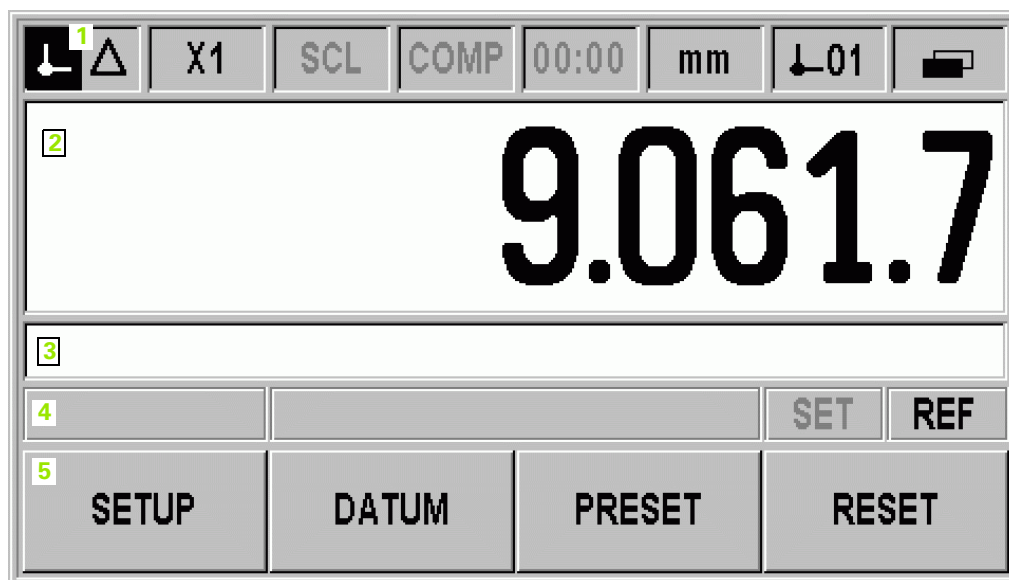


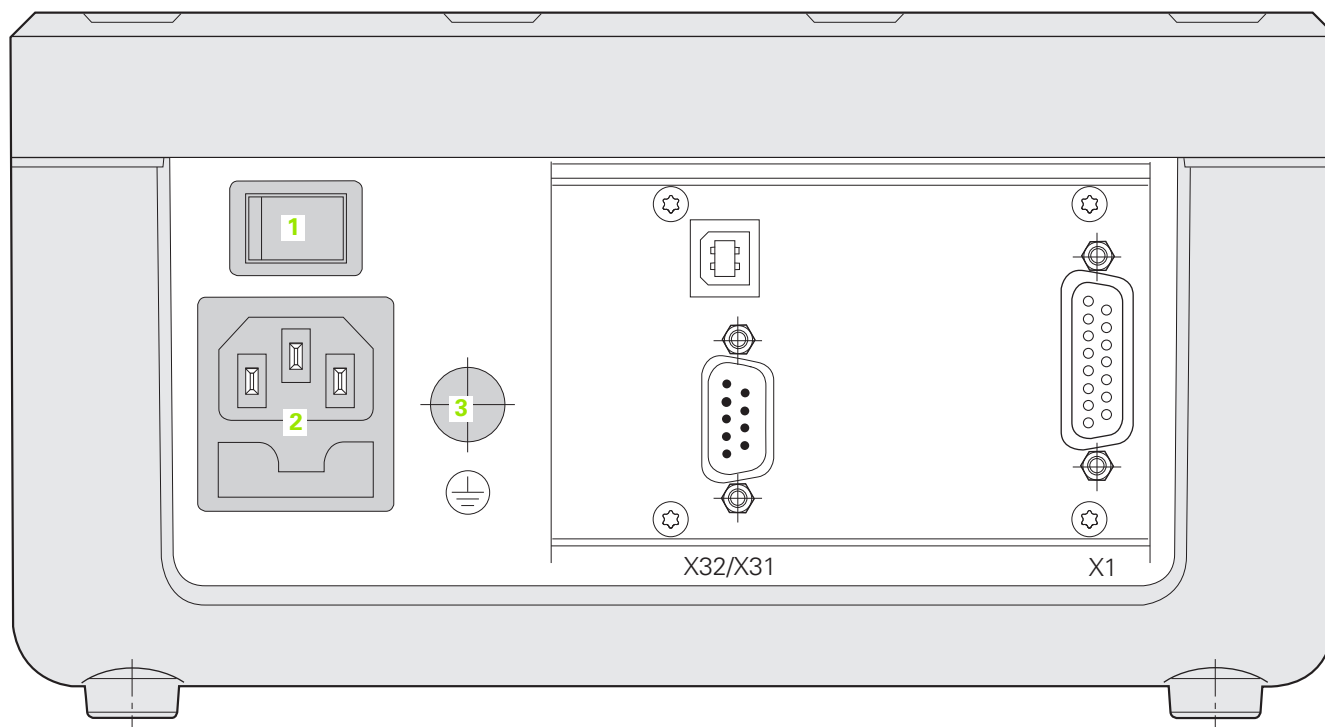
ND 280 Screen



ND 280 Front Panel



ND 280 Rear Panel



Connections

1 Power switch

2 Power connection with fuse

3 Ground (protective earthing)

X1 for a HEIDENHAIN encoder with **11 μ App, 1 Vpp** or **EnDat 2.1/2.2 interface**

X32/X31 **Two serial ports** for data transfer: **RS-232-C/V.24 (X31)** and **USB Type B (UART, X32)**

II – 7 Specifications

ND 280

Specifications	
Axes	One axis
Encoder input	<ul style="list-style-type: none"> ■ Incremental HEIDENHAIN encoders <ul style="list-style-type: none"> ■ Sinusoidal signals 11 μA_{PP}, input frequency max. 100 kHz ■ Sinusoidal signals 11 V_{PP}, input frequency max. 500 kHz ■ Absolute HEIDENHAIN encoders with EnDat 2.1/2.2 interface <p>Possible signal periods for linear and rotary encoders:</p> <ul style="list-style-type: none"> ■ For rotary encoders: 1 - 999 999.999 ■ For linear encoders: 0.000 000 01 μm - 99 999.9999 μm
Display step	<ul style="list-style-type: none"> ■ Linear axes: 0.5 mm to 0.001 μm, depending on the signal period ■ Rotary axes: 0.5° to 0.000001° (00°00'00.1"), depending on the signal period
Display	<p>Monochrome display for position values, dialog and input display, graphic functions, graphic positioning aid</p> <ul style="list-style-type: none"> ■ Status display: Operating mode, axis, scale factor, compensation, stopwatch, unit of measure, datum number, soft-key row ■ Position display and measured-value display with selectable display resolution
Conversational language	English, German, French, Japanese, Chinese (simplified)
Functions	<ul style="list-style-type: none"> ■ Multilingual user guidance ■ REF reference-mark evaluation for distance-coded or single reference marks ■ Display for lengths or angles ■ Distance-To-Go or Actual Value operating mode ■ Two datums ■ Scaling factor ■ Stopwatch ■ Reset or Preset function ■ Linear or non-linear error compensation for axis-error compensation ■ Diagnostics function for testing the encoder, the keyboard, the screen and the supply voltage ■ Data transfer of measured values and compensation values, configuration parameters or software downloads via a serial interface ■ Integrated help system
Error compensation	<ul style="list-style-type: none"> ■ Linear axes: Linear and non-linear (up to 200 compensation points) ■ Rotary axes: Non-linear (180 fixed compensation points spaced at 2°)



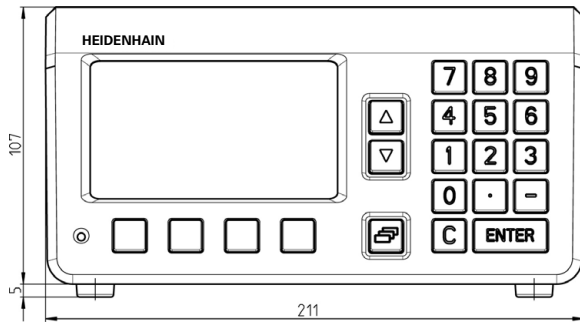
Specifications	
Data interface	<p>Two serial interfaces:</p> <ul style="list-style-type: none"> ■ RS-232-C/V.24 110 to 115 200 baud ■ USB Type B (UART) <p>You can use only one interface for data transfer at a time. The data transfer software TNCremoNT is available for free on the HEIDENHAIN web site at www.heidenhain.de on the downloads page under Services and Documentation.</p>
Optional accessories	<ul style="list-style-type: none"> ■ Mounting base for installation in a 19-inch electrical cabinet ■ Adapter cables with D-sub connector for HEIDENHAIN encoders ■ Length gauge with D-sub connector ■ Data transmission cable for RS-232-C/V.24 interface ■ Data transmission cable for USB interface
Main power input	100 V~ to 240 V~; 50 Hz to 60 Hz
Line fuse	2 x T500 mA
Power	Max. 30 VA
Electromagnetic compatibility/ CE compliance	<p>The encoder fulfills the requirements for electromagnetic compatibility according to 2004/108/EEC with respect to the generic standards for</p> <ul style="list-style-type: none"> ■ Noise immunity (IEC 61000-6-2) ■ Emission (IEC 61000-6-4)
Operating temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage temperature	-40 °C to 85 °C (-40 °F to 185 °F)
Relative air humidity	<p>Annual mean: < 75%</p> <p>In exceptional cases: < 90%</p>
Protection (IEC 60529)	IP 40 rear panel, IP 54 front panel
Weight	Approx. 2.5 kg (5.5 lb.)
Housing	Benchtop design, cast-metal housing
Housing dimensions	Width: 211 mm, height: 112 mm (including feet), depth: 251 mm (including connector)



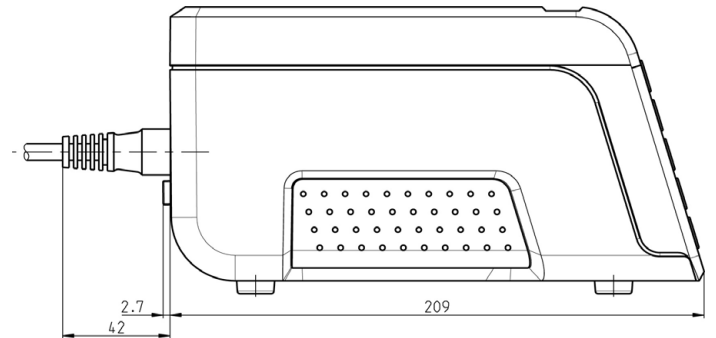
II – 8 Dimensions

ND 280

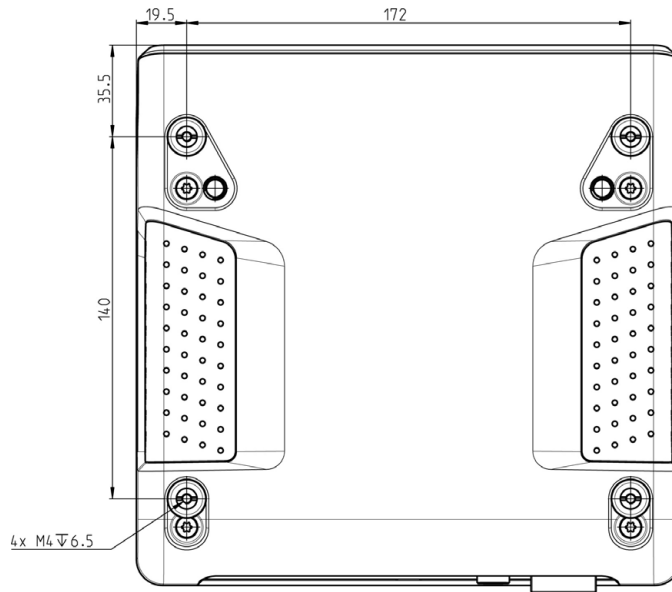
Dimensions in mm



Front view with dimensions



Side view with dimensions



Bottom view with dimensions

Dimensions in mm



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