easyE4 control relay

Download the easyE4 brochure

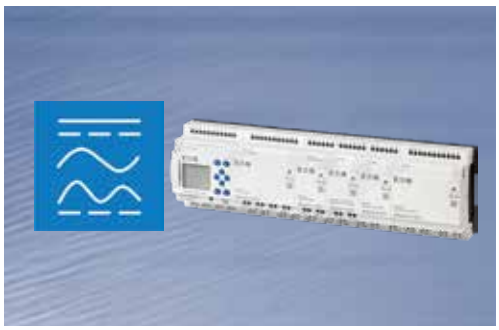
Download the easyE4 flyer

The new easyE4 generation of control relays is ideal for users looking to implement control tasks with as little effort as possible. Thanks to its ease of use, the easyE4 can be used to implement both simple control tasks and more complex configurations with high process efficiency. The devices are available with different voltages, which makes them suitable for use in many different applications.

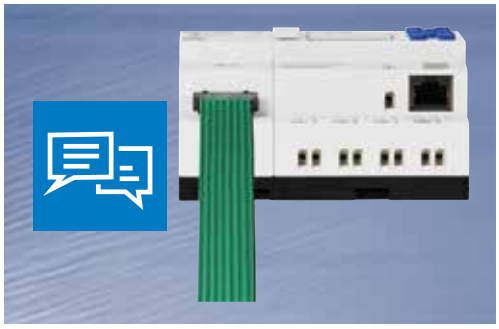
The base devices come with powerful hardware, flexible expansions and extensive communication and visualization options, while the Ethernet interface gives users access to the Internet of Things (IoT).

In conjunction with the intuitive programming software easySoft version 7, which, among others, supports four different programming languages, the easyE4 offers a smart package for quick and easy programming.

Get more information



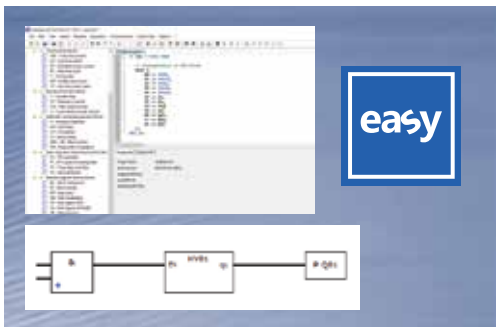
Flexible expansions and installation
Available as DC, UC and AC versions, the easyE4 base devices and expansion modules are ideal for use in various industrial and building applications. The base devices can be expanded by up to 11 modules to a maximum of 188 inputs/outputs. The different voltage types can be combined without any limitations. Thanks to the intelligent plug connector, connecting or replacing individual expansion modules is easy.



State-of-the art communication
Via the integrated Ethernet interface, the easyE4 can be easily integrated into modern automation structures. Bidirectional communication with devices in the field is also possible via the integrated Modbus TCP communication and the SmartWire-DT module. Client and server operation can be selected for Modbus TCP communication.

Flexible visualization and remote access
With the integrated web server, the contents of the easyE4 can be easily accessed on all mobile devices, such as smartphones or tablets. In addition, the integrated web server enables automated notification by e-mail in the event of a malfunction and it can also be used to control your system. Furthermore, it is also possible to exchange data via JSON API.

Precise time and date indication
The easyE4 also comes with a DCF77 radio clock, which is particularly important for time-sensitive applications. This ensures highly accurate time and date indication for any application. The time and date are also updated automatically, for example during the switch from winter time to daylight saving time. Time synchronization via Ethernet is also possible.



easySoft version 7
easySoft version 7 offers four programming languages—LD, EDP, FBD and ST—alongside helpful new function blocks such as interrupts or alarm modules, which together ensure the smooth operation of any application. The programming software contains many new functions that have been designed with users' needs in mind in order to save valuable time during the programming process.

Tailored to your requirements

The devices are multi-functional, which simplifies planning

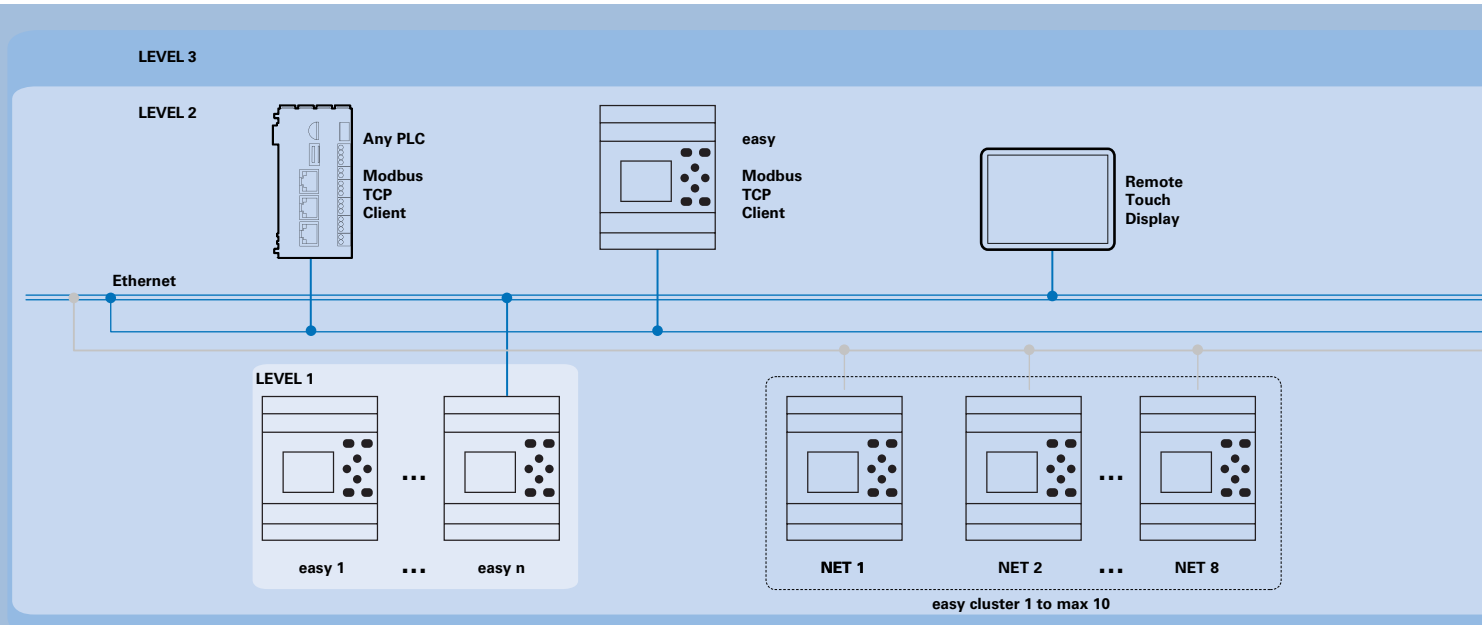
The easyE4 combines multiple functions, such as logic and counting functions, in one device. This significantly reduces the time required for planning new projects. In addition, the control relay closes the gap between the various relay types and a small controller. The compact easyE4 range also simplifies ordering, warehousing and maintenance.

Programming and commissioning made easy

The easyE4 offers flexible programming options, either directly on the device or via the easySoft software from any PC. Users have a choice of four different programming languages. A micro SD card can be used to transfer the programming to new devices, which simplifies the commissioning of standardized machinery, for example.

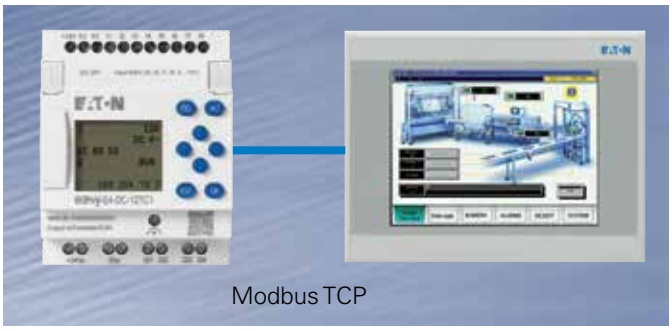
Quick and easy implementation during operation

Many advantages of this powerful control relay become apparent during operation: Thanks to the interrupt functions, the easyE4 achieves fast response times of less than 2 milliseconds. The DCF77 synchronization ensures high accuracy in time-sensitive applications. Using the device display for visualization allows for rapid detection of the operating states of both the base devices and the expansion modules. The operating parameters can be directly adjusted via the keys on the base device.



Visualization via HMI and web server
The easyE4 also offers multiple visualization options. Via the integrated web server, content can be retrieved from any internet-enabled device, such as a smartphone or tablet. Thanks to the Ethernet interface, projects can also be displayed, via Modbus TCP, on any HMI, for example on the XV100. Access rights can be individually assigned.

The easy Remote Touch Display (RTD) offers a further visualization option as a plug & play solution. The contents of the easy base device are mirrored in color on the RTD. Controlling your application remotely is just as easy is just as easy - and all this without programming of the RTD!



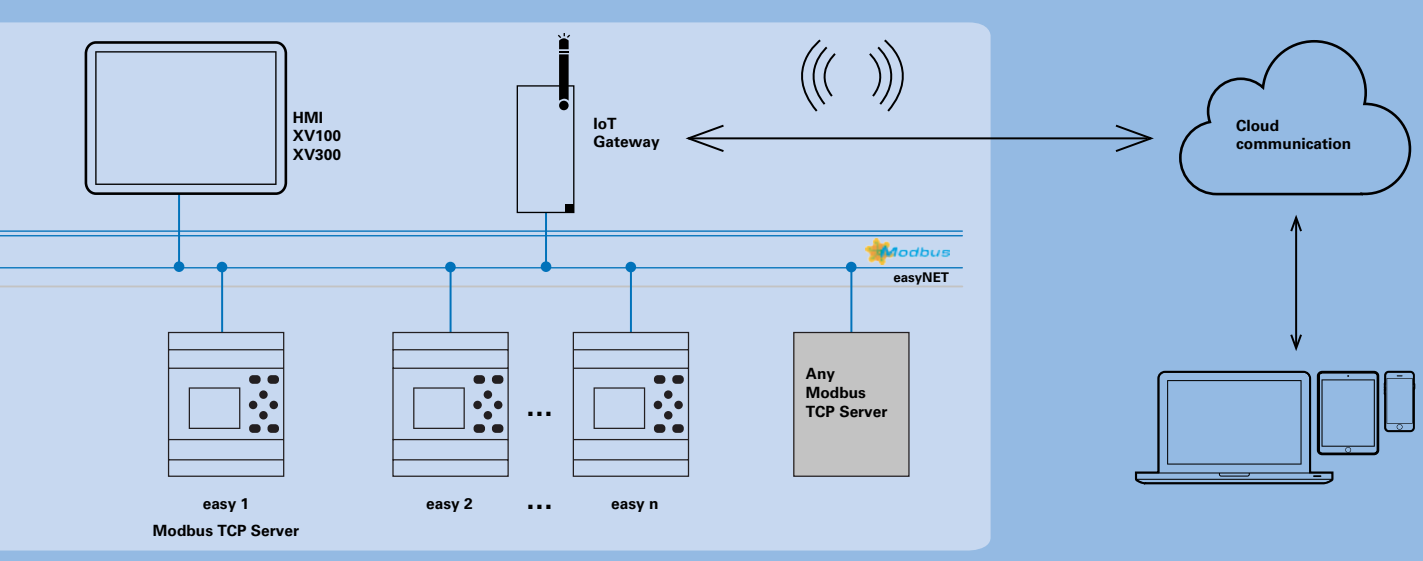
easyE4 solutions

LEVEL 1: easyE4 as a stand-alone solution
The base device handles the control of simple tasks via its integrated inputs and outputs.
The available expansions can be used to adapt the system to the specific task requirements.

LEVEL 2: easyE4 as part of an Eaton system solution
Via the Ethernet and easyNET interfaces, up to eight easyE4 devices can communicate with each other within the same network cluster. By supporting Modbus TCP as client and server functionality, visualization devices, such as the touch display XV-102, can be easily connected.

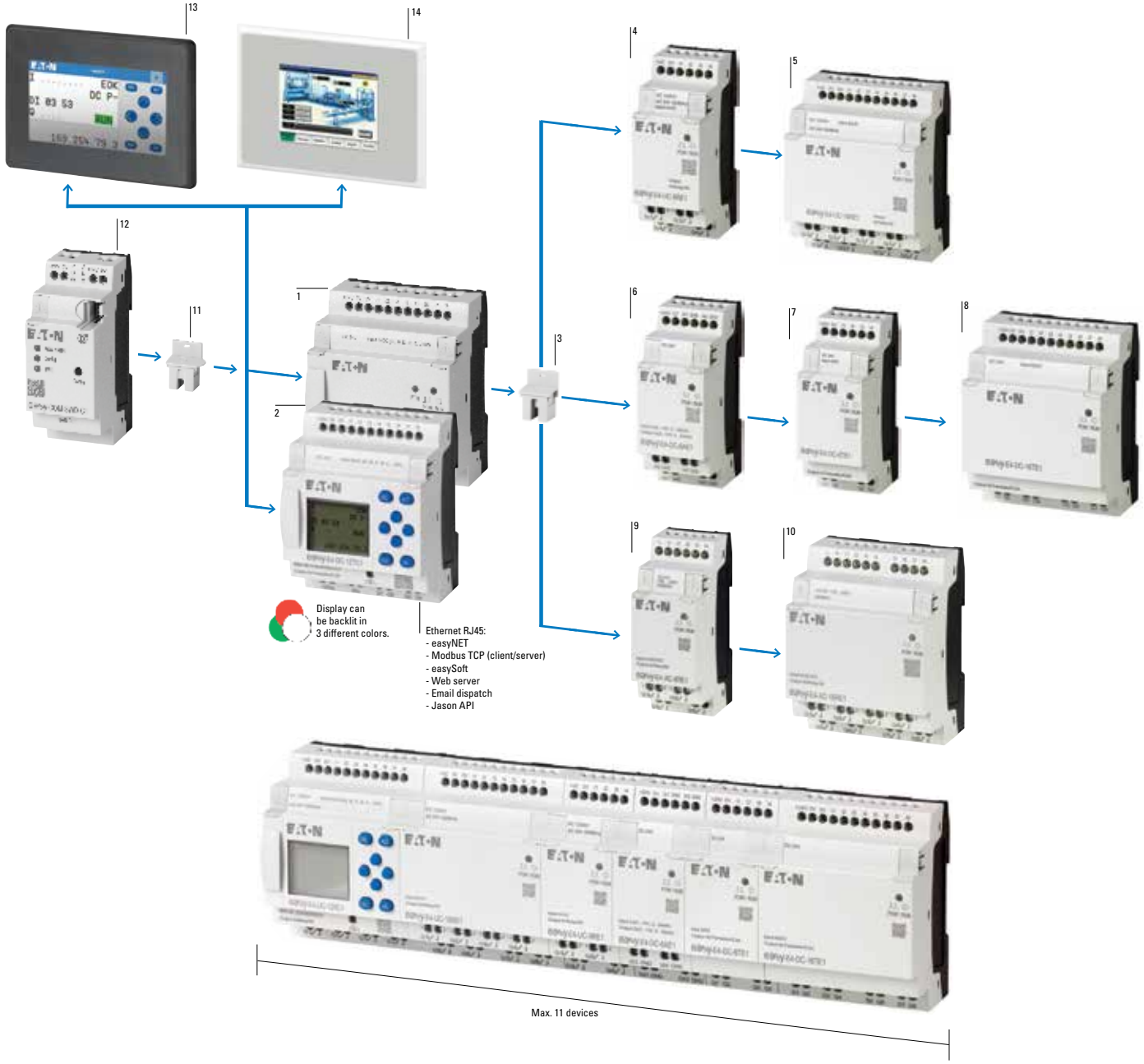
LEVEL 3: An Eaton system solution with cloud connection
The easyE4 enables integration into IIoT architectures via the built-in Ethernet interface. A router is used to transfer the data from all connected devices to the cloud, allowing them to be accessed wherever and whenever they are needed.

Smart control relays offer an alternative to PLCs
Our white paper examines the question whether the latest generation of smart control relays can provide a future-proof and cost-effective alternative to PLCs when it comes to controlling machines of low to medium complexity.



Control relays

System overview



1 easyE4 control relay without display
2 easyE4 control relay with display
3 Plug connector for expansion modules
4 UC expansion module, 8 inputs/outputs
5 UC expansion module, 16 inputs/outputs
6 DC expansion module, 6 analog inputs/outputs
7 DC expansion module, 8 inputs/outputs
8 DC expansion module, 16 inputs/outputs
9 AC expansion module, 8 inputs/outputs
10 AC expansion module, 16 inputs/outputs
11 Plug connector for communication module
12 SmartWire-DT communication module for easyE4 range
13 easy Remote Touch Display, resistive touch, 4.3"
14 XV-102 touch display for easyE4 devices, resistive touch, 3.5“and 5.7"

	Inputs		Outputs			Other features			Supply voltage	Screw terminal	Push-in terminal
	Digital	Available as analog inputs	Relay	Transistor	Analog	Display + keypad	Real-time clock	Ethernet		Part no. Article no.	Part no. Article no.
easyE4											
Base devices with 8 A outputs											
	4	4	4	-	-	✓	✓	✓	12/ 24 V DC 24 V AC	**EASY-E4-UC-12RC1** 197211	**EASY-E4-UC-12RC1P** 197504
	4	4	4	-	-	-	✓	✓	12/ 24 V DC 24 V AC	**EASY-E4-UC-12RCX1** 197212	**EASY-E4-UC-12RCX1P** 197505
	4	4	-	4	-	✓	✓	✓	24 V DC	**EASY-E4-DC-12TC1** 197213	**EASY-E4-DC-12TC1P** 197506
	4	4	-	4	-	-	✓	✓	24 V DC	**EASY-E4-DC-12TCX1** 197214	**EASY-E4-DC-12TCX1P** 197507
	8	-	4	-	-	✓	✓	✓	100 - 240 V AC/DC	**EASY-E4-AC-12RC1** 197215	**EASY-E4-AC-12RC1P** 197508
	8	-	4	-	-	-	✓	✓	100 - 240 V AC/DC	**EASY-E4-AC-12RCX1** 197216	**EASY-E4-AC-12RCX1P** 197509
Expansion devices with 5 A outputs											
	4	-	4	-	-				12/ 24 V DC 24 V AC	**EASY-E4-UC-8RE1** 197217	**EASY-E4-UC-8RE1P** 197510
	8	-	8	-	-				12/ 24 V DC 24 V AC	**EASY-E4-UC-16RE1** 197218	**EASY-E4-UC-16RE1P** 197511
	4	-	-	4	-				24 V DC	**EASY-E4-DC-8TE1** 197219	**EASY-E4-DC-8TE1P** 197512
	8	-	-	8	-				24 V DC	**EASY-E4-DC-16TE1** 197220	**EASY-E4-DC-16TE1P** 197513
	4	-	4	-	-				100 - 240 V AC/DC	**EASY-E4-AC-8RE1** 197221	**EASY-E4-AC-8RE1P** 197514
	8	-	8	-	-				100 - 240 V AC/DC	**EASY-E4-AC-16RE1** 197222	**EASY-E4-AC-16RE1P** 197515
	-	4	-	-	2				24 V DC	**EASY-E4-DC-6AE1** 197223	**EASY-E4-DC-6AE1P** 197516
	-	4	-	-	-				24 V DC	**EASY-E4-DC-4PE1** 197224	**EASY-E4-DC-4PE1P** 197517

	Description	Part no.	Article no.
Communication module			
	Communication module for connecting the easy control relay as an SWD coordinator in the SmartWire-DT network, screw terminal	**EASY-COM-SWD-C1**	199452
Software			
easy	easySoft programming software	**EASYSOFT-SWLIC**	197226
Optional accessories			
	Micro SD memory card, 2 GB	**MEMORY-SDU-A1**	191087
	easyConnect replacement parts pack, consisting of 3 plug connectors and 3 cable shrouds	**EASY-E4-CONNECT1**	199513
	easyConnect spare parts package for expansion modules 3 x plug connectors, 3 x cover caps	**EASY-E4-CONNECT-COM1**	197225
	Hinged inspection window for 4HP	**SKF-FF4**	233780
	Hinged inspection window for 6HP	**SKF-FF6**	233781
	Mounting bracket for hinged inspection window	**SKF-HA**	233782
	DIN rail - suitable for 4HP	**TS-CI-K3**	206903
	DIN rail - suitable for 6HP	**TS-CI-K4**	206904
easyE4 starter sets			
	UC base device, patch cable, easySoft license code, easyE4 flyer	**EASY-BOX-E4-UC1**	197227
	DC base device, patch cable, easySoft license code, easyE4 flyer	**EASY-BOX-E4-DC1**	197228
	AC base device, patch cable, easySoft license code, easyE4 flyer	**EASY-BOX-E4-AC1**	197229

Visualization for the easyE4 made easy

Further information on our starter sets

The easyE4 also offers a wide range of options for visualization, to optimally adapt the solution to your individual requirements and circumstances. With the integrated display, texts and values can be can be displayed and changed directly at the base device. Due to the integrated web server, content can also be called up on all mobile devices devices such as smartphones or tablets.

For visualization and display outside of the control cabinet, the 'easy' Remote Touch Display as well as the touch display XV-102 ideally complement the easyE4 product range.

The Remote Touch Display (RTD), which is available in 4.3", offers a cost-effective way to operate your application remotely. The contents of the integrated display of the easyE4 base device are mirrored in color on the Remote Touch Display. A programming is not required - the display is ready for immediate use.

With the XV-102 'easy' touch display, projects created for the control relay series can be visualized conveniently and clearly. The compact touch display offers you all the design options you need from diagrams to icons and images to create an individual user interface. The visualization on the 3.5" and 5.7" display is implemented using Eaton's own GALILEO software.

With the easyE4 control relay, simple control tasks, such as temperature control in the food industry, can be solved quickly and easily – without any in-depth programming knowledge. Screw and Push-in terminals are available for quick and easy commissioning.

Visualization outside the control cabinet is handled by the 'easy' Remote Touch Display or the XV-102 touch display depending on requirements. The functions of the XV-102 as an HMI solution can be adapted specifically to the needs of the easyE4 user. In combination with the GALILEO visualization software, a cost-effective automation solution is created that can be expanded to include additional devices as required.

Moeller series

easyE4 visualization

	Display size Inches	PLC license	Built-in interfaces 1 x RS232 / 485	 1 x USB host 2.0	 1 x Modbus TCP/IP	Part no.	Article no.
easy Remote Touch Display for easyE4 control relay Resistive touch Approvals: cUL (UL508)							
	4.3	Without PLC functionality	✓	-	-	**EASY-RTD-DC-43-03B1-00**	199740
XV-102 without PLC for use with easyE4 control relays Resistive touch approvals: cUL (UL508) SD card slots: 1 1 x Ethernet 10/100 Mbps 1 x USB device Number of colors: 64 k							
	3.5	Without PLC functionality	-	✓	✓	**XV-102-A0-35TQRB-1E4**	198513
	5.7					**XV-102-A3-57TVRB-1E4**	199734
	Description					**Part no.**	Article no.
easyE4 XV100 starter sets							
	DC base device with display, 3.5" touch panel, Ethernet switch, patch cable, easySoft license code, easyE4 flyer					**XV100-BOX-E4-DC1**	198514
	UC base device with display, 3.5" touch panel, Ethernet switch, patch cable, easySoft license code, easyE4 flyer					**XV100-BOX-E4-UC1**	198515
easyE4 Remote Touch Display starter sets							
	DC base device with display, 4.3" Remote Touch Display, patch cable, easySoft license code, easyE4 flyer					**RTD-BOX-E4-DC1**	199786
	UC base device with display, 4.3" Remote Touch Display, patch cable, easySoft license code, easyE4 flyer					**RTD-BOX-E4-UC1**	199785

easyPower and PSG power supplies

Whether they're used as part of a machine or system, inside the control panel or in the distribution board – the easyPower and PSG 24 V DC power supplies offer the right solution and design for every type of requirement. The DIN rail power supplies ensure efficient 1-phase and 3-phase operation. In addition to the wide-range inputs and approvals for global use, the devices stand out for their efficiency and wide temperature range. The devices come with short-circuit and overload protection, which ensures reliable power supply. The compact enclosures save space and costs. The adjustable output voltage range of the PSG power supplies offers maximum flexibility. With output currents from 1 A to 40 A, the power supply units cover machines and systems with both low and high power requirements.

Get more information

	Input voltage range	Rated output voltage	Rated output power W	Rated output current A	**Part no.** Article no.
Single-phase power supplies					
Nominal input voltage: 100 - 240 V AC					
	85 - 264 V AC	24 V DC (± 3%) 12 V DC (± 4%)	-	0.35 0.02	**EASY200-POW** 229424
		24 V DC (± 3%)	-	1.25	**EASY400-POW** 212319
Setting range of the output voltage: 22 - 28 V DC 	85 - 264 V AC (120 - 375 V DC)	24 V DC (± 2%)	60	2.5	**PSG60N24RP** 172890
			60	2.5	**PSG60E24RM** 172891
			120	5	**PSG120E24RM** 172892
			240	10	**PSG240E24RM** 172893
			480	20	**PSG480E24RM** 172894
3-phase power supplies					
Nominal input voltage: 3 x 400 - 500 V AC Setting range of the output voltage: 24 - 28 V DC					
	320 - 600 V AC (450 - 800 V DC)	24 V DC (± 2%)	60	2.5	**PSG60F24RM** 172882
			120	5	**PSG120F24RM** 172883
			240	10	**PSG240F24RM** 172884
			480	20	**PSG480F24RM** 172885
			960	40	**PSG960F24RM** 172886

Control