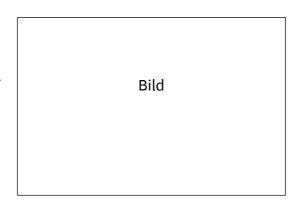## 17. COP-DEND (wire final checking)

COP-DEND   6113468xx

The COP-DEND was developed to measure the ohmic resistance of winded wires. This allows the user to calculate the length of the wire.

The COP-DEND is a complete COP-node, including the measurement PCB, the COP-MAS2 with special measurement Software and the case. There are versions with either 32 or 8 measurement Channels.

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17.1. Technical Spezifications

Specifications		
Specified resistance measurement range	0.1 – 100'000	Ohm
repetitive accuracy	< 2	%
Test current	0..24	mA
Channels	8 or 32	
Termination technique	4-Wire	
cables	shielded	
Line frequency filter	50 or 60	Hz

Remark:
These values are valid under labor conditions
Wounded Wires act like antennas and depending on geometry and electromagnetic fields of the environment, disturbances are coupled into the Wire. This may have an impact on the measurement.
A 4-wire connection should be used, means 2 wires for the test current and 2 wires for the measurement signal. A good contacting is very important for measurements of low omic resistances and should be done with kelvin contacts.

17.2. Pin Assignment

The pin assigned of the measurement PCB is the same as the COP-ADA.
The Pin-Pair "Analog out Ax/GND" and the Analog in +Ax / -Ax combine to the measurent channel x.

17.3. Hardware Description

The COP-DEND device uses COP-ADA PCBs as measurement hardware. The Software of the COP-DEND controls the measurent automatically. The analog outputs are used as Currentsources and supply the testcurrent to the wounded wire. The analog Inputs measure the voltage over the wounded wire. Testcurrent, ADC input range, filtering and calculation of the omic resistance is done by the software.
A software filter is selectable to either suppress 50 Hz or 60 Hz Line frequency disturbances.

17.4.   Available Options

Art. Nr.	Label	Option	Description
611346832	COP-DEND	32Channel	Assembled COP-node for wire final checking. 4 Measurement PCBs with a totoal of 32 channels, incl COP-MAS2 and Case.
611346810	COP-DEND	8Channel	Assembled COP-node for wire final checking. 1 Measurement PCBs with a totoal of 8 channels, incl COP-MAS2 and Case