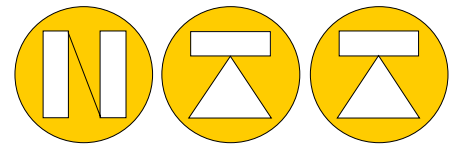


MD1014 Digital Indicator



NORDIC TRANSDUCER

< +/-0.01% External accuracy

+/- 50.000 Display resolution



The panel digital indicator **MD1014** has been designed to be used in the modern static and dynamic measure systems of industrial field of activity.

Suitable for processing analogue signals coming from strain gauge load cells and torque transducers or by pressure and torque transmitters, it allows to perform measurements with a long-term accuracy of 0.01% with a resolution of ± 50.000 steps at 2mV/V. At your inside the instrument works with ± 500.000 steps. All the calibrations (Zero, Full Scale, Analogue output, Sensibility, etc.) are digital (no trimmer), therefore they can be performed and repeated without the need of removing the instrument from the panel and without to open it. User interface is handled by a menu which allows the programming of all functions such as:

- **F1:** it can be programmed to perform **UNLOAD** measurements in loss of weight (used for extract material from a silos) or to store positive or negative **PEAKS** (used in industrial automation).
- **4 SET POINT:** with relay output, activation and deactivation threshold programmable. Two functions of choice with or without external consent.
- **FILTER:** it allows to attenuate the weight vibrations especially in dynamic applications.
- **RESOLUTION:** it allows to increase the measurement through certain steps (1,2,5 divisions).
- **KEYBOARD LOCK:** it allows to block the Zero key and the parameters programming through a password.
- **REPEATER:** it allows the connection of a second indicator for measurement remote display.
- **AUTO ZERO:** it reset automatically the instrument when the measurement is lower to the programmed threshold.
- **SENSITIVITY:** it allows to manage analogue signal from 1 to 3mV (2mV input) or, on request, from 2 to 6mV (4mV input).

Indicator is equipped with optoinsulated digital inputs for a remote control of ZERO, PEAK, HOLD, UNLOAD and PRINT functions. On request it possible to provide the instrument with optoinsulated serial interfaces RS232C, RS485 multipoint and USB which make the indicator extremely flexible to be interfaced with advanced systems such as PC, PLC etc.

A 24 columns external printer handling allows to print up to 255 weighings, a custom letterhead (customer name) and date/time.

Optoinsulated analogue output is programmable either in tension or in current.

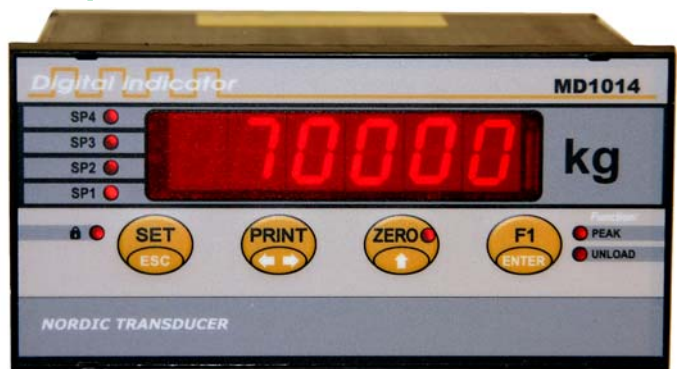
Force-Weight Load cells **Pressure Transmitters** **Displacement Transducers** **Inclinometer Sensor**



Standard input is 0...3mV/V

or 0...6mV/V

Can be changes internally to following inputs
0-20mA, 4-20mA, +/-5V, +/-10V



Printer output

RS232 - RS485 or USB output

Analog output

Set points 4 outputs



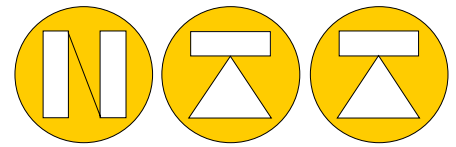
PLC or control system

wireless to:



remote display





NORDIC TRANSDUCER

TECHNICAL DATA MD1014

ACCURACY CLASS	≤ ± 0.01 %
LINEARITY ERROR	≤ ± 0.01 %
LOAD CELL INPUT (standard)	±2mV/V (1÷3mV/V)
CONNECTABLE LOAD CELLS	6 (350Ω) or 12 (700Ω)5Vac (±3%)
LOAD CELL FEEDING	carrying frequency
CONNECTION SYSTEM	4 or 6 wires
TRANSMITTER FEEDING (amplified output)	15Vdc (-4%) 50mA
STANDARD RESOLUTION (2mV/V)	± 50.000 div.
INTERNAL RESOLUTION	± 500.000 div.
READINGS PER SEC. (0 filter)	max 160 (6.25ms)
NOMINAL WORKING TEMPERATURE	0 / +50°C
MAX WORKING TEMPERATURE	-10 / +50°C
STORAGE TEMPERATURE	-20 / +70°C
10°C TEMPERATURE VARIATION :	
a) on zero	≤ ± 0.005%
b) on full scale	≤ ± 0.003%
Programmable SET POINT and	4
HYSTERESISZERO FUNCTION	100%
PROGRAMMABLE DIGITAL FILTER	0, 1, 2, 3, 4, 5
PROGRAMMABLE FULL SCALE	max. ±99.998(resolution of 2 steps)
PROGRAMMABLE DECIMAL	Yes
POINTPROGRAMMABLE RESOLUTION	1, 2, 5, 10, 20, 50, 100
PEAK FUNCTION	Pos.(+), Neg.(-) and Disabled
LOAD FUNCTION	Yes
REMOTE COMMANDS (OPTOINSULATED)	Zero, Print, Peak, Hold, Unload
KEYBOARD LOCK FUNCTION	Yes
RELAY OUTPUT (set point)	4
CHARACTERISTICS	max.115 Vac,1A (resistor load)
RED DISPLAY (high efficiency)	7 segments
DISPLAY HEIGHT	13 mm
POWER SUPPLY	230 Vac ±10% 50÷60Hz
MAX. ABSORPTION	10VA
CONNECTIONS	screw terminal block + DB9
PROTECTION CLASS (EN 60529)	IP40 (front panel)
CASE FOR PANELS	DIN43700
DIMENSIONS (HxLxW)	72 x 144 x 153 mm
HOLE GAUGE (HxL)	68 x 138 mm
WEIGHT	~ 0.9kg

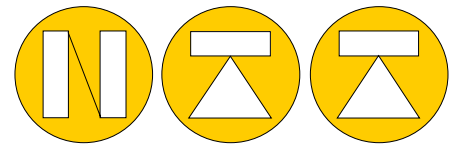
Options

INPUT SIGNAL	4mV/V, ±5V, ±10V, 0-20mA, 4-20mA
ANALOG OUTPUT (optoinsulated)	±5V, ±10V, 0-20mA, 4-20mA
INTERNAL RESOLUTION	Voltage: ±15 bits, Current: 15½ bits
PROGRAMMABLE ZERO (%FS)	20%
PROGRAMMABLE FULL SCALE	100%
SERIAL OUTPUT(optoinsulated)	RS232C, RS485, USB 2.0
PROGRAMMABLE BAUD RATE	4800, 9600, 19200, 38400, 115200
PRINTER OUTPUT	24 columns
DATA CUSTOM PRINTING	Company and address (3 rows)
PEAK RELAY OUTPUT	Yes
POWER SUPPLY	115 Vac ±10% 50÷60Hz 24 Vdc ±10%

Nordic Transducer Als Oddevej 85 DK-9560 Hadsund Danmark
Tlf. +45 98 58 14 44 fax. +45 98 58 18 66 e-mail: ntt@ntt.dk WEB: www.ntt.dk

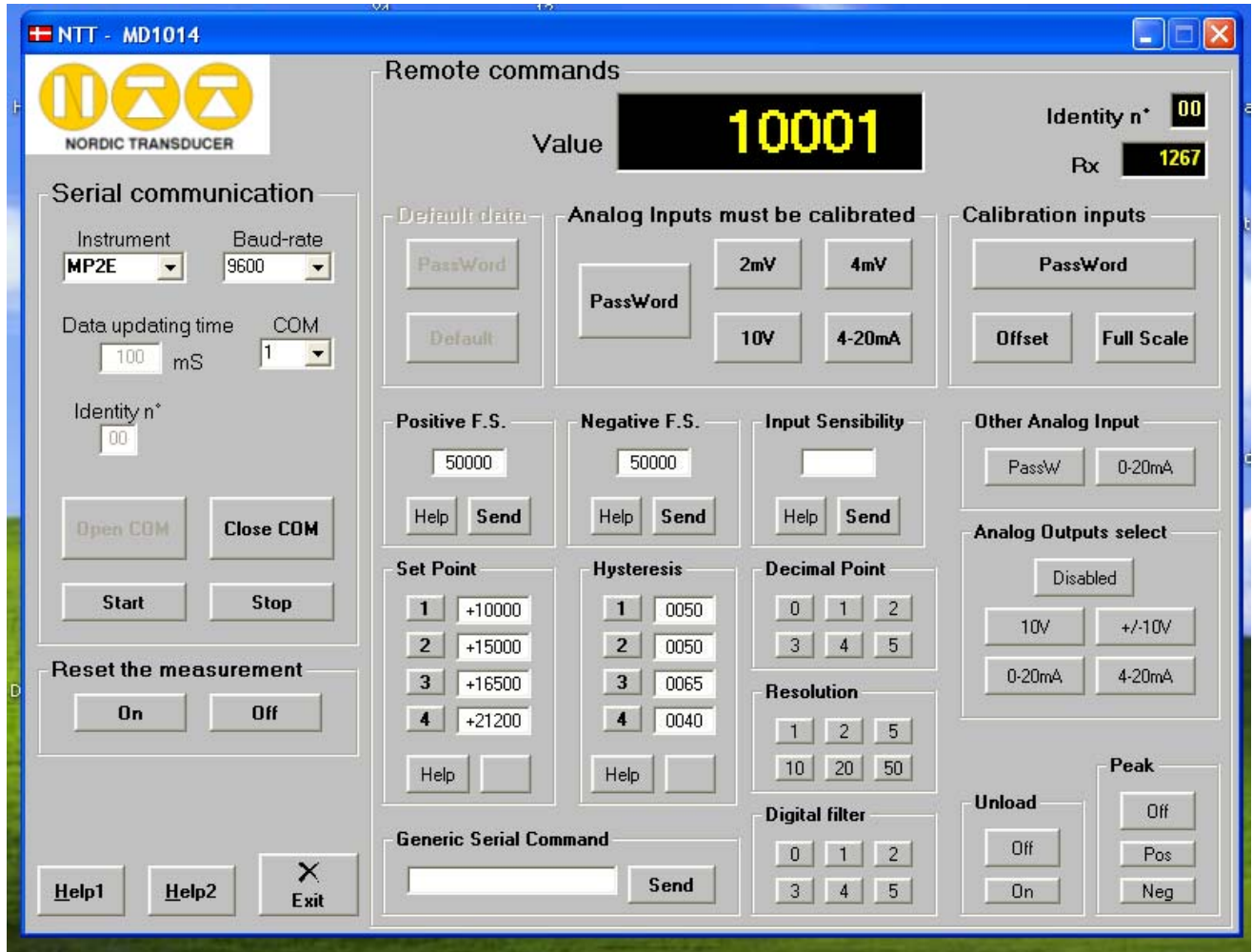


MD1014 SET-UP Software



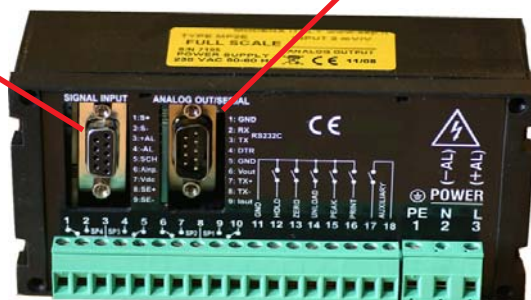
NORDIC TRANSDUCER

When using a RS232 output then a very easy to use software for setting up the instrument are available free.



Analogue inputs

Analogue outputs
or combination of digital and analogue out.



4 relay outputs

5 isolated inputs