

Outdoor Wireless Bridge Transparent Cable Replacement RS485 bus

CSP00201800601



Telecommunication Equipment

Applications:

- ▶ Modbus RTU over wireless MESH networks
- ▶ Cable Replacement of RS485 control networks
- ▶ Communication infrastructure for battery powered devices



The product family ERMES (Athena ATHDC11) is designed to provide a useful tool for replacing cables in telemetry and control systems based on RS485 serial bus.

ERMES provides a physical layer Modbus RTU interface that allow remoting the control of individual devices or part of the cable network. Thanks to CN6, technology developed entirely by Athena, ERMES minimizes the installation procedures but can help the installer for deployment optimization. ERMES can be customized both to handle proprietary protocols and specific configuration commands.

ERMES is able to act as a gateway for battery-powered devices compatible with the bandwidth and modulation used.

Technical Features

Power consumption	
Maximum current (during packet transmission) (+5Vdc/+12Vdc/+24Vdc/+30Vdc)	60mA/25mA/14mA/12mA
Average current (+5Vdc/+12Vdc/+24Vdc/+30Vdc)	43mA/19,3mA/11,1mA/9,6mA
RF characteristics	
Bandwidth	g3, Annex 1 ERC 70-03 (869.4MHz – 869.650MHz)
Modulation	GFSK
Line of sight point to point coverage	470m (PER<10 ⁻³ @ 57.6 kbaud)
Antenna	integrated
Connectivity	
Athena CN6 Technology	
Interfaces	
Power supply	+5VDC ÷ +30VDC
RS485	1 (max speed 115.2 kbaud)
LED	3
Buttons	1
jumper (master detection)	1
Physical connection	Four core cable AWG 24 (power supply and RS485)

Installation

Housing dimension: 132,5 mm x 83,1 mm x 51,9 mm (160,3 mm x 93 mm x 62,2 with mounting plate)

Material: ASA

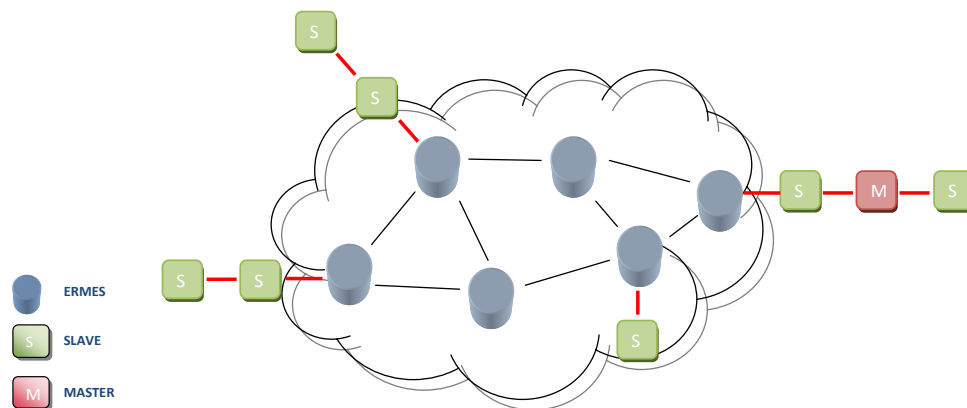
NEMA rating: NEMA6

The device can be fixed to the wall or metal surface (the antenna is designed to ensure its performance in both situations).

The only installation operation required is association of all the devices with the same network identifier. This can be done easily with a dedicated button action.

With the same button the installer can activate processes that controls the quality of the deployment. The result of those operations is shown by the LEDs present on the unit.

The following figure shows a typical installation case: a Modbus network remotod by an ERMES wireless infrastructure:



Regulatory framework

ERMES complies with:

ETSI EN 300 220-2 v2.1.2 (2007-06)

ETSI EN 301 489-3 v1.4.1 (2002-08)

EN 60950-1 (2006-04)

The standard operating temperature is $-20^{\circ}\text{C} \div +70^{\circ}\text{C}$. Upon request, the device can be equipped to operate in extended temperature range $-40^{\circ}\text{C} \div +82^{\circ}\text{C}$. The receiver is qualified to meet the constraints of **class 2**.

At the same time the apparatus ensures compliance with European directives:

Radio and telecommunications terminal equipment 99/5/EC

Electromagnetic compatibility 2004/108/EC

Low Voltage equipment 2006/95/EC

Support

Contact Athena for complete information about the product, supported technologies and customization options.