

DX 721

Digital wide range soil moisture probe



- Precise determination of the volumetric water content
- Maximum possible range of up to 100% VWC
- Integrated temperature measurement
- Interchangeable
- Low power
- Fast and accurate
- Designed for long term use and long term stability

DESCRIPTION

The DX 721 is a state-of-the-art soil moisture probe – suitable for fast measurements in changing locations or for long term monitoring in fixed locations.

The DX 721 are optimized and calibrated for use in typical agricultural soils. The accuracy depends on the application.

With the standard calibration up to $\pm 3\%$ (VWC) in mineral soils with medium salinity from 0 to 50% VWC can be achieved.

With soil-specific calibration, accuracy of up to $\pm 1\%$ (VWC) can be achieved.

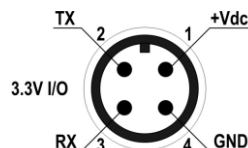
Measurement is also possible in other materials, for example: mineral wool, coconut fiber, wood fiber, paper. The display values must then be interpreted/calibrated for the specific material.

DX 721 sensors are interchangeable - the sensors are fully calibrated. Simply “plug in and measure”!

With the suitable PRO D01 / PRO D05 meters this is a reliable reference for agricultural/horticultural applications.

The multichannel data logger meters PRO D05.2/.3 can combine up to 3 probes in one instrument – or combine the probes with each of the available DX-digital probe to incorporate a multiparameter measuring solution “in one hand”.

Supplied with 2 or 5 m cable with 4-pin M12 connector.



M12 DX 721 sensor pin out

The moisture in soil is measured with the unit VOLUMETRIC WATER CONTENT [% VWC]

The Volumetric Water Content (VWC) is defined as the ratio between the volume occupied by the water in a defined volume (moist) soil, the practical unit is $VWC * 100\%$ (% VWC) .

TECHNICAL SPECIFICATIONS

Sensor	Soil Moisture	TDT high frequency, measuring area 110x30 mm
	Temperature	IC-sensor
Measuring range	Soil Moisture	0 ... 60% VWC volumetric water content (up to 100% volumetric water content with limited accuracy)
	Temperature	-40...+80 °C
Resolution	Soil Moisture	0.1% VWC
	Temperature	0.1 °C
Accuracy	Soil Moisture	typ. ±3%, depending on soil conditions
	Temperature	typ. ± 0.2 °C, max. ± 0.4°C over whole range
Operating conditions		-40...+80 °C / 0...100 %RH
Output & Power supply		DX-Sensor-Interface
Power consumption		Ø 0.5 mA typ.
Connection		4-pole M12
Dimensions		measuring area 110x30 mm 182mm x 30mm x 12mm (measuring area thickness ca 1.6mm) Cable length: 2, 5 or 10 m
Weight		95 g approx. with 2 m cable 150 g approx. with 5 m cable
Materials		In contact with soil: FR4 epoxy Handle: Luran / stainless steel screws Cable: PVC

STANDRAD ARTICLES

DX 721-L02-P	Digital wide range soil moisture probe, 2 m PVC cable, DX connector M12	Art no. 487434
DX 721-L05-P	Digital wide range soil moisture probe, 5 m PVC cable, DX connector M12	Art no. 487647

SUITABLE INSTRUMENTS

PRO D01	1-channel handheld meter for digital probes. Supplied with 4 x AA alkaline batteries and QuickStart	Art no. 486134
PRO D05.2	2-channel handheld data logger for digital probes. Supplied with 4 NiMH rechargeable batteries, QuickStart, USB cabl. Free software ProXware downloadable from Senseca website	Art no. 486136
PRO D05.3	3-channel handheld data logger for digital probes. Supplied with 4 NiMH rechargeable batteries, QuickStart, USB cable. Free software ProXware downloadable from Senseca website	Art no. 486137