

AmsSevernTrent

Data Sheet

Description

The AmsSevernTrent module is a client interface module in the Amplex Module System. It is designed for two-way communication with Severn Trent compatible utility meters. The AmsSevernTrent module can easily be connected with up to ten utility meters. The AmsSevernTrent module collects readings and other data from the meters and subsequently transfers these data to an AmsCPU module that acts as a data concentrator and WAN module. The AmsCPU module delivers the data to the central server when required. Direct communication and power supply between the AmsSevernTrent module and the AmsCPU module are handled by an incorporated A-Bus interface, which is based on the industrially proven RS-485 technology.

Functionality

Topic	Comments
A-Bus communication	A-Bus two-way communication with A-Bus masters, e.g. AmsCPU, AmsCPU-IO.
Severn Trent communication	The interface of the AmsSevernTrent module is only compatible with Severn Trent SM 150E smart meters.
Autodiscovery	The module is automatically discovered by the AmsCPU. In case a module is disconnected from the AmsCPU, this is reported to the server application and the module is listed as missing. If the module is reconnected to the AmsCPU or another AmsCPU, it will be rediscovered by the system.
Real-time clock	The real-time clock is automatically synchronized with the AmsCPU, which in turn is synchronized with the Network Time Protocol (NTP).
LED	AMS Status LED (green): indicates whether the A-Bus is up and running.

Connections

I/O	Comments
A-Bus	A-Bus client module
Severn Trent	Up to 10 water meters. Three terminals for each water meter: one for data requests, one for data input and one for ground.

Reliability & Maintainability

Topic	Comments
Software upgrade	The software on the AmsSevernTrent module can be updated remotely from the central server.
Installation of new software	New software is transferred without interrupting the normal functionality of the AmsSevernTrent module. When the software has been transferred, the integrity of the software is checked and the software is installed.
Self-test	A built-in self-test (BIST) is performed after power-up.
Watchdog and brown-out reset	Watchdog and brown-out reset ensure that the system is up and running at all times.



Technical Specifications

Operational specifications

Storage temp.	-40°C to +85°C
Operating temp.	-20°C to +65°C
Max humidity	90% (non-condensing)
IP grade	IP20
Input voltage	12 V DC via A-Bus
Current consumption	Typical 40 mA, Max 50 mA

Standards and approvals

2006/95/EC, Low Voltage Directive (LVD)
2004/108/EC, EMC Directive
2002/95/EC, RoHS Directive



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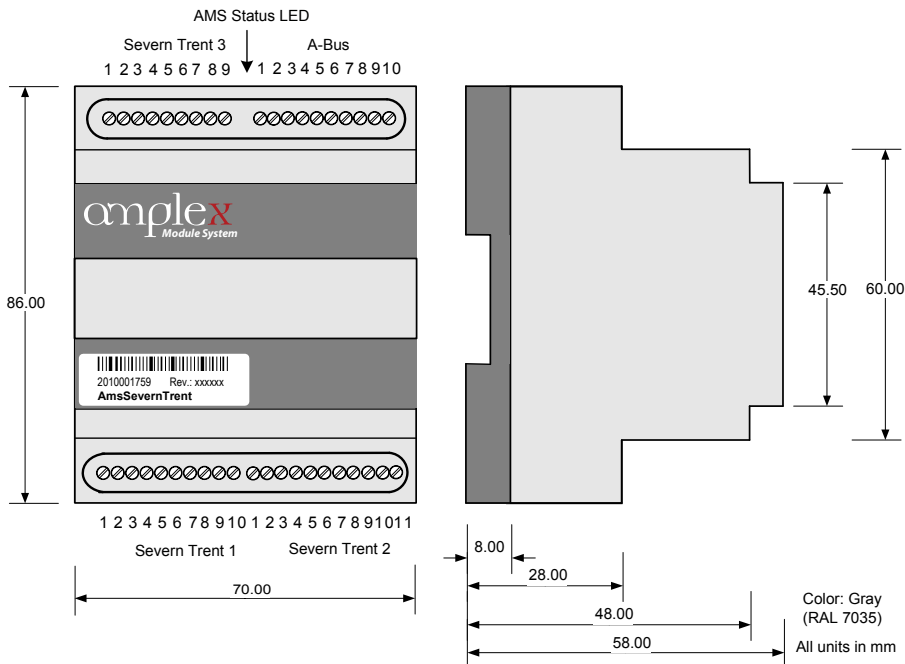
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Installation Guide

The AmsSevernTrent module can be connected to any master module in the Amplex Module System, e.g. AmsCPU and AmsCPU-IO. The A-Bus connections are internally daisy-chained for easy installation.

Topic	Comments
A-Bus cable	Use shielded twisted pair cable.
A-Bus cable length	< 3 m
Severn Trent cable	See data sheet for the Severn Trent SM 150E smart meter.
Severn Trent cable length	< 3 m
0.5 mm ² terminals	Use a 2 mm slotted screwdriver to loosen/tighten the terminal screws.
Enclosure	The AmsSevernTrent module must be installed in an enclosure of protection degree IP65 or installed at a location that provides the module with the same level of protection.

Drawing

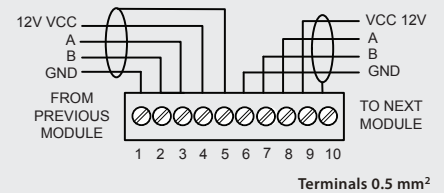


Physical Specifications

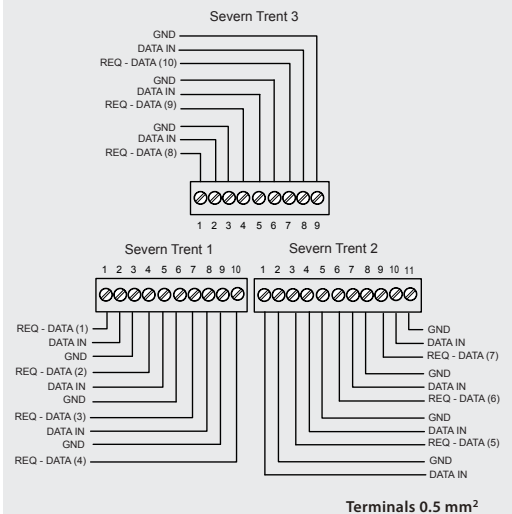
Weight	89 g
Top part	Gray (RAL 7035)
	Lexan 940
Base part	Black (RAL 7021)
	Noryl VO 1550
Coating	Conformal coated
A-Bus connector	0.14 - 0.5 mm ² (AWG 26-20)
Severn Trent connector	0.14 - 0.5 mm ² (AWG 26-20)
Mounting	DIN-rail (EN50022)

I/O Schematic

A-Bus connection



Severn Trent connections



Ordering Information

Product	Order number
AmsSevernTrent	100-30-005

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