

SIGNUX HEC25

Soil probes — RS485



DESCRIPTION

Soil probe for moisture, conductivity and temperature, with RS485 Modbus RTU output. A 2 m cable, with a stripped end or an M10 connector.

The three prongs go into the soil and measure moisture, conductivity and temperature at the same point. That is the combination a watering decision needs: how much water there is, how much salt has built up, and what temperature the soil is at.

The body is vacuum-potted in flame-retardant epoxy resin, rated IP68, and stands being buried long term without electrolysis eating the contacts. It speaks Modbus RTU over RS485, with no gateway in between.

FEATURES

- One hole, one reading: All three come from the same point and in the same Modbus frame: three consecutive registers from 0x0000. Nothing to line up between probes driven in at different depths.
- Calibrated by drying and weighing: Checked against the gravimetric reference method: the sample weighed wet, then dry. And the salt content of the soil barely affects it, so it works in any kind of ground.
- Made to stay put: Vacuum-potted in black flame-retardant epoxy, with IP68 that allows immersion and resistance to long-term electrolysis.
- The prongs go all the way in: 70 mm long and 3 mm across, and the reading needs them fully buried: if one is left in the air, the figure is worthless.

AT A GLANCE

Measures	Moisture · Conductivity · Temperature
Output	RS485
Protection	IP68
Operating	-20 to +80 °C

GENERAL

Measured parameters	Moisture · Conductivity · Temperature	
Family	Direct-insertion probe	
Output	RS485	Modbus RTU
Prongs	3 pcs	

SOIL MOISTURE

Range	0-100 %	
Resolution	0.1 %	
Accuracy	±2 %	Over the 0-50 % span
	±3 %	Over the 0-100 % span

ELECTRICAL CONDUCTIVITY

Range	0-20000 µS/cm	
Resolution	10 µS/cm	
Accuracy	±3 %	Up to 10,000 µS/cm
	±5 %	At 20,000 µS/cm

TEMPERATURE

Range	-40 to +80 °C	
Resolution	0.1 °C	
Accuracy	±0.5 °C	

OUTPUT AND POWER

Output interface	RS485	Modbus RTU protocol
Power supply	5 to 30 V DC	
Maximum consumption	0.7 W	At a 24 V DC supply
Factory settings	4800 8N1, address 1	
Baud rates supported	2400 · 4800 · 9600	

CONSTRUCTION

Ingress protection	IP68	
Operating temperature	-20 to +80 °C	At 0 to 80 % RH
Sealing	Flame-retardant epoxy resin, vacuum-potted	
Prongs	70 × 3 mm	Length by diameter
Cable length	2 m	

PART NUMBERS

PART NUMBER	CABLE LENGTH	CONNECTOR / OUTPUT
SX-HEC25-2M-PT	2 m	Pigtail
SX-HEC25-2M-M10	2 m	M10 connector