easyE4 solutions

Ready for the future

"I'm getting the advice and support I need to implement cutting-edge system solutions."

The optimal design of your system architecture

LEVEL 1:
Eaton 'easy' stand-alone solution

The easyE4 allows for a wide range of clever applications of varying complexity. The control of simple tasks is performed by the base unit via the integrated inputs/outputs. The system can be tailored to the task at hand by means of the existing expansions. To this end, various expansion modules are available, which can be connected via a simple plug connector.

LEVEL 2
Eaton 'easy' system solution

For more complex tasks, additional devices can be connected to the base unit and the expansions via the network. Via the Ethernet and NET interfaces, up to eight easyE4 devices can communicate with each other within the same network cluster.

For larger networks, the easyE4 series offers the possibility of operating up to ten clusters—each with eight individual easyE4 devices—in parallel.

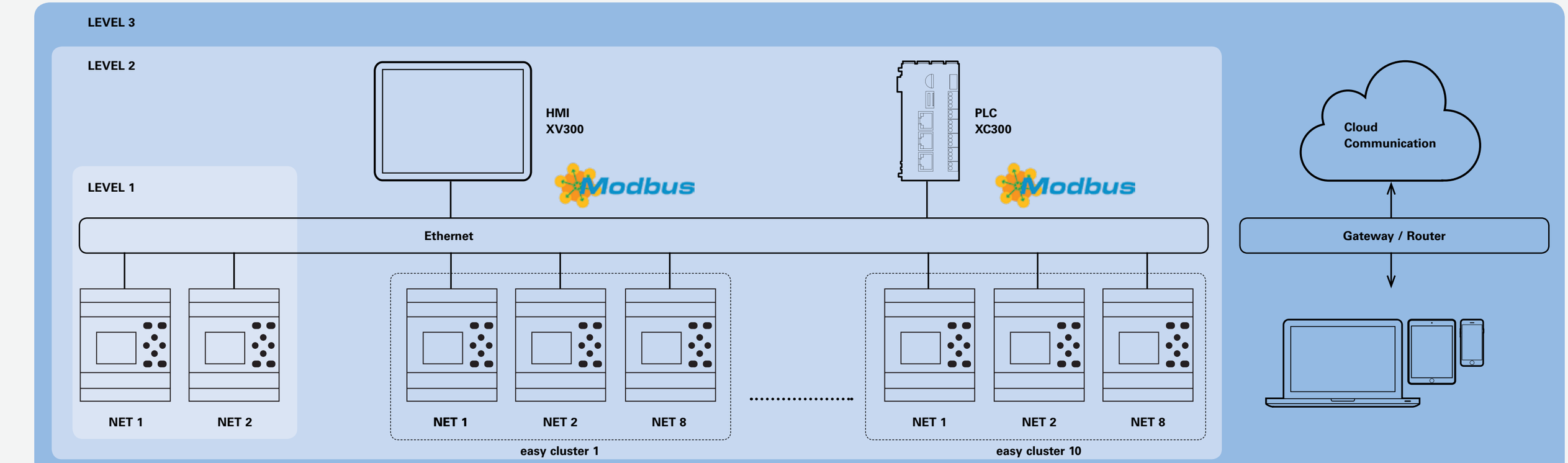
With the Modbus TCP protocol, it is even possible to use Eaton's XC300 as the central master-level control system for the easyE4 devices. And by connecting an Eaton HMI (e.g. the XV300), even the most demanding visualizations can be realized.

Successful entry to IIOT

LEVEL 3
Eaton 'easy' system solution with connection to the cloud

Industry 4.0 is already a reality in many companies. In addition to enhancements in data availability, it also facilitates process optimization along the entire value chain. Implementation requires intelligent, networked system components—also known as the Industrial Internet of Things (IIoT).

easyE4 enables integration into IIoT architectures via the built-in Ethernet interface. You can therefore transfer your data to the cloud via a router and then access it whenever you need it, from anywhere in the world.



Smart control relay as an alternative to PLC control

In our whitepaper you will find more information about the question whether the latest generation of smart control relays can be a future-proof and cost-effective alternative to PLC controls for machines of low to medium complexity.

Download WhitePaper

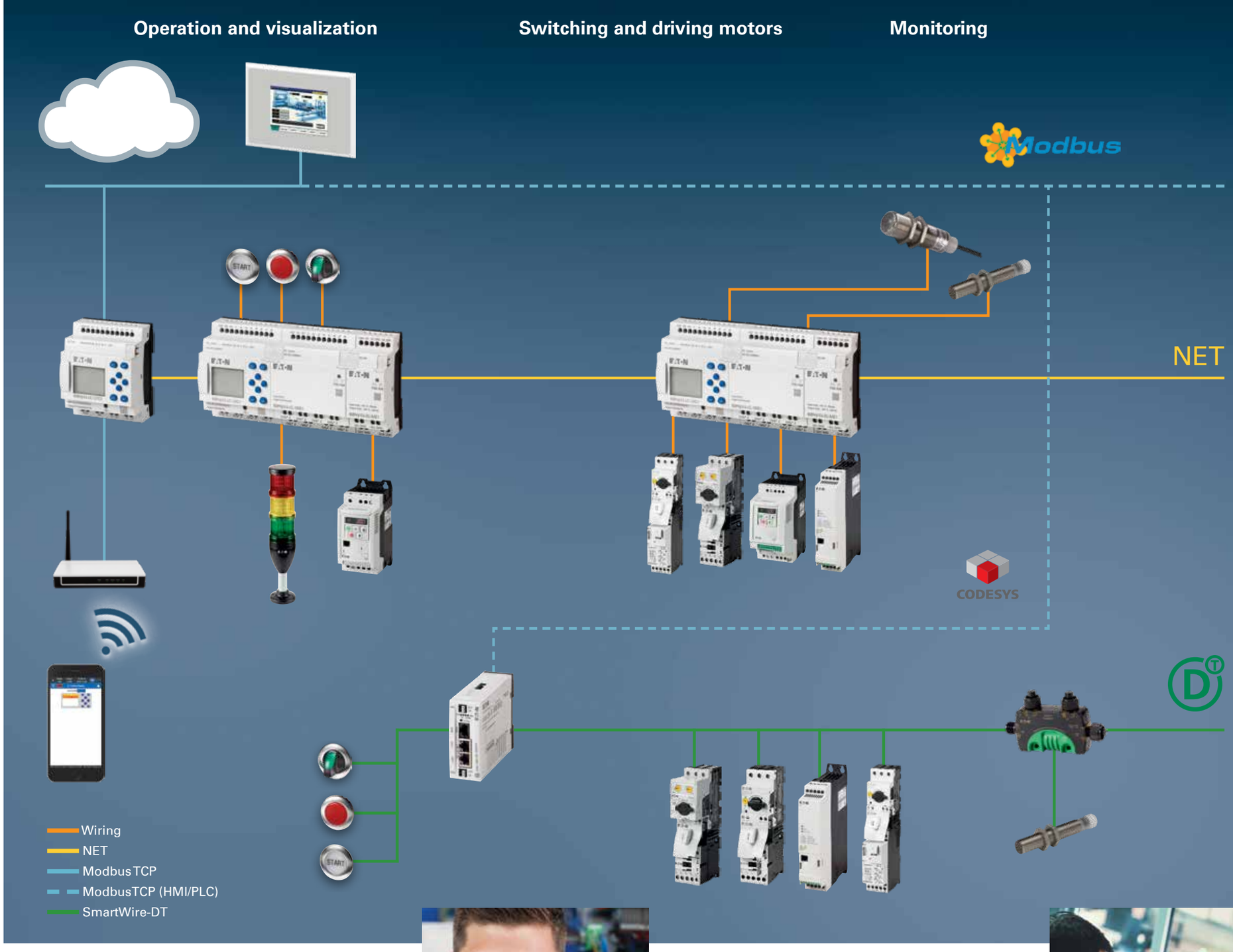
Implementing system architectures with Eaton's easyE4

The easyE4 control relays can be used within many different projects meeting your requirements for a flexible, modular system. If used in conjunction with the other components from the Eaton portfolio, such as our pilot devices or motor starters, the devices allow you to implement integrated system architectures that can be easily expanded.

Our example shows three different areas of application: Operation and visualization, motor start and controls, and sensor technology. The easyE4 control relay serves as an important interface between the individual components of the system architecture.

Since the in-/outputs in the easyE4 system can be easily extended, it is possible to integrate a wide variety of devices, such as those from our RMQ-Titan range. In addition, you can also connect motor starters, variable speed starters or sensors to the easyE4. The devices within each easyE4 network (cluster) communicate via NET. The XV100, which can be easily connected via Modbus TCP, is used for visualization.

A Modbus gateway is used to integrate additional modules, such as those from our SmartWire-DT range. Modbus TCP is also used to transmit the system-level data, which can then be visualized on a master-level control system using Codesys. With the easyE4, the operating status of the entire application can also be conveniently displayed on any mobile device.



Flexible visualization options

In addition to HMI visualization via Modbus TCP, the easyE4's integrated web server also makes it possible to display the application content on tablets and smartphones. The web server is accessed by means of a wireless router. A number of built-in functions ensure secure access to the server.

Tailor-made programming options

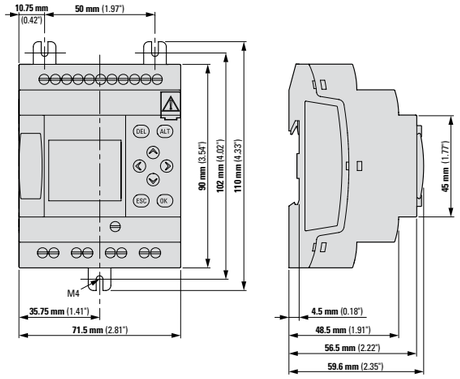
From easy device programming (EDP) to the ladder diagram (LD), the function block diagram (FBD), and structured text (ST) for more advanced users — easySoft gives users the option to select their preferred programming language. This not only provides flexibility but also saves time.

Technical data

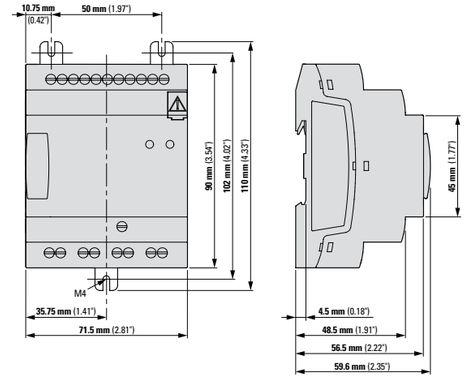
Typ	EASY-E4-UC-12RC1	EASY-E4-UC-12RCX1	EASY-E4-UC-8RE1	EASY-E4-UC-16RE1	EASY-E4-DC-6AE1	EASY-E4-DC-12TC1	EASY-E4-DC-12TCX1	EASY-E4-DC-8TE1	EASY-E4-DC-16TE1
Article no.	197211	197212	197217	197218	197223	197213	197214	197219	197220
Type of device	Base unit	Base unit	Expansion unit	Expansion unit	Expansion unit	Base unit	Base unit	Expansion unit	Expansion unit
Inputs									
digital	8	8	4	8	-	8	8	4	8
can be used as analog inputs	4	4	-	-	6	4	4	-	-
Outputs									
Transistor	-	-	-	-	-	4	4	4	8
Relay	4	4	4	8	-	-	-	-	-
can be used as analog outputs	-	-	-	-	2	-	-		-
Display	with Display	without Display	without Display	without Display	without Display	with Display	without Display	without Display	without Display
Rated operational voltage	12/24 V DC, 24 V AC				24 V DC				
Operating ambient temperature (°C)	-25 - +55				-25 - +55				
Dimensions (L x H x D)	71.5 x 90 x 58		35.5 x 90 x 58	71.5 x 90 x 58	35.5 x 90 x 58	71.5 x 90 x 58		35.5 x 90 x 58	71.5 x 90 x 58
Weight (kg)	0.2		0.2	0.2	0.2	0.2		0.2	0.2
Degree of protection	IP20								
Standards	EN 61000-6-2, EN 61000-6-3, IEC 60068-2-6, IEC 60068-2-27, IEC 60068-2-30, IEC 61131-2, EN 61010, EN 50178, cULus acc. to UL 61010, CSA C22.2 No.61010								

Dimensions

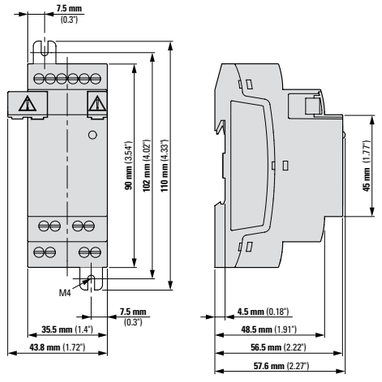
Base unit with display



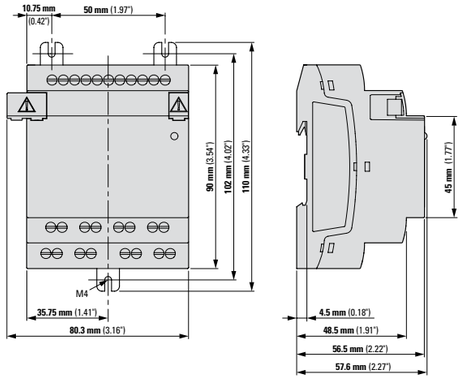
Base unit without display



Slim expansion module



Large expansion module



Ordering data

easyE4 base units

Inscription	Input		Output		Features			Power supply	Typ Article no.	
	digital	digital analog	Transistor	Relay (8 A)	Display + Keypad	Realtime clock	Ethernet		Screw terminal	Push-in clamp
Base unit 12/24 V DC,24 V AC, Display, Keypad	4	4	-	4	•	•	•	12/ 24 V DC 24 V AC	EASY-E4-UC-12RC1 197211	EASY-E4-UC-12RC1P 197504
Base unit 12/24 V DC,24 V AC	4	4	-	4	-	•	•	12/ 24 V DC 24 V AC	EASY-E4-UC-12RCX1 197212	EASY-E4-UC-12RCX1P 197505
Base unit 24 V DC, Display, Keypad,	4	4	4	-	•	•	•	24 V DC	EASY-E4-DC-12TC1 197213	EASY-E4-DC-12TC1P 197506
Base unit 24 V DC	4	4	4	-	-	•	•	24 V DC	EASY-E4-DC-12TCX1 197214	EASY-E4-DC-12TCX1P 197507
Base unit 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 unit 100-240 V AC/DC	8	-	-	4	-	•	•	100- 240 V AC/DC	EASY-E4-AC-12RCX1 197216	EASY-E4-AC-12RCX1P 197509

Expansion devices

Inscription	Input		Output			Power supply	Typ Article no.	
	digital	analog	Relay (5 A)	Transistor	analog		Screw terminal	Push-in clamp
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	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	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 - 20mA, 12 bit, each channel configurable	-	4	-	-	2	24 V DC	EASY-E4-DC-6AE1 197223	EASY-E4-DC-6AE1P 197516
Temperature Input, 2 and 3 Wire, Pt100/1000/Ni1000, 12 bit, * [°C] or [°F], scalling, 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

* Measurement range selectable PT100, PT1000 -100°C...+200°C / -148°F...392°F, -100°C...+400°C / -148°F...752°F, -100°C...+800°C / -148°F...1472°F; Ni1000 -50°C...+100°C / -58°F...212°F, -50°C...+250°C / -58°F...482°F

Visualization

Inscription	Typ Article no.
Touch panel for easyE4 control relay 3.5", resistive touch, Modbus-TCP interface	XV-102-A0-35TQRB-1E4 198513

Software

Inscription	Typ Article no.
Programming software easySoft easyE range	EASYSOFT-SWLIC 197226

Accessories (optional)

Inscription	Typ Article no.
Micro SD memory card, 2GB, with adapter	MEMORY-SDU-A1 191087
Switching power supply, 100-240VAC/24VDC/12VDC, 0.35A/0.02A, single-phase, regulated	EASY200-POW 229424
Switching power supply, 100-240VAC/24VDC,1.25A, 1-phase, regulated	EASY400-POW 212319
Spare parts package easyConnect 3 x connector, 3 x caps	EASY-E4-CONNECT1 197225