

# AmsSwitch



## Description

The AmsSwitch module is a client interface module in the Amplex Module System. It consists of two individually controllable relays. These relays are galvanically isolated and are used for switching minor loads on and off directly and three-phase or larger loads via an intermediate breaker. One of the two relays provides both NO and NC functionality.

The AmsSwitch module can be used for a wide range of purposes that require stable and reliable control.

All modules in the Amplex Module System incorporate an A-Bus interface which is based on the industrially proven RS-485 technology. The A-Bus interface is used for power supply and for direct communication between the modules.

## Functionality

Topic	Comments
Communication	A-Bus two-way communication with A-Bus masters, e.g. AmsCPU, AmsPLC+, AmsService
Autodiscovery	The module is automatically discovered by the AmsCPU module. In case a module is disconnected from the AmsCPU module, this is reported to the server application and the module is listed as missing. If the module is reconnected to the AmsCPU module or another AmsCPU module, it will be rediscovered by the system.
Real-time clock	The real-time clock is automatically synchronized with the AmsCPU module 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
Max switching voltage	250 V AC/30 V DC (resistive)
Max switching current	3 A (resistive)

Contact Amplex A/S for information about other types of loads.

## Reliability & Maintainability

Topic	Comments
Software upgrade	The software on the AmsSwitch module can be updated remotely from the central server.
Installation of new software	New software is transferred without interrupting the normal functionality of the AmsSwitch 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 +60°C
Max humidity	90% (non-condensing)
IP grade	IP20
Input voltage	12 V DC via A-Bus
Current consumption	Typical 20 mA, Max 100 mA

### Standards and approvals

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



# AmsSwitch



## Installation Guide

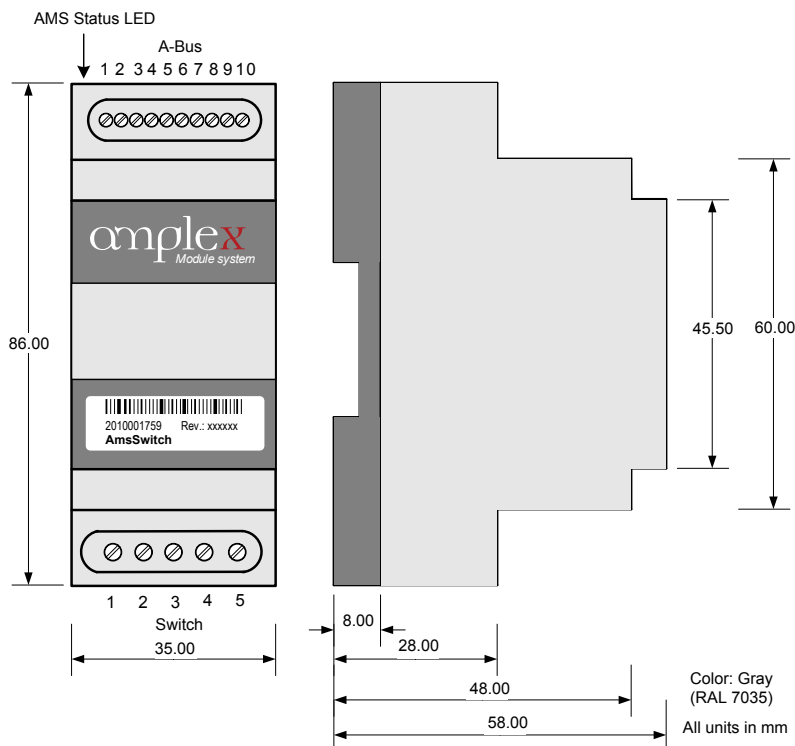
The AmsSwitch module can be connected to any master module in the Amplex Module System, e.g. an AmsCPU module. The A-Bus connections are internally daisy-chained for easy installation.

Topic	Comments
A-Bus cable	Use shielded twisted pair cable.
A-Bus cable length	< 3 m
Switch connection cable length	< 3 m
0.5 mm <sup>2</sup> terminals	Use a 2 mm slotted screwdriver to loosen/tighten the terminal screws.
Enclosure	The AmsSwitch 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.

## Physical Specifications

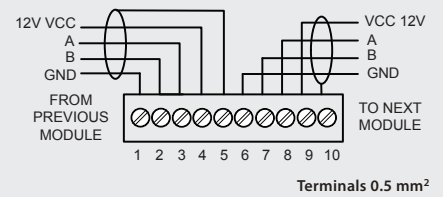
Weight	64 g
Top part	Gray (RAL 7035)
	Lexan 940
Base part	Black (RAL 7021)
	Noryl VO 1550
Coating	Conformal coated
A-Bus connector	0.14 - 0.5 mm <sup>2</sup> (AWG 26-20)
Switch connector	0.14 -1.5 mm <sup>2</sup> (AWG 26-16)
Mounting	DIN-rail (EN50022)

## Drawing

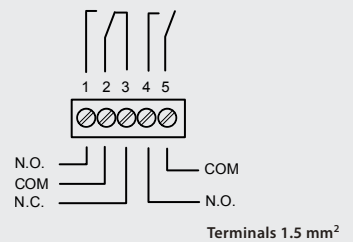


## I/O Schematic

### A-Bus connection



### Switch connection



## Ordering Information

Product	Order number
AmsSwitch	100-20-002

All specifications are subject to changes

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