

## 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		<ul> <li>If there is no communic delay).</li> </ul>	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		<ul> <li>Check for broken patch connections.</li> </ul>	/communication cables or bad
	Damper error ERC 1		No. 1 156	A-larm		<ul> <li>Check that G0 and G+ are kept in order within the trafe group.</li> </ul>	
	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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### **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=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					<b>1</b>	
🖮 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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### Modbus/EXOline TCP

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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