From the Control Relay to the Automation System

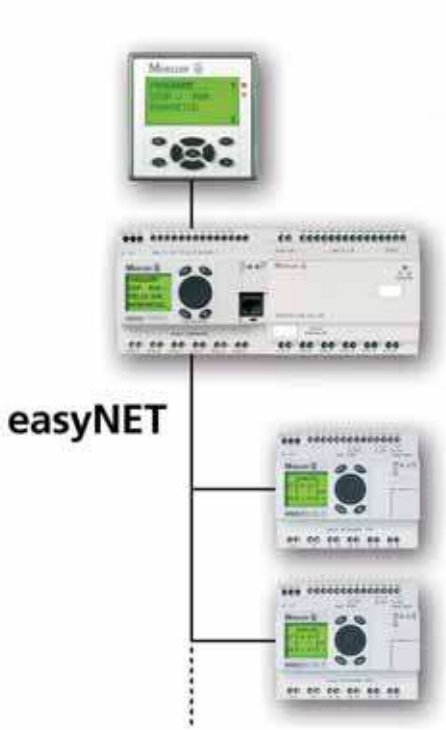
The control relays of Moeller's easy series enjoy a high level of popularity and success worldwide. In the last few years, the range has been continuously expanded and functionality enhanced. CPU types are thus available today with several equipment versions, together with a wide range of I/O modules and network interfaces to well-established fieldbus systems such as Profibus, AS-Interface, DeviceNet and CANopen. >>>

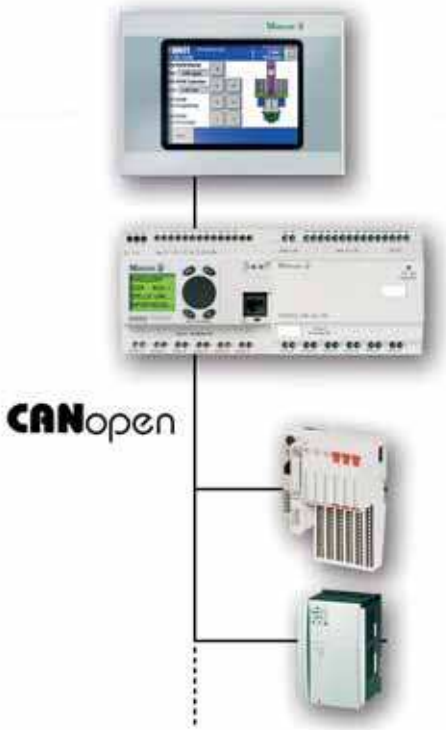
Devices can also be connected to Ethernet, and user-friendly programming with easy Soft CoDeSys provides effective support for creating user programs. It has been optimally designed for electricians and newcomers to automation technology and is the ideal tool for implementing simple applications on easy controllers.

When the level of automation and also the complexity of the application increases, programming systems are required that meet the requirements of the international standard EN61131-3. The programming languages provided here – instruction list, ladder diagram, function block diagram, sequential function chart and structured text, as well as tools for structuring the task definition effectively – provide the support necessary for implementing more demanding application solutions. Moeller has been using the renowned CoDeSys programming system from 3S for several years for its XC100/200 PLCs and XV touch display PLCs. Its widespread use, outstanding features and simple handling are the guarantee for implementing automation projects successfully.

easy Control meets CoDeSys

Moeller's new powerful easy Control series now links the well-established and simple easy concept with the benefits of standard programming to EN61131-3. The CoDeSys programming system is also naturally used here. easy Soft CoDeSys brilliantly develops the features of the new easy Control controllers so that they can be used for new medium-complexity applications. The performance potential here goes far beyond the standard requirements of EN61131-3. The freely definable function block chart (CFC) language is provided as well as the programming languages defined in the standard. Options for simulating the user program, the integrated fieldbus configurator, the very powerful test and commissioning functions, as well as the integrated visualization tool, ensure that application requirements can be implemented rapidly and simply. With only two programming standards, easy Soft and easy Soft CoDeSys, Moeller can therefore cover entire the automation range.



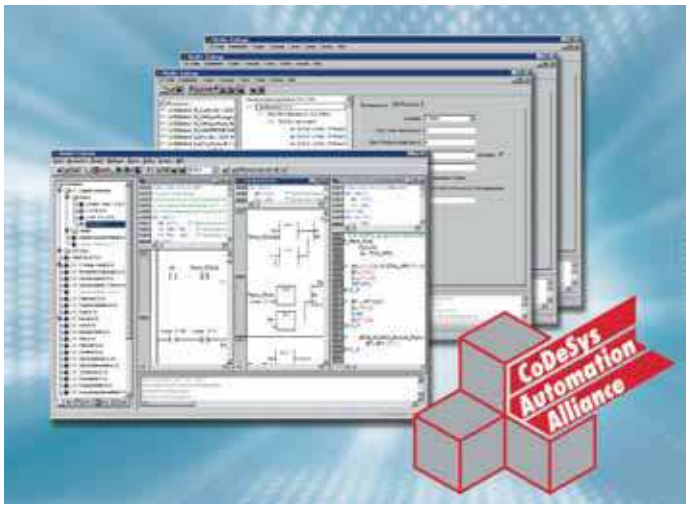


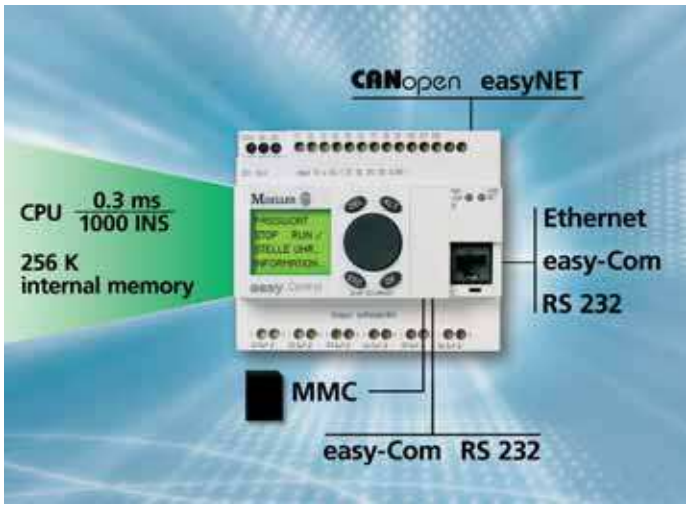
Systematic integration

The new easy Control controller series fits seamlessly into the existing easy system, and the EC4-200 controllers make use of the wide range of easy products already available. The large number of I/O expansion modules can be used equally as well as the slave network modules provided for connecting to higher-level fieldbus masters. The easy Control devices also naturally come with the increased temperature range from -25 to +55 degrees.

Lots of power in the compact class

EC4-200 compact controllers are designed for use in small to medium-sized automation solutions. The 16-bit processor ensures high CPU performance and thus short cycle times. Program and data memory are also generously sized with 256/224 KB. The EC4-200 controllers are available in a number of different versions. The devices feature 12 digital inputs of which up to four can be used as analog inputs. Eight transistor outputs or six relays are provided on the output side. Versions with or without integrated display, as well as different versions for analog processing and different communication interfaces provide additional options for selecting exactly the right device for the application at hand. A total of sixteen device versions are on offer, and all devices come with a real-time clock. The devices are maintenance free and do not require any batteries.





CANopen and easy-NET

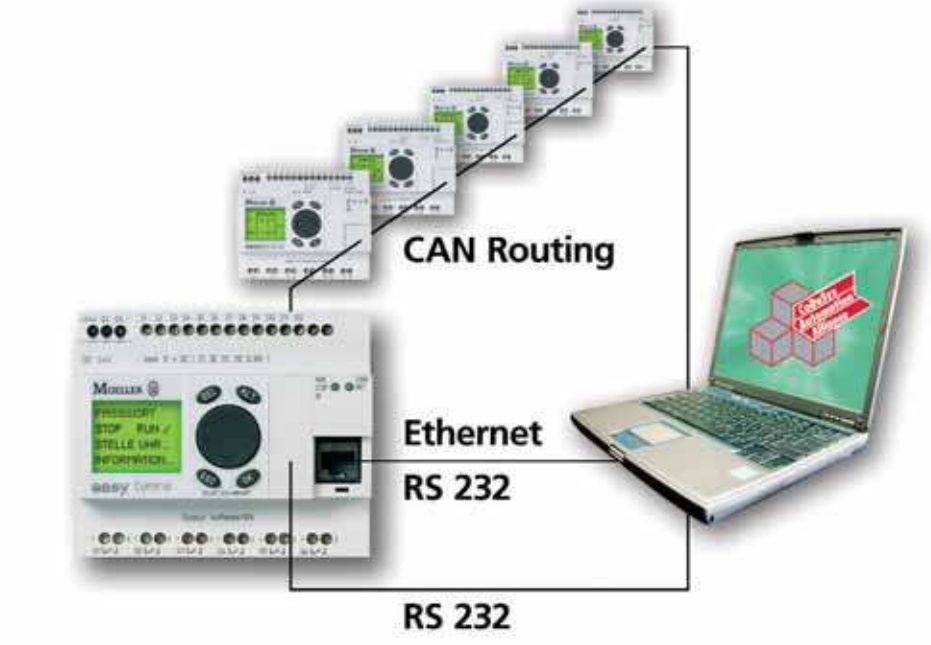
The simple easy-NET interface is a feature well-known to easy users, providing simple network communication thanks to its plug and play technology. Up to eight devices can be interconnected over a distance of up to 1000 metres. However, a standard fieldbus system is required if users wish to connect standard fieldbus devices. A standard CANopen fieldbus master is integrated on all EC4-200 devices in addition to the easy-NET network. Connection to a wide range of fieldbus stations such as visualization systems, remote I/O systems or drives considerably expands the range of applications possible. The controllers can likewise be accessed via the network. Subordinate controllers can also be programmed and diagnosed easily from a central location.

Memory card with standard file system

Memory cards enable user program or recipe updates to be carried out simply at the device. However, the memory card of the easy Control devices offers several other functions. The standard file system enables data to be read and stored on the memory card by the PLC and by any PC. This allows recipe data or measuring and operating values stored by the PLC to be read out and further processed so easily.

Ethernet onboard

The large range of possibilities and resulting benefits of Ethernet are being exploited more and more in the automation field. A large range of infrastructure components enables suitable networking structures to be created simply. However, what users are missing are affordable compact controllers with an integrated Ethernet interface that can be installed in these networks directly. Current implementations consist of using additional converters that convert the commonly available serial interface of the PLC to Ethernet, and this naturally increases the costs of the automation system considerably. The EC4-200 versions with an integrated Ethernet interface therefore provide exactly the right solution. Remote programming from any location, data exchange to higher-level systems (e.g. via OPC), faster processing speed, simple connection to the office world are typical applications. An inexpensive and simple integration into an Ethernet environment is now possible without any difficulty for even smaller applications.



CONCLUSION

With the introduction of the easy Control devices, Moeller is closing the gap between the control relay and the programmable logic controller. Its well-known simple handling is combined together with the product features required of PLC systems. The use of the entire easy product range guarantees a wide application spectrum. The powerful easy Soft CoDeSys programming system, standard communication interfaces provided such as Ethernet and CANopen, or the file and recipe handling on the standard memory card are just some of the outstanding product features for this performance class. They form the basis for implementing innovative solutions.

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