

# CALEC® ST II N2Open



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# 1 General information

## Content

In this operating manual are only N2Open specific information on CALEC® ST II, for more details, the technical documentation of CALEC® ST II is necessary.

### REFERENCE!



#### Main operating manual!

The main operating manual and additional documents can be found on the following website: <http://www.aquametro.ch/qr/prod/calec-st/11111.html>



For general information regarding N2Open, please contact System Integration Services centres of Johnson Controls.

## CALEC® ST II: Overview of supported functions

Function	Parameter	Description	More information
Addressing range	Slave: 1-255	Factory setting: 1	See chapter: Configuration of the METASYS N2Open interface on CALEC® ST II
Baud rate	9600	Factory Setting: 9600	

# 2 Commissioning

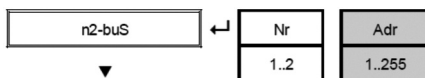
## Configuration of the METASYS N2Open interface on CALEC® ST II

For using the CALEC® ST II with a N2Open interface, please set the necessary N2Open address in the CALEC® ST II operating menu. The address range is valid from 1 to 255.

The parameter

- Bus address

is changeable in the menu structure under



The relevant bus number for the configuration results from the assembly of the BACnet interface in socket # 1 or socket # 2.

### 3 Point Mapping Tables

#### CALEC® ST II Unit Analogue Inputs

NPT <sup>1</sup>	NPA <sup>2</sup>	Unit / Note	Description
AI	1		Not used
	2	m <sup>3</sup>	Volume
	3		Not used
	4	kWh	Energy
	5		Not used
	6		Not used
	7		Not used
	8	m <sup>3</sup>	Volume - BDE
	9		Not used
	10	kWh	Energy - BDE
	11		Not used
	12		Not used
	13		Not used
	14	1	Auxiliary counter 2
	15		Not used
	16		Not used
	17		Not used
	18	1	Auxiliary counter 3
	19		Not used
	20		Not used
	21	kW	Power
	22	m <sup>3</sup> /h	Volume flow
	23	°C	Temperature Warm
	24	°C	Temperature Cold
	25	K	Temperature difference
	26		Not used
	27		Not used
	28		Not used
	29		Not used
	30	t	Mass
	31	t/h	Mass flow
	32	1	Auxiliary counter 1
	33		Not used
	34		Not used
	35		Not used
	36		Not used
	37		Not used
	38		Not used
	39		Not used
	40		Firmware Version
	41		Hardware Version

<sup>1</sup> Network Point Type

<sup>2</sup> Network Point Address

#### CALEC® ST II Unit Analogue Inputs

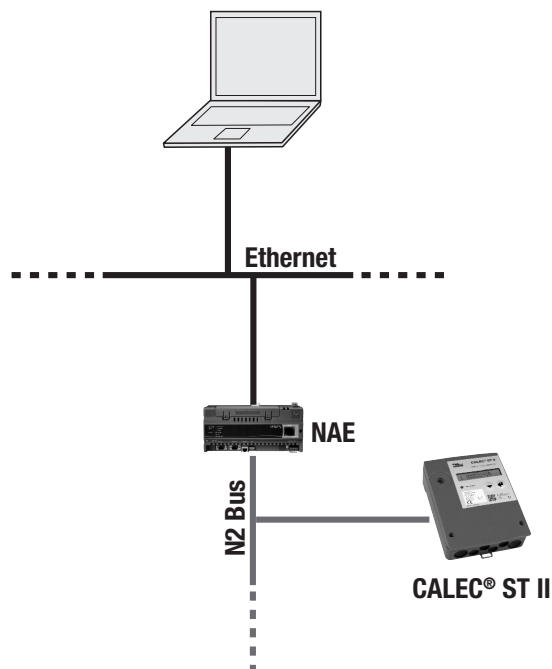
NPT <sup>1</sup>	NPA <sup>2</sup>	Unit / Note	Description 1=On 0=Off
BI	1		Device Alarm Status
	2		Not used
	3		Not used
	4		Not used
	5		Not used
	6		Not used
	7		Installation side [1 = Cold side, 0 = Warm side]
	8		Not used
	9		Not used
	10		Device Error Status

<sup>1</sup> Network Point Type

<sup>2</sup> Network Point Address

## 4 Application details

N2Open protocol is a well established field bus protocol which is used in the area of building automation of Johnson Controls. N2Open (based on RS 485 technology) allows the Aquametro heat calculator CALEC® ST II to be easily integrated into BMS and other system components of Johnson Controls.



### Components requirements

To integrate a CALEC® ST II device of Aquametro into a N2Open network, following components are necessary:

- CALEC® ST II with METASYS N2Open interface
- For information of Johnson Controls devices please contact Johnson Controls directly.

### Line termination

A termination resistor must be connected to each end of the RS-485 segment. The specification recommends a 120 Ohm resistor.

If the CALEC® ST II is at the end of a segment, the internal termination resistor can be used.

Operating menu: Bus => n2Bus => TRN

## 5 Troubleshooting

### No communication

If no communication via N2Open possible, please check the following possibilities:

- Are the connections to clamp 90 and 91 O.K.?
- Is the N2Open setup at CALEC® ST II (Address) O.K.?
- Please check the address of all N2Open slaves in the network.

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