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Resource Data Management RS485 Modbus Interface User Guide

Resource Data Management RS485 Modbus Interface
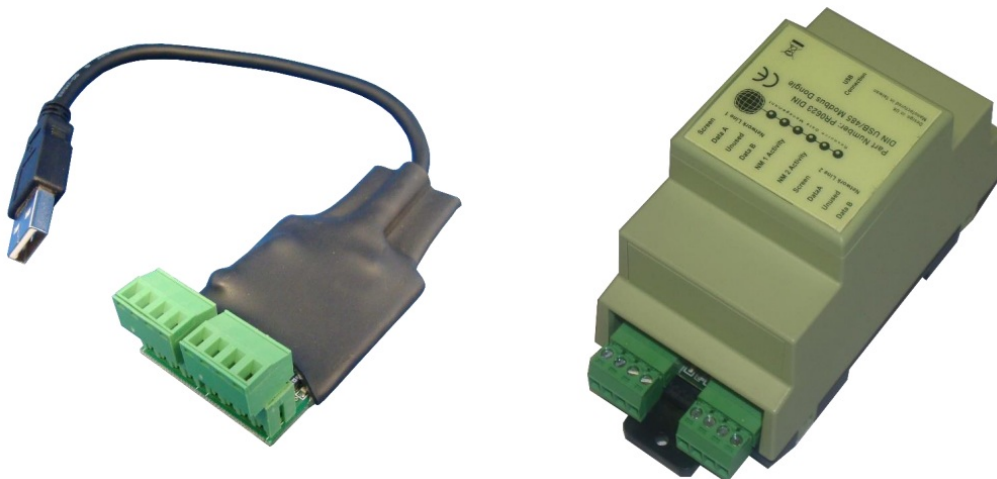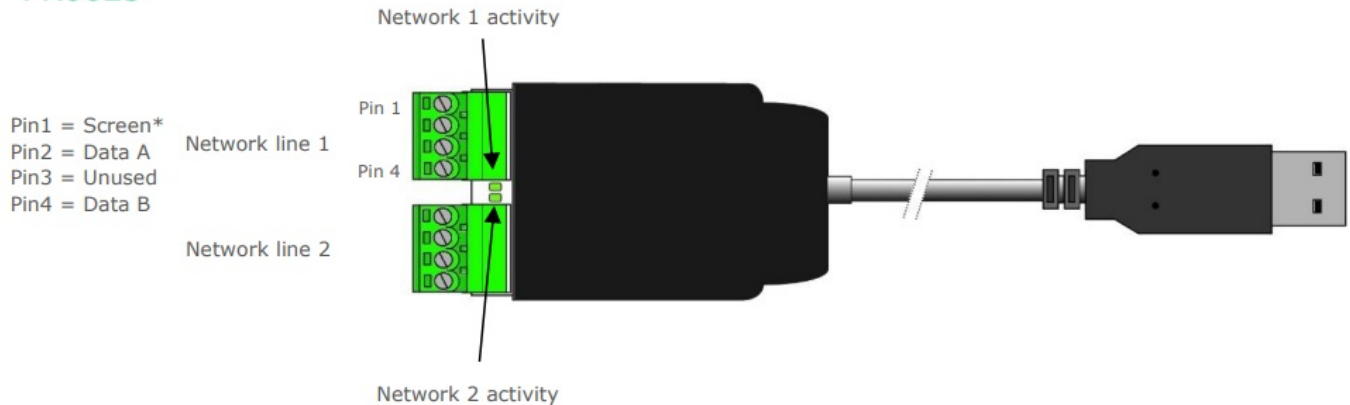

Contents

USB to RS485 Modbus® Interface

Resource Data Management

Modbus network support can be enabled using the RDM USB to RS485 Modbus network adaptor, part number PR0623/ PR0623 DIN. A single adapter is supported by the DMTouch and allows for two RS485 Modbus networks, with up 32 devices on each network line. Similarly when used in conjunction with the intuitive plant TDB, it can also support the two network lines with 32 devices on each.

Support is provided for a range of Modbus devices and new devices are being added continuously. Contact RDM Technical support to obtain the most up to date list of supported devices.

Note: This feature requires Data Manager software version V1.53.0 or above.

PR0623

Network 1 activity

Pin1 = Screen*
Pin2 = Data A
Pin3 = Unused
Pin4 = Data B

Network line 1

Network line 2

Network 2 activity

* Optional dependent on application

Mechanical

Dimensions 35 x 22 x 260mm
Weight 50g (1.7 oz)

PR0623-DIN

Network line 1

Pin1 = Screen*
Pin2 = Data A
Pin3 = Unused
Pin4 = Data B

Network line 2

Type B USB connector port (USB cable supplied)

Mechanical
Dimensions 112 x 53 x 67mm
Weight 110g (3.8 oz)

RS485 Configuration

Note the RS485 configuration defaults of the Adapters are the following:

Baud rate 9600
Data bits 8
Parity No
Stop Bits 1

When connected to a DMTouch with software V3.1 or above or an Intuitive TDB with software V4.1 or above the adapter can be configured with the following set up.

| Baud Rate	Data Bits	Parity	Stop Bits
1200	8	E	1
1200	8	N	2
2400	8	E	1
2400	8	N	2
4800	8	E	1
4800	8	N	2
9600	8	E	1
9600	8	N	2
19200	8	E	1
19200	8	N	2
38400	8	E	1
38400	8	N	2

Specifications

DC Voltage 5V
Rated Current 0.1A (USB Powered)

Adding a Modbus Device

DMTouch
On the DMTouch the adapter/ software needs to be activated before it will communicate to the Modbus devices. Please consult RDM sales for activation.

Modbus
USB should
be checked
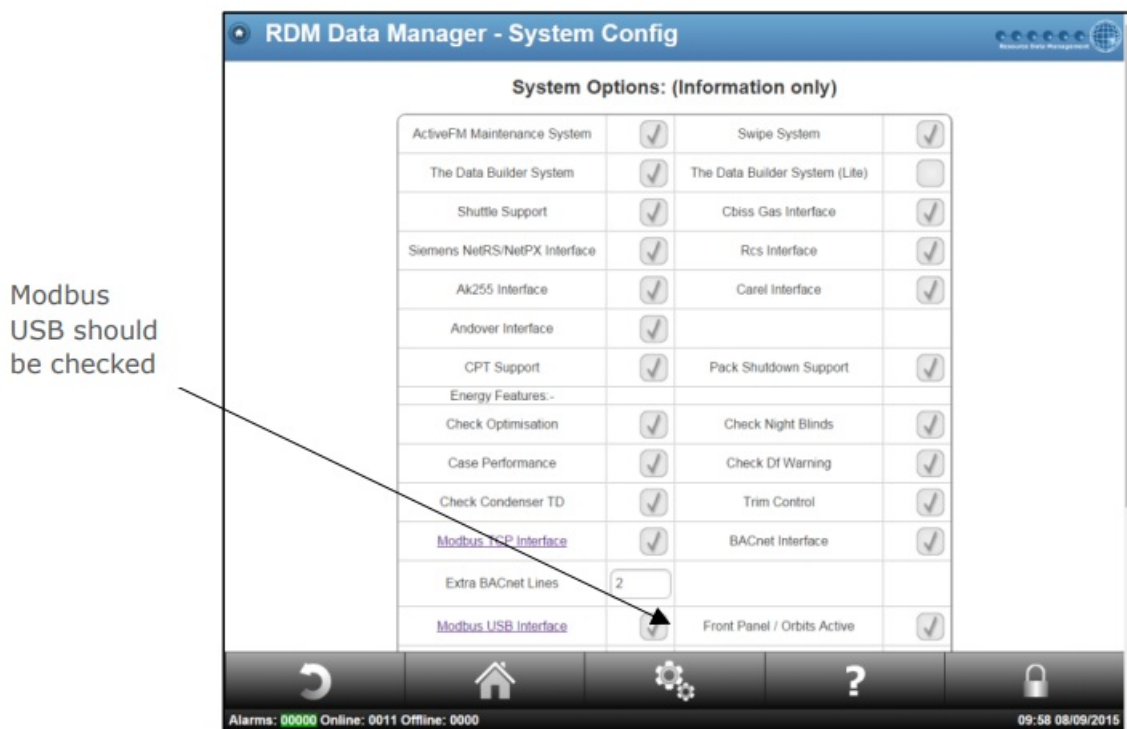
When activated, it will open a number of useable 'templates' for devices to communicate with the DMTouch. Currently the following Modbus® devices are supported:

Modbus® Energy Meters	SIRIO Energy Meter
4MOD Pulse Counter	Socomec Diris A20
AcuDC 240	Socomec Diris A40
AEM33 Power Monitor	SPN ILC Energy Meter
Autometer IC970	VIP396 Energy Meter
Carlo Gavazzi EM21	VIP396 Energy Meter (IEEE)
Carlo Gavazzi EM24-DIN	RDM Energy Meter
Carlo Gavazzi WM14	

|	
Compact NSX	
Countis E13, E23, E33, E43, E53	**Other Modbus® Devices**
Cube 350	**Gas Detection**
Dent Powerscout Energy meter	CPC Infrared RLDS Unit 1
EMM R4h Energy meter	TQ4200 Mk 11 (16 Chan)
Enviro ENV900	TQ4200 Mk II (24 Chan)
Enviro ENV901	TQ4000 (4 Chan)
Enviro ENV901-THD	TQ4300 (12 Chan)
Enviro ENV903-DR-485	TQ4300 (16 Chan)
Enviro ENV910 Single Phase	TQ8000 (24 Chan)
Enviro ENV910 Three Phase	TQ8000 (16 Chan)
Flash D Power Monitor	TQ8000 (8 Chan)
Flash D Power Monitor (3 Wire)	TQ100 (30 Chan)
ICT Energy Meter EI	Safety Gas Detection System

ICT Energy Meter EI Flex – 1phase	Carel Gas Detection
ICT Energy Meter EI Flex – 3phase	MGS Gas 404A Detector
IME Nemo 96HD	**Others**
Integra 1530	Toshiba FDP3 A/C Interface
Integra Ci3/Ri3 Energy Meter	Polin Bakery Controller
Janitza UMG 604	ISpeed Inverter Drive
Janitza UMG 96S	RESI Dali Lighting System
Kamstrum Multical 602	Sabroe Unisab III
Measurlogic DTS	AirBloc SmartElec2
Nautil 910 Energy Meter	Emerson Control Techniques VSD
Schneider Masterpact NW16 H1	Daikin ZEAS Remote Condensing units 11-26
Schneider PM710	NXL Vacon Inverter Template
Schneider PM750	NSL Vacon Inverter Template
Shark Energy Meter	

Note: Please be aware that the templates listed above were generated on request and designed to the customers' requirements. Please contact RDM Technical Support for information regarding the template. Furthermore, if you have a Modbus® device which is not listed please contact RDM Technical Support.

The USB dongle is not 'plug & play', for the DMTouch to recognise the device, it must be present when powered up (or restarted).
To add a Modbus device, log in and navigate through the following menus:

Service/ Devices/ Network/ Add Device
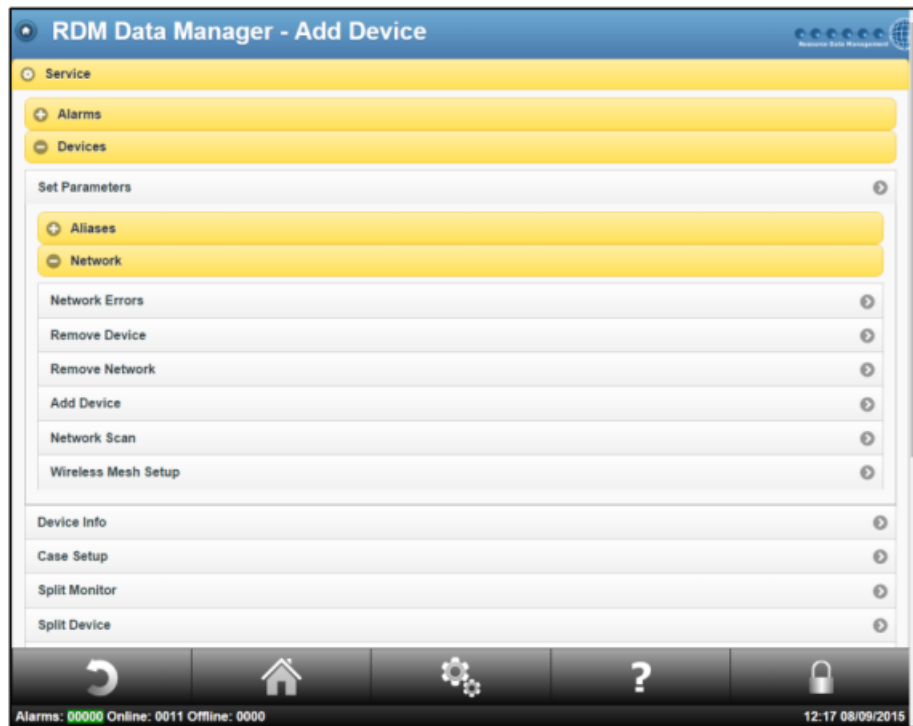
Selecting the 'Add device' option, will show the following page:

Within the page, all fields will need to be entered:

Device Type: Select Modbus/ USB device
Name: The six character name which appears on the 'device list'
Alias: Enter an appropriate description for the device

Type: Select the device from the drop down menu.
USB Line: Select either Line 1 or Line 2, depending on the network line the controller is physically connected.
Modbus Address: Enter the Modbus address of the device.

Once details are entered, the Modbus controller will show in the device list.

Intuitive Plant TDB

With the Intuitive Plant TDB, the Modbus USB is already activated. Therefor similar to the dmTouch, the adapter needs to be present when the controller is booting up (restart). Currently, the following Modbus devices are listed within the intuitive controller:

Device	Device
Flash D Power Mon (4 Wire)	Schneider PM710
VIP396 Energy Meter	Flash D Power Mon (3 Wire)
4MOD Pulse Counter	Sirio Energy Meter
Autometer IC970	VIP396 Energy Meter (IEEE)
Socomec Diris A20	Shark Energy Meter
AEM33 Power Monitor	Powerscout
Enviro ENV901	Enviro ENV900
AEM33 Power Monitor	

Note: Please be aware that the templates listed above were generated on request and designed to the customers' requirements. Please contact RDM Technical Support for information regarding the template. Furthermore, if you have a Modbus® device which is not listed please contact RDM Technical Support.
To add a Modbus device, log in and navigate through the following menus: Network – Add Device

Within the page, all fields will need to be entered:

Device Type: Select Modbus/ USB device
Name: The six character name which appears on the 'List' page
Type: Select the device from the drop down menu.
Modbus Address: Enter the Modbus address of the device.
Network Line: Select either Line 1 or Line 2, depending on the network line the controller is physically connected.

Once details are entered, the Modbus controller will appear within the 'List' of devices under Network – List.

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Revision History

Revision	Date	Changes
1.0	08/09/2015	First document
1.0a	03/05/2017	New documentation format.
1.0b	18/12/2019	Update to US Offices
1.0c	03/02/2022	USB Modbus setup table added

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Documents / Resources

Resource Data Management RS485 Modbus Interface [pdf] User Guide
RS485 Modbus Interface, RS485, Modbus Interface, Interface

References

- 🌐 **Resource Data Management**
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- 🌐 **Technical Support**