AT303

smar

USER´S MANUAL

PROFIBUS DP
ACTIVE TERMINATOR

FEB / 13

AT303

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Specifications and information are subject to change without notice.
Up-to-date address information is available on our website.

web: www.smar.com/contactus.asp

AVOIDING ELECTROSTATIC DISCHARGES

ATTENTION

Electrostatic discharges may damage semiconductor electronic components in printed circuit boards. They usually occur when touching components or connector pins from modules and racks, without wearing the appropriate equipment to prevent discharges. It is recommended to take the following precautions:

- ✓ Before handling modules and racks, remove the electrostatic charge from your body by wearing a proper wristband or touching grounded devices;
- ✓ Avoid touching electronic components or connector pins from racks and modules.

AT303 – PROFIBUS-DP ACTIVE TERMINATOR

Description

The AT303 is an active terminator developed to increase the PROFIBUS-DP network availability and facilitate accessing any node on the PROFIBUS-DP bus without putting the network in an intermittent condition. This way, any network slave can be switched off, removed or replaced without harming the communication, especially when the terminators are enabled on the network end slaves.

The AT303 terminator can be mounted inside the panels with DIN rail or even on the field in boxes.

Figure 1 – AT303

Main features

- 24Vdc insulated power supply;
- Galvanic insulation;
- Speeds from 9.6 kbits/s to 12 Mbits/s;
- LED for power supply indication;
- One PROFIBUS DP frontal DB9 connector;
- One connector PROFIBUS DP terminal block;

Application

The figure below shows a network whose used terminators are part of the devices. If any device is turned off or removed, the network is without terminator.

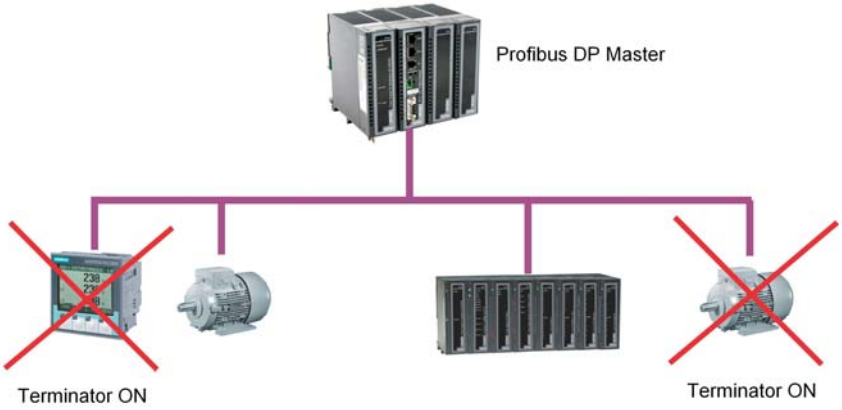


Figure 2 – Network without AT303 - terminator on the device

The AT303 is the solution for this type of problem, increasing the network availability. See example on next figure.

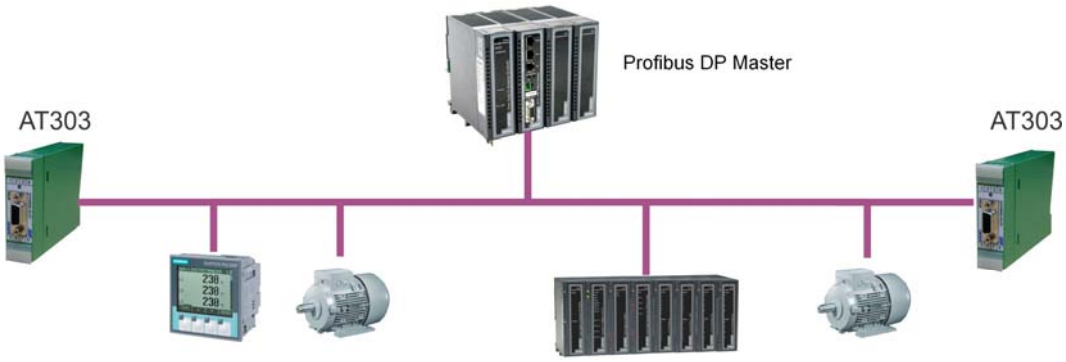


Figure 3 – Example of AT303 application

Order Code

AT303 – Active Profibus-DP Terminator

Diagnostics

The LED lit means that the AT303 is powered. The LED off means that the +5V powering is absent in the terminators' resistors. In this case, check if the power supply voltage is within the allowed range.

Installation

The AT303 can be easily mounted in a DIN rail snap-on connection. It also can be mounted on panel. In the case of the 35mm DIN rail, use an adequate screwdriver to prevent damage to the mechanic parts.

Follow the next steps:

1. First, lean the AT303 upper part on the mounting panel, above the DIN rail.
2. Slide the AT303 until it leans on the DIN rail and press its lower part while rotating it, until hearing a click.
3. To remove the AT303 apply a force opposite to the fixation, forcing it upward and pull it outside.
4. Make sure there is nothing loose. If affirmative, the rail may not be standard.

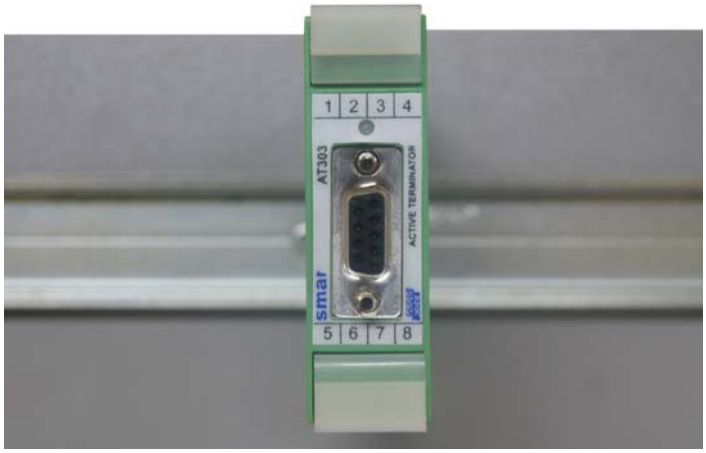


Figure 4 – AT303 installed on DIN rail

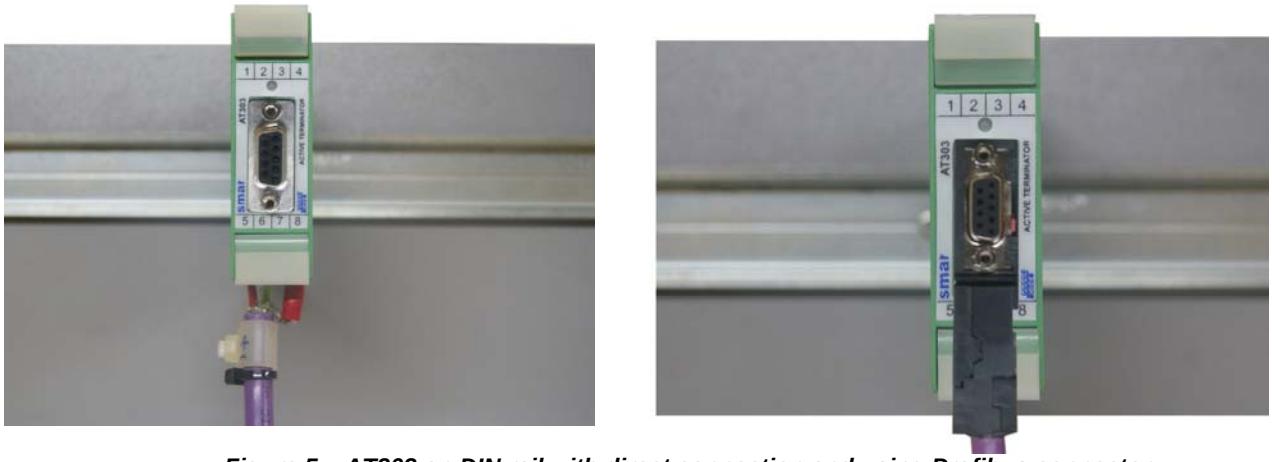
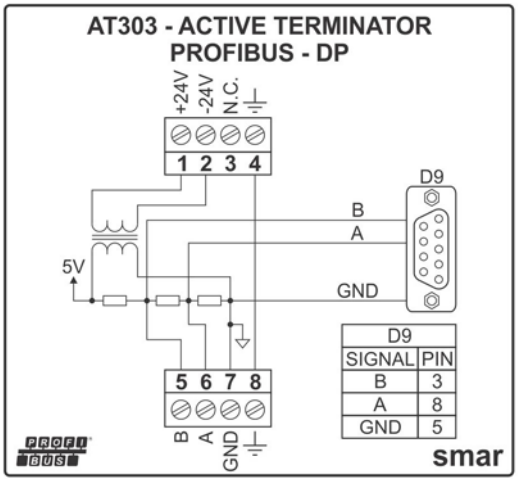


Figure 5 – AT303 on DIN rail with direct connection and using Profibus connector

Connection scheme



Technical Specifications

POWER SUPPLY	
Voltage	20 to 30 Vdc
Consumption	20 mA @ 24 Vdc
Insulation	Galvanic
Wiring	Up to 2.5mm² cable with connectors fixed with screws

FUNCTION SPECIFICATIONS	
Communication	All PROFIBUS RS-485: (DP, DP-V1, DP-V2, PROFIdrive, MPI, etc.)
Communication rates (kbps)	9,6; 19,2; 45,45; 93,75; 187,5; 500; 1500; 3000; 6000 and 12000
Cable	Type A – compliant with EN50170
Termination resistors	Compliant with Profibus EN50170 standard
Protection Degree	IP-20 (DIN EN 60529 VDE 0470)

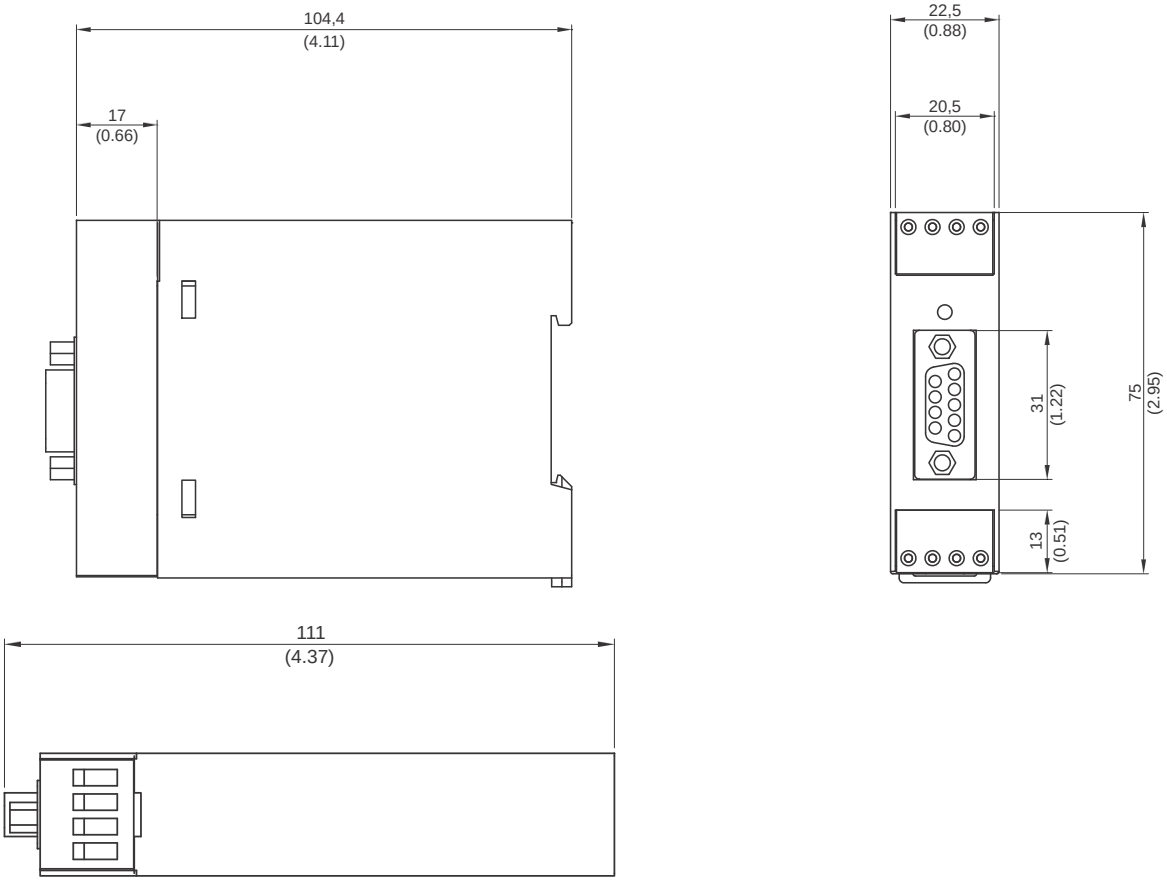
ENVIRONMENT CONDITIONS	
Operation temperature	0 to 60 ºC
Humidity	Up to 90%

DIMENSIONS AND WEIGHT	
Dimensions (Height x Width x Depth)	75.0 x 22.5 x 104.4
Weight	100 g

MOUNTING	
Support	DIN35 rail (DIN EN 60715 TH35)

Dimensional drawings

Dimensions are in millimeters, and in brackets for inches.



Appendix

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SRF – SERVICE REQUEST FORM

AT303 - PROFIBUS-DP ACTIVE TERMINATOR

GENERAL DATA

Model: AT303

Serial Number: _____

TAG: _____

PROCESS DATA

Interference types present in the area: No interference ( ) Temperature ( ) Vibration ( ) Others: _____

Ambient Temperature: From _____ºC up to _____ºC. **Profibus-DP communication rate**: _____(kbits/s)

FAILURE DESCRIPTON

_____

_____

_____

_____

SERVICE SUGGESTION

Adjustment ( ) Cleaning ( ) Preventive Maintenance ( ) Upgrade ( )

Other: _____

USER INFORMATION

Company: _____

Contact: _____

Title: _____

Section: _____

Phone: _____ _____ _____ _____ **Extension:** _____

E-mail: _____ **Date:** _____/ _____/ _____

For warranty or non-warranty repair, please contact your representative.
Further information about address and contacts can be found on www.smar.com/contactus.asp