

RS485 - USB Converter User Guide



Arkon Flow Systems
Nováčkova 11, 614 00 Brno, Czech Republic
Tel. +420 543 214 822, Tel./Fax +420 543 215 249
Enquiries/ Orders/ General questions: office@arkon.co.uk
Marketing support/ Brochures: marketing@arkon.co.uk
Technical support: support@arkon.co.uk
www.arkon.co.uk

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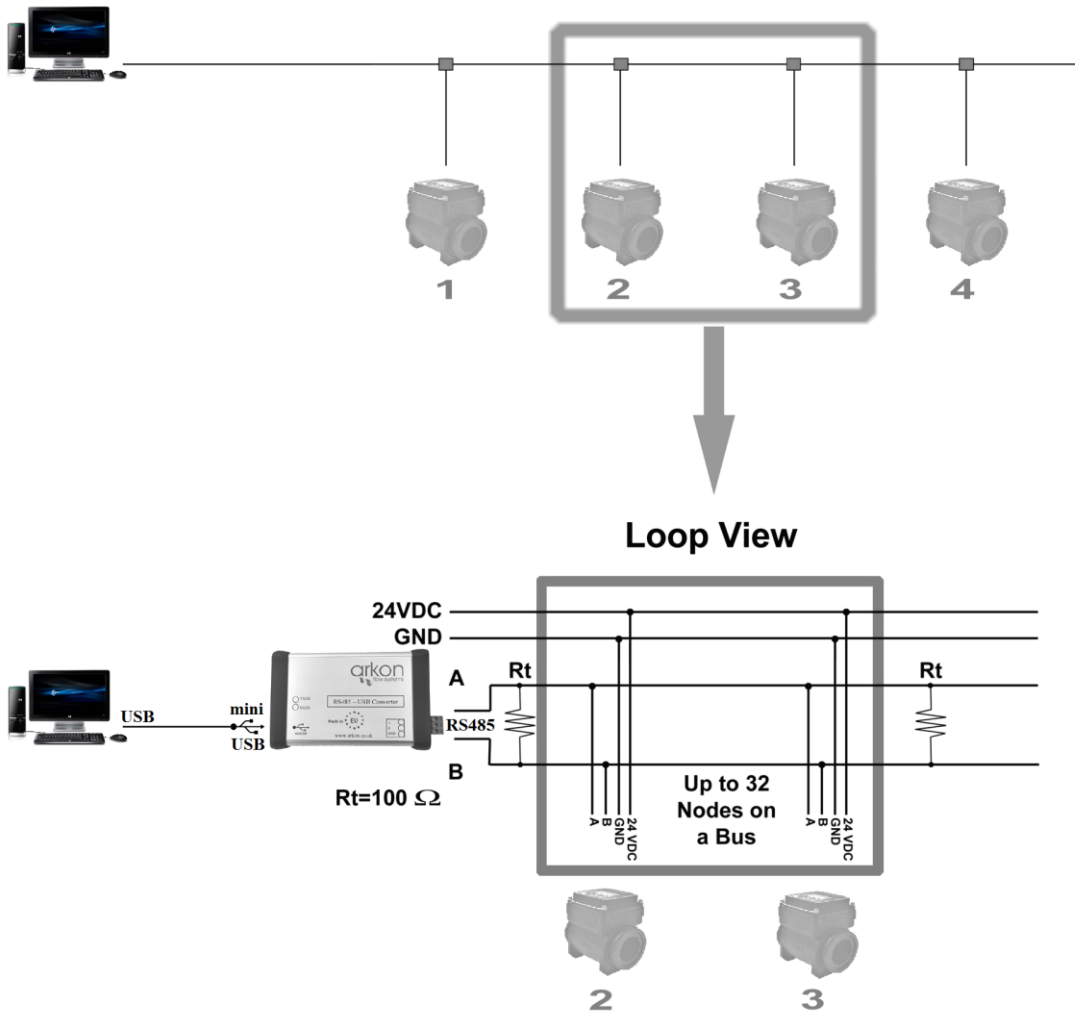
1. RS485 communication

RS485 is one of the most popular communication methods used in industrial applications due to its noise immunity, long-distance capability and capability of multi-drop communications – up to 32 nodes.

In the picture bellow, the general network topology of RS485 is shown. N nodes are connected in a multipoint RS485 network. For longer lines, the termination resistances R_t (both of value 100Ω), are necessary on both ends of the line to eliminate reflections. The RS485 network must be designed as one line with multiple drops, not as a star. Although total cable length maybe shorter in a star configuration, adequate termination is not possible anymore and signal quality may degrade significantly.

Electrical Specifications	
Max distance	Up to 1200m depends on cable parameters
Cabling requirements	Twisted pair, plus signal ground for long distances
Multidrop	Up to 32 nodes
Operating temperature	-20 – 70 °C

BASIC CIRCUIT CONNECTIONS:



For more information please see the communication standard TIA/EIA-485 or RS-485.

2. USB communication

After connecting the standard mini USB cable to the computer, you have to install drivers that you can find on Arkon CD or the below website (except MS Windows 7). The flowmeter appears in the computer as a virtual COM port. Therefore is possible to use Arkon communication software or use your own SCADA software. The communication protocol is Modbus RTU over serial port.

BASIC CIRCUIT CONNECTIONS:



VIRTUAL COM PORT (VCP) DRIVERS:

<http://www.ftdichip.com/Drivers/VCP.htm>

Driver installation guide: <http://www.ftdichip.com/Documents/InstallGuides.htm>

3. Warranty

The warranty conditions are covered by Arkon Flow Systems, s.r.o. Terms & Conditions of Sale and by Arkon Flow Systems, s.r.o Return Regulations and Warranty Conditions. The Arkon Flow Systems, s.r.o Terms & Conditions of Sale and the Arkon Flow Systems, s.r.o Return Regulations and Warranty Conditions are an integral part of the Resellers contract and of any Order Confirmation. Please see your Resellers contract or www.arkon.co.uk; Support section. The Warranty sheet is part of the Packing note of any new goods sent. For the claim or return procedure, please consult our web site www.arkon.co.uk or call the Arkon Flow Systems, s.r.o sales office.

3.1. Contact



Technical support: support@arkon.co.uk
Skype: support.arkon

Sales office: office@arkon.co.uk

Office hours:
8:30 – 18:00 (GMT+1)

Direct technical support:
8:00 – 17:00 (GMT+1)