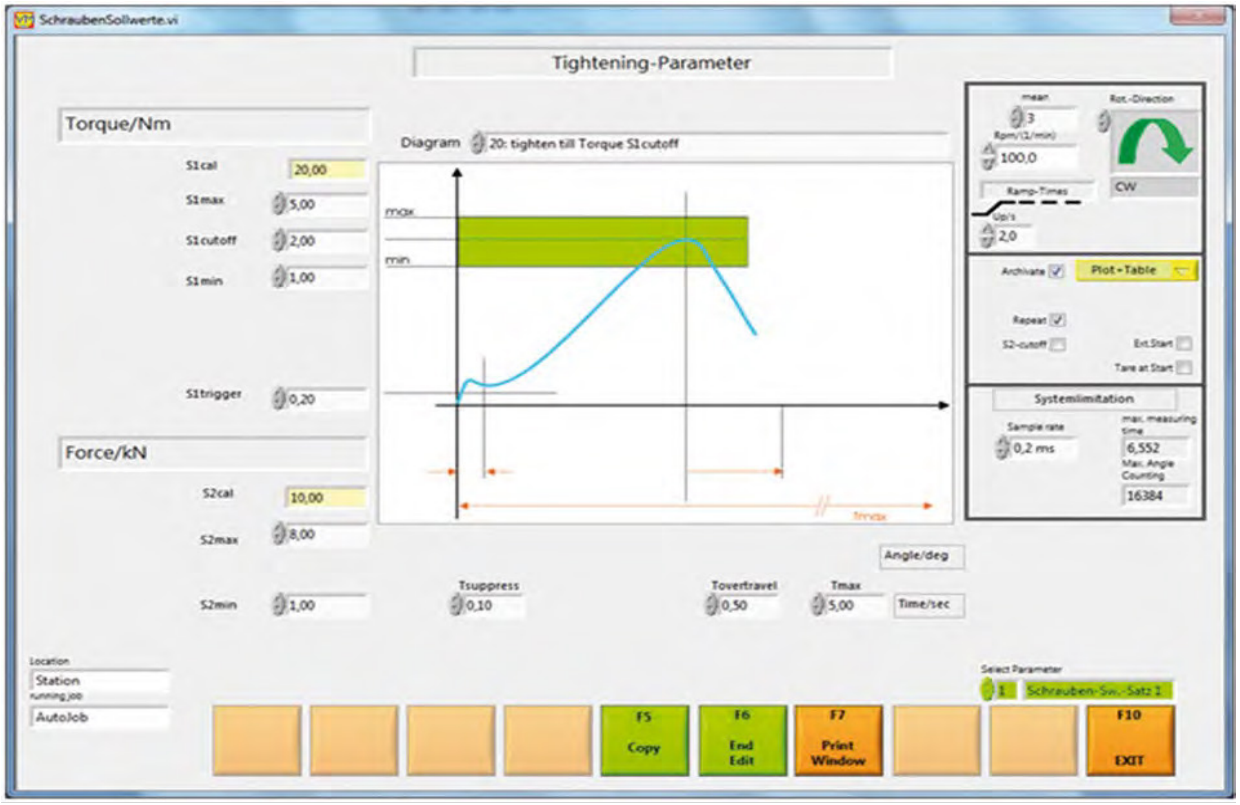


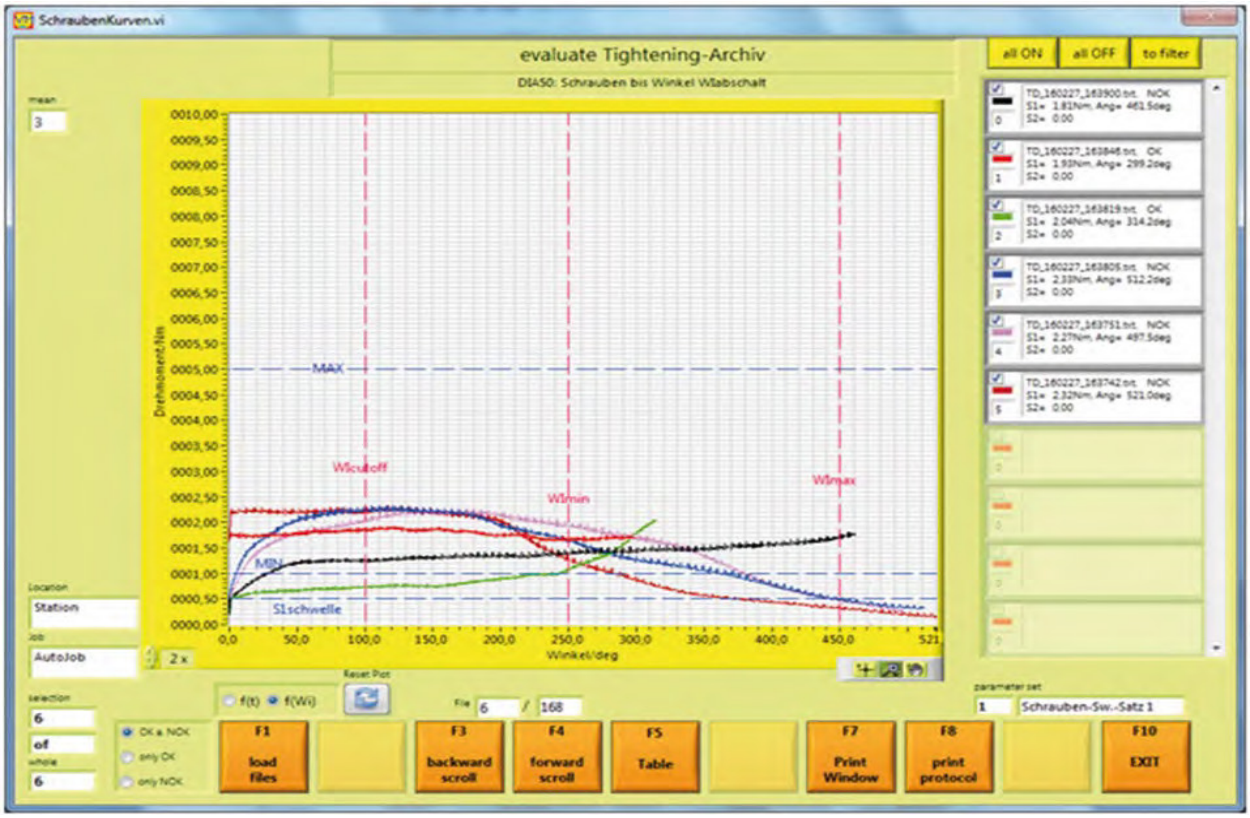
PM Instrumentation | 47 Avenue de l'Europe | F-92400 Courbevoie | France
+33(0)1 46 91 93 30 | contact@pm-instrumentation.com | www.pm-instrumentation.com



▲ Screwing function after an NIO screwing (pretension force not reached).

▼ Setpoints entry screen for DIA20.





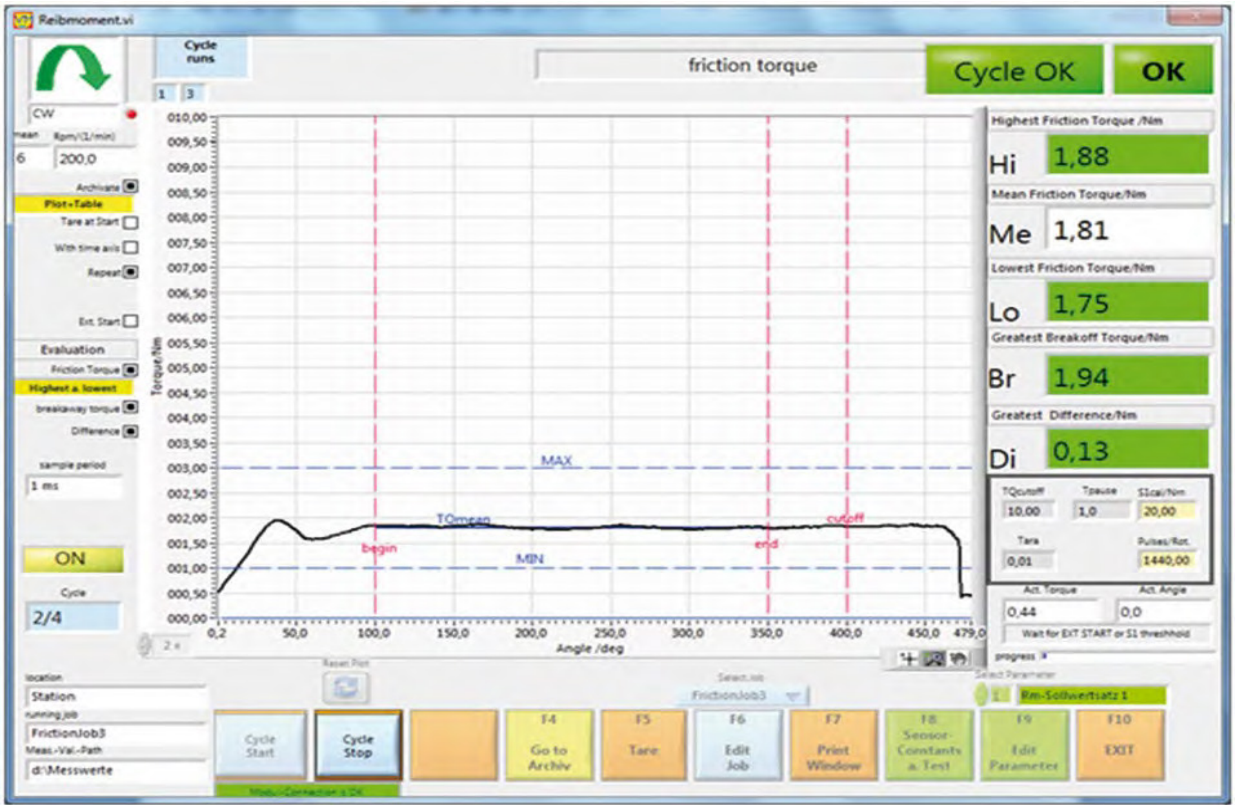
▲ Analysis screen for 6 archived torque plots for the “Screwing” function with plot legend.

▼ Power measurement with torque, power and speed.

PM Instrumentation | 47 Avenue de l'Europe | F-92400 Courbevoie | France
+33(0)1 46 91 93 30 | contact@pm-instrumentation.com | www.pm-instrumentation.com

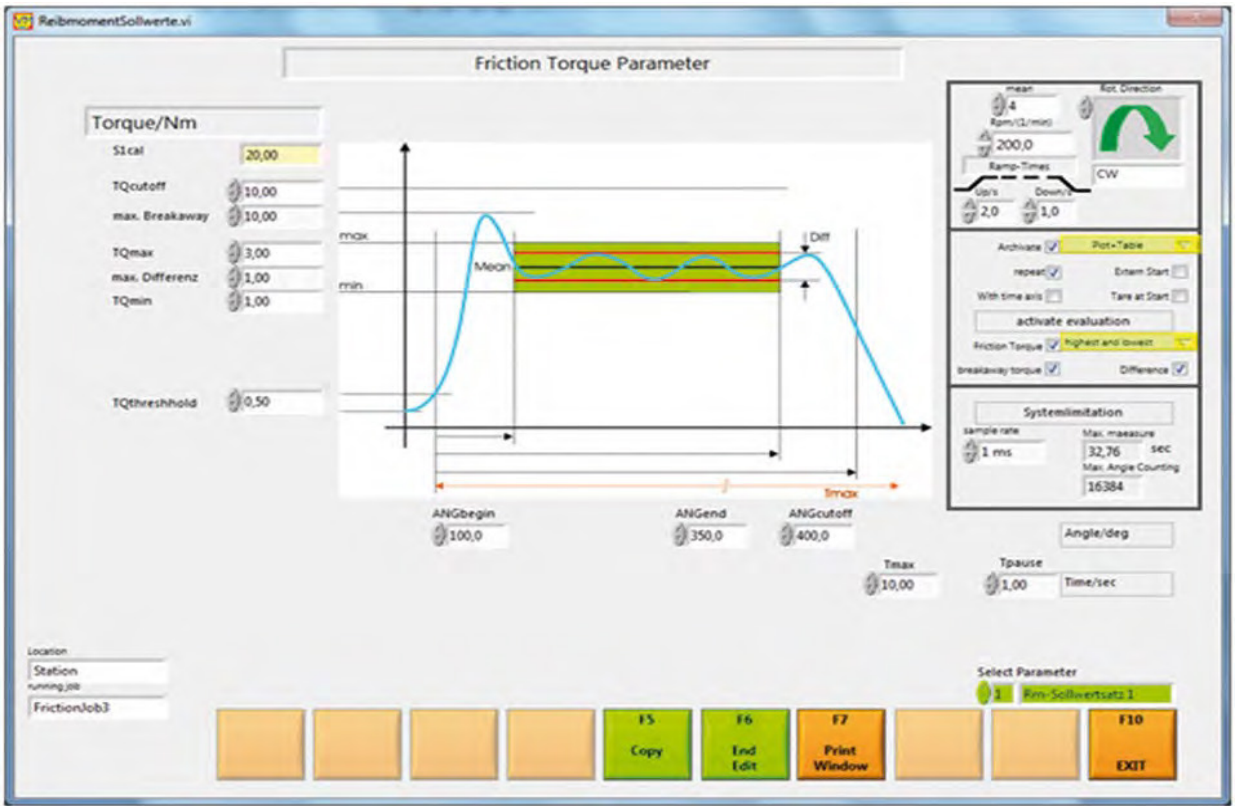
Value Masterbase

Measurement Module With Network Connection

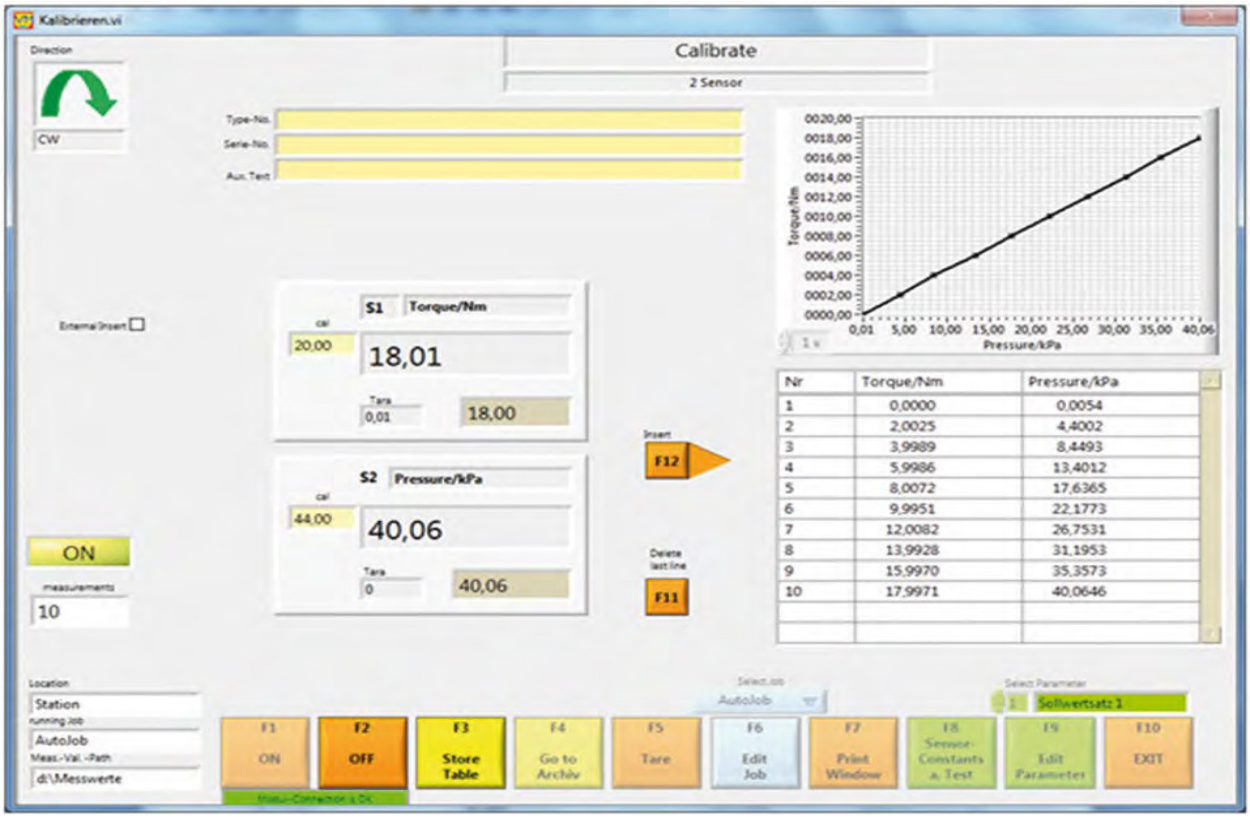


▲ “Friction torque measurement” function with evaluation angle. Programmable cyclical operation. Each program step (maximum 4) is performed like a standard test. Any number of tests can be run with the setpoint record.

▼ The type of evaluation can be selected when entering the setpoint for friction torque.

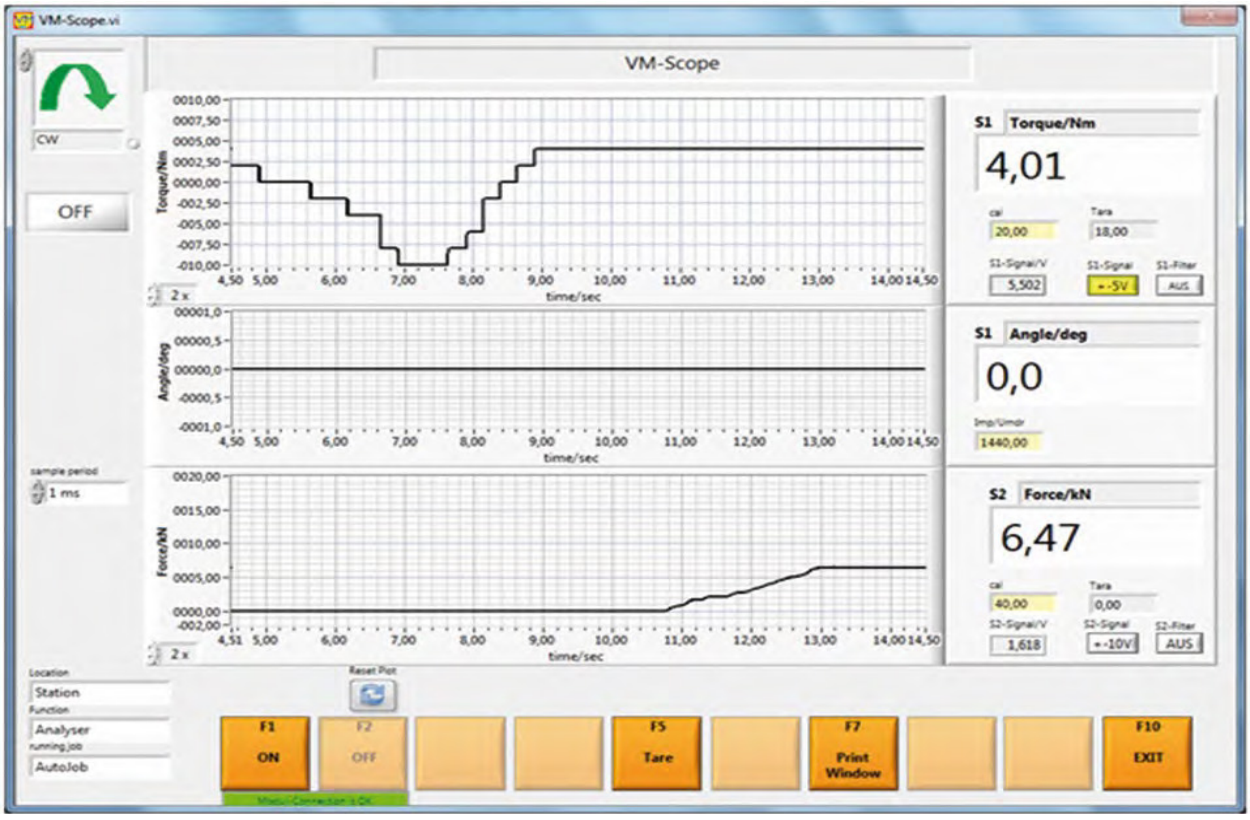


PM Instrumentation | 47 Avenue de l'Europe | F-92400 Courbevoie | France
+33(0)1 46 91 93 30 | contact@pm-instrumentation.com | www.pm-instrumentation.com

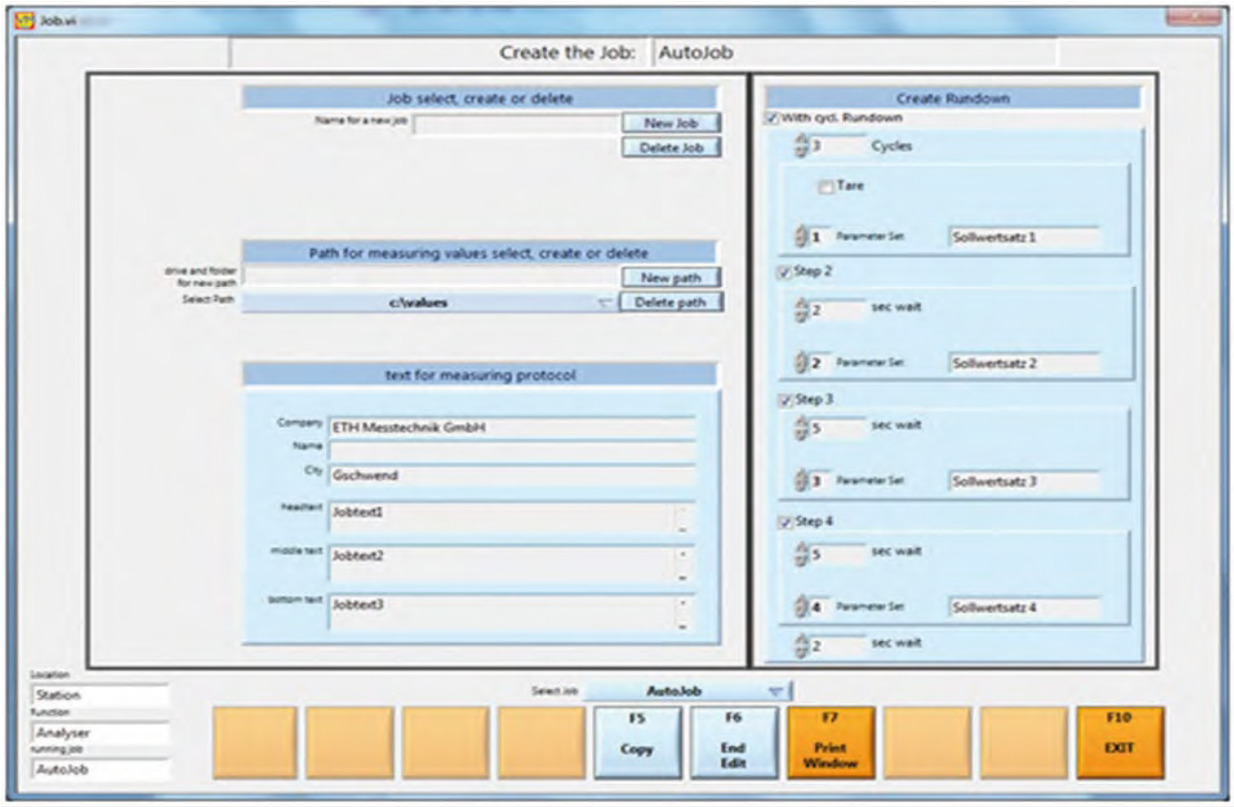


▲ Calibrate function screen: Control variable S2 (pressure), measured variable S1 (torque).
Torque-pressure tables for hydraulic- and pneumatic screwdrivers can be created with this function.

▼ The inputs from sensor 1 and sensor 2 and the angle sensor are plotted as with an oscilloscope.
The format and number of graphics windows are determined by the sensor constants selected.



PM Instrumentation | 47 Avenue de l'Europe | F-92400 Courbevoie | France
+33(0)1 46 91 93 30 | contact@pm-instrumentation.com | www.pm-instrumentation.com



▲ The job subfunction can be called in every function (Analysis, Screwing, Friction torque, Power, Calibration).
A job can be setup for different tests at different locations in Job administration.

▼ Test hardware screen.