



domat

MEMBER OF CEZ ESCO

NEWS LETTER

Summer 2022

Energy under control

Dear business friends,

The holiday months traditionally bring another edition of our newsletter, in which we would like to summarize the most important things from our world of measurement and regulation of the previous six months.

Before you will continue reading, we would like to start by answering some frequently asked questions about the availability of our products. Thanks to our own development team at the HW and SW level, we are able to respond very flexibly to the lack of components that occurred as a result of the current unpredictably developing market situation. We are thus able to maintain the continuity of our deliveries for you even in this difficult time.

Thank you for your cooperation and the trust you place in us.

Domat Control System team

NEW products

We continue in redesigning **the DDC controllers of the mark series**. After mark220LX, 320LX and markMX.2, we have also newly released **IMIO105.2**, **IMIO110.2**, **ICIO205.2** a **mark130.2**.

It serves as a full-fledged replacement for DDC controllers IMIO105, IMIO110, ICIO205 and mark130, which you will no longer find in our offer. They differ from their predecessors in a new i.MX6UL processor and Linux OS. In addition, they contain two ETH connectors.



The updated price list of our products applies from 8 July 2022. For sending, please contact us via e-mail products@domat.cz.



[More information](#)

We have also removed the UI6xx, UI5xx, UC150 and UC250 Ethernet controllers from our offer. The sale of other controllers on the RS485 line continues.

News

New version Merbon IDE 2.4.0.22

Updated version 2.4.0.22 contains many new functionalities, such as BACnet server and client, platform mark220LX, mark320LX, markMX.2, IMIO110.2, IMIO105.2, ICIO205.2, mark130.2, **PLC of wall (Wago) series**, new web server and SSCP over serial. Read more about the new features in **the Properties of hardware platforms with Merbon runtime** article.

With version 2.4.0.x and above, external HMI editor is not supported anymore, but the external HMI editor version 2.4.0.11 can be used to switch from older runtime versions (up to 2.3.0.x) to version 2.4.0.x. Read more in the Release notes. Please use the most recent Merbon IDE version if possible. The current version has several bugs fixed and contains fixes to increase program stability. The program supports OS with .NET Framework 4.7.2 or later – Windows 8 or later (Win8, Win8.1, Win10, Win11).

All users who already have some version of Merbon IDE installed on their computer, please, use only the current release for new projects.

[Download here](#)

New version RcWareSoftPLC IDE/RT

For compatibility of new platforms with i.MX processor (IPLC301, IPLC201, MXPLC-B, IPLC5xx and MXPLC-L) it is necessary to download the development environment RcWareSoftPLC IDE / RT 2022.06.02 (v 0.9.22.602).

[Download here](#)

Platforms with i.MX can be identified by PN from the label on the device:

PLC	PN
iPLC201	7069 and higher
iPLC301	7571 and higher
MXPLC-B	7570 and higher
MXPLC-L	7052 and higher
iPLC500	7070 and higher
iPLC500B	7071 and higher
iPLC510	7837 and higher
iPLC510B	7836 and higher

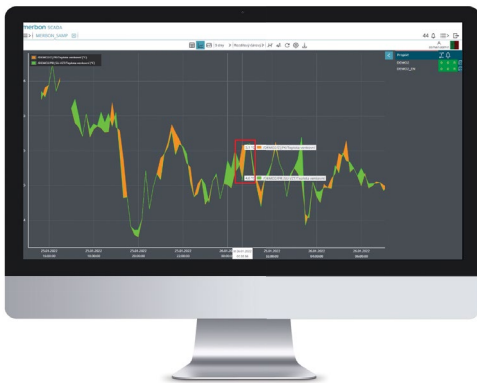
Articles

SCADA for Energy Management

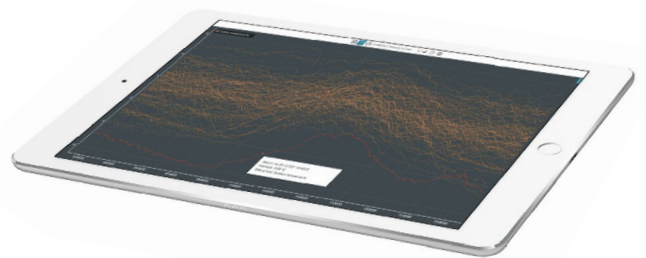
Merbon SCADA as a visualization tool for controlled technologies is well known to everyone. It has several key advantages:

- the functions of this software can be used for easy and efficient energy management in buildings,
- the option to export displayed data to .csv or .xlsx format facilitates subsequent processing and analysis,
- saving chart templates directly in the web access, which can be named and called up later,
- monitoring the fulfillment of the quarter-hour maximum.

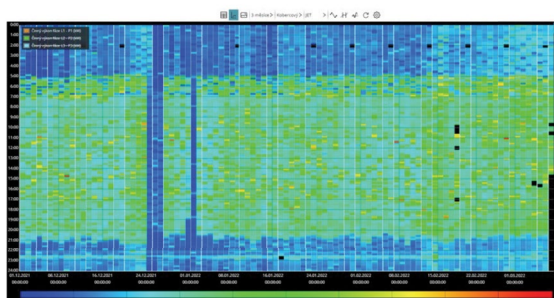
Several types of graphs are available to help you check the regulation:



Difference line graph can monitor the temperature progress and control the regulation - desired parameters versus real state. In addition, it is possible to determine from the graph how long it will take for the desired temperature to be reached and how long the building will cool down. Subsequently, the regulation can be adjusted to avoid unnecessary heating.



Modulo graph for finding non-normal intervals. Display of a longer period of time divided into selected intervals (day, week, month), which are compared with each other.



Carpet graph for easier finding of deviations (temperature/consumption). Clear control of compliance with recommended settings, quick finding of extreme = problem. Clear display of energy consumption - period without consumption and time of normal operation of the building.

Bar graph enables the application of mathematical functions over intervals, e.g. the conversion of the electricity meter status to consumption. The „Difference“ or „Increasing Difference“ function also solves the problem of changing electricity meters.



Merbon SCADA software will also be appreciated by building energy experts when evaluating consumption data and other economic indicators.

Basics of Modbus protocol, routing and analog values

Although Modbus was defined more than 40 years ago, the protocol still provides reliable and fast communication between programmable logic controllers, sensors, thermostats, frequency converters, etc. So it is definitely worth learning to work with it. Our articles and tips could help you with this:


[Modbus Communication Protocol](#)
[Modbus Routing - part 1](#)
[Modbus Routing - part 2](#)
[Modbus and Analog Values](#)

MW240B for blinds control



MW240B is a small universal input/output module with two inputs and two relay outputs. The outputs can be controlled either by inputs directly on the module or remotely using the Modbus protocol. In addition to the wide range of settings for use as a switching element, it can be used for the purpose of controlling blind actuators for which it is equipped with control logic. Useful tips are summarized in a two-part series

[Read article](#)

How it is with the templates thing?

However **the Merbon IDE** may be intuitive and easy to use, one of the critical crosspaths which may stop the engineer's steps are definitions of web pages in the PLC and graphic or text templates for the terminals. Let's have a look at them and see how to go to achieve the aims fast and without trouble.

[Read article](#)

28th AMPER 2022

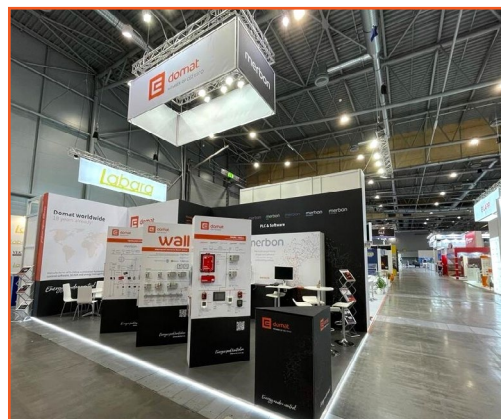
...is successfully over!

This year, the Brno Exhibition Center hosted the traditional AMPER for the 28th time. Untraditionally in May. Our company was on the list of almost 600 exhibitors this year as well. Despite the unfortunate situation, due to which the fair had to be moved twice, we are pleased to say that this year was also very successful.

We thank the organizers for the smooth running of the event and especially to all of you who came to visit us. We hope that you have gained new information and inspiration, brought interesting knowledge and contacts and enjoyed the great atmosphere that accompanied us all week.

The next year will take place again in March from 21 to 23, 2023. Again in Brno, again with us and we believe that again with you! :)

We look forward! :)



References

Majaland, Prague



Majaland children's amusement park was recently opened in Tuchoměřice, not far from Prague Airport. On an area of over 9000 m², there are twelve themed attractions, including a roller coaster or a 30 m long slide, a restaurant, a toy store and a theater. It is the largest facility of this type in the country.

The building management system contains eleven switchboards, which control mainly air conditioning, heat and cold source and pool technology. However, there is also measurement of consumption for evaluating the energy parameters of the building. Measurement and regulation are solved by freely programmable substations of the wall series, connected by a technological network, which is connected to the building's intranet. There is a HT200 graphics terminal for local control on three switchboards (LV substation, pool technology room and engine room for heating and cooling), the other switchboards are without local controls and can be accessed from the graphics center.



The heat and cold source is a system of heat pumps, supplemented by 300 kW cooling units. Heating and cooling water is accumulated in two tanks of 1500 l and then further distributed to two heating and two cooling circuits. The regulation of individual rooms is represented in the offices of eleven FCU controllers, which control fans and six-way valves for heating and cooling. Large air handling units (two for the main hall, one for the kitchen) are equipped with their own gas condensing boilers and, of course, recuperation. Other HVAC units deal with ventilation of premises, facilities and offices.



The air handling unit for the main hall is equipped with destratifiers, which are controlled by six CO₂ sensors and twelve temperature sensors located in the hall. This guarantees both air exchange and its proper distribution in the entire area intended for visitors.

The graphics center with Merbon SCADA visualization contains over 1200 data points. It is located in the control room of the entire outlet and also allows remote access, which is necessary for ongoing maintenance and service. In such a large building, where the public moves, the emphasis is mainly on safety and comfort. The building management system therefore also serves as a central for collecting signals of technology failures, so it is possible to start troubleshooting before it affects the environmental parameters. These are mainly water levels in swimming pool technologies, the state of backup sources, flooding and the like. The implementation took place in the autumn and winter of 2021 and the entire amusement park was opened on December 27, 2021.

Trainings



This year, we have published the dates of our regular trainings in the summer months as well. If your holiday calendar allows you to do so, we would love to have you join us.

28. 7. 2022 – Advanced Merbon IDE training

11. 8. 2022 – Modbus communication

18. 8. 2022 – Merbon IDE for beginners

With the new school year, we have prepared more dates of our trainings:

25. 8. 2022 – Merbon SCADA

15. 9. 2022 – Training of BMS designers

22. 9. 2022 – Merbon IDE for beginners

13. 10. 2022 – Modbus communication

3. 11. 2022 – Advanced Merbon IDE training

10. 11. 2022 – Merbon IDE for beginners

24. 11. 2022 – Merbon SCADA

8. 12. 2022 – Training of BMS designers

22. 12. 2022 – Modbus communication

All training will take place at our company headquarters in Pardubice.

Please register at skoleni@domat.cz. All trainings are in Czech language, if you would like to arrange online meeting in English, let us know.

Please follow **the news** and event **calendar**, where we will inform you in time about any changes or newly listed trainings. News regarding not only our trainings can also be found on our social networks:



Youtube tutorials and FAQ



The technical support section on our website is regularly updated with new articles and instructions. The same goes for our **Youtube channel**, which we are also trying to expand with new tutorials. If you are solving a certain problem and you are looking for a specific solution, don't forget to study our FAQ and videos.



Czech Republic

Domat Control System s.r.o.
U Panasonicu 376
CZ – 530 06 Pardubice – Staré Ččvice
T: +420 461 100 823
F: +420 226 013 092
Service hotline: +420 733 421 878
E: info@domat.cz
www.domat.cz

Training center Praha

Třebízského nám. 424
CZ – 250 67 Klecany
T: +420 222 365 395
F: +420 226 013 092
E: support@domat.cz

Domat Slovakia

Domat Control System s.r.o.
Údernická 11
SK – 851 01 Bratislava
T: +421 911 165 038
F: +420 226 013 092
E: info@domat.sk
www.domat.sk

Armenia

INTEGRAL design & engineering
T: +374 10 520 188
E: info@integral.am
www.integral.am

Austria

Elektro-Zukunft H.Bayonas
T: +43 (0) 91126771
E: office@elektro-zukunft.at
www.elektro-zukunft.at

Benelux (distributor)

VEDOTEC BV
T: +31 088 833 68 00
E: info@vedotec.nl
www.vedotec.nl

Croatia

Aeroteh d.o.o.
T: +385 1 301 53 12
E: eduard.nothig@aeroteh.hr
www.aeroteh.hr

Germany

S+S Regeltechnik GmbH
T: +49 (0) 911-519 47-0
E: mail@spluss.de
www.spluss.eu

Greece

ARKTOS CONTROLS
Odysseos 16 Thessaloniki 54629
T: +30 231 055 7171
E: info@arktoscontrols.com
www.arktoscontrols.com

Hungary

LS Épületautomatika Kft.
T: +36 1 288 0500
E: vegh.peter@lsa.hu
www.lsa.hu

Jordan

OXYGEN GROUP
2154 Amman, 11953 Jordan
T: +962 799 860 869
E: info@oxgn-grp.com
www.oxgn-grp.com

Lithuania and Latvia

UAB BALTESA
T: +370 5 272 7902
E: info@baltesa.lt
www.baltesa.lt

Macedonia and Kosovo

SIMT d.o.o.
T: +389 2 306 9591
E: simt@simt.com.mk
www.simt.com.mk

Malaysia

TECH-STORE MALAYSIA Sdn. Bhd.
T: +603 8940 6688
E: info@tech-store.com.my
www.tech-store.com

Norway

KE Automasjon AS
T: +47 934 16 814
E: tj@ke.no
www.ke-automasjon.no

Poland

P&B Sp. z o.o.
T: +48 56 660 84 18
E: info@domat-cs.pl
www.domat-cs.pl

Portugal

WSBP – We Solve Building Problems
T: +351 239 700 317
E: info@wsbp.eu
www.wsbp.eu

Romania

SC LSA Romania Building
Automation SRL
T: +36 1 288 0500
E: aracs.peter@lsa.hu
www.lsa.hu

Serbia

POWERHOME
T: +381 63 7405 671
E: office@powerhome.rs
www.powerhome.rs

Slovenia

MBC, d.o.o (system integrator)
T: +386 1 7865 106
E: info@mbc.si
www.mbc.si

KOVINTRADE CELJE (distributor)

T: + 386 1 560 76 78
E: regulacije@kovintrade.si
www.kovintrade.com

Spain

SEDICAL, S.A.
T: +34 944 710 460
E: sedical@sedical.com
www.sedical.com

Switzerland

GLT Engineering AG
T: +41 52 647 41 00
E: info@glt.ch
www.glt.ch

Sweden

Malthe Winje Automation AB
T: +46 (0)8-594 118 30
E: info@mwa.se
www.mwa.se

Thailand, Burma, Laos and Cambodia

IOT GENERATION Investment CO., LTD
T: +8428 6274 5097
E: info@iot-gen.com
www.iot-gen.com

The Netherlands

(system integrator)
Building technology bv
T: +31 571 262 728
E: info@buildingtechnology.nl
www.buildingtechnology.nl

Vietnam

IOT GENERATION Investment CO., LTD
T: +8428 6274 5097
E: info@iot-gen.com
www.iot-gen.com

Energy under control