

OPTICAL PROBES **AMOS-RS485x**

Application

Optical probes **AMOS-RS485x** are used for serial communication (readout, parametrizing and setting) using infrared communication between static smart electricity meters (or other equipment) with optical interface on one side and PC or RPT (manual computer terminal) equipped with RS485 interface on the other side.

The probe parameters fulfil all technical requirements on data transmission in accordance with the standard IEC 62056-21 and the set of users' requirements DLMS/COSEM.

Description

Optical probes of the type series **AMOS-RS485x** are designed as cylindrical plastic heads equipped with a permanent magnet intended for attachment to the metal ring of the electricity meter. The probes are connected by flexible cable, at the end of which is the RJ connector or contacts. The probes perform conversion of the optical signals into signals suitable for RS485 interface.

Properties

- The probes are intended for both-way serial communication with the meter via infrared light;
- RS 485 interface enables remote connection;
- The probes are attached to the meter by the permanent magnet.



Optical probe **AMOS-RS485A, AMOS-RS485H**



Optical probe **AMOS-RS485R**



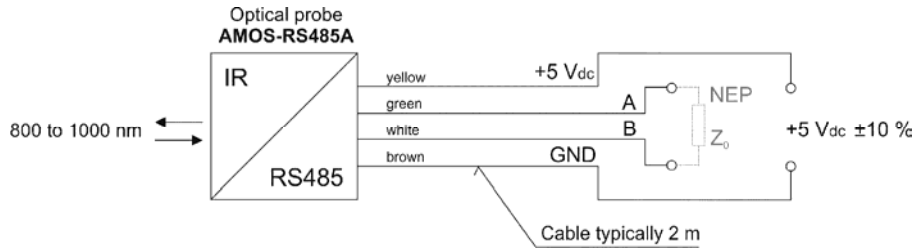
Converter **AMCV US**

Technical data

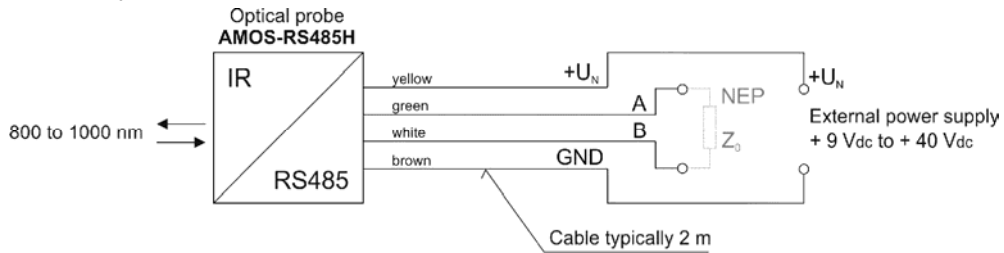
Transmission speed	300 Bd to 19200 Bd
IR transmission wave length	800 nm to 1000 nm
Supply	+9 V _{dc} to +40 V _{dc} (type AMOS-RS485H and AMOS-RS485R) +5 V _{dc} ±10 % V _{dc} (type AMOS-RS485A)
Synchronization	According to FLAG protocol or XON / XOFF
Weight	0.2 kg
Length of transmission cable	50 m (type AMOS-RS485H and AMOS-RS485R) 2 m (type AMOS-RS485A)
Working temperature range	– 20 °C to +50 °C
PC Interface	RS485, half-duplex

Arrangement of the probe

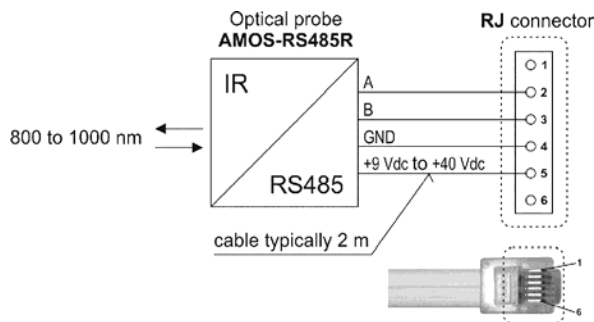
- Probe **AMOS-RS485A** - intended for communication in an immediate distance (up to 2 m), end of the cable is equipped with contacts, external supply +5 Vdc $\pm 10\%$.



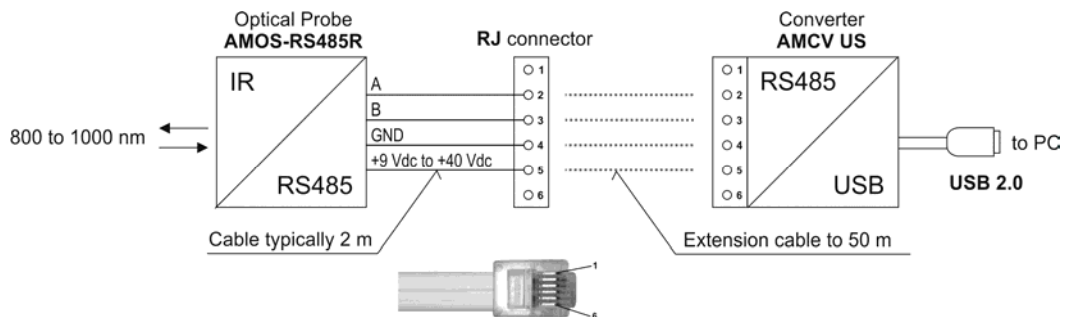
- Probe **AMOS-RS485H** - cable of length up to 2 m with contacts in the end, external supply +9 Vdc to +40 Vdc, equipped with an internal voltage stabilizer. On a customer's special request the probe can be delivered with a prolonged cable up to 50 m.



- Probe **AMOS-RS485R** – cable of length 2 m ended with RJ12 connector, external supply +9 Vdc to +40 Vdc.



- Probe **AMOS-RS485R** with converter **AMCV US** provides connection to a PC through USB interface either at a standard distance of 2 m or by extension cable at distances up to 50 m. The extension cable can be delivered on special requirements.



Note 1: Load impedance 120 Ohm is installed only when required by the customer.

Note 2: On the basis of special requirement, it is possible to deliver probes with stronger attachment magnet.

Marking of the probe

AMOS-RS485x₁x₂

AMOS designation of a type

RS485.... designation of an interface

x₁ supply: **A** + 5 V $\pm 10\%$ free contacts, **H** +9V to +40V free contacts, **R** +9V to + 40V with RJ connector

x₂ special version: **N** – stronger magnet

Ordering data

Specification of type and version, number of pieces.