



# Lindab **Pascal 3.0 TCP Guide**

Modbus - EXOline - Bacnet

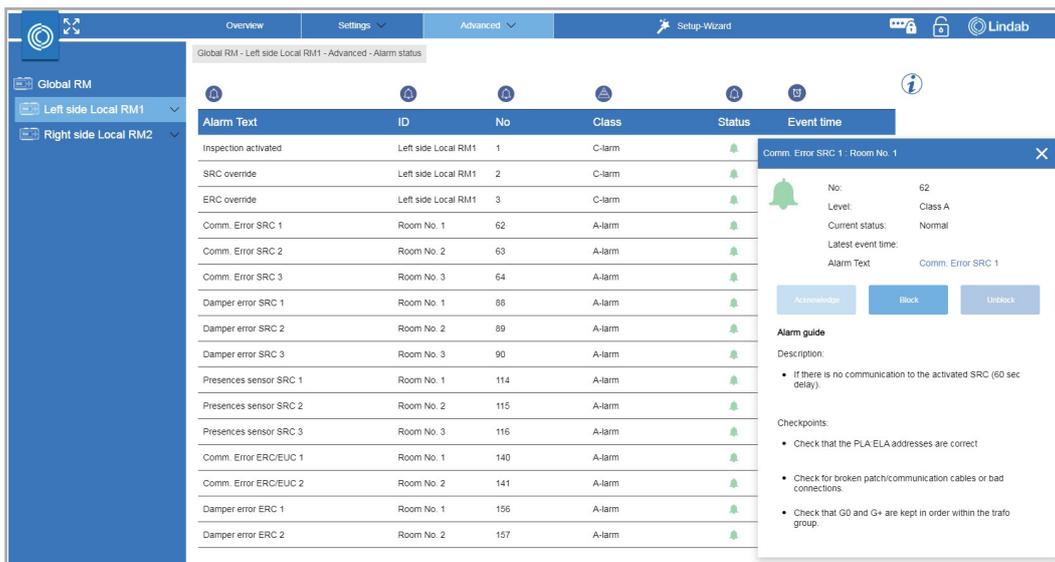


# Pascal 3.0 TCP Guide

Regula Master version 3.0-1-02

## Alarms handling

The following describes how to handle alarms in Regula Master TCP – the procedure and which commands to use. In the webserver Pascal Operate the alarms for the configured controllers are listed in the Advanced section, which is reserved for “service” login, but active alarms will be readable for user and operator login as well. Here is an example for a Local RM:



## Modbus/EXOLine TCP

In the Lindab Pascal Signal list Modbus–Exoline there are alarm signal registers listed in both Discrete Inputs and in Input registers. The alarm signals in the Discrete Inputs are showing actual values (0/1, second by second), which is only intended for monitoring, e.g. error diagnostics. To see alarm/error status use **Input register** signals **2000-2178**.

These alarms can have the following values: 1=Normal; 2=Blocked; 4=Cancelled; 5=Returned 7= Alarm

Commands for these alarms are found in **Holding register** signals **3000-3001**. In Holding register 3000, set the alarm number, where 1 = Input register 2000, 2 = Input register 2001, etc. (alarm number = Input register number – 1999). Alarm numbers can also be seen in Pascal Operate Alarm status.

In Holding register 3001, the command for the selected alarm number is set. The possible commands are 1=Acknowledge, 2=Block, 3=Unblock.

A Cancelled or Returned alarm will be set into Normal, after an Acknowledge command.

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## Bacnet TCP

In Bacnet TCP the status alarms are shown as **Multi-state Input** signals (object instance **62-179**).

The alarms can have the following values: Normal(2); Blocked(3); Cancelled(4); Returned(6); Alarm(8).

Commands for these alarms are found in **Analog Value-901 AlaCmdPtNo** and **Analog Value-902 AlaCmdExe**. In Analog Value-901 AlaCmdPtNo, set the alarm number of the Multi-state Input signal (**62-179**). Alarm numbers can also be seen in Pascal Operate Alarm status.

In Analog Value-902 AlaCmdExe, the command for the selected alarm number is set. The possible commands are 1=Acknowledge, 2=Block, 3=Unblock.

A Cancelled or Returned alarm will be set into Normal, after an Acknowledge command.

## SRC commissioning parameters

For the 26 SRCs there are several commissioning parameters which both can be read and written to. However, as it is commissioning parameters, all of them are not continuously updated in the Regula Master, so they must be read and written, one SRC at a time. In the webserver Pascal Operate that is what is done for SRCs in Settings and Advanced menu when clicking on the “Update settings” and “Confirm settings icons:



Global RM - Right side Local RM2 - Supply - Settings - SRC1: Room No. 1

Setup status

Show ID

SRC1  Application ver. 1.5-1-0

SRC2  6: Air only

SRC3  8: Air + Water

SRC4  Flow regulator MBV/DBV/LCFV-125

Quantity 1

Air flow rate [l/s] per flow regulation unit

Standby 5 l/s

Occupied minimum 10 l/s

Occupied maximum 50 l/s

Nominal (Default) 86 l/s

Sensors

Presence

Temperature (Extern)

CO2

Humidity (v1.5 and >)

Regulation

Actuators

Display

Min limit for VAV-damper at CO2-control 800 ppm

Max limit for VAV-damper at CO2-control 1000 ppm

Global RM - Right side Local RM2 - Supply - Advanced - SRC3: Room No. 3

Advanced Overview

Show ID

Par no	Description	Value	Select for copy
SerialNo	Regula Combi version	1.5-1-1	<input type="checkbox"/>
P00	Lindab Program	6	<input type="checkbox"/>
P139	Size of damper	5: MBV/DBV/LCFV-200	<input type="checkbox"/>
Par no	Description	Value	Select for copy
P01	Heat Occupied	21.0 °C	<input type="checkbox"/>
P02	Cool Occupied	23.0 °C	<input type="checkbox"/>
P03	Neutral zone at standby	2.0 °C	<input type="checkbox"/>
P04	Heat Standby	15.0 °C	<input type="checkbox"/>
P05	Cool Standby	30.0 °C	<input type="checkbox"/>
P06	Frost protection setpoint	8.0 °C	<input type="checkbox"/>
P07	P-band for room controller	10.0 °C	<input type="checkbox"/>
P08	I-time for room controller	300.0 s	<input type="checkbox"/>

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## Modbus/EXoline TCP

In the Lindab Pascal Signal list Modbus–Exoline, selected SRC commissioning parameters are listed in the **Holding register** signals **100-611**, sorted in SRC numbers. These are values which are stored in each room controller (SRC).

### Reading SRC parameters procedure:

1. Prior to reading SRC parameter(s), use **Holding register** signal **98**, by writing the SRC number value (1-26) into **register 98**, to update all the parameter values of that SRC.
2. Read the desired SRC parameter Holding register of that SRC.

### Writing SRC parameters procedure:

1. Prior to writing value(s) into the SRC parameter(s), use **Holding register** signal **98**, by writing the SRC number value (1-26) into **register 98**, to update all the parameter values of that SRC.
2. Write the value(s) to the desired SRC parameter(s) in the Holding register.
3. Write the SRC number value (1-26) into **register 99**, to commit changes of parameter value(s) of that SRC.

## Bacnet TCP

Selected SRC commissioning parameters are listed as **Analog Value** signals (object instance **10113-12623**), sorted in SRC numbers. These are values which are stored in each room controller (SRC).

### Reading SRC parameters procedure:

1. Prior to reading SRC parameter(s), use the signal **Analog Value-10098 SRC\_ReadCommand**, by writing the SRC number value (1-26) into that register, to update all the parameter values of that SRC.
2. Read the desired SRC parameter Analog Value signal(s) of that SRC.

### Writing SRC parameters procedure:

1. Prior to reading SRC parameter(s), use the signal **Analog Value-10098 SRC\_ReadCommand**, by writing the SRC number value (1-26) into that register, to update all the parameter values of that SRC.
2. Write the value(s) to the desired SRC parameter(s) in the Analog Value signal(s).
3. Write the SRC number value (1-26) into **Analog Value-10099 SRC\_WriteCommand**, to commit changes of parameter value(s) of that SRC.



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