MP Computer for engine test beds

speed
rpm

4999

speed limitation
● too high
● too low

command value

speed stabilization on/off

calibrate

0 Nm

calibration value

torque
Nm

65.5

command value

power
kW

34.3

command value

work
kWh

0.531

counter reset

counter on/off

specific consumption
g/kWh

7	8	9
4	5	6
1	2	3
+/_	0	,
		C

F 1

F 2
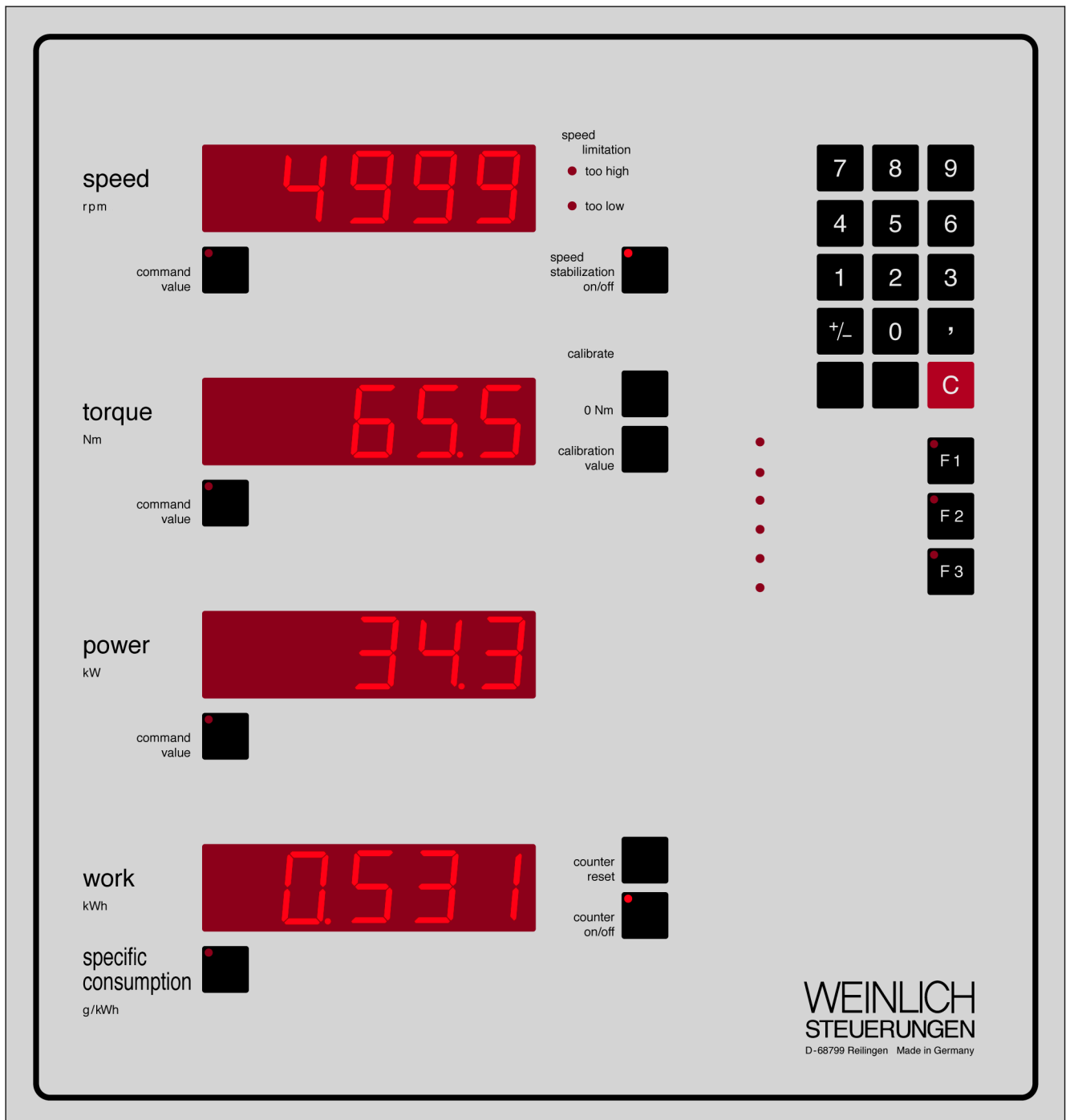
F 3

WEINLICH
STEUERUNGEN
D-68799 Reilingen   Made in Germany

WEINLICH
STEUERUNGEN

MP Computer for engine power tests
DiaW - Diagram for Windows

for display, memorisation and printing of curve diagrams by PC
optional with additional numerical display of incoming data

MP Computers for evaluation, display and control of engine power tests can be connected to IBM compatible personal computers via a serial interface in order to memorise the results determined by the MP Computer and to display and print them as curves during measuring or later.

After only few inputs from the keyboard the PC is ready to receive data sequences from the MP Computer. As data arrives, the curves for e.g. torque and power as a function of speed or all measured values as function of time are displayed on the screen in different colours in a X-Y-diagram. The number of curves to be memorised in one file is practically unlimited.

As soon as the measured values are displayed on the screen they are memorised in files. Since the MP Computer transmits the symbols and the units together with the values and as DiaW memorises this information together with the values, the axis of the diagram are labelled automatically with the correct symbols and units. While recording data, DiaW adjusts the range of the X-axis to keep track of the received values by horizontally scrolling the display area.

In an extended version incoming data can be additionally displayed numerically.

During and after measuring the user can adjust colour and scaling of each curve, display range etc. according to his needs. Once having found a suitable setting for a certain measuring application, he may save this setting as a pattern. Next time DiaW receives similar data, it will propose automatically the use of this pattern.

All settings may be changed at any time.

Memorised functions of different sets can be redisplayed in freely selectable combinations to simplify comparison of certain measured values.

Memorised curves can be printed on any printer supported by the Windows environment. Format and layout of the printout can be easily configured within DiaW. In order to optimise the readability of the print-out, screen colours can be mapped to different colours and line styles on the printing device. Although the use of a colour printer is highly recommended, printing on grayscale and monochrome printers is supported.

Recorded data can be exported into ASCII files that can be easily processed by other applications, e.g. for import into database applications or to perform additional analysis by using external programs.

Hard- and software requirements
  for the MP Computer:
    serial data output continuously sending measured values suitable for DiaW,
    data connection cable with one plug for a serial interface connector at the PC and another plug for the data output of the MP Computer,
  for the PC:
    available serial port (Highspeed UART 16550a recommended),
    Pentium CPU,
    minimum 16 MB RAM (64 MB or more recommended),
    colour monitor with VGA (SVGA with 256 colours/800x600 pixels or better recommended),
    systems software Microsoft Windows 9x / ME or Windows NT / Windows 2000 / Windows XP,
    DiaW (application software) available by Weinlich,
  for plotting:
    any printer supported by Windows (colour printer highly recommended)

DiaW

ibn_gun6
X: t/s

Y1 = n/A/min
Y2 = 10*M/Nm
Y3 = 50*P/kW
Y4 = W/kWh
Y5 = m/g
Y6 = TA/degrC
Y7 = pA/mbar

Incoming data

DiaW 1.2

TW degrC	98.0	1.69
TE degrC	625.6	101.4

pO bar
TO degrC

DiaW

File Axis Acquisition Data Schemes Analysis Printing Options Help

4000

3000

2000

1000

0

-1000

1350   1400   1450   1500   1550   1600   1650   1700   1750

DP 595/902 GB