Description

Anybus®-CompactCom

for Modbus-RTU®

[Control Touch]

Software version: V 2.01

24.07.2014

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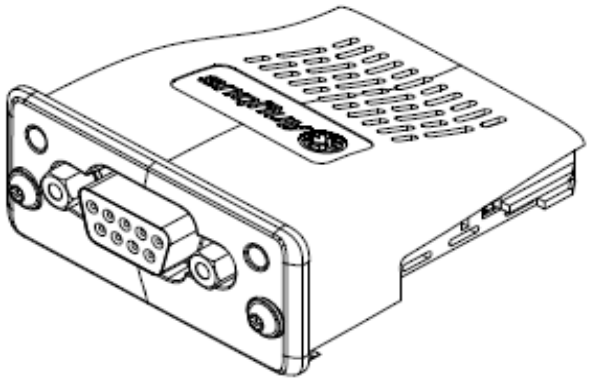
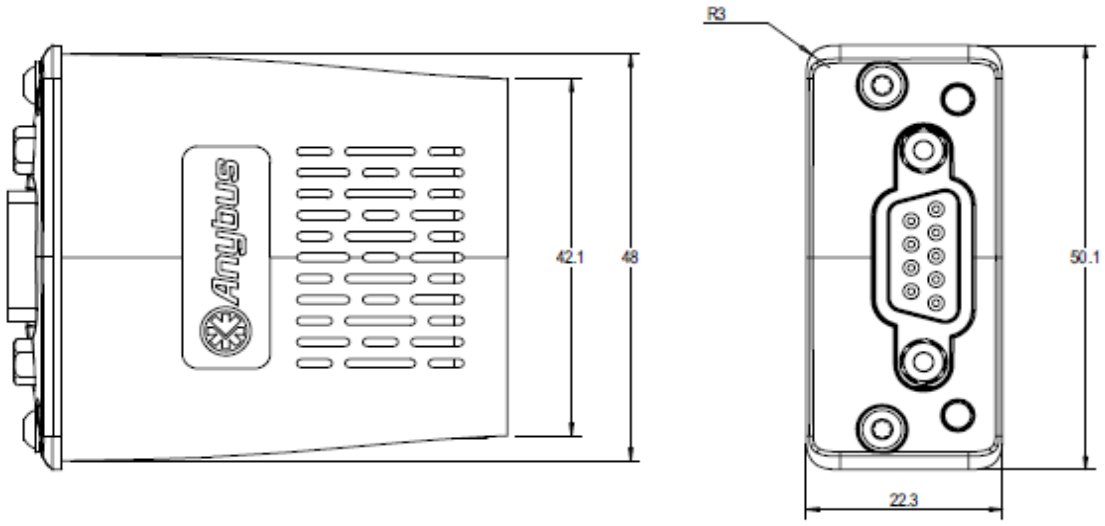
1 Version

The Modul „Anybus®-CompactCom“ for „Modbus-RTU“ allows connection of a Reflex controller „Control Touch“ as a slave to a Modus-RTU-network.
The modul is inserted directly into the slot on the (back side of) the CPU print board.

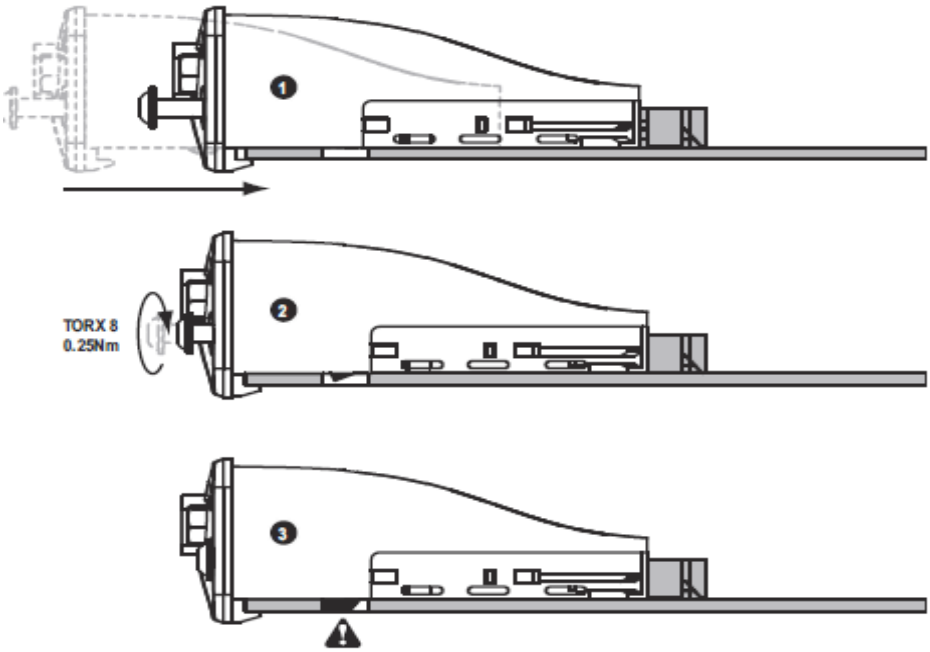


2 Technical data

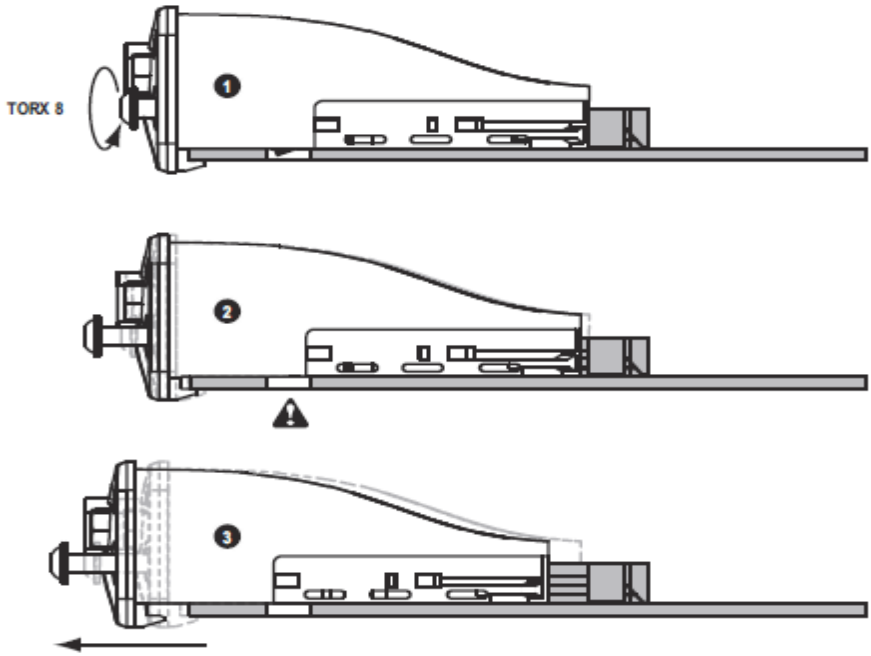
Ambient conditions:	Operating temperature -40 to +70°C Storage temperature -40 to +85°C Degree of protection accordingly „Control Touch“
Power supply:	via „Control Touch“
Modbus-RTU interface:	RS485 or RS232; 1,2 kbit/s to 57,6 kbit/s; Connection via 9-pin Sub-D socket Address setting via „Control_Touch“
Interface to controller:	Module is integrated into the control panel of the unit
Attention:	Installation or removing of the module only when the control unit is completely isolated for the power supply!



Installation:



Removal:



3 Connection „Modbus-RTU“

The DB9-connection slot is accessible after opening the cover.
Before opening the control units must be completely isolated for the power supply!

Pin assignment of the Sub-D-connector:

Pin	Designation	Function
1	GND	
2	5V	
3	PMC	at „RS232“ connect with Pin 2. at „RS485“ leave open!
4	-	
5	B-Line	RS485 Signal B
6	-	
7	Rx	RS232 Receiving
8	Tx	RS232 Sending
9	A-Line	RS485, Signal A

Settings for the module:

The Modbus-Address (module address), the baud rate and the data format has to be adjusted on the „Control_Touch“ controller.

➔ Settings ➔ Service ➔ Anybus module

This menu is only available when a Anybus module is detected!

Module address:	1 ... 247;
Baud rates:	4800, 9600, 19200, 38400, 57600 Baud;
Data formats:	8/EVEN/1, 8/ODD/1, 8/NONE/2, 8/NONE/1; (Data bits / Parity / Stop bits)

4 Transmitted data

4.1 Data from Modbus to controller (remote)

So far, no data from Modbus to controller is transferred / evaluated.

4.2 Data from controller to Modbus
(read operation data)

Following functions are provided for data retrieval

Modbus Function Code	Designation	Addressing
2	Read discrete inputs	Bit address
3	Read multiple registers (from addr. 100h => # = 1)	Word address
4	Read input registers (from addr. 000h => # = 0)	Word address

Follow data can be retrieved:

Designation	Word address	Bit address
System pressure in 1/100 bar (not for „Servitec Levelcontrol“)	#10h	
Filling level in % (not for Servitec / optional filling pipe pressure in 1/100 bar for Servitec)	#11h	
Digital outputs	#12h	120h Compressor 2 or pump 2 ON 121h Compressor 1 or pump 1 ON 122h Overflow valve 2 OPEN 123h Overflow valve 1 OPEN 124h Make-up valve OPEN 125h Message: min. level 126h Message: Common fault
Digital inputs	#13h	130h Feedback pump 1 131h Feedback pump 132h Low-water switch 133h Water meter

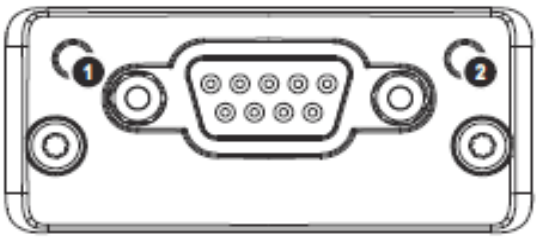
Designation	Word address	Bit address
Alarm messages 1	#14h	140h I/O-module faulty 141h EEPROM faulty 142h Undervoltage 143h Pressure below minimum pressure 144h Low water 1 145h Pump 1 fault 146h Compressor 1 fault 147h Pump 2 fault 148h Compressor 2 fault 149h Pressure measurement fault 14Ah Level measurement fault 14Bh Spray tube pressure measurement fault (only for Servitec) 14Ch In STOP mode for longer than 4 hours 14Dh Low water 2 (only for Servitec)
Alarm messages 2	#15h	150h Failure PCB 151h Failure digital encoder voltage 152h Failure analogue encoder voltage 153h Failure encoder voltage ball valve 1 154h Failure encoder voltage ball valve 2 155h Failure jumper “pressure“ 156h Failure jumper „level“
Alarm messages 3	#16h	(Currently not assigned!)

Designation	Word address	Bit address
Warnings 1	#17h	170h --- 171h Maximum level exceeded 172h Pump runtime exceeded 173h Make-up time exceeded 174h Make-up cycles exceeded 175h Maximum pressure exceeded 176h Make-up quantity exceeded 177h Filling time exceeded (only for Servitec) 178h Filling quantity exceeded (only for Servitec) 179h Expulsion time exceeded (only for Servitec) 17Ah Make-up valve leaking 17Bh Voltage failure 17Ch Auto-zero faulty 17Dh Parameter faulty 17Eh Maximum make-up quantity exceeded 17Fh Maintenance request
Warnings 2	#18h	180h Replace battery 181h Replace softening cartridge 182h Check data logger
Warnings 3	#19h	190h I/O-module, Message digital input 1 191h I/O-module, Message digital input 2 192h I/O-module, Message digital input 3 193h I/O-module, Message digital input 4 194h I/O-module, Message digital input 5 195h I/O-module, Message digital input 6 196h I/O-module, Message digital output 6

Designation	Word address	Bit address
Operation hours Compressor / pump 1 (32 Bit value)	#1Ah (H) #1Bh (L)	
Operation hours Compressor / pump 2 (32 Bit value)	#1Ch (H) #1Dh (L)	
Cumulative total water meter in liters (32 Bit value)	#1Eh (H) #1Fh (L)	
Status Bus module	#20h	200h 0 = no connection between Bus module and controller 1 = Connection between Bus module and controller OK
Type of system 1 = Variomat 2 = Variomat Giga 3 = Reflexomat / C 4 = Servitec Magcontrol 5 = Servitec Levelcontrol	#21h	
Current position motorized ball valve 1 (0-100%)	#22h	
Current position motorized ball valve 2 (0-100%)	#23h	
Operation mode	#24h	240h Operation mode „Hand“ 241h Operation mode „Stop“ 242h Operation mode „Auto“ 244h 1 Pump/compressor 245h 2 Pumps/compressors
Anybus-CompactCom Software version (201 = V 2.01)	#25h	

5 Diagnosis

The module contains two SMD light-emitting diodes, indication the operating status of the module. These are located left and right of the 9-pin Profibus connector on the module.



LED □ viewed from the rear, to the left of the 9-pin Profibus connector
* YELLOW => Communication active
* RED => Disorder recognized

LED □ viewed from the rear, to the right of the 9-pin Profibus connector
* GREEN => Module initialized, no failure
* RED => Error recognized