

domat[®]
control system



NEWS LETTER

WINTER 2017

Energy under control

Dear business friends,

at the end of 2017, which we believe was for you successful, too, we would like to inform you about some product news and events planned for the first half of the next year.

We want to thank you for your confidence which you show by doing business with us. We try to position Domat not only as a product and software supplier, but also as a competent partner in building technologies, communication and IT, 3rd party systems integration, and other branches we all are involved in. We are happy for every solution we find together with you.

We wish both you and ourselves more achievements like these in the next year.

Have a nice Christmas and successful New Year!

Your Domat Control System team

NEW products

Analogue input module R560

Replacement of the M560 input module by a new one. The R560 is a more universal successor of M560 and M550 (8 resistance inputs) and can be used for most of the applications as a replacement of M500 (8 voltage inputs) as well – just note that R560 has no -10...10 V symmetric inputs, just 0...10 V, unlike the M500.

Each of the eight inputs may be independently set as current input 0(4)...20 mA, no external resistors needed. There is also optional linearisation of Pt1000 sensors in the module, which means that for this sensor type the linearisation needs not to be implemented at 3rd party systems. (Domat SoftPLC and Merbon IDE provide linearisation at the PLC level which brings more comfortable correction setting and better flexibility. The module must be thus set to resistance rather than temperature measuring range.)

Maximum baudrate at the RS485 bus (protocol Modbus RTU) is 115200 bps. As most of the new R... modules, the R560 provides both hardware and software addressing, which makes commissioning and service easier.

Read the complete data sheet here

domat-int.com/wp-content/uploads/domat_R560_en.pdf



Triac modules R312, R313



Triac output modules redesigned, with a more compact housing. The outputs provide, in the same way as their predecessors M312 and M313, either 2-point (on/off), or PWM signal with internal modulation – the PLC sends just the duty as a 0...100 % value.

The redesigned modules offer improved EMC immunity and thanks to their built-in DIN rail clip they are easy to install in difficult spaces, such as false ceilings, floor heating distribution boxes etc.

The optotriacs with zero crossing are used as actors for thermic valves, but they can also be deployed as drivers of power SSR for electric heating or switching of pumps and fans. The R312 provides output of 24 V AC, while the supply for outputs may be separated from the module supply, and the R313 switches 230 V AC.

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NEW products

Room units with backlight UC010, UC011, UC013



The UC010 room units have been redesigned according to customer requirements. The units now have backlight of the LCD display and the knob, controlled separately, and configurable over Modbus registers.

The backlight may be activated on operation of the knob, it can be dimmed at night etc. In the FC010 Modbus table there is now an extra group of registers for analogue backlight intensity control in both active and passive state, and for afterglow time for knob and display separately. The blue backlight looks very attractive especially with the anthracite housing.

It is also possible to change between active and passive state over the bus, which bring more functionality for visual indication of operation, alarm states etc.

The units are backward compatible with the old types, so that they can be freely used as a service replacement. Use the latest **ModComTool** for configuration (<http://domat-int.com/wp-content/uploads/ModComTool.zip>).

FCR013, FCR015 sales release

The zone controllers FC013, FC015 have been replaced by FCR013 and FCR015 since December 2017 – similarly to the replacement of FC010 by FCR010. The new types offer more attractive housing with higher ingress protection, and with DIN rail holder as a standard feature. Both functionality and Modbus tables are the same as at the old types.



Replacement of old I/O modules and controllers – The overview

In the following table there are old products and their successors or replacements together with main technical differences to be noted for design and servicing. The new devices which are already supplied today are printed in bold. Other devices will be following in 2018, please check the news at our web pages.

We tried to keep maximum compatibility with the old types, mainly regarding software. The modules were improved and made more versatile at the same time. All technical features are better or the same, unless stated otherwise. We are discontinuing only products which did not sell in the last years, or for which the major components are not available anymore. If in doubt or in need for more information, please contact our technical support, support@domat.cz.

Old product	New product or replacement	Technical differences
M012	R012	Only new box and new operating conditions
M020	R020	Only new box and new operating conditions
M025	R025	Only new box and new operating conditions
M031	R031	Only new box and new operating conditions
M035	R035	Only new box and new operating conditions
M040	R040	Only new box and new operating conditions
M085	R085	Only new box and new operating conditions
M086	R086	Only new box and new operating conditions
M090	R091	Now also as a multimaster. Software is backward compatible. New 4 DIN module box rather than 2 DIN module box!
M095	R095	New box and new operating conditions, new 4 DIN module box rather than 2 DIN module box. 300 and 2400 Bd only.
M096	R096	New box and new operating conditions, new 4 DIN module box rather than 2 DIN module box. 300 and 2400 Bd only.
MMIO	RMIO	Rewiring necessary. DI/AI/AO/DO6,7 now wire max. 1,5 mm ² , SSR now also for DC
MXIO	RXIO	Cover redesign only
MCI02	RCIO	Cover redesign only
ECIO2	ICIO205	Not a 100 % supplement: customized software must be written for the ICIO205; no automatic routing, slaves must be entered in the program
M200	R220	New box and new operating conditions, new 6 DIN module box rather than 4 DIN module box. 8 more DO.
M210	R220	More outputs, terminals and Modbus map fully backward compatible with M210. Now 12 x DO, new box and new operating conditions.
M300	R320	New box and new operating conditions, new 6 DIN module box rather than 4 DIN module box. Small terminals instead of the large ones.
M312	R312	New box and new operating conditions
M313	R313	New box and new operating conditions
M320	R320	New box and new operating conditions. Small terminals instead of the large ones.
-	R330	New device with 32 x DO, small terminals, 6 DIN box
M400	R420	New 6 DIN module box rather than 4 DIN module box. Terminal rewiring necessary. Modbus table not 100 % compatible with the M400 table.
M401	R420	New 6 DIN module box rather than 4 DIN module box. Terminal rewiring necessary. Modbus table not 100 % compatible with the M400 table.
M410	-	NO REPLACEMENT. (230 V inputs)
M411	-	NO REPLACEMENT. (230 V inputs)
M420	R420	Small terminals instead of the large ones. Grounds for 8 and 8 inputs are not galvanically separated now. New box and new operating conditions.
M430	R430	New box and new operating conditions.
M500	R500	Small terminals instead of the large ones. Extra DIP for 0...20 mA also at AI 5-8
M504	R560	Small terminals instead of the large ones, terminal layout changed. Resistance measuring in several ranges. Voltage: 0...10 V only.
M560	R560	Small terminals instead of the large ones, terminal layout changed. Extra DIP for 0...20 mA also at AI 5-8

M610	R610	Terminal layout changed (unification with other modules), new box and new operating conditions.
M620	-	NO REPLACEMENT. (4...20 mA current outputs)
M710	R710	Terminal layout changed. New box and new operating conditions
FC010	FCR010	New box and new operating conditions
FC013	FCR013	New box and new operating conditions
FC015	FCR015	New box and new operating conditions

New releases of Merbon tools

At the Domat web we released the new Merbon IDE version 2.3.0.3, which contains among others also the following improvements and changes:

Merbon HMI Editor:

- now integrated in Merbon IDE, not a separate program anymore
- graphic panels for HT200 and Merbon Visual app (formerly known as Merbon Menu Reader)

Merbon IDE:

- fulltext search in the Solution
- filtering of variables set to Manual
- communication over native protocol (SSCP) between PLCs in different Solutions
- dark theme for more comfortable work under difficult light conditions
- manual adding of dynamically created inputs of functions and function blocks
- support of new modules (R..., UI0...)

To engineer the application software for the mark... process stations supplied since January 2018, it is important - for compatibility reasons - to use the most recent release of Merbon IDE, 2.3.0.3. (The new runtime can be also uploaded into older controllers from the new Merbon IDE version.)



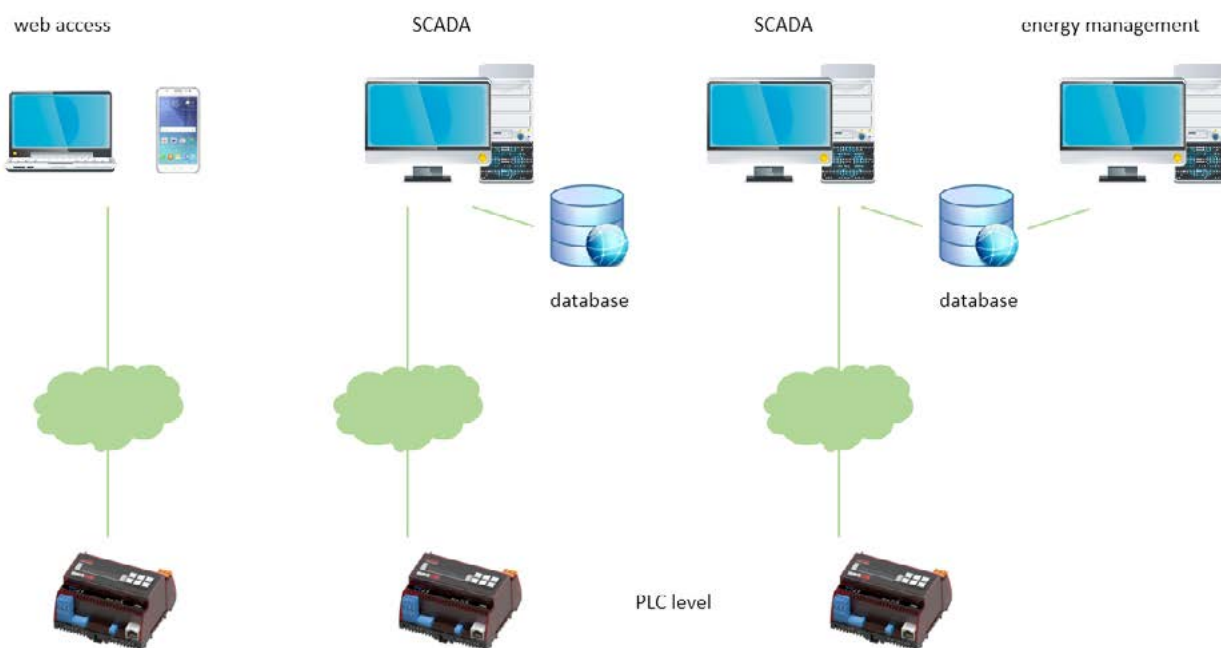
Topics of the issue

Select the right HMI/SCADA for your control system

Every control system shall contain a user interface which provides fast overview of the controlled processes and comfortable setting of parameters. The first question in the decision process should be: who is going to work with the system? Will it be...

- a house technician, whose assignment is to keep the technology up and running, fix problems, and set some parameters according to the users' needs?
- a building manager, who is responsible for long-term comfort parameters and minimum downtimes?
- an energy manager, whose aim is to minimize energy consumption of the building using advanced analytics?
- an occasional user, who needs alarm notification and sets time schedulers several times per year?
- a service engineer, who is familiar with the system and performs maintenance and post-commissioning?
- a dispatcher, who takes care of more buildings and manages the service engineers?
- or more of the above, or a single person who performs more roles at a time?

Every of the above mentioned roles – and surely more of these could be found – needs a bit different set of data, with different presentations and on different terminal devices. This is why choosing the right platform for every installation is so important both for the designer and for the user.



Read the whole article at

<http://domat-int.com/en/products/online-documentation/select-right-hmiscada-control-system>

Trade fairs and conferences

18. - 23. 3. 2018 Light & Building, Frankfurt a. M.

The most recognized lighting technology and building control technologies world trade fair. Domat will present the complete new range of process stations and I/O modules together with engineering tools and SCADA.

20. - 23. 3. 2018 Amper, Brno

Major Czech event in the field. Both Czech and world manufacturers will meet their customers in Brno, as every year. Domat will also be there. Come and see the new engineering tools for energy-efficient building control systems!

www.domat.cz/newsletter

Trainings

Online training – webinar: the pilot session will be focused on the new HMI Editor in Merbon IDE. Live stream at YouTube starts on 17.1.2018 at 10:00 CET, expected end at 10:30. The session is in Czech language. Web link and details will be available at the Domat web in the Events section: <http://domat-int.com/en/about-us/events>

We invite you to trainings which take part in the second half of 2018. We also organise trainings on-demand, such as Training for Maintenance Engineers, Building Technologies for Beginners, Networking for Building Control Engineers etc.

Building control system designers training

For designers of control systems with Domat components. Impact will be put on the most frequent mistakes, grounding, overvoltage protection, power supply connection etc. We will discuss also communication over RS485, 3rd party integration regarding old building control systems and investment protection, network topologies, data storage in databases, and other topics which bring along most of the questionmarks when designing a control system.

The training is held in Czech language.

Communication over Modbus

This training aims both at PLC and SCADA engineers, and for those who are interested in integrated systems using Modbus RTU and TCP. The participants will be able to select, design and commission the communication between a 3rd party Modbus device and PLC or SCADA. Hands-on sessions included.

The training is held in Czech language.

Programming in Merbon IDE

New – Functions, programming, and configuration of PLCs in the new software Merbon IDE. Overview of PLC controllers mark and their features. Programming in FUPLA and ST, customized blocks and libraries, commissioning, debugging. Web server, configuration of web pages, upload to PLC. Previous experience with SoftPLC IDE is welcome. The training is held in Czech language.

Merbon IDE Advanced course

A follow-on training to Programming in Merbon IDE. Advanced system features, more ST (Structured Text) programming, custom devices and blocks, more space for questions regarding particular projects. Efficient work with more PLCs, tasks, assignment of programs to tasks. Communication drivers and their properties.

On demand: SoftPLC for software engineers

Basic introduction into SoftPLC IDE for process station programming, function blocks, communication with I/O modules, program upload, remote debugging, LCD menu design, and web access. For those who want to start programming the favourite MiniPLC controllers. Within a single day, you will see values from your own program on the MiniPLC's embedded web server.

The training is held in Czech language and on demand only, please contact your distributor or sales@domat.cz for trainings in other languages.

Jan 11, 2018 Merbon IDE Advanced course, Bratislava

Jan 18, 2018 Building Control System Designers training, Brno

Jan 25, 2018 Merbon IDE for Beginners, Pardubice

Feb 15, 2018 Merbon IDE Advanced course, Klecany

Feb 22, 2018 Communication over Modbus, Klecany

Mar 1, 2018 Merbon IDE for Beginners, Klecany

Mar 29, 2018 Building Control System Designers training, Pardubice

Trainings

- Apr 5, 2018** Merbon IDE for Beginners, Brno
- Apr 12, 2018** Merbon IDE Advanced course, Brno
- May 24, 2018** Communication over Modbus, Pardubice
- May 31, 2018** Merbon IDE Advanced course, Pardubice
- Jun 7, 2018** Merbon IDE for Beginners, Ostrava
- Jun 14, 2018** Building Control System Designers training, Klecany
- Jun 21, 2018** Merbon IDE Advanced course, Bratislava

More trainings on demand. There may be extra trainings not listed here, please follow www.domat.cz.

Domat Tour

A half-day presentation of the new generation of control system which covers both freely programmable devices and IoT connectivity. Details on venues will be available at the Domat web at spring 2018. Take a chance to meet the Domat experts for a friendly talk close to your place!

Czech Republic

- 24. 4. 2018** Ostrava
- 26. 4. 2018** Brno
- 3. 5. 2018** České Budějovice
- 10. 5. 2018** Plzeň
- 15. 5. 2018** Praha
- 17. 5. 2018** Pardubice

Slovakia

- 17. 4. 2018** Košice
- 19. 4. 2018** Bratislava



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