ND 280
– The digital readout for one axis

The ND 280 digital readout for one axis is designed for simple measuring and positioning tasks, such as infeed for a circular saw, the stroke of press travel, or the position of an additional rotary table on a machine tool.

Design
The ND 200 series features a sturdy aluminum die-cast housing. The splash-proof full-travel keyboard is built for the workshop. A large graphic TFT monitor displays the measured values, the status and the soft-key row.

Functions
The standard **ND 280** readout provides the basic functions for simple measuring and positioning tasks. The ND 287 evaluation unit (see catalog titled *Evaluation Electronics for Metrology Applications*) offers expanded functions such as metrological acquisition and statistical evaluation of measured values. With its switching inputs and outputs, it also permit operation in simple automated environments.
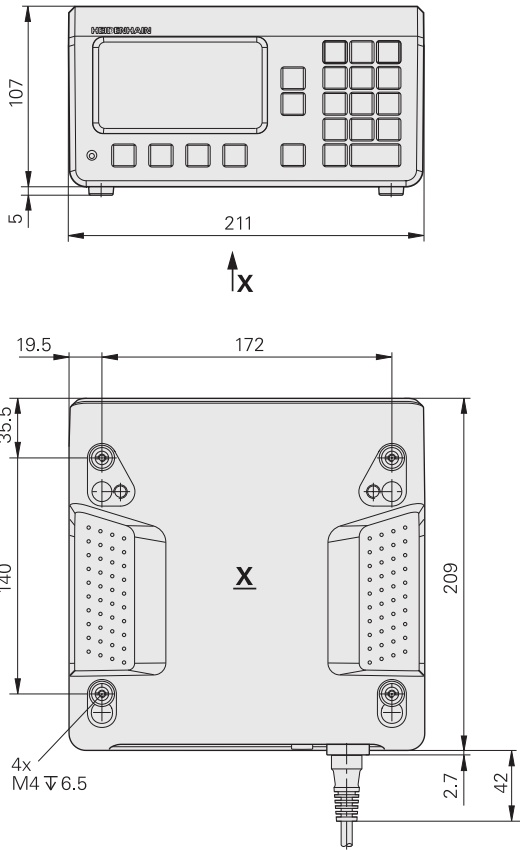
Data interfaces
The ND 280 has serial interfaces for measured value transfer to a PC or printer, for input/output of parameters and compensation value lists, and for diagnostics:
• USB (UART)
• RS-232-C/V.24

ND 280

	ND 280
Axes	1
Encoder inputs	$\sim$ 1 V$_{PP}$, $\sim$ 11 μA$_{PP}$ or EnDat[1]: D-sub female 15-pin (automatic interface recognition)
Input frequency	$\sim$ 1 V$_{PP}$: ≤ 500 kHz; *11 μA$_{PP}$:* ≤ 100 kHz
Subdivision factor	4096-fold
Display step[2]	Adjustable, max. 9 digits *Linear axis:* 0.5 to 0.002 µm *Angular axis:* 0.5° to 0.000 01° or 00°00'00.1
Display	Monochrome TFT screen
	Position values, dialogs and input, graphic functions and soft keys
Status display	Operating mode, REF, datum, scaling factor, compensation, stopwatch, unit of measure, soft-key level
Functions	• REF reference-mark evaluation for distance-coded or single reference marks • 2 reference points • Distance-to-go mode • Integrated help and diagnostics • Remote operation via serial interface
Axis-error compensation	*Linear axis:* Linear and multipoint over up to 200 points *Angle axis:* Multipoint linear with 180 compensation points (every 2°)
Data interface	• RS-232-C/V.24 • USB (UART) port type B
Power connection	100 V to 240 V AC (-10 % to +15 %), 48 Hz to 62 Hz; 30 W
Operating temperature	0 °C to 45 °C (storage temperature –20 °C to 70 °C)
Protection EN 60529	IP 40, front panel IP 54
Weight	Approx. 2.5 kg

[1] Purely serial, no evaluation of the incremental signals
[2] Depends on the signal period of the connected encoder (display step ≈ signal period/4096)

mm
Tolerancing ISO 8015
ISO 2768 - m H
< 6 mm: ±0.2 mm