easy®E4

Control made simple – with just one finger



25 years easy

A benchmark in the control relay market for 25 years

E·T·N
Powering Business Worldwide

easyE4 control relay

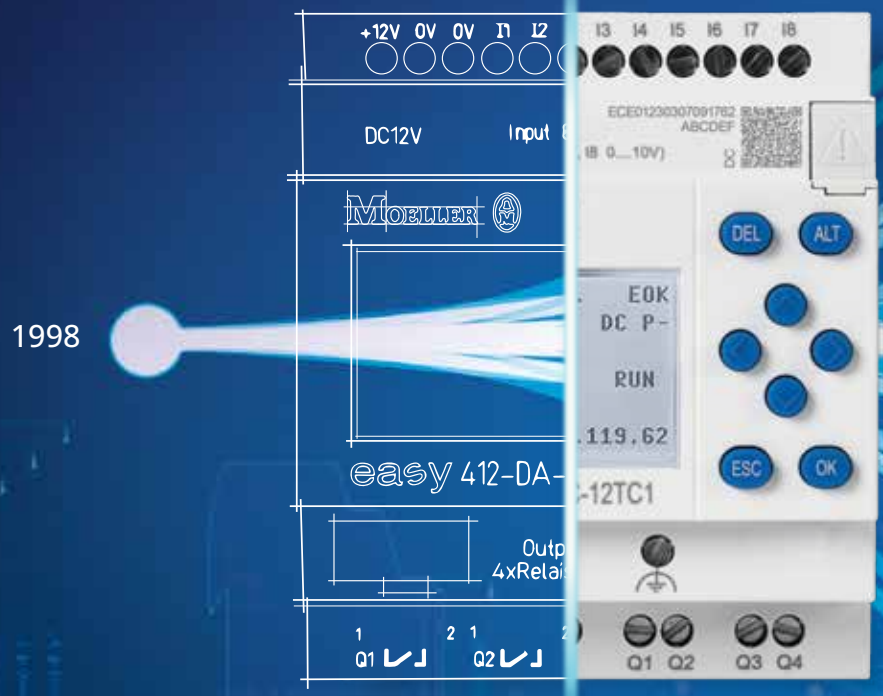
25 years easy

When it comes to control relays, our 'easy' devices have been setting the standard for more than 25 years. When we launched the first 'easy' compact control relay in 1998, it changed everything. Not only was the old-fashioned manual operation now a thing of the past, but we also added a number of functions that were new at the time, such as the Ethernet connection. As a result, our innovative control relay made operating, controlling and managing circuits easier and less time-consuming.

Each generation of the 'easy' series marked an important turning point in terms of product development and enabled us to better understand the needs of our customers.

Based on these insights, we have continuously enhanced our range of supporting software and accessories, making the 'easy' control relay a leading product in its field.

Today, more than 25 years after the launch of the first generation, the sophisticated features and functions of the easyE4 make the implementation of control applications easier than ever.







More time for what really matters

The easyE4 control relay from Eaton's Moeller™ Series makes it even easier, faster and more convenient to implement a wide range of control functions, whether it's temperature control in the food industry, simple control applications in mechanical engineering or lighting control in buildings.

We have redesigned the easyE4 and equipped it with additional functions such as a **web editor** and a direct connection to the **Amazon Web Services (AWS)** cloud, giving you more time for what really matters.





A wide range of functions to simplify planning

The easyE4 covers various control applications in one device, from logic, timing relay and counter functions to an integrated timer and a proportional–integral–derivative (PID) controller.

The control relay can be easily extended by means of a communication module and up to 11 I/O modules, and the extensions for AC, DC and UC voltage can be mixed and matched as required.

Easy to use in every way – from project planning to maintenance

With its optimized product portfolio, the **easyE4 supports you every step of the way** — right from the planning phase of your project. From now on, you will benefit from more flexibility, more transparency and more time that you can devote to other tasks.

Programming tailored to your needs

The programming of the easyE4 is flexible and user-friendly and can be done directly on the device or conveniently via the easySoft software.

There are not only four different programming languages to choose from, but it is also possible to customize display texts, background colors and start-up graphics.

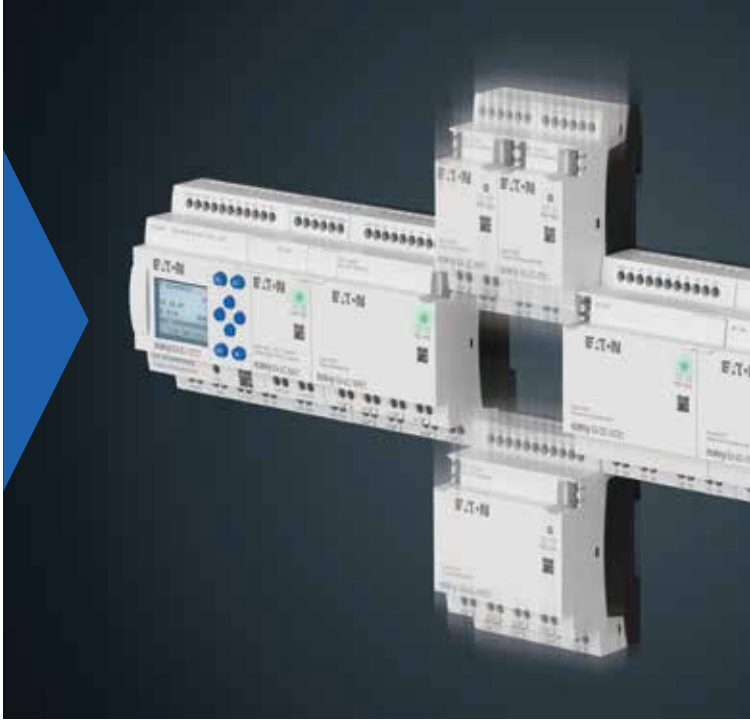


Installation and commissioning made easy

The easyE4 is available with both conventional screw terminals and time-saving Push-in terminals.

Expansion modules are available to easily increase the number of inputs/outputs so that Modbus RTU and SmartWire-DT devices can be connected to the easyE4 without any problems.

Programs can be uploaded to the control relay via an SD card, which significantly simplifies the commissioning of standardized systems, for example.





Getting your system up and running quickly

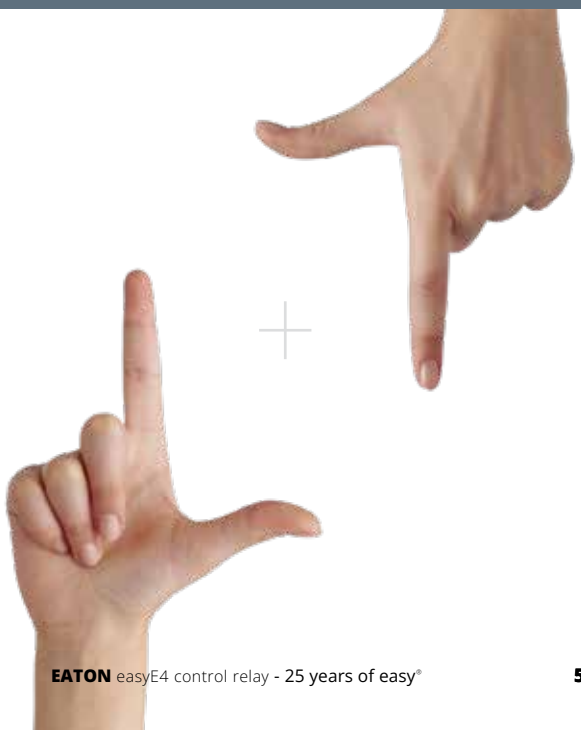
In addition to an interrupt function block for fast response times, the easyE4 also features radio clock synchronization (DCF77) for processes that need to be accurate to the second.

Via the integrated display, operators can quickly check the control relay status and adjust its operating parameters directly on the device.

All the information you need for maintenance

In addition to the easy-to-use display, the easyE4 can also be accessed remotely, for instance via a smartphone or tablet, with various viewing options providing a comprehensive overview.

The easyE4 can log operating states (data logging) and perform simple event evaluations. It also simplifies diagnostics by providing status information on all connected communication devices and expansion modules.



Maximum flexibility

We are constantly fine-tuning the easyE4 to adapt it to new requirements and changing user habits. This includes the web server function, which simplifies remote visualization and control, as well as synchronization with smart home devices via development environments such as Node-RED. And via the JSON application programming interface (API), the easyE4 is also compatible with all common voice assistants.

New functions for even more options

We have added two new functions to the latest version of easyE4 to make it even more user-friendly and easy to use.

On the one hand, the control relay now comes with a direct connection to **Amazon Web Services (AWS)**, one of the world's most widely used cloud platforms. This means that the information stored on any number of easyE4 devices can be safely transferred to the cloud in compliance with the latest cybersecurity standards. Once it is in the cloud, it can then be aggregated to monitor processes, integrate features such as artificial intelligence or generate automated commands.

On the other hand, the **integrated web editor** simplifies the creation of visualizations and allows for even greater flexibility. The visualization runs on the easyE4 itself and can be accessed like a normal website via the browser of any mobile device, making it hardware-independent.



NEW

Connection to the AWS cloud

With the direct link to AWS, you are not only able to transfer data securely to the cloud, but can also access it quickly and easily on mobile devices.

NEW

Integrated web editor

For simple visualization design on end devices with a web browser. The visualizations are configured in easySoft V8.

easy features and functions

The powerful Ethernet interface ensures a **high level of connectivity,** either directly via easyNET and Modbus TCP or using Modbus RTU and SmartWire-DT **communication modules.**

The **astronomical clock** enables precise system control, for example in accordance with sunrise and sunset times.

The **unlimited combination possibilities** of easyE4 devices with expansion modules ensure easy handling.

The **integrated web server** can be used for visualization, automatic notifications and system control. The connection is encrypted with an SSL/TLS certificate.

Four programming languages are available: easy Device Programming (EDP), ladder diagram (LD), function block diagram (FBD) and structured text (ST).

The option to add a **communication module** and up to **11 I/O modules** enables a wide range of applications.

Node-RED is a free programming environment for the **Internet of Things (IoT).** With the help of a simple web editor, various devices and systems are networked with each other to create so-called "flows."

An **API** is a programming interface that is widely used for the **Artificial Internet of Things (AIoT).** The easyE4 also comes with an API, which can be accessed via the link provided.

Scalable visualization options – from the visualization that is already integrated in easySoft to complex machine operating concepts using our **Galileo design tool** and **XV100/XV300 HMIs.**

NEW

Remote Touch Display

The integrated display and the Remote Touch Display Standard and Advanced provide a wide range of **display and visualization options.**

NEW

Hardware security module

This module can be used to store information in accordance with the latest cybersecurity requirements to **encrypt all device communications** with a certificate.

easy application examples

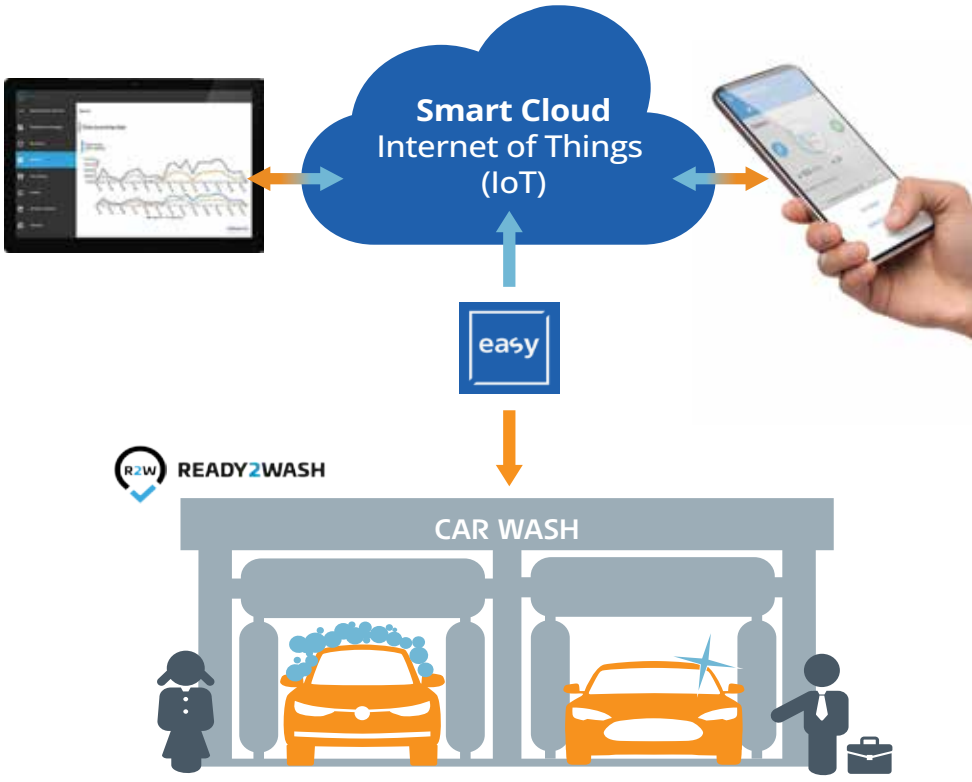
Car-Wash-Center H. Hanle

A clean solution for contactless payment

The easyE4 serves as a sturdy control unit for self-service car washes and also provides a connection to an app-based IoT payment system.

"100% humidity, temperatures of around 50 degrees Celsius and the vibrations of the 1.5-kilowatt pumps – in such conditions, a PLC can be a bit capricious. The easyE4, on the other hand, has not let us down so far – even though it is only mounted in a standard IP68 control cabinet."

Marcel Haupt, head of development and modernization Car-Wash-Center H. Hanle





Hellbernd Elektrotechnik

Control system for an egg collection system

Several networked easyE4 devices enable the simple implementation of a decentralized control system for an egg collection and conveyor system.

"The easyE4 is easy to install, configure and set up – this means that even smaller projects of greater complexity can be implemented quickly."

Leon Hellbernd, master electrician Hellbernd Elektrotechnik GmbH & Co. KG





Howatherm Klimatechnik

Flexible control solution for mobile UV-C air disinfection units

As a manufacturer of large ventilation and air conditioning systems, Howatherm Klimatechnik wanted to make a contribution to the fight against the coronavirus pandemic with a mobile air disinfection unit.

Using the easyE4 and the **XV102 touch display** as a basis, the company created a powerful device that, among other things, automatically adapts to the number of people in the room and thus ensures that the air is germ-free.

HOWATHERM
Klimatechnik GmbH,
Brücken, Germany



Milde Hydraulik

Automated leak monitoring system for hydraulic pumps in biogas plants

Automation solutions from a single source: explosion-proof and IIoT-networked.

"Many equipment manufacturers and operators believe that an IIoT connection is too expensive to implement in smaller systems. Using Eaton components, we have shown that this is not the case."

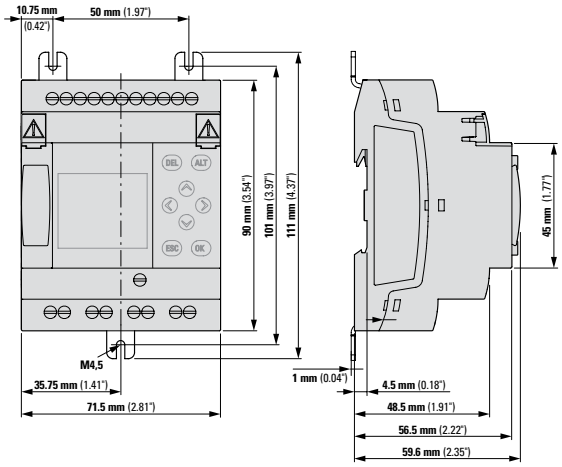
Peter Hennes, managing director
iSAT



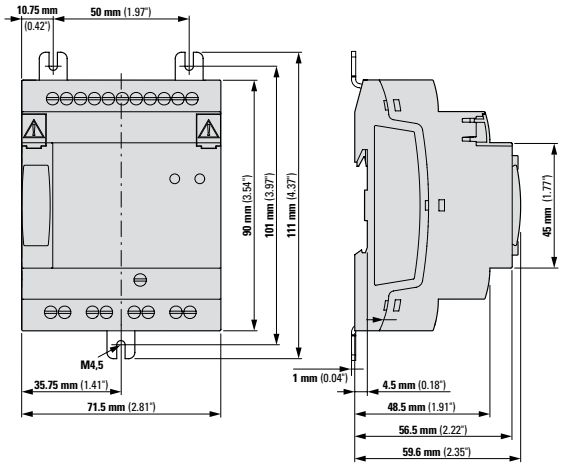


Dimensions

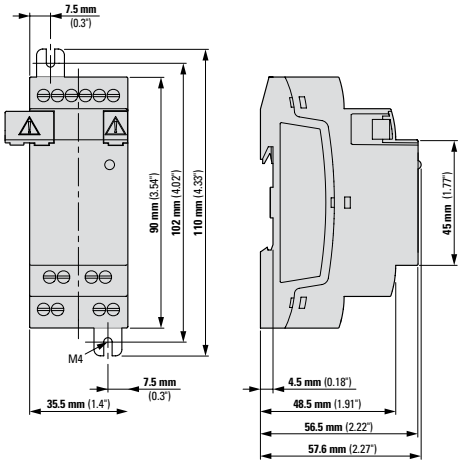
Base device with display



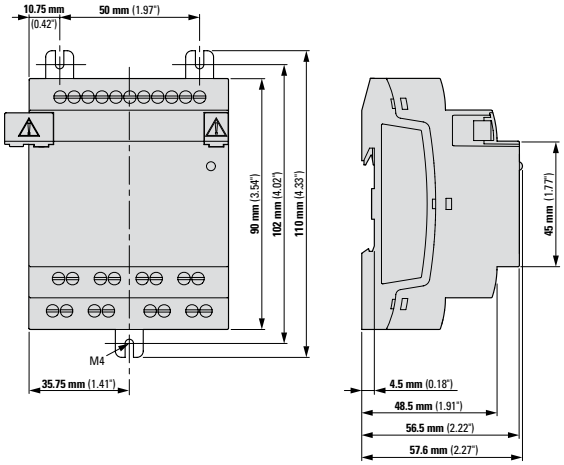
Base device without display



Slim expansion module, communication module



Wide expansion module



Ordering information

easyE4 base devices

Description	Input		Output		Features			Supply voltage	Part no. Article no.	
	Digital	Digital analog	Transistor	Relay (8 A)	Display + Keypad	Real-time clock	Ethernet		Screw terminal	Push-in terminal
Base device, 12/24 V DC, 24 V AC, display, keypad	8	4	-	4	•	•	•	12/ 24 V DC 24 V AC	EASY-E4-UC-12RC1 197211	EASY-E4-UC-12RC1P 197504
Base device, 12/24 V DC, 24 V AC	8	4	-	4	-	•	•	12/ 24 V DC 24 V AC	EASY-E4-UC-12RCX1 197212	EASY-E4-UC-12RCX1P 197505
Base device, 24 V DC, display, keypad	8	4	4	-	•	•	•	24 V DC	EASY-E4-DC-12TC1 197213	EASY-E4-DC-12TC1P 197506
Base device, 24 V DC	8	4	4	-	-	•	•	24 V DC	EASY-E4-DC-12TCX1 197214	EASY-E4-DC-12TCX1P 197507
Base device, 100-240 V AC/DC, display, keypad	8	-	-	4	•	•	•	100-240 V AC/DC	EASY-E4-AC-12RC1 197215	EASY-E4-AC-12RC1P 197508
Base device,100-240 V AC/DC	8	-	-	4	-	•	•	100-240 V AC/DC	EASY-E4-AC-12RCX1 197216	EASY-E4-AC-12RCX1P 197509

Expansion modules

Description	Input		Output			Supply voltage	Part no. Article no.	
	Digital	Analog	Relay (5 A)	Transistor	Analog		Screw terminal	Push-in terminal
Digital input/output, 12/24 V DC, 24 V AC	4	-	4	-	-	12/ 24 V DC 24 V AC	EASY-E4-UC-8RE1 197217	EASY-E4-UC-8RE1P 197510
Digital input/output, 12/24 V DC, 24 V AC	8	-	8	-	-	12/ 24 V DC 24 V AC	EASY-E4-UC-16RE1 197218	EASY-E4-UC-16RE1P 197511
Transistor input/output, 0,5 A	4	-	-	4	-	24 V DC	EASY-E4-DC-8TE1 197219	EASY-E4-DC-8TE1P 197512
Transistor input/output, 0,5 A	8	-	-	8	-	24 V DC	EASY-E4-DC-16TE1 197220	EASY-E4-DC-16TE1P 197513
Digital input/output, 100/110/230/ 240 V AC/DC	4	-	4	-	-	100-240 V AC/DC	EASY-E4-AC-8RE1 197221	EASY-E4-AC-8RE1P 197514
Digital input/output, 100/110/230/ 240 V AC/DC	8	-	8	-	-	100-240 V AC/DC	EASY-E4-AC-16RE1 197222	EASY-E4-AC-16RE1P 197515
Analog input/output, 0–10 V / 0/4–20 mA, 12 bit, all channels are configurable	-	4	-	-	2	24 V DC	EASY-E4-DC-6AE1 197223	EASY-E4-DC-6AE1P 197516
Temperature input, 3-wire, Pt100/1000/Ni1000, 12 Bit, * [°C] oder [°F], Scaling, 12 Bit, in 0,1 °, in 1°, 0 - 4095, 0 - 65535	-	4	-	-	-	24 V DC	EASY-E4-DC-4PE1 197224	EASY-E4-DC-4PE1P 197517

*Temperature range can be selected: PT100 / PT1000: from -100 to +200°C, from -100 to +400°C, from -100 to +800°C; Ni1000: from -50 to +100°C, from -50 to +200°C

Communication modules

Description	Part no. Article no.
easyE communication module for Modbus RTU	EASY-COM-RTU-M1 199453
easyE communication module for SmartWire-DT	EASY-COM-SWD-C1 199452

Visualization

Description	Part no. Article no.
Remote Touch Display - Standard for the easyE4 control relay 4.3", resistive touch	EASY-RTD-DC-43-03B1-00 199740
Remote Touch Display - Advanced for the easyE4 control relay 4.3", resistive touch	EASY-RTD-DC-43-03B2-00 EP-401057

Software

Description	Part no. Article no.
easySoft programming software for the easyE series	EASYSOFT-SWLIC 197226

easyE4 starter boxes

Description	Part no. Article no.
UC base device, patch cord, license code for easySoft, easyE4 flyer	EASY-BOX-E4-UC1 197227
DC base device, patch cord, license code for easySoft, easyE4 flyer	EASY-BOX-E4-DC1 197228
AC base device, patch cord, license code for easySoft, easyE4 flyer	EASY-BOX-E4-AC1 197229
UC base device with display, easyE Remote Touch Display - Advanced, patch cord, license code for easySoft, easyE4 flyer	RTD-BOX-E4-UC1 199785
DC base device with display, easyE Remote Touch Display - Advanced, patch cord, license code for easySoft, easyE4 flyer	RTD-BOX-E4-DC1 199786

For detailed information about our products, please visit **ecat.eaton.com**

Optional accessories

Description	Part no. Article no.
MicroSD memory card, 2 GB, with adapter	MEMORY-SDU-A1 191087
easyConnect spare parts package for expansion modules 3 x plug connectors, 3 x cover caps	EASY-E4-CONNECT1 197225
easyConnect spare parts package for communication modules 3 x plug connectors, 3 x cover caps	EASY-E4-CONNECT-COM1 199513
Industrial switch, 5-port, 100 Mbit/s	XN-332-5ETH-UMS 199711
Power supply, 1-phase, 85-264 V AC / 24 V DC, 3.125 A, 75 W	PSG75E24SPB EP-401392
Power supply, 1-phase, 320-575 V AC / 24 V DC, 5 A, 120 W	PSG120E24SMB EP-401394
Power supply, 1-phase, 90-264 V AC / 24 V DC, 10 A, 240 W	PSG240E24SMB EP-401395
Power supply, 1-phase, 90-264 V AC / 24 V DC, 20 A, 480 W	PSG480E24SMB EP-401396
Power supply, 3-phase, 320-575 V AC / 24 V DC, 5 A, 120 W	PSG120F24SMB EP-401398
Power supply, 3-phase, 320-575 V AC / 24 V DC, 10 A, 240 W	PSG240F24SMB EP-401399
Power supply, 3-phase, 320-575 V AC / 24 V DC, 20 A, 480 W	PSG480F24SMB EP-401400
Power supply, 3-phase, 320-575 V AC / 24 V DC, 40 A, 960 W	PSG960F24SMB EP-401401
Power supply, 1-phase, 90-264 V AC / 24 V DC, 0.42 A, 10 W	PSL10E24RP EP-401402
Power supply, 1-phase, 90-264 V AC / 24 V DC, 1.25 A, 30 W	PSL30E24RP EP-401403
Power supply, 1-phase, 90-264 V AC / 24 V DC, 2.5 A, 60 W	PSL60E24RP EP-401404
Power supply, 1-phase, 90-264 V AC / 24 V DC, 3.8 A, 100 W	PSL100E24RP EP-401405
Hinged inspection window for 4HP	EASY-E4-BOX-SKF-4TE EP-401058
Hinged inspection window for 6HP	EASY-E4-BOX-SKF-6TE EP-401059
Base bracket (3 pcs. per device required)	ZB4-101-GF1 061360
Energy meter, 3P, DIN, ModBus-TCP, 63A	EMD3P-CT63 EP-502639
Energy meter, 3P, DIN, ModBus-TCP, 200A	EMD3P-CT200 EP-502640
Energy meter, 3P, DIN, ModBus-TCP, 600A	EMD3P-CT600 EP-502641

Eaton is an intelligent power management company dedicated to protecting the environment and improving the quality of life for people everywhere. We make products for the data center, utility, industrial, commercial, machine building, residential, aerospace and mobility markets. We are guided by our commitment to do business right, to operate sustainably and to help our customers manage power - today and well into the future. By capitalizing on the global growth trends of electrification and digitalization, we're accelerating the planet's transition to renewable energy sources, helping to solve the world's most urgent power management challenges, and building a more sustainable society for people today and generations to come.

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Publication no.: BR050009EN
January 2025

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