

Technical Manual for the 1-Wire ID-Button Reader

Version 1.12



Introduction

This manual contains technical documentation allowing easy installation and use of the 1-Wire ID-Button (iButton) reader. Each ID-Button has a unique ID, which makes identification of persons/items very easy.

The ID-Button readers are available for:

- RTCU MX2i series.
- RTCU DX4 series.
- RTCU AX9 series.
- RTCU A9i units.
- RTCU M11i series.

The 1-Wire bus is a single wire (plus ground) communication bus, which is easy to install as it only consist of the two wires. In addition to this a LED, which is located in the middle of the reader for user indications etc, also need a wire.

For information on the software configuration of the RTCU unit please refer to the RTCU IDE on-line help.

Table of Contents

Introduction	2
Table of Contents.....	3
Ordering Information	3
Graphical view.....	4
Connections	5
RTCU MX2i series	5
RTCU M11i series	5
RTCU DX4 / AX9 series and the RTCU A9i	5

Ordering Information

Order-code	Description
RT-O-1W-IDRD1	1-wire ID button reader cable for the RTCU-M11 Series.
RT-O-1W-IDRD2	1-wire ID button reader cable for the RTCU-DX4 / AX9 Series, and the RTCU-A9i unit.
RT-O-1W-IDRD3	1-wire ID button reader cable for the RTCU-MX2i Series

Graphical view



1-Wire ID-Button Reader for
the M11i Series



1-Wire ID-Button Reader for
DX4 / AX9 Series, and the
RTCU-A9i units



1-Wire ID-Button Reader for
MX2i Series

Connections

RTCU MX2i series

The reader is delivered with a 12-pole connector. Connect this directly to the COM connector on the MX2i unit.

RTCU M11i series

The reader is delivered with a SUB-D9 connector. Connect this directly to serial port 1 (programming connector) on the RTCU unit.

RTCU DX4 / AX9 series and the RTCU A9i

The reader is supplied with three wires prepared for connection. The color and function of the wires are listed in the table below.

4x0.34mm² cable

Color	Description	DX4	AX9	A9i
Yellow	1-Wire bus	1Wire, pin 7	1Wire	1W-Bus
Brown	LED indicator	1Wire-LED, pin 8	1Wire-LED	Note*
Green	Ground	SGND, pin 9	SGND	GND

For installation on the RTCU AX9 and A9i the wires must be stripped and installed in the dedicated connectors. The connectors are labeled on the RTCU-AX9 and RTCU-A9i for easy identification.

Note: The RTCU A9i does not support the LED indicator. If its function is required a 0.25W resistor must be connected in series with the LED, and then the other end of the resistor could be connected to one of the digital outputs, that is controllable from the VPL program. The resistor value will vary depending on the supply voltage. Use the following equation to calculate the value:

$$R = (V_{\text{supply}} - 2.5) / 0.005$$

Where V_{supply} is the DC-voltage applied to the resistor. If the unit is supplied with AC the unregulated 12V DC-output can be used instead.

For a 24V supply the resistor value will be 107.5k ohm. If the calculated value isn't available as standard, choose the nearest standard value. Which will be either 100k or 110k for a 24V supply.