domat

MEMBER OF CEZ ESCO

NEWS LETTER

Winter 2022

Energy under control

Dear business friends,

In previous newsletters, we wished that our lives would calm down as quickly as possible after the pandemic. No one had the slightest idea that we would have another life test in store for us this year. Whether both events affected us directly or indirectly, we firmly believe that we will overcome it all together and we hope that the better wave will come as soon as possible.

One of the main topics recently remains is the problem with the availability of certain components. We have once again confirmed that, thanks to our own development team, we are able to react flexibly to the failure of some components and thus maintain the continuity of your deliveries.

Another big topic is the rise in the energy price. Our company, as a leading supplier of control systems, measurement and regulation technologies, can of course effectively help you to correctly set up effective energy management, which you can achieve primarily with a correctly set system from a reliable supplier. This is the best prevention against fluctuations in energy consumption, which entails significant financial savings.

Christmas is literally just around the corner. Most of us wish that the following years will be better, or at least as good as the current years. This year is different - so let's all remember to step on the right foot and believe that the following year 2023 will be much calmer and more successful.

Merry Christmas and good health

Domat Control System team

Redesigned products

IPLC201, IPLC301

The IPLC series is a family of digital process stations - communicative DDC controllers with an ARM i.MX6UL processor. All types have an RS485 interface for connecting I/O modules (or integrated inputs and outputs) and Ethernet for communication with a control station or for control from a web browser, extended types then additional serial interfaces RS232 or RS485. IPLCs (201, 201B, 301, 301B, and 5xx) include the markPLCkit frame (not Frame as with older IPLCs).

Use:

- Free programmable control units for HVAC systems and other applications with local HMI and web access

- Optional customized firmware – protocol converters with data presentation

- Data acquisition, processing, and presentation systems with advanced networking features

- Communicative home automation etc.

News

New version of Merbn IDE 2.4.0.23

Version 2.4.0.x 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**.

More info

Download current version
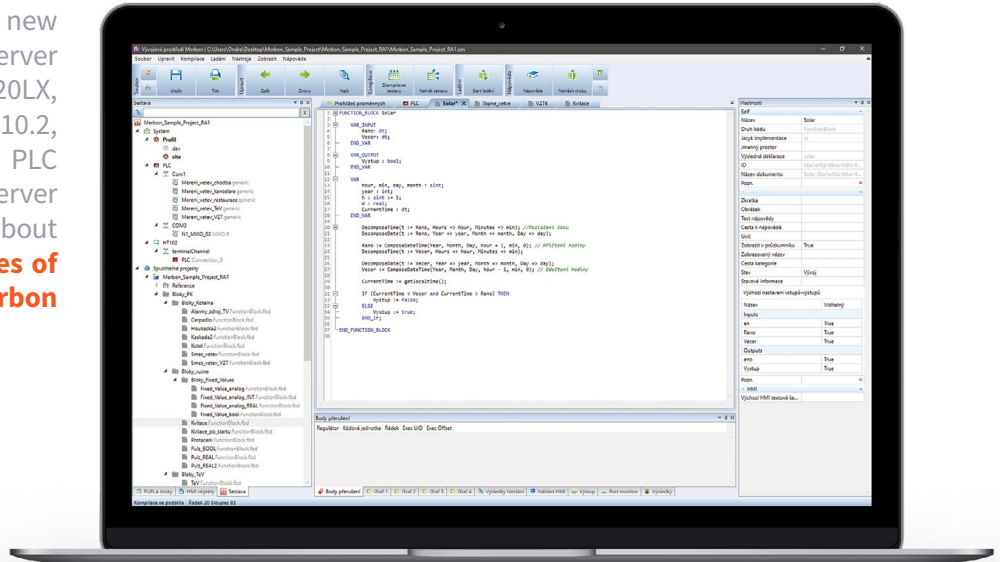
New version of RcWareSoftPLC IDE/RT 2022.08.18

This update brings new support for the TLS1.2 protocol on the IPLC5xx platform.

Download current version

## Differential pressure measurement in air handling unit

The measurement of differential air pressure in air-handling equipment is most often encountered when monitoring the clogging of filters or the operation of fans. There, two-state measurement and evaluation using differential manostats will suffice. In variable air volume systems (VAV) however, the air-handling unit usually has the task of maintaining a constant pressure on the supply, exhaust or between. This requires continuous measurement, which is what differential pressure sensors are used for. When assembling and commissioning, it is good to follow a few simple rules, which we will remind you of in the following text.
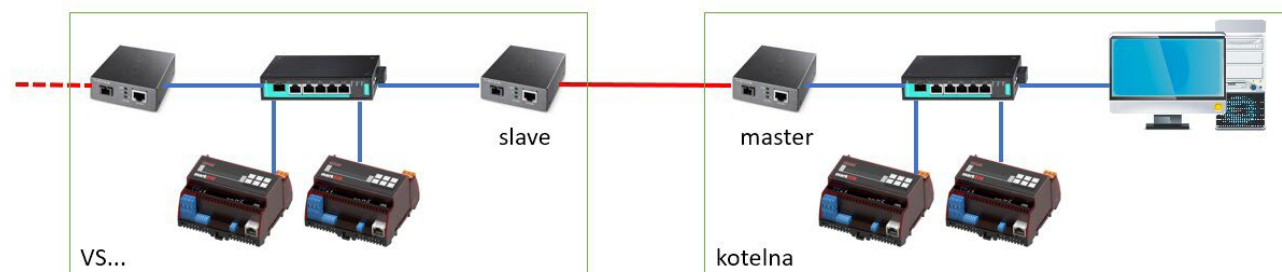
Read whole article

Articles

Technological network with VDSL converters
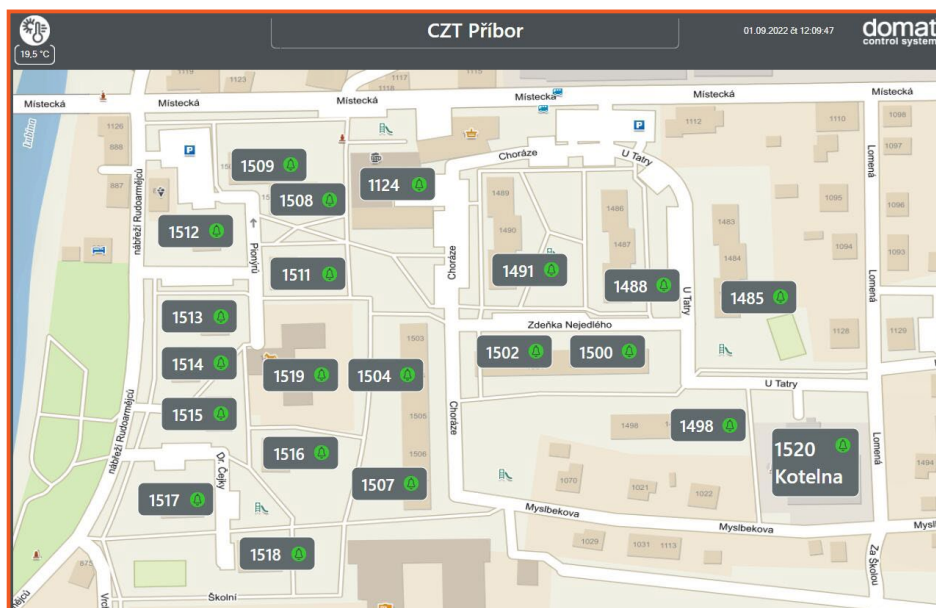
When renovating transmission station networks in industrial areas, we may find ourselves in a situation where we need to connect modern process stations with an Ethernet network, but individual engine rooms have historically been connected either by a serial communication line (RS485) or even just by a telephone line. Laying a new line, typically an optical cable, is prohibitive in terms of price and sometimes even deadlines.

Some systems delivered today can communicate with each other and with the central office (SCADA) via serial lines, in addition to Ethernet, using standardized protocols - e.g. Modbus RTU, BACnet MS/TP, or company protocols. However, this solution brings considerable limitations. In addition to the significantly lower effective data transfer rate, we cannot use the bus for other services, for example service access to the PLC (exception is SSCP in Merbon PLC or native BACnet MS/TP), web access or connection of foreign systems via the Ethernet interface.

Sometimes the deployment of VDSL converters can help in these cases. These devices can act as a bridge from a network point of view: they connect two Ethernet networks (in our case two home stations) on the line layer, which means that they are completely transparent for IP communication and do not require any configuration. The connection between the converters requires a regular telephone cable, i.e. the twisted pair used for the RS485 bus is not even necessary. The result is a system of „point-to-point" Ethernet lines that are connected to each other in the machine rooms, to the PLC and possibly to other devices (operating terminals) using industrial switches.

How to connect converters, set DIP switches and what to watch out for? We have summarized this for you in the following article.

Read whole article

Articles

Domat room units and controllers

Our company offers a wide range of room controllers. They may look similar, but the functions are different. For simple orientation in the portfolio, you can use the following image:

UIxxx/UX0x1 Room unit for PLC	UCxxx Room unit for FCR	Integrated room controler
UI010 - basic model UI011 - communication galv. separated UI012 - 2DI, 1DO UI020 - 2DI, 2DO	UC010 + galv. separation = UC011	**Heating controller** UC102 - 2DI, 1DO UC120 - 1DI, 1AO EPC102 - 1DI, 1DO US100 - 3DO, 5x button UX015 - 1DI, 3DO, 5x button
UI051 - without knob UI052 - 2DI, 1DO, without knob UI055 - 2DI, 2DO, without knob	**Fancoil controller** UC010/UC011 + FCR010 - 2DI, 5DO	
UI071 - without knob and LCD UI072 - 2DI, 1DO, without knob and LCD UI075 - 2DI, 2DO, without knob and LCD	**Fancoil controller (230V powered)** UC010/UC011 + FCR011 - 2DI, 5DO	**Heating and cooling controller** UC200 - 2DI, 2DO UC220 - 2DI, 2AO
UX011 - 1DI, 3DO, 5x button UX041 - 1DI, 3DO, 5x button, humidity	**Fancoil Controller with fan** UC013 + FCR013 - 2DI, 2DO, 3AO	**Floor heating controller** UC300 - 1DO, 1AI
UI300 - 1DI, 1DO, 1AI UI309 - 1DI, 1DO, 1AI, CO2 UI310 - 1DI, 1DO, 1AI, PIR UI319 - 1DI, 1DO, 1AI, CO2, PIR	**VAV controller** UC905 + FCR015 - 2DI, 2DO, 3AO, CO2	
UI900 - CO2, without knob and LCD UI901 - 2DI, 2DO, CO2 UI903 - 2DI, 2DO, CO2, without knob UI905 - CO2 UI907 - 2DI, 2DO, CO2, without knob and LCD		

Basically, devices can be divided into three main groups. The first are room controllers designed to connect to a PLC, the designation starts with UI or UX. They do not have a controller function, they are used for entering and displaying values and states. For all models, you can choose a version with a backlit display, which then have a label ending in BL. The UI05x series is a design without a control knob, suitable where we do not want the user to change values. The UI07x series has no knob and no LCD. UX models with five buttons are used to control the blinds instead of a control wheel. The UI3xx has an input for a Pt1000 temperature sensor, so it is suitable for rooms with underfloor heating. The UI90x series of nine features a CO_2 sensor. The second family of controllers is marked UCxxx and is intended for connection to FCR controllers.

For EMC sensitive environments, we recommend the UC011 model, which has galvanic separation compared to the UC010 model. Both can be combined with the FCR010 and FCR011 regulators (choose according to the 24 or 230 V power supply). The UC013 + FCR013 combination is intended for fan coils with a fan - and if you want to monitor air quality as well, use the UC905 + FCR015 combination with a CO_2 sensor. The last category is separate heating and cooling controllers (without fan or damper control), which can use time programs and run independently of the PLC. The designation is different, according to the combination of inputs and outputs, everyone will probably choose.

Read whole article

The last shipment of our products will take place on Monday 19. 12. 2022

We will send the next shipments in January 2023. Please place your orders in time if you need to deliver the goods this year.

Thanks for cooperation, Domat Control System team

The autumn fairs are successfully behind us!

1,531 exhibitors and more than 90,000 visitors from 147 countries. These are the abridged statistics of the special autumn edition of the **Light + Building international trade fair**, which took place in Frankfurt am Main after a long two and a half year hiatus due to the coronavirus pandemic. The field of electrical engineering and automation focused primarily on technical innovations that contribute to increasing energy efficiency in buildings, so our company could not be missing from among the exhibitors.

As in **Smart Production Solutions, SPS** for short, which covers the entire spectrum of smart and digital automation from simple sensors to intelligent solutions, from what is feasible today to the vision of a fully digitized industrial world. We also participated for the first time with the new automation software **Idekit**, which is a complete set for developing and running automation projects for manufacturers of their own PLC, IoT or other hardware platforms.

We would like to thank the organizers for the smooth running of both events and especially to all of you who came to visit us. We hope that you gained new information and inspiration, took away interesting knowledge and contacts and enjoyed the great atmosphere that accompanied us.

References

Lidl Logistics Center, Buštěhrad

BREEAM® is the most widespread certification in the field of energy-saving and sustainable buildings. In addition to energy efficiency and emphasis on avoiding energy waste, it includes a wide range of other aspects such as availability of materials, natural ventilation, use of suitable cooling agents, emissions, land use, waste management and others.

For LIDL (international retailer chain), environmental management is one of the important priorities. Thanks to this, their new logistics center in Buštěhrad received the elite BREEAM In Use certification and was placed in the leading positions with an exceptional rating, even in an international comparison.

This LC is unique for several reasons. Domat Control System helped improve energy management in two ways:

- **Waste heat** - we take waste heat from the cooling units, which we use as part of the regulation to heat domestic hot water and for underfloor heating, thus covering up to 50% of the total heat energy consumption. Savings due to the use of waste heat reach approximately 4,750 GJ per year.

- **Lighting** - economical LED lighting is used for lighting, which we monitor and can subsequently control manually or time-wise. Its intensity and lighting time can thus be used based on the use of space, the needs of users or the intensity of daylight, thereby effectively optimizing energy consumption.

Energy savings, sustainability and environmental friendliness - these are the main topics of today's construction. We are aware of their importance, which is why we are happy to expand them together with you.

References

ČEZ ENERGO - Supply of ICT services

The subject of delivery is the Outsourcing of IT services - support in the field of technological network services.

At the beginning of this collaboration, our company is going to take care of the reconfiguration of about **150 Mikrotik routers** with regard to security rules, treatment of ports and accesses. All security settings were done within the framework of **IKB's cyber security**, which is given a lot of attention.

With the cooperation of the **TEDOM** company, access to the Mikrotik network will be prepared by setting up a VPN tunnel, so that we can set up all end devices individually according to individual locations and relevant devices. Implementation and configuration will take place on-site (Backup, firmware upgrade and reconfiguration, or deployment of security rules).

Following the initial setup, we then have to manage these 150 active terminal elements, continuous supervision and firmware updates, including the resolution of error states and cooperation in the resolution of events and incidents. We will also prepare Mikrotik routers for new installations and take care of subsequent service.

RouterOS Mikrotik DUDE is used for online monitoring of Mikrotik endpoints.

In connection with the mentioned activities, passportization (updating existing documentation) will be carried out at the same time.

This solution has several advantages:

- SLA fulfillment at 98% - approx. 7.3 days/year, i.e. approx. 0.61 days/month.
- As a follow-up to the SVR project, a substantial part of transport costs can be saved by using the coordination of the aforementioned services. Planned trips to the site can be combined with SVR switchboard prophylactics, including increasing the operational safety of the KGJ control system.
- Mikrotik is the standard technology used by Domat Control System.
- Full use of EDGE BOX technology (dual connectivity to the Internet, use of both channels).
- Due to our expertise and many years of experience in the field of measurement and regulation, we will also provide support for the management of other technologies in this area.
- The Outsourcing of IT services project will bring greater security of transmitted data and optimization of connectivity, including IKB.včetně IKB.

Training

With the new year comes other dates of our regular trainings.
If your calendar allows, we'd like you to join us:

12. 1. 2023 – Merbon IDE for beginners, Pardubice

26. 1. 2023 – Advanced Merbon IDE, Pardubice

9. 2. 2023 - Merbon SCADA, Pardubice

16. 2. 2023 – Advanced Merbon IDE, Bratislava

23. 2. 2023 - Training of BMS designers, Pardubice

2. 3. 2023 - Modbus communication, 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.

domat
MEMBER OF CEZ ESCO

Pour féliciter
We wish you peaceful Christmas and a successful new year!

domat

MEMBER OF CEZ ESCO

Czech Republic
Domat Control System s.r.o.
U Panasonicu 376
CZ – 530 06 Pardubice – Staré Čivice
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.
Údernícka 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