Quick start manual

INCA process gas analyzer

Remote control module RCM

Description of remote control option for INCA process gas analyzer using the remote control module RCM designed by UNION Instruments GmbH. Summarizes the options and communication possibilties of the module and includes an installation guide for the module.

Change history

Datum	Änderung	Autor	Version
22.02.2013	Created document from German Version V0.99R01	TF	V0.99R01
02.05.2013	Released	TF	V1.00
20.01.2013	Corrected link to DeviceInstaller	TF	V1.02

Table 1: Change history

Communication via remote control module RCM (Ethernet, TCP/IP)

UNION Instruments GmbH offers optionally the remote control module RCM (**R**emote **C**ontrol **M**odule, part.-no. 08300299972).

Every INCA process gas analyzer (model "Version 2", manufactured after 07/2010) can be upgraded with this module.[1] An already built-in fieldbus gateway can easily be connected to this module, to retain a running fieldbus connection.

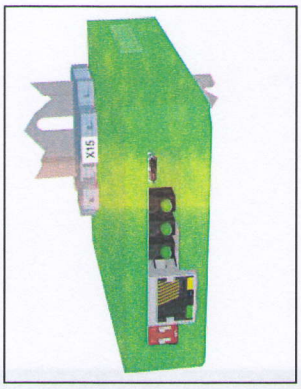


Figure 1: Remote Control Module RCM

With the remote control module RCM the INCA process gas analyzer can be attached to an existing ethernet network.
In addition to that it is possible to set up the router of the network to make the INCA available for communication through the internet from a remote station from anywhere – e. g. from a PC out of the office.
By using the PC-program *INCACtrl*[2] remote service work can be perfromed on the analyzer. Current process and calibration data, errors and service messages and measurement and calibration history data can be read.

Functionality

Remote control module RCM – connectiors and functionality	
Connection	**Connector type and function**
USB	**Micro-USB** Isolated serial connector for local connection to a PC to establish a communication with the PC-program *INCACtrl*. Während dieser Anschluss durch den Anschluss eines PCs belegt ist, ist weder eine Ethernet TCP/IP-Verbindung noch eine Feldbuskommunikation möglich.
Ethernet	**RJ-45-connector** Connector to connect to an Ethernet network. While being communicated over this connection, the fieldbus gateway is "offline". After 5 seconds without communication over the Ethernet connection, the fieldbus gateway is automatically set back "online" to retrieve new data from the analyzer. While being offline the values are frozen in the fieldbus gateway.
Fieldbus gateway	**10-pole multipole connector** To connect to fieldbus gateway
Bus	**3-pole multipole connector** To connect internal power supply of INCA process gas analyzer
PCB-AddOn	**Sub-D9** 9-pole connector to connect the RCM with display board PCB-AddOn (located behind the display in door) through a standard crossed serial cable (→null modem cable).

Table 1: RCM – connectors and functionality

[1] firmware update to version V1.08 or greater is necessary

[2] version V1.02 or greater of program *INCACtrl* is necessary

Connectors, DIP-switches and status LEDs

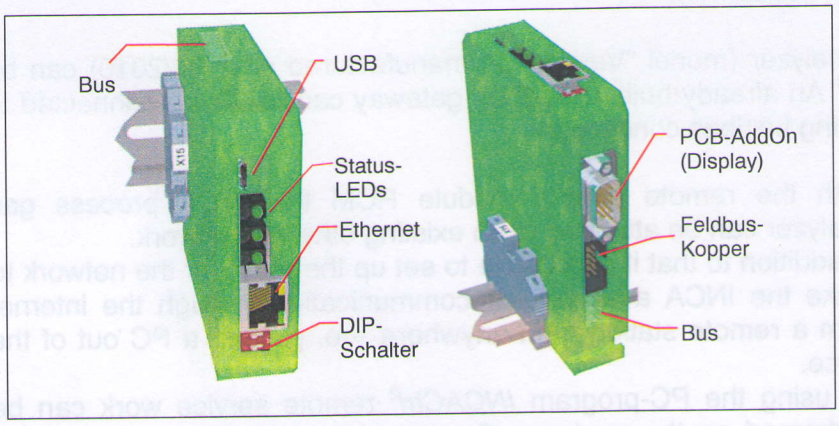


Figure 2: RCM - connectors (front view, bottom view)

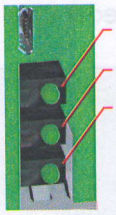
Remote control module RCM – DIP-switches and status LEDs	
DIP-switch / LEDs	**Function**
1	**ON** **No** fieldbus gateway connected. Ethernet LED flashes permanently. (REMARK: set menu-parameter "ABC built.in" via display-menu to OFF) **OFF** fieldbus gateway is connected . (REMARK: set menu-parameter "ABC built.in" via display menu to ON)
2	**ON** CP1 of Ethernet-module controls automatic switching (future use) **OFF (factory setting, default)** CP1 of Ethernet-module does not control automatic switching
	**LED 1 – USB active** **LED 2 – Anybus active** **LED 3 – Ethernet active** The status LEDs show, which connector is currently routed to the PCB-AddOn to communicate with the INCA process gas analyzer.

Table 2: RCM - DIP-switches and status LEDs

Installation

The Ethernet-module of the RCM is by default set to use DHCP-functionality to obtain an IP-address automatically if connected to a network supporting DHCP. If applicable, the IP address can be read back from the DHCP
If no DHCP-server is available then the module can be assigned an IP-address using the program *DeviceInstaller* from Lantronix (http://www.lantronix.com) – see figure below. Link to download *DeviceInstaller.*

DeviceInstaller scans the network for the Ethernet-module without knowing its IP-address. In addition to that an IP-address can be assign just using the MAC-address of the module. The MAC-address is located on a sticker of the RCM.

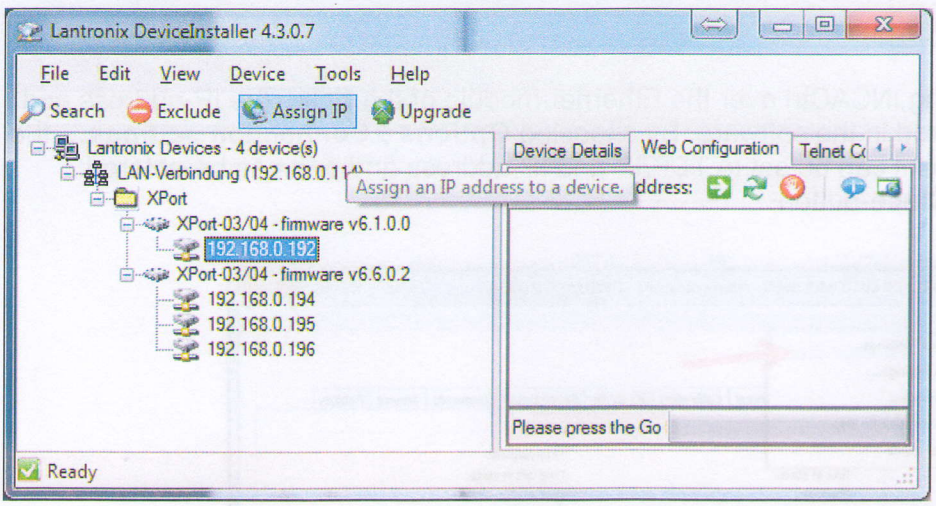


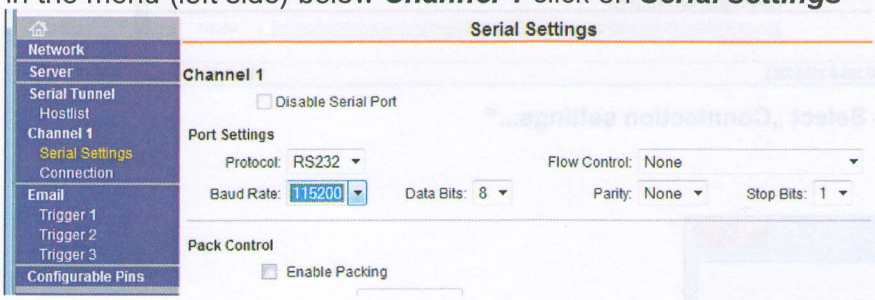
Figure 3: Assigning an IP-address using Lantronix *DeviceInstaller*

<u>After assigning IP-address (IP-address must be known)</u>

For best operation the baudrate of the built-in serial interface should be checked – it should be set up to 115200 bit/s – see figure below.

To check/set up the baudrate:

1.) enter **IP-Adresse** of the Ethernet-module in the browser
2.) confirm the login screen by pressing „**OK**“ (no user name or password required)
3.) in the menu (left side) below ***Channel 1*** click on ***Serial settings***



4.) select “**Baud Rate 115200**“ if not already set and confirm with „**OK**“-button (bottom of screen)
5.) Restart by pressing **Apply settings** in left menu.

Default-settings and communication using INCACtrl

The settings of the Ethernet-module of the RCM are set by default to:

IP über DHCP:	On
Port:	10001
Protocol:	TCP/IP
RS232:	115200 bit/s, 8 Datenbit, 1 Stoppbit, keine Parität

TCP/IP-setting *INCACtrl*

To communicate using INCACtrl over the Ethernet-module of the RCM, the IP-address and port must be configured in the software. By choosing **Options→Connection settings…** the communication protocol can be set to **TCP/IP** and IP-address and port can be entered. Confirm by clicking **Close**-button.

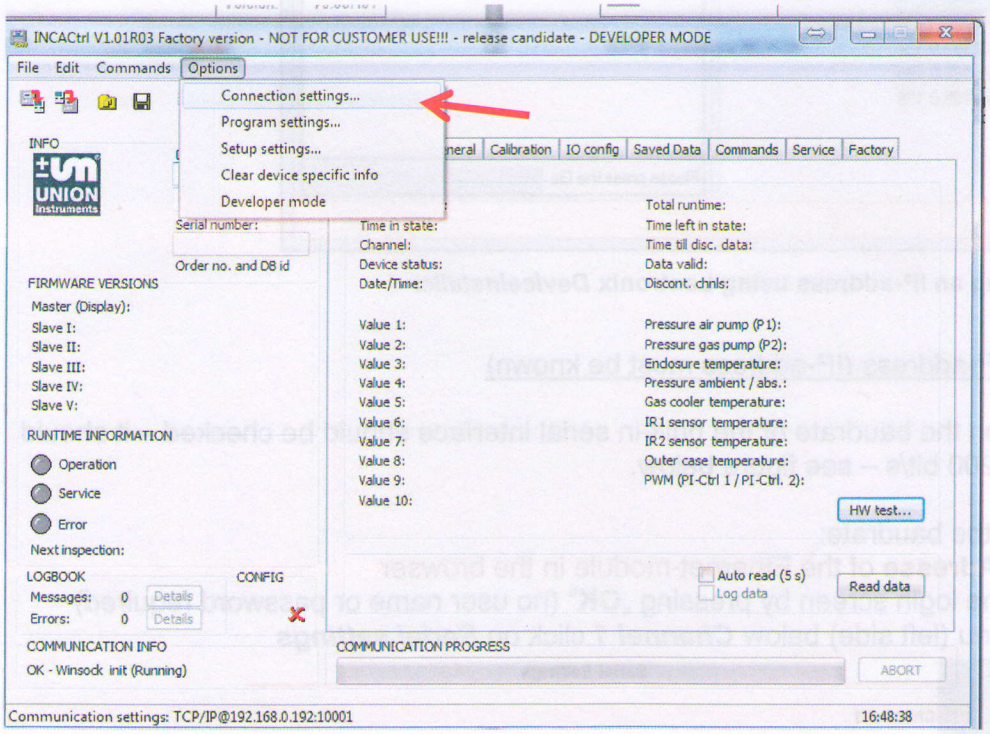


Figure 4: *INCACtrl* – Select „Conntection settings...“

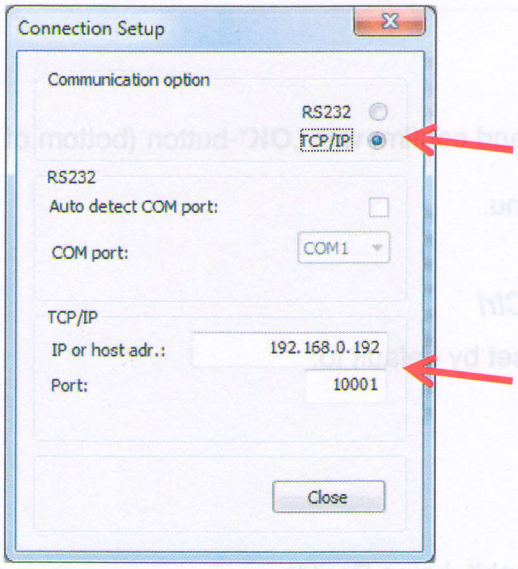


Figure 5: TCP-IP-set up using "Connection Setup"-dialog