

UNIMA-KS

Development & production of control equipment
Visualization, measurement and regulation SW

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Specifications Bridge TEM

For remote access to TEM-EVO and
measured values transfer from TEM-EVO to UnimaBUS



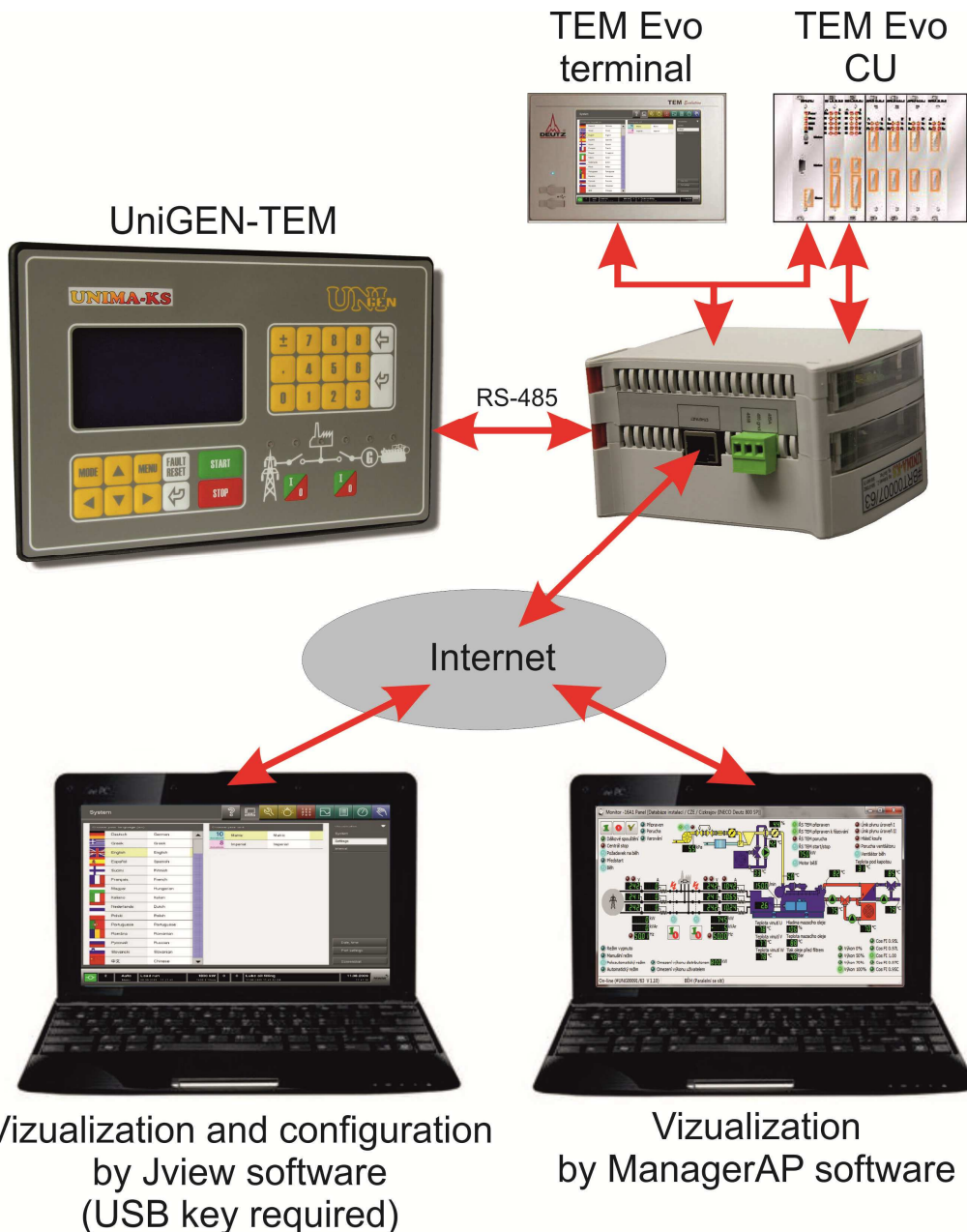
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1. Using

Bridge TEM (BTEM) is multipurpose converter for installations with Deutz engines and original TEM-EVO controll.

- BTEM is the interface converter from TTY protocol 3964R of control system TEM-EVO to the RS-485 protocol UnimaBUS AP version (communication protocol equipment UNIMA KS-AP version). Allows read-up measured values and status information from the TEM-EVO and provide them to control system UniGEN-TEM, which can store this informations in history and are also available for visualization in the service program ManagerAP (or the information can also be transmitted from UniGEN-TEM using his Modbus).
- BTEM also allows remote access via Internet to TEM-EVO using original JView software (with the USB key is possible to adjust parameters in TEM-EVO over the Internet as well as locally on installation).
- BTEM also serve as Internet-bridge for equipment UNIMA-KS. Over a single ethernet cable is possible to connect not only JView to TEM-EVO, but also program Manager AP to the controller UniGEN-TEM, phasing units Microgen-SYN or what-any other devices UNIMA-KS connected to BTEM via RS-485 (UnimaBUS).



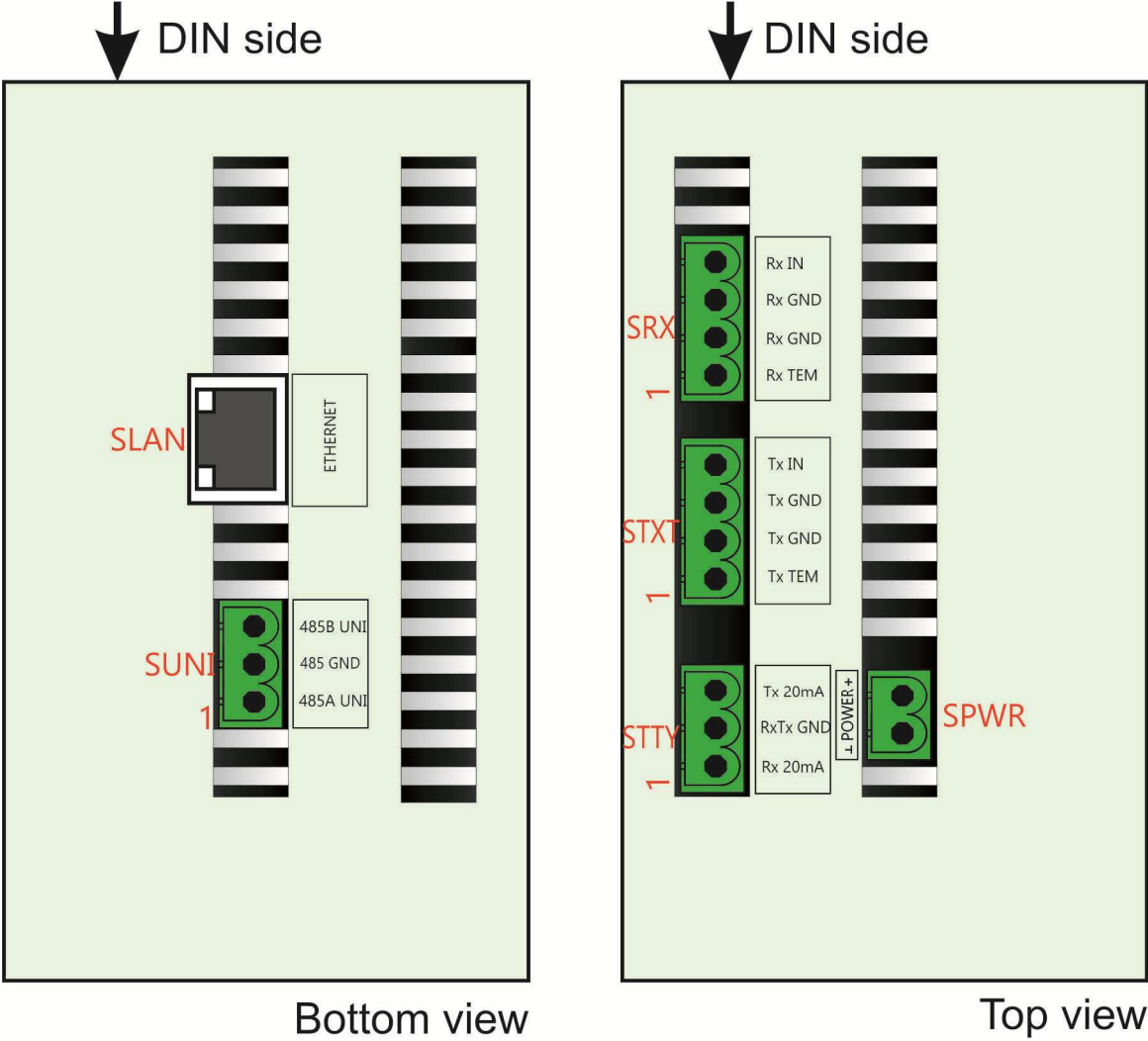
2. Mechanical Design

Module is placed in plastics box Railbox (IP20) for mounting to switchbox DIN.
 Module width (DIN required space) is 70mm, height 100mm, depth 120mm.

3. Electrical Design

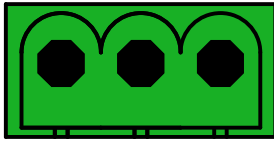
Module is connected using PA256 connectors (spacing 5,08mm). Module is powered by 10÷33V DC or 8÷24V AC (SPWR).

Connectors placement:



3.1 Connectors description

3.1.1 SUNI (RS-485 communication)

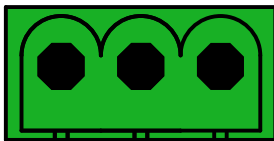


Pin	Name	Description
SUNI.1	485A UNI	RS-485 for AP devices connection (UnimaBUS)
SUNI.2	485 GND	
SUNI.3	485B UNI	

Connector span: 5,04mm

Max. conductor cross-sect.: 2,5mm²

3.1.2 STTY (TEM-EVO 3964R communication)

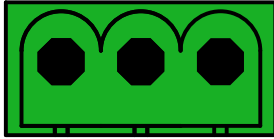


Pin	Name	Description
STTY.1	Rx 20mA	Current communication interface for data read-up from TEM-EVO using TTY protocol 3964R
STTY.2	RxTx GND	
STTY.3	Tx 20mA	

Connector span: 5,04mm

Max. conductor cross-sect.: 2,5mm²

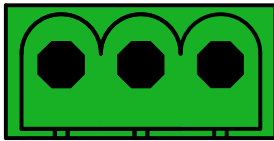
3.1.3 SRX (Remote communication Rx)



Pin	Name	Description
SRX.1	Rx TEM	TEM-EVO connection for remote access
SRX.2	Rx GND	
SRX.3	Rx IN	

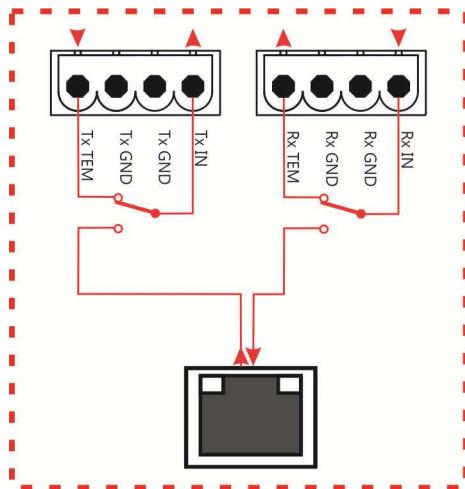
Connector span: 5,04mm
 Max. conductor cross-sect.: 2,5mm²

3.1.4 STX (Remote communication Tx)

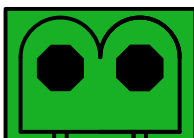


Pin	Name	Description
STX.1	Tx TEM	TEM-EVO connection for remote access
STX.2	Tx GND	
STX.3	Tx IN	

Connector span: 5,04mm
 Max. conductor cross-sect.: 2,5mm²



3.1.5 SPWR (Power supply)

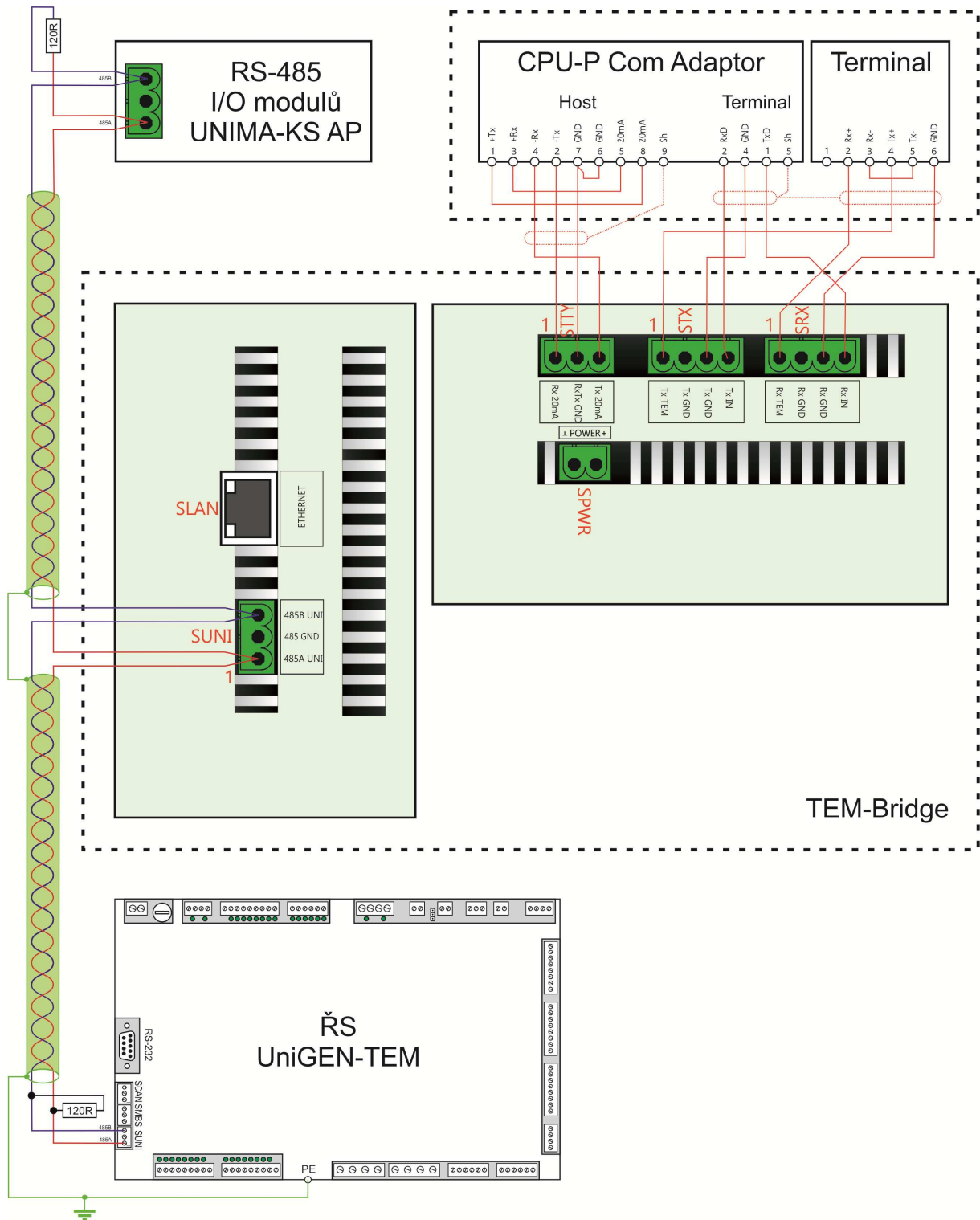


Pin	Name	Description
SPWR.1	POWER	Power supply 10÷33V DC or 8÷24V AC
SPWR.2		

Connector span: 5,04mm
 Max. conductor cross-sect.: 2,5mm²

3.2 Bridge TEM connection

Controller or expansion modules are connected to BTEM AP using RS-485 (SUNI – „UnimaBUS“). Controller and each module have to set the same address as BTEM („Addr“ parameter). All expansion modules connected on common bus have to set another slot number („Slot“ parameter).

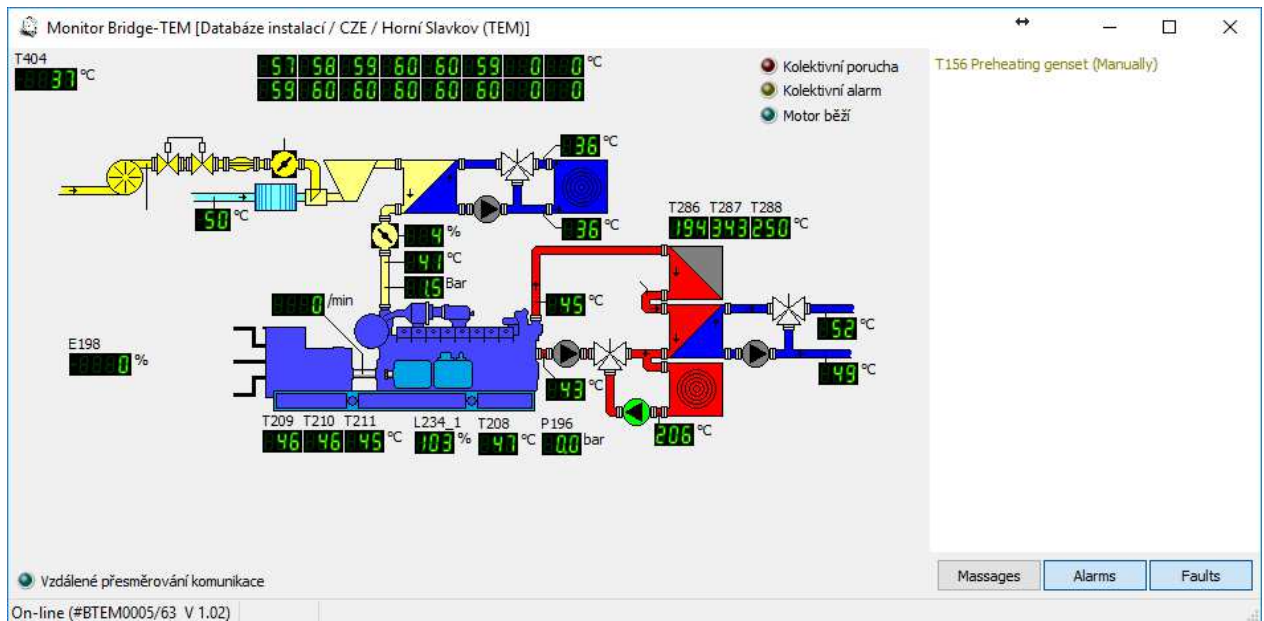


4. Remote access

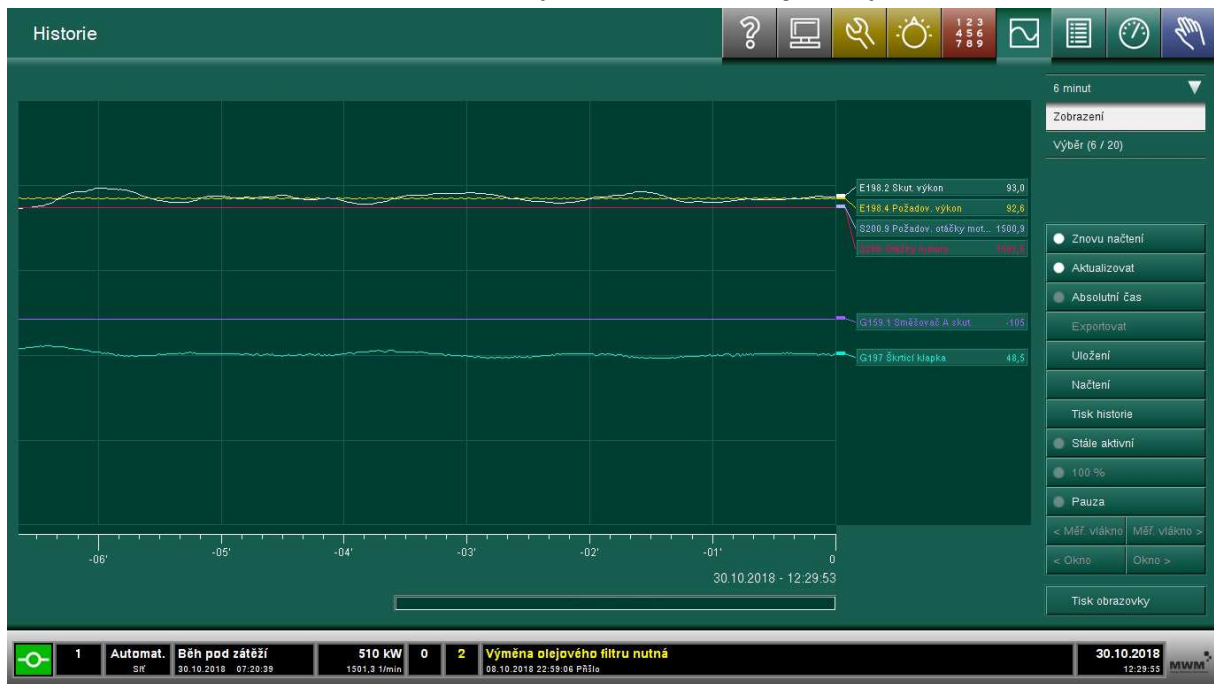
4.1 Visualization of measured values from TEM (USB license not required)

4.1.1 ManagerAP

Informations from ŘS TEM-EVO is possible to visualize by program ManagerAP (locally or remotely using internet).

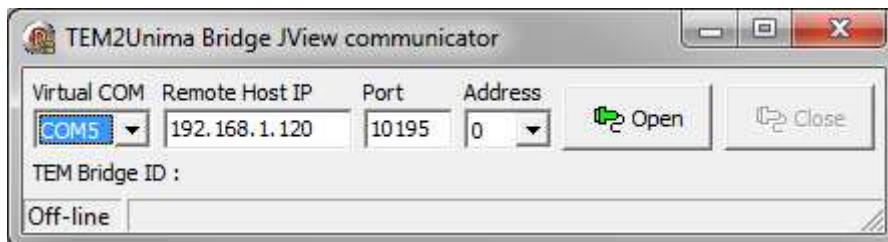


4.2 Full access to TEM via JView (USB license required)



4.2.1 JViewCOM

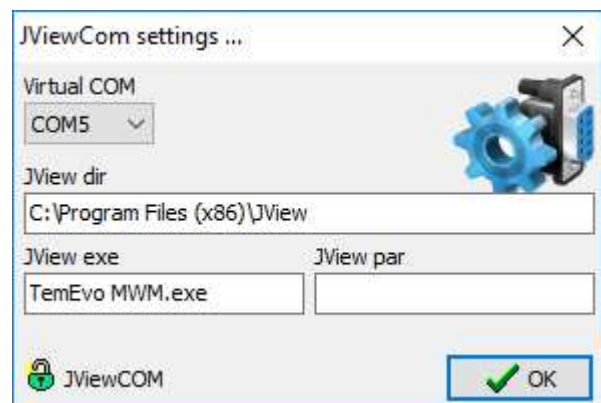
To the „full“ remote connection (same as locally at the site) serve program JViewCOM. After program execution is created connection between local virtual COM port and BTEM and after it program JView is executed. Program JView than can connect to TEM-EVO using selected virtual COM (with USB key is possible full access include parameters configuration).



4.2.2 ManagerAP V 1.76 or higher

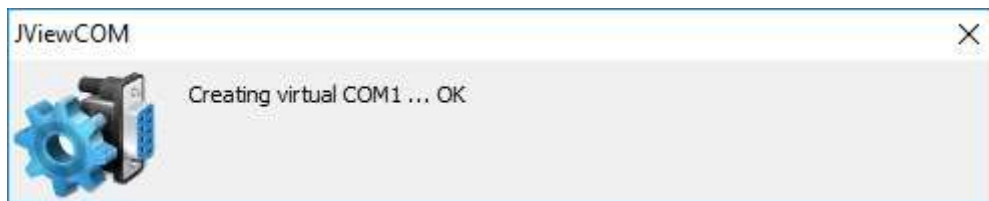
In ManagerAP version V 1.76 and higher, JViewCOM is implemented directly. You can launch JView directly by clicking "JView" in the Bridge-TEM popup menu. The item is only active with a special program license (in the JViewCom setting is the green lock symbol) and Bridge-TEM is online.

In the JViewCom Settings in the AP Manager, the path to JView is defined (default: "C: \ Program Files (x86) \ JView \ TemEVO MWM.exe") and virtual com (any free COM through JView).

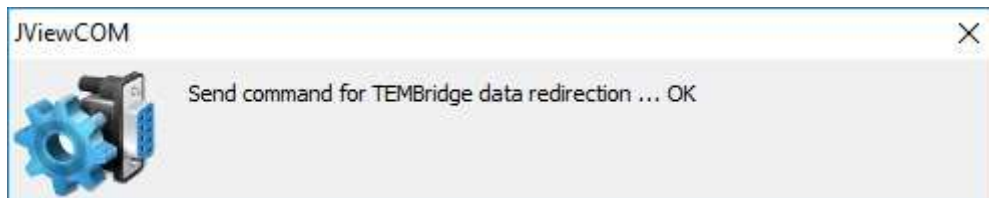




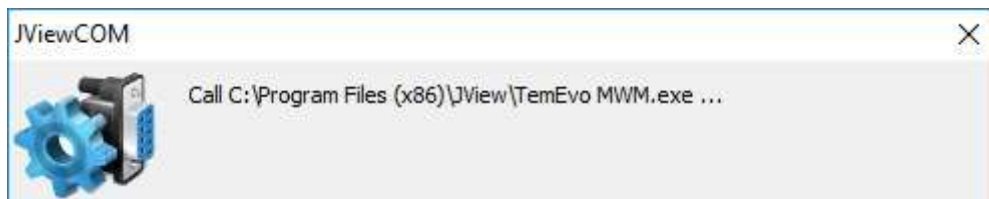
Clicking JView creates a virtual COM:



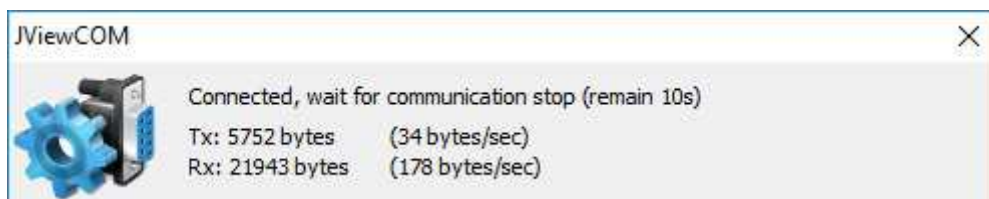
The command to redirect the communication is then sent:



Finally, JView starts:



JView communication is redirected to the TEM CPU:



Upon completion of JView communication, JViewCOM automatically terminates and communication returns to normal mode.