# **PRO D01 / PRO D05**



# Handheld multifunction meters/data loggers

## 1, 2 or 3-connections for digital probes



- 1 (PRO D01), 2 (PRO D05.2) or 3 sensor connectors (PRO D05.3)
- Wide range of interchangeable and automatically recognized digital probes can be connected
- Fast and accurate
- Easy to use and read due to backlit dot matrix/clear text display
- Various measurement views available, including life chart
- Data logger with files read out via USB (only **PRO D05**)
- statistical functions Min, Avg, Max
- Acoustic alarm with high/low thresholds and optional hysteresis
- List of favorite functions for quick access to the most used operations
- Built-in foldable stand and magnet for flexible operation
- Shock and impact proof
- IP 67 waterproof
- NiMH batteries rechargeable via USB

## **DESCRIPTION**

PRO D01 (1-connector), PRO D05.2 (2-connector) and PRO D05.3 (3-connector) are high class professional multifunction handheld meters with a rich set of features, high grade robustness and operating comfort for safe and reliable use. PRO D05.2 and PRO D05.3 also have data logging capabilities and a USB-rechargeable battery system.

#### **Probes**

The data logger communicates digitally with the probe. The digital communication allows longer probe cables (up to  $10\,\text{m}$ ).

The wide range of probes available allows measuring:

- Temperature
- Absolute, relative and differential pressure
- Humidity: relative and absolute, Dew Point, wet bulb temperature, mixing ratio, partial vapor pressure
- Air speed, flow rate (configurable duct section)
- Illuminance, luminance, irradiance, UVA, UVB, UVC, UVBC, PAR. Integral calculation with manual start/stop and setting of time/value limit.
- Indoor Air Quality (IAQ): CO<sub>2</sub> and VOC index

More will follow.

The digital probes are supplied factory adjusted with adjustment data stored internally, allowing for interchangeability without the need for readjustment when changing the probes.

The probe type is automatically recognized, and the instrument is automatically set without any user intervention.



PRO D05.3 model - M12 sensor connectors

#### **Display**

The multilingual large dot matrix/clear text LCD has ergonomic wide-angle visibility from daylight to darkness, thanks to the backlight. It displays either large scale values, statistical data or the chart of a variable measurement history.

The HOLD feature allows freezing the measurements on display, while the REL feature allows showing the measurement against the measured value.

Many units of measurement are available, depending on the connected probes.

#### Data logging (only PRO D05)

Large storage capacity: up to 1 million data, file system based.

The logged data are store in CVS files that can be easily viewed connecting the instrument to a PC via USB: the instrument is seen by the PC as a mass storage device, the data can be read oud and evaluated without software necessarily needed.

Automatic log with configurable interval.

The instruments integrate a Real Time Clock: date and time of each logged sample are stored.

#### **Application software**

In addition to CSV files, the free user-friendly basic **ProXware** PC application software allows for examination of a large amount of logged data.

For a more in-depth data analysis, an optional advanced version of the **ProXware** software is available.

#### **Alarm**

Configurable alarm thresholds and optionally hysteresis can be set. LCD indication and buzzer activation when thresholds are exceeded.

#### **Statistics**

Detection of MIN, AVG (average) and MAX for each displayed variable. The user can clear the statistical info to start a new statistical calculation.

#### **PC** connectivity

Via the USB C port, for viewing or downloading the files stored in the instrument internal memory (only PRO D05) or connecting to the application software **ProXware**.

#### **Power supply**

4 Powerful AA batteries, the low power design and the configurable auto-off feature are ensuring long operation.

For permanent operation the instrument can also be powered via its USB C port.

While the basic model PRO D01 is designed for Alkaline batteries, all data logger variants PRO D05 are equipped with NiMH batteries and charging electronics. Any standard 5 Vdc power adapter or a PC USB port can be used (ensuring at least 900 mA for fast charging of the PRO D05.x batteries).

Configurable LCD backlight for more energy saving options.

### **Ergonomics**

The construction allows for both one-handed use as well as bench-top use with the foldable back stand.

Side rubber protection offers a secure grip during the use in the field.

#### **Calibration support**

Calibration reports or DAkkS/ACCREDIA certificates are available upon request in combination with referring probes.

The last calibration date is stored.

# TECHNICAL SPECIFICATIONS

## **General specifications**

Inputs  1 (PRO D01), 2 (PRO D05.2) or 3 (PRO D05.3) 5-pole M12 connector for digital probes  Storage capacity (only PRO D05)  Up to 1 million data sets, file system based Each data set includes date/time stamp and measurements (of all channels for multi-channel data loggers) Data are stored in CVS files  Logging type (only PRO D05)  Logging interval only interval on
Each data set includes date/time stamp and measurements (of all channels for multi-channel data loggers) Data are stored in CVS files  Logging type (only PRO D05)  Automatic with manual start/stop  Logging interval (only PRO D05)  1, 5, 10, 15, 30 s / 1, 2, 5, 10, 15, 20, 30 min / 1 hour  Measurement rate  2 meas/s  Clock  User settable RTC Max. drift 1 min/month @ 25 °C  Display  140 x 160 dot matrix backlit LCD / visible area 42 x 50 mm Multiple choice of measurement screens:  Large digit single value Multi-row Statistical info (Min/Avg/Max) Chart view  User interface  Multilingual (de, en, it, fr, es)  PC connection  USB C Mass Storage Device  Power supply  4 x AA batteries, PRO D01: 4 x AA Alkaline non rechargeable
Logging interval (only PRO D05)  1, 5, 10, 15, 30 s / 1, 2, 5, 10, 15, 20, 30 min / 1 hour  Measurement rate  2 meas/s  Clock  User settable RTC Max. drift 1 min/month @ 25 °C  Display  140 x 160 dot matrix backlit LCD / visible area 42 x 50 mm Multiple choice of measurement screens:  Large digit single value  Multi-row Statistical info (Min/Avg/Max) Chart view  User interface  Multilingual (de, en, it, fr, es)  PC connection  USB C Mass Storage Device  Power supply  4 x AA batteries, PRO D01: 4 x AA Alkaline non rechargeable
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Power supply  4 x AA batteries, PRO D01: 4 x AA Alkaline non rechargeable
PRO D01: 4 x AA Alkaline non rechargeable
External 5 Vdc via USB C (power adapter or PC USB port)
Power consumption 10 mA typ. (excluding probes)
Battery autonomy > 200 h typ. continuous operation (fully charged batteries and backlight off). The effective autonomy depends on the number and type of connected sensors.
Auto power off Yes, user configurable Automatically disabled if external power is connected
Operating conditions -550 °C / 085 %RH non-condensing
Storage temperature -2565 °C (without batteries)
Protection degree IP 67 (except probe connection) IK 04
Dimensions 170 x 78 x 38 mm
Weight PRO D01: 340 g approx. PRO D05.2: 370 g approx. PRO D05.3: 380 g approx.
Housing material ABS, TPE (side protection), Polyester (front panel)

### **ORDERING CODES**

PRO D05.2 Single-input handheld meter for digital probes. Supplied with 4 x AA alkaline batteries.

Art.No. 486134

PRO D05.2 2-input handheld data logger for digital probes. Supplied with 4 NiMH rechargeable batteries, USB cable and software downloadable from Senseca website.

Art.No. 486136

PRO D05.3 3-input handheld data logger for digital probes. Supplied with 4 NiMH rechargeable batteries, USB cable and software downloadable from Senseca website.

Art.No. 486137

Probes have to be ordered separately.

## **ATTACHABLE PROBES**

Temperature			
DX 111-00-130-L01	Digital Pt100 immersion probe, thin film sensor, stem Ø3 x 130 mm, cable length 1 m.		
	- ····	Art.No. 486231	
DX 111-00-230-L01	Digital Pt100 immersion probe, thin film sensor, stem $\emptyset 3 \times 230 \times 1 \text{ m}$ .	mm, cable length	
		Art.No. 486236	
DX 115-00-300-L02	Digital Pt100 immersion probe, wire wound sensor, stem Ø3 x 300 mm, cable length 2 m.	high precision,	
	Stem 20 x 000 mm, caste length 2 m.	Art.No. 486229	
Relative humidity and ter	mperature		
DX 310	Digital combined temperature and relative humidity probe, sten	n Ø14 x 101 mm. <b>Art.No. 486793</b>	
DX 311-L01	Digital combined temperature and relative humidity probe, sten cable length $1\mathrm{m}$ .	n Ø14 x 132 mm,	
		Art.No. 486774	
Pressure			
DX 210-2.5hPa-00-L01	Digital differential pressure probe. Measuring range: ±2.5 hPa. incl. 1 m M12 connection cable.	M12 connector, Art.No. 486674	
DX 210-20hPa-00-L01	Digital differential pressure probe. Measuring range: $\pm 20\text{hPa}$ . incl. 1 m M12 connection cable.	M12 connector, Art.No. 486675	
DX 210-500hPa-00-L01	Digital differential pressure probe. Measuring range: $\pm 500hPa$ . incl. 1 m M12 connection cable.	M12 connector, Art.No. 486676	
DX 210-200kPa-00-L01	Digital differential pressure probe. Measuring range: $\pm 200$ kPa. incl. 1 m M12 connection cable.	M12 connector, Art.No. 486677	
DV 240 700LD- 00 L04	Digital differential pressure probe. Measuring range: ±700 kPa.	M12 connector,	
DX 210-700kPa-00-L01	incl. 1 m M12 connection cable.	Art.No. 486678	

DX 610-L02	Digital photometric probe for the measurement of illuminance, spectral response according to standard photopic vision, diffuser for cosine correction, incl. 2 m M12 connection cable.	
	Art.No. 486775	
DX 620-L02	Digital radiometric probe for the measurement of irradiance in the spectral range 4001050 nm, diffuser for cosine correction, incl. 2 m M12 connection cable.	
	Art.No. 486776	
DX 630-L02	Digital quantum-radiometric probe for the measurement of photon flux in the PAR chlorophyll field (photosynthetically Active Radiation 400700 nm), diffuser for cosine correction, incl. 2 m M12 connection cable.	
	Art.No. 486777	
DX 640-UVA-L02	Digital radiometric probe for the measurement of irradiance in the 315400 nm UVA spectral range, quartz diffuser for cosine correction, incl. 2 m M12 connection cable.	
	Art.No. 486778	
DX 680-L02	Digital radiometric probe for the measurement of effective irradiance in the Blue light spectral band. Spectral range 380550 nm, diffuser for cosine correction, incl. 2 m M12 connection cable.	
	Art.No. 486782	
DX 640-UVB-L02	Digital radiometric probe for the measurement of irradiance in the 280315 nm UVB spectral range, quartz diffuser for cosine correction, incl. 2 m M12 connection cable. t.b.d.	
DX 640-UVC-L02	Digital radiometric probe for the measurement of irradiance in the 220280 nm UVC spectral range, quartz diffuser for cosine correction, incl. 2 m M12 connection cable. t.b.d.	
DX 640-UVBC-L02	Digital radiometric probe for the measurement of irradiance in the 210355 nm UVBC spectral range, quartz diffuser for cosine correction, incl. 2 m M12 connection cable. t.b.d.	
DX 650-L02	Digital Photometric probe for the measurement of luminance, spectral response according to standard photopic vision, angle of view 2°, incl. 2 m M12 connection cable.  t.b.d	
DX 690-PHOT-UVA-L02	Digital combined probe for the measurement of illuminance, with standard photopic spectral response, and irradiance in the UVA spectral range. Diffuser for cosine correction. The ratio between UV irradiance and illuminance in µW/lumen is provided, incl. 2 m M12 connection cable.	
DX 690-Eeff-UVBC-L02	Digital combined probe for the measurement of effective total irradiance according to UV action curve (250400 nm). Diffuser for cosine correction. The probe provides the effective total irradiance ( $E_{\rm eff}$ ), the effective irradiance in the UV-CB band and the UV irradiance, incl. 2 m M12 connection cable. <b>t.b.d.</b>	
Air quality		
DX 330-00	Digital VOC index, CO <sub>2</sub> , temperature, relative humidity and atmospheric pressure	
	probe. Art.No. 486786	