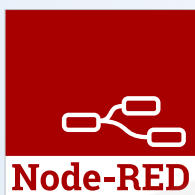


Compact controller and data logger –

Simple control and energy monitoring
in buildings, machines, and systems



Compact controller & data logger

Simple control and energy monitoring in buildings, machines, and systems

The EWIO₂ device families are high-performance data loggers and mini controllers (see variants) with numerous interfaces for applications in energy monitoring and energy management systems in accordance with DIN EN ISO 50001, as well as for automation tasks in buildings, machines, and systems. Small control tasks can be created intuitively and easily with the graphic programming interface “Node-RED”, integrated in the web server via drag & drop.

In the process, prefabricated nodes are linked together to form program flows. Countless flows and nodes from different manufacturers and categories (palettes) can be loaded from the large Node-RED community into the development environment and used.

Two Ethernet-Ports with Daisy Chain function are predefined for connection to a LAN network and for daisy chaining several network participants. The EWIO₂ features the communication protocols Modbus TCP and BACnet/IP (*variant) for connection to the management (e.g., building management system) or automation level (e.g. controllers). Sensors and consumption meters of different media (e.g., energy, water, gas and heat) can be connected and read out via the interfaces M-Bus, S0, Modbus RTU and Modbus TCP. The consumption values of individual data points are stored in the database of the EWIO₂ with a time stamp.

This data can be sent (push) or read (pull) as a CSV file from the database via e-mail (SSL) or FTP (SFTP). The EWIO₂ can also be accessed via Modbus TCP, BACnet/IP, and TCP/IP, and

the database queried. A REST-API interface enables direct access to the device from higher-level systems. The configuration, parameterization, and programming of the EWIO₂ is done by the web browser directly on the device, meaning no additional software is required.

The integrated digital and analog inputs and outputs of the EWIO₂ are designed to connect sensors and actuators from different applications in building or industrial automation.

An integrated micro SD memory card extends the functionality of the EWIO₂ and can be used for saving settings, data, and applications, as well as a boot drive. Optional expansion modules for converting of physical properties such as temperature or S0 pulses into M-BUS telegrams, the recording of S0 double tariff meters, or Modbus RTU I/Os create countless expansion possibilities for the system involving the EWIO₂. The EWIO₂ is available as a device variant with data logger function for energy control or management or as a pure compact controller for building or industrial automation.

* Device variant



Benefits of data loggers



> Simple quick wiring with jumper plug for connection of extension/ function modules



> Buttons and LEDs for manual operation and display



> Multi-I/O with 24 digital and analog inputs and outputs



> Compact design for integration in an electrical installation distributor with 45 mm front height
> Minimal space requirement in the switch cabinet 125 mm width (7TE)



> Easy to install and maintain with hardware management, electronics detachable from termination unit without data loss



> M-BUS interface with integrated level converter for 80 M-Bus loads
> Reading out M-Bus meters (parameterizable readout interval)



> 1 x Modbus RTU interface for 32 participants



> Controller with ARM-Cortex-A7 Dual Core processor 1Ghz, 512 MB RAM and 4 GB flash



> 2-port Ethernet switch with Daisy Chain function

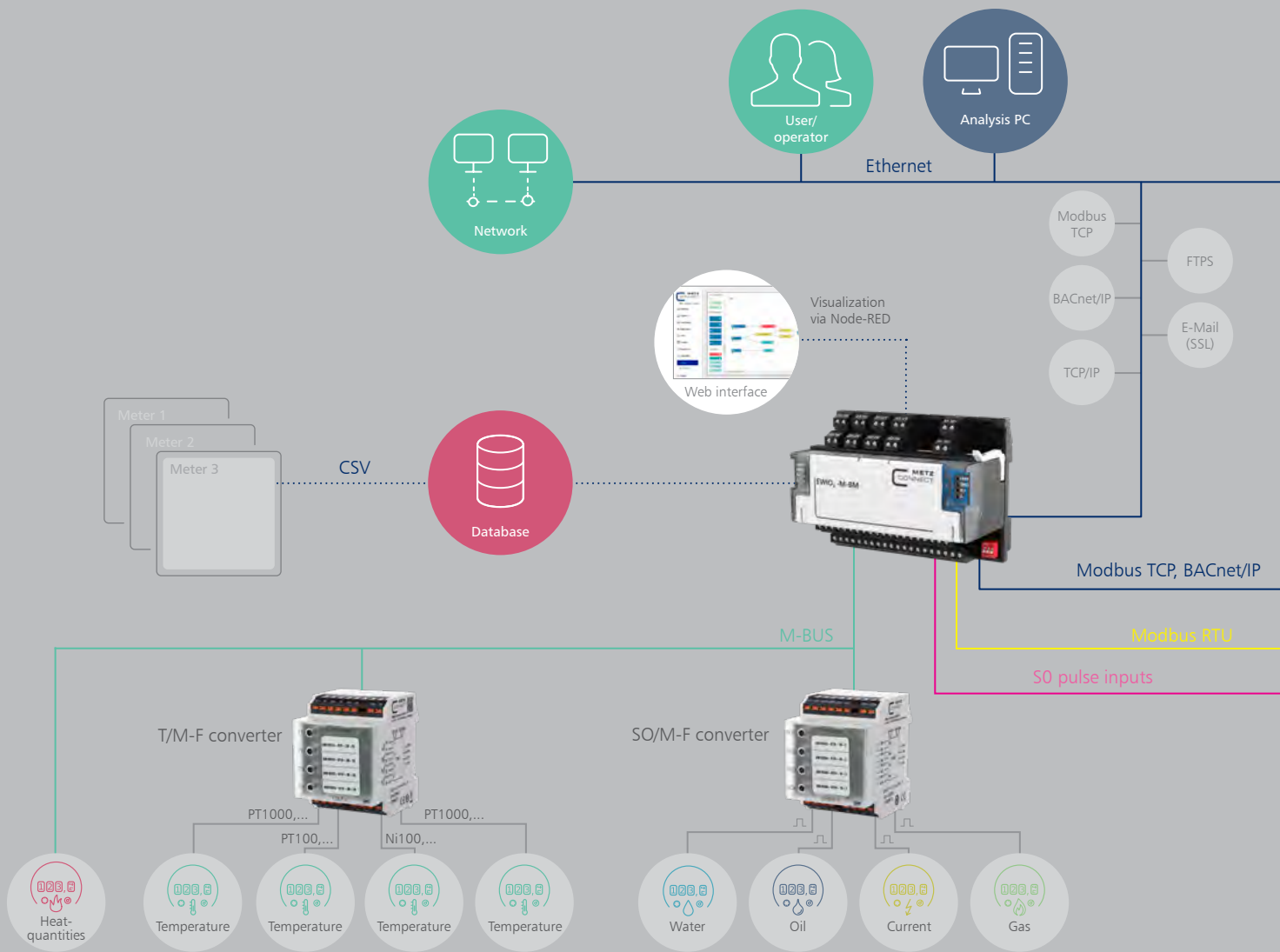


> Simple programming and visualization of applications by Drag & Drop



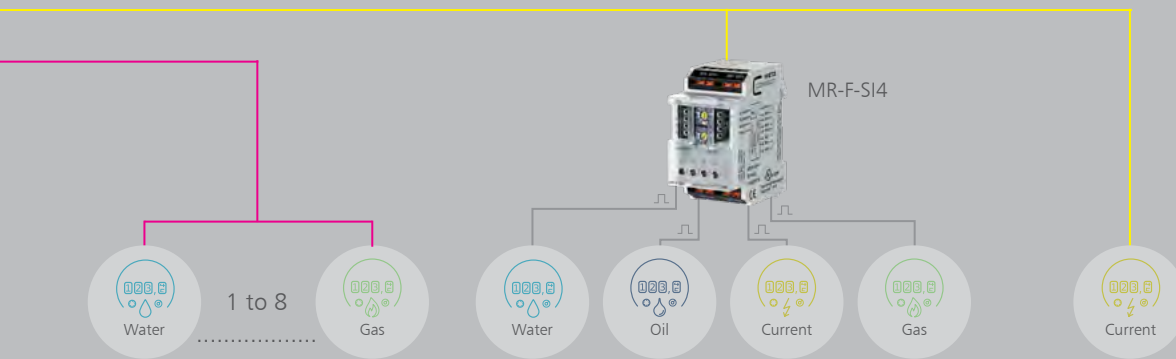
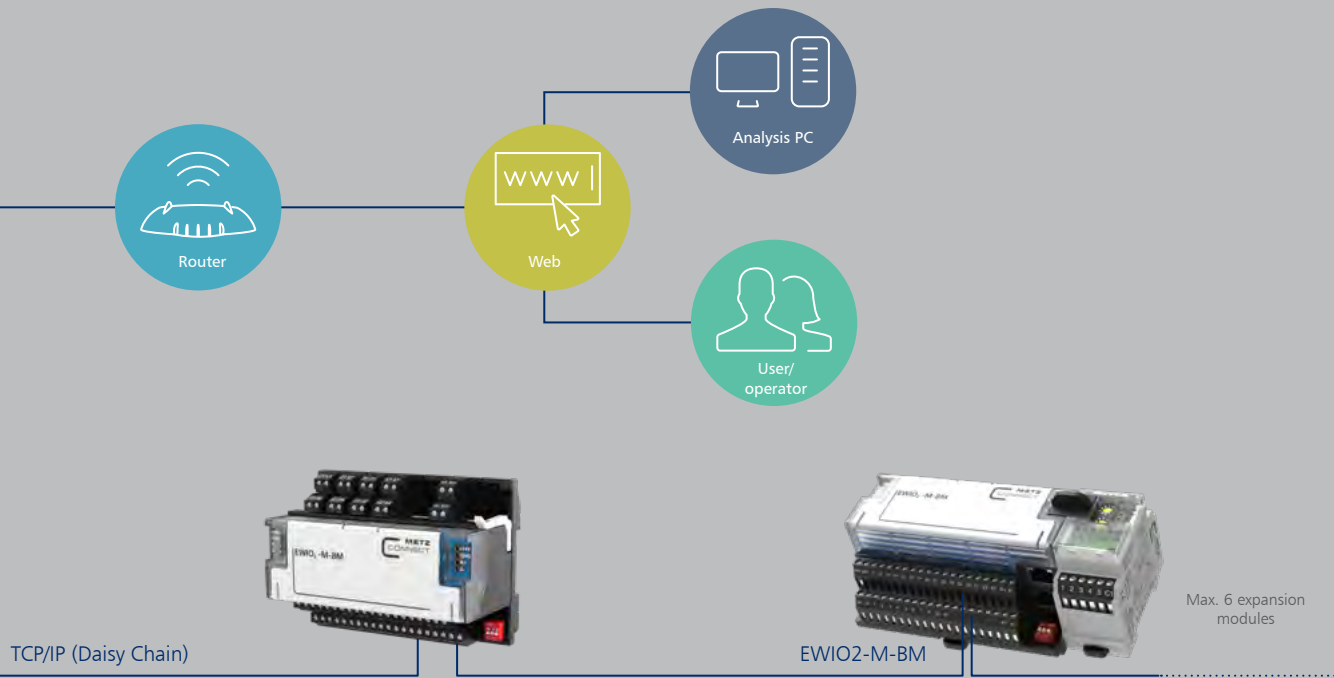
Benefits of Node-RED

- > Web-based graphic programming interface
- > Data flow orientated programming by Drag & Drop
- > Simple creation of dashboards
- > Prefabricated nodes for interfaces and I/Os
- > Countless freely available applications (flows) available in the Node-RED Community
- > Open Source, www.nodered.org
- > Node-RED access using nodes to EWIO₂ I/Os and in the EWIO₂ configured meter data



Product overview

Type	EWIO ₂ -M	EWIO ₂ -M-BM	EWIO ₂ -BM
P/N	110930	110935	110904
Data logger	x	x	-
Ethernet-I/O controller	x	x	x
M-Bus	x	x	-
Modbus	-	x	x
BACnet	-	x	x



Hardware management – easy installation and commissioning



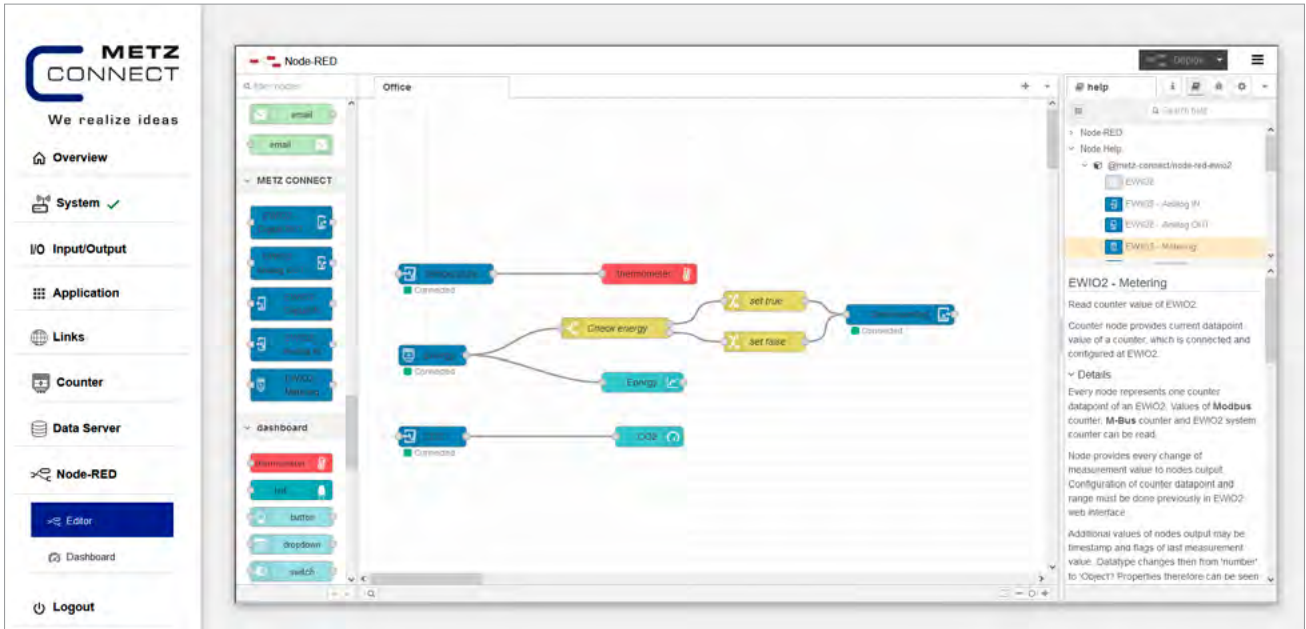
Node-RED



Node-RED Editor Web-based graphical programming interface

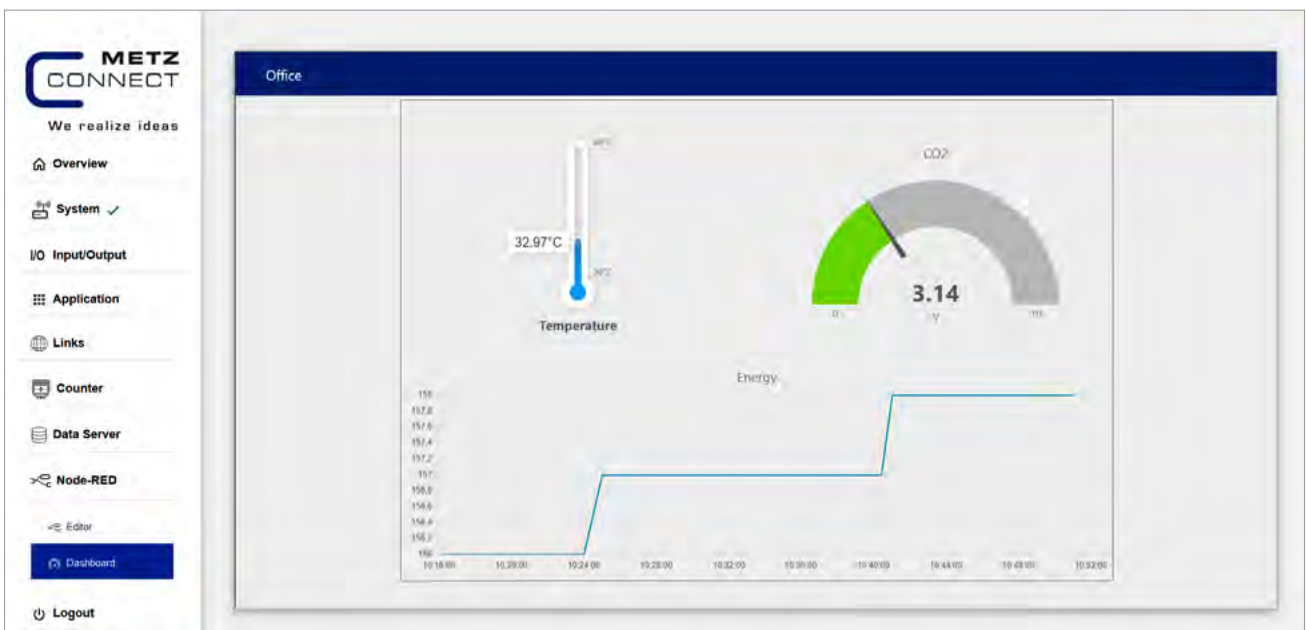
Flow example

Data stream oriented programming via drag & drop



Dashboard with Node-RED

Web-based creation of simple dashboards






System and expansion components

M-Bus modules and accessories



S0/M converter 4x
S0/M-F converter 4x



 110556
 11055670

4 S0 inputs

S0/M-Bus converter with 4 channels for recording pulses generated by energy meters via a standardized interface according to DIN EN 62053-31 class A



T/M converter 4x
T/M-F converter 4x

 110562
 11056270

4 temperature inputs

Temperature/M-Bus converter with 4 individually adjustable channels. Selectable characteristic curves for sensors: PT100, PT500, PT1000, Ni100, Ni1000, NTC1k8, NTC10k, NTC 20k, KTY10



MYD-4M-IP65

P/N 11056301



6 x M-Bus,
2 x voltage

M-Bus distributor in IP65 surface mount housing for structured M-Bus cabling. With removable spring clamp terminal blocks in the conductor color. For maintenance, uninterruptible current measurement is possible. The cover has quick-release fasteners and can be sealed.

6 x M-Bus, 2 x voltage



Power supply unit NG4 24 V DC
Power supply unit NG4-F 24 V DC

 110561
 11056170

In 110-240 V AC 50/60 Hz,
Out 24 V DC (SELV)/
700 mA; 16 W

The NG4 power supply unit provides a regulated DC voltage of 24 V DC/16 W for supplying devices from the METZ CONNECT I/O product family. The secondary voltage can be tapped via a plug-in terminal block or screw type terminal blocks



M-Bus CT software

www.metz-connect.com

M-BUS CT
Configuration tool for
METZ CONNECT M-Bus components

I/O expansion modules

MR-DI4
MR-F-DI4

▼ 1108341319
▶ 110834131970

4 digital inputs

MR-DI10
MR-F-DI10

▼ 1108311319
▶ 110831131970

10 digital inputs

MR-SI4
MR-F-SI4

▼ 11083913
▶ 1108391370

4 S0 inputs

MR-AI8
MR-F-AI8

▼ 11083213
▶ 1108321370

8 configurable temperature
or voltage inputsMR-CI4
MR-F-CI4

▼ 1108401332
▶ 110840133270

4 current inputs 0-20 mA,
4 voltage inputs 0-10 VMR-DO4
MR-F-DO4

▼ 1108361321
▶ 110836132170

4 relay outputs,
manual control levelMR-DOA4
MR-F-DOA4

▼ 110836132101
▶ 11083613210170

4 relay outputs

MR-TO4
MR-F-TO4

▼ 11083013
▶ 1108301370

4 triac outputs,
manual control levelMR-AOP4
MR-F-AOP4

▼ 1108371302
▶ 110837130270

4 voltage outputs 0-10 V,
manual control levelMR-AO4
MR-F-AO4

▼ 1108351302
▶ 110835130270

4 voltage outputs 0-10 V

MR-DIO4/2
MR-F-DIO4/2

▼ 1108331326
▶ 110833132670



4 digital inputs,
2 relay outputs, converter,
manual control levelMR-DIO4/2S
MR-F-DIO4/2S

▼ 10833132601
▶ 1083313260170

4 digital inputs,
2 relay outputs, normally open contact,
manual control level





MR-TP
MR-F-TP

-  11083813
-  1108381370

6 digital inputs,
2 two-phase relay outputs,
manual control level



MR-LD6
MR-F-LD6

-  11084413
-  1108441370

6 analog inputs,
2 relay outputs
For monitoring levels and
leakages, as well as switching
of solenoid valves



MR-Multi I/O

P/N 11084313

4 digital outputs (photo MOS)
4 digital outputs (relay)
11 digital inputs
6 universal inputs (temperature/voltage)
1 analog input (current)
2 analog outputs (voltage)
1 SO input

METZ CONNECT GmbH

Im Tal 2
78176 Blumberg
Germany

Phone +49 7702 533-0
Fax +49 7702 533-189

info@metz-connect.com
www.metz-connect.com

METZ CONNECT USA Inc.

200 Tornillo Way
Tinton Falls, NJ 07712
USA

Phone +1 732 389 1300
Fax +1 732 389 9066

METZ CONNECT France SAS

28, Rue Schweighaeuser
67000 Strasbourg
France

Phone +33 3886 17073
Fax +33 3886 19473

METZ CONNECT AUSTRIA GmbH
c/o German chamber of commerce
in Austria

Schwarzenbergplatz 5, Top 3/1
1030 Vienna
Austria

Phone +43 1 227 12 64
Fax +43 1 227 12 66

METZ CONNECT Zhongshan Ltd.

Ping Chang Road
Ping Pu Industrial Park
Sanxiang Town
Zhongshan City, 528463
Guangdong Province
China

Phone +86 760 86365 055
Fax +86 760 86365 050

METZ CONNECT Asia Pacific Ltd.

Suite 1803, 18/F
Chinachem Hollywood Centre,
1 Hollywood Road, Central
Hong Kong

Phone +852 26 027 300
Fax +852 27 257 522

