

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:

|) <u>×</u> | Overview | Settings 🗸 | Advanced 🗸 | * | Setup-Wizard | | Eindab |
|----------------------------|--------------------------------|-------------------------------|----------------|--------|--------------|--|------------------------------------|
| | Global RM - Left side Local RM | 11 - Advanced - Alarm status | | | | | |
| Global RM | 0 | 0 | 0 | | 0 | 6 | i |
| Left side Local RM1 \sim | | ID | No | Class | Status | Event time | |
| 🗊 Right side Local RM2 🛛 🗸 | Inspection activated | | de Local RM1 1 | C-larm | | Comm. Error SRC 1 : Room N | |
| | SRC override | Left si | de Local RM1 2 | C-larm | | Comm. Endr SRC 1. Room N | D 1 |
| | ERC override | Left si | de Local RM1 3 | C-larm | | No: | 62 Class A |
| | Comm. Error SRC 1 | Room | No. 1 62 | A-larm | | Current status | |
| | Comm. Error SRC 2 | Room | No. 2 63 | A-larm | | Latest event ti | |
| | Comm. Error SRC 3 | Room | No. 3 64 | A-larm | | Alarm Text | Comm. Error SRC 1 |
| | Damper error SRC 1 | Room | No. 1 88 | A-larm | | Acknowledge | Block Unblock |
| | Damper error SRC 2 | Room | No. 2 89 | A-larm | | Alarm guide | |
| | Damper error SRC 3 | Room | No. 3 90 | A-larm | | Description: | |
| | Presences sensor SRC 1 | Room | No. 1 114 | A-larm | | If there is no communic delay). | ation to the activated SRC (60 sec |
| | Presences sensor SRC 2 | Room | No. 2 115 | A-larm | | | |
| | Presences sensor SRC 3 | Room | No. 3 116 | A-larm | | Checkpoints: Check that the PLA:EL | A addresses are correct |
| | Comm. Error ERC/EUC 1 | Room | No. 1 140 | A-larm | | Clieck that the PLACEL | A audresses are correct |
| | Comm. Error ERC/EUC 2 | Room | No. 2 141 | A-larm | | Check for broken patch connections. | /communication cables or bad |
| | Damper error ERC 1 | | No. 1 156 | A-larm | | Check that G0 and G+ are kept in order within the trafe group. | |
| | Damper error ERC 2 | Damper error ERC 2 Room No. 2 | | A-larm | | group. | |

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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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=Ac-knowledge, 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:



| 6 | Overview | Settings | Advanced | 🏓 Setup-Wizard | • | •••• | C Lindab |
|--------------------------|------------------------------|--------------------------------|--------------------|---|----------------|----------|----------|
| | Global RM - Right side Local | RM2 - Supply - Settings - SRC* | : Room No. 1 | | | | |
| 🖼 Global RM | Setup status | | | | | 1 | |
| 🖮 Left side Local RM1 $$ | Show ID | Application ver. 1. 5- | 1- 0 | Sensors | (B) Regulation | | ~ |
| Right side Local RM2 | SRC1 Ø | 6: Air only | | | Actuators | | \sim |
| Supply | SRC3 Ø | 8: Air + Water | | (I) Temperature (Extern) | Display | | ~ |
| Extract | SRC4 🧔 | Flow regulator | MBV/DBV/LCFV-125 | 0 | | | |
| S Flow & Temperature | | Quantity | 1 | Min limit for VAV-damper at CO2-control | 800 ppm | | |
| | | Air flow rate [I/s] per fl | ow regulation unit | Max limit for VAV-damper at CO2-control | 1000 ppm | | |
| | | Standby | 5 l/s | Humidity (v1.5 and >) | | | |
| | | Occupied minimum | 10 l/s | | | | |
| | | Occupied maximum | 50 l/s | | | | |
| | | Nominal (Default) | 86 l/s | | | | |

| 6 2 | Overview | Settings | Advanced | 🎾 Setup-Wizard | 🚟 🔓 🔘 Lindab |
|------------------------|------------------------------|---|---------------|---------------------|-----------------|
| | Global RM - Right side Local | RM2 - Supply - Advanced - SRC | 3: Room No. 3 | | |
| 🖼 Global RM | Advanced Overview | | | s > 5 | 0 |
| Eft side Local RM1 V | Show ID | Par no Description | | Value | Select for copy |
| Right side Local RM2 ^ | | SerialNo Regula Combi version | | 1. 5- 1- 1 | |
| Supply | SRC2 Ø | P00 Lindab Program | | 6 | |
| Extract | SRC4 🔕 | P139 Size of damper | | 5: MBV/DBV/LCFV-200 | |
| Flow & Temperature | | Par no Description P01 Heat Occupied | | Value | Select for copy |
| | | | | 21.0 °C | |
| | | P02 Cool Occupied | | 23.0 °C | |
| | | P03 Neutral zone at st | andby | 2.0 °C | |
| | | P04 Heat Standby P05 Cool Standby | | 15.0 °C | |
| | | | | 30.0 °C | |
| | | P06 Frost protection s | etpoint | 8.0 °C | |
| | | P07 P-band for room controller | | 10.0 °C | |
| | | P08 I-time for room co | ntroller | 300.0 s | |



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In the Lindab Pascal Signal list Modbus–Exoline, selected SRC commissioning parameters are listed in the **Holding reg**ister 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).
- 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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We at Lindab have therefore made it our most important objective to contribute to an indoor climate that improves people's lives. We do this by developing energy-efficient ventilation solutions and durable building products. We also aim to contribute to a better climate for our planet by working in a way that is sustainable for both people and the environment.

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