



easy control relay

MFD-Titan multi-function display



The control relays easy500/700/800 and the multifunction display MFD Titan offer all the technical possibilities needed to realize applications in industrial and manual applications as well as in machinery or apparatus construction.

easy500

Functions such as multifunction relays, current pulse switches, counters, analog value comparators, week and year time switches +++ Stand-alone device +++ Optimal for smaller applications +++ Connectable to Ethernet

easy700

Complete functional scope of an easy500 +++ Local and remote extension options for flexible applications +++ Connectable to current bus systems or Ethernet

easy800

Complete functional scope of an easy700 +++ Numerous additional functions such as PID controller, arithmetic functions, value scaling, fast counter (5 kHz) +++ To perform comprehensive control tasks +++ Digital and analog expandability +++ Integrated communication through easyNet +++ Connectable to current bus systems or Ethernet

MFD-Titan

Combines control function of an easy800 with convenient visualization +++ Display, control, regulation and communication with one device +++ E/A modules for direct temperature sensing +++ Digital and analog expandability +++ Communication through easyNet possible +++ Connectable to current bus systems or Ethernet

easy control relay, MFD-Titan multi-function display

Control relay easy

Technical overview

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System overview

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Ordering

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MFD-Titan Multi-function display

System overview

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Ordering

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Control relay, multi-function display

Technical data

Basic devices, Expansion Devices

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Basic devices, Expansion Devices

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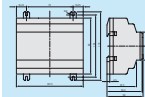
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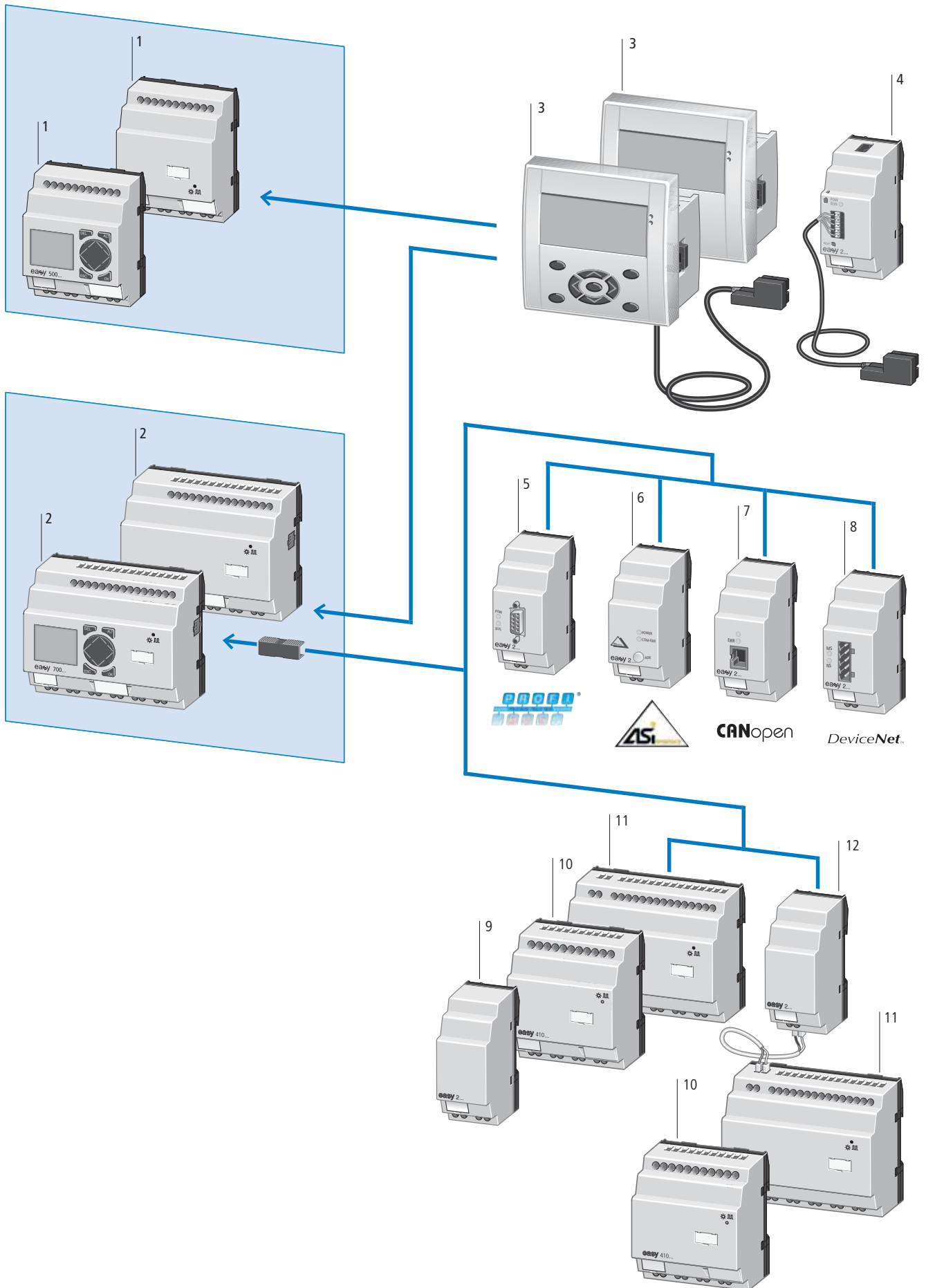


Technical overview

Functions		easy500/700	easy800	MFD-...CP8...
Counter functions 	Counter relay (up, down counting)	16 (0 to 32000)	32 (±2 ³¹)	32 (±2 ³¹)
	Frequency counters	2 (max. 1 kHz)	4 (max. 5 kHz)	4 (max. 3 kHz)
	High-Speed counter	2 (max. 1 kHz)	4 (max. 5 kHz)	4 (max. 3 kHz)
	Incremental counters	–	2 (max. 3 kHz)	2 (max. 3 kHz)
	Hour meter	4 (operating hours value is stored super-retentively (e.g also with program change))		
Time functions 	Weekly timer (4 channels per timer, each channel offers one On/Off time)	8	32	32
	Year time switch	8	32	
	Set cycle time	–	1	1
	Timing relay	16 (0.01 s ... 99 h 59 min)	32 (0.005 s ... 2 ³² min), On-delayed and/or off-delayed (optionally random switching), pulse shaping, flashing	
Program sequencing functions 	Jump	8	32	32
	Conditional jump	–	32	32
	Master reset	3	32	32
Maths functions 	Analog value comparator	16	32	32
	Arithmetic	–	32 (ADD, SUB, MUL, DIV)	32 (ADD, SUB, MUL, DIV)
	PID controller	–	32	32
	PT1 signal smoothing filter	–	32	32
	Value scaling	–	32	32
	Numerical converter	–	32	32
	Pulse output	–	2	–
	Pulse width modulation	–	2	2
	Value limit	–	32	32
Memory functions 	Block comparison	–	32	32
	Block transfer	–	32	32
	Boolean operation	–	32 (AND, OR, NOT)	32 (AND, OR, NOT)
	Comparator	16	32	32
	Data function block	–	32	32
	Data multiplexer	–	32	–
	Shift register	–	32	32
	Table function	–	32	32
Communication functions 	Get value from the NET	–	32	32
	Put value on the NET	–	32	32
	Bit output via NET	–	32	32
	Bit input via NET	–	32	32
	Diagnostic alarm	–	9	9
	Serial protocol	–	32	–
	Synchronize clock via NET	–	1	1
Text functions 	Text display (can be edited via software)	16 × (4 × 12 characters)	32 × (4 × 16 characters)	Yes
	Static text			Yes
	Message text			Yes
	Screen menu			Yes
	Running text			Yes
	Rolling text			Yes
Value entry functions 	Date and time information			Yes
	Year time switch entry			Yes
	Latching pushbutton			Yes
	Button field			Yes
	Timing relay value entry	Yes	Yes	Yes
	Value entry			Yes
	Week clock input			Yes
Enter counter value/reference value/OT	Yes	Yes	Yes	
Value display functions 	Bit display			Yes
	Message bitmap			Yes
	Bargraph			Yes
	Numerical value			Yes
	Timing relay value display			Yes
	Actual values	Yes	Yes	Yes
	Date and time	Yes	Yes	Yes



System overview



Basic devices

easy500	1
Stand-alone	
12 V DC = easy...DA...	
24 V DC = easy...DC...	
24 V AC = easy...AB...	
100 - 240 V AC = easy...AC...	
8 digital inputs	
2 usable as analog inputs (DA, DC or AB versions)	
4 relay outputs (max. 10 A, UL) or 4 transistor outputs	
Display and keypad optional	
Bolt-on and top-hat rail mounting	
Screw terminals	
→ Page 12/6	
easy700	2
Expandable: Digital inputs/outputs and bus systems AS-Interface, CANopen, PROFIBUS-DP, DeviceNet	
12 V DC = easy...DA...	
24 V DC = easy...DC...	
24 V AC = easy...AB...	
100 - 240 V AC = easy...AC...	
12 digital inputs	
4 usable as analog inputs (DA, DC or AB versions)	
6 relay outputs (max. 10 A, UL) or 8 transistor outputs	
Display and keypad optional	
Bolt-on and top-hat rail mounting	
Screw terminals	
→ Page 12/7	

Remote text display

Consists of:	
Display/operating unit MFD-80(-B)	3
Power supply unit/communication module MFD(-AC)-CP4-500	3
Including connection cable (5 m, can be cut to length) for easy500/700	
24 V DC = MFD-CP4-500	
100 - 240 V AC = MFD-AC-CP4-500	
Spring-loaded terminals	
→ Page 12/16	

Ethernet gateway

EASY209-SE	4
24 V DC	
Serial interface easyRelay to Ethernet	
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Bus modules

EASY204-DP	5
PROFIBUS-DP slave connection, 24 V DC	
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EASY205-ASI	6
AS-Interface connection as slave	
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EASY221-C0	7
CANopen connection, 24 V DC	
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EASY222-DN	8
DeviceNet connection, 24 V DC	
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Output expansion

EASY202-RE	9
2 relay outputs (max. 10 A, UL)	
Bolt-on and top-hat rail mounting	
Screw terminals	
→ Page 12/15	

I/O expansions

EASY410...	10
24 V DC	
6 digital inputs	
4 relay outputs (max. 10 A, UL) or 4 transistor outputs	
Bolt-on and top-hat rail mounting	
Screw terminals	
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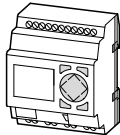


EASY6...	11
24 V DC	
12 digital inputs	
6 relay outputs (max. 10 A, UL) or 8 transistor outputs	
Bolt-on and top-hat rail mounting	
Screw terminals	
→ Page 12/15	

Coupling module

EASY200-EASY	12
For remote connection of a digital I/O expansion through two-pole connection cable (max. 30 m); e.g. NYM 3 × 1.5 mm ²	
Bolt-on and top-hat rail mounting	
Screw terminals	
→ Page 12/15	



Ordering

	Inputs		Outputs		Other features		Supply voltage	Part no. Article no.	Price See price list	Std. pack
	Digital	Of which can be used as analog	Relays 10 A (UL)	Transistor	Display + keypad	Real-time clock				
easy500										
Stand alone										
	8	2	4	-	✓	✓	24 V AC	EASY512-AB-RC 274101		1 off 
	8	2	4	-	-	✓	24 V AC	EASY512-AB-RCX 274102		
	8	-	4	-	✓	-	100 - 240 V AC	EASY512-AC-R 274103		
	8	-	4	-	✓	✓	100 - 240 V AC	EASY512-AC-RC 274104		
	8	-	4	-	-	✓	100 - 240 V AC	EASY512-AC-RCX 274105		
	8	2	4	-	✓	✓	12 V DC	EASY512-DA-RC 274106		
	8	2	4	-	-	✓	12 V DC	EASY512-DA-RCX 274107		
	8	2	4	-	✓	-	24 V DC	EASY512-DC-R 274108		
	8	2	4	-	✓	✓	24 V DC	EASY512-DC-RC 274109		
	8	2	4	-	-	✓	24 V DC	EASY512-DC-RCX 274110		
	8	2	-	4	✓	✓	24 V DC	EASY512-DC-TC 274111		
	8	2	-	4	-	✓	24 V DC	EASY512-DC-TCX 274112		
Customized inscription, user program								EASY-COMBINATION-*1) 257823	1 off 	
<ul style="list-style-type: none"> • Customized inscription of easy control relay trough labeling software Labeleditor or • Supply of easy control relay programmed with user program 										

Notes

Procedure and ordering example for Labeleditor inscription software
 Individually inscribe your device in 4 stages:
 - Download the inscription software: www.moeller.net/support, keyword: "Labeleditor"
 - Creation of label template (menu-guided in the software)
 - Send the label template to the factory by email.
 The email address is automatically set for the selected product by the program. When your template is sent, the Labeleditor issues a file name such as "EASY_12345.zip". This file name is part of the article to be ordered (see Ordering examples).
 - Send order to the Eaton office or the electrical wholesalers.

Ordering example easy

EASY719-DC-RC with "Company logo":
 1 x EASY-COMBINATION-*
 1 x EASY719-DC-RC
 1 x the file name "EASY_xxxx.zip" issued by the Labeleditor

Information relevant for export to North America



Product Standards

IEC/EN see Technical Data; UL 508;
 CSA C22.2 No. 142-M1987;
 CSA C22.2 No. 213-M1987;
 CE marking
 E135462
 NRAQ
 012528
 2252-01 + 2258-02
 UL Listed, CSA certified
 IEC: IP20, UL/CSA Type: -

UL File No.

UL CCN

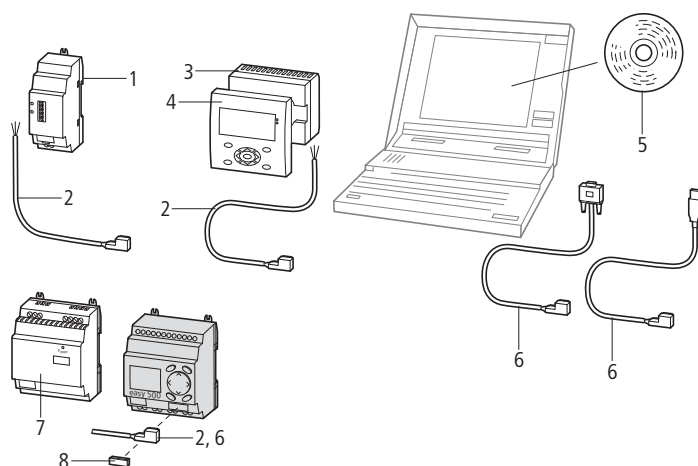
CSA File No.

CSA Class No.

NA Certification

Degree of Protection

1) UL/CSA certification not required

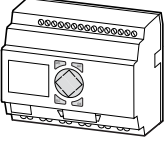






Accessories

1 Ethernet gateway	→ Page 12/16
2 Connection cable	→ Page 12/27
3 Power supply unit/communication	→ Page 12/23
4 Display/keypad	→ Page 12/16
5 Programming software	→ Page 12/9
6 PC programming cable	→ Page 12/9
7 Switched-mode power supply unit	→ Page 12/10
8 Memory card	→ Page 12/9

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	Inputs		Outputs		Other features		Supply voltage	Part no. Article no.	Price See price list	Std. pack
	Digital	Of which can be used as analog	Relays 10 A (UL)	Transistor	Display + keypad	Real-time clock				
easy700										
Expandable: Digital inputs/outputs and bus systems AS-Interface, CANopen, PROFIBUS-DP, DeviceNet										
	12	4	6	–	√	√	24 V AC	EASY719-AB-RC 274113	1 off  	
	12	4	6	–	–	√	24 V AC	EASY719-AB-RCX 274114		
	12	–	6	–	√	√	100 - 240 V AC	EASY719-AC-RC 274115		
	12	–	6	–	–	√	100 - 240 V AC	EASY719-AC-RCX 274116		
	12	4	6	–	√	√	12 V DC	EASY719-DA-RC 274117		
	12	4	6	–	–	√	12 V DC	EASY719-DA-RCX 274118		
	12	4	6	–	√	√	24 V DC	EASY719-DC-RC 274119		
	12	4	6	–	–	√	24 V DC	EASY719-DC-RCX 274120		
	12	4	–	8	√	√	24 V DC	EASY721-DC-TC 274121		
	12	4	–	8	–	√	24 V DC	EASY721-DC-TCX 274122		
Customized inscription, user program										
<ul style="list-style-type: none"> • Customized inscription of easy control relay trough labeling software Labeleditor or • Supply of easy control relay programmed with user program 								EASY-COMBINATION-* ¹⁾ 257823	1 off  	

Notes

Procedure and ordering example for Labeleditor inscription software
Individually inscribe your device in 4 stages:
– Download the inscription software: www.moeller.net/support, keyword: "Labeleditor"
– Creation of label template (menu-guided in the software)
– Send the label template to the factory by email.
The email address is automatically set for the selected product by the program.
When your template is sent, the Labeleditor issues a file name such as "EASY_12345.zip".
This file name is part of the article to be ordered (see Ordering examples).
– Send order to the Eaton office or the electrical wholesalers.

Ordering example easy

EASY719-DC-RC with "Company logo":
1 x EASY-COMBINATION-^{*}
1 x EASY719-DC-RC
1 x the file name "EASY_xxxxx.zip" issued by the Labeleditor

Information relevant for export to North America

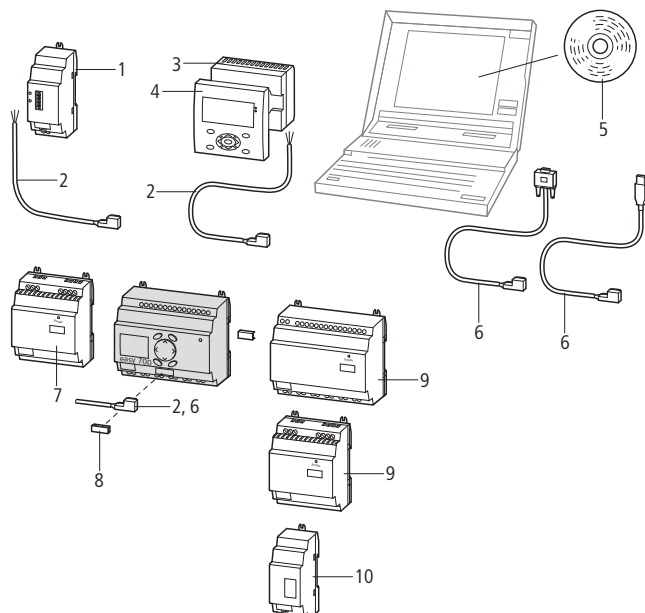


Product Standards

UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Degree of Protection

IEC/EN see Technical Data; UL 508;
CSA C22.2 No. 142-M1987;
CSA C22.2 No. 213-M1987;
CE marking
E135462
NRAQ
012528
2252-01 + 2258-02
UL Listed, CSA certified
IEC: IP20, UL/CSA Type: -

¹⁾ UL/CSA certification not required



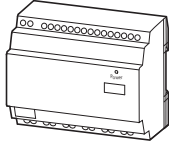


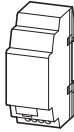
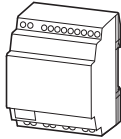
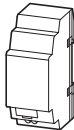


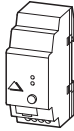


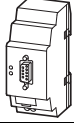

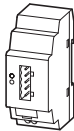
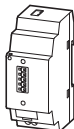




Accessories

- 1 Ethernet gateway
- 2 Connection cable
- 3 Power supply unit/communication module
- 4 Display/keypad
- 5 Programming software
- 6 PC programming cable
- 7 Switched-mode power supply unit
- 8 Memory card
- 9 Inputs/outputs expansion
- 10 output expansion, bus module, coupling module

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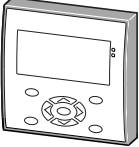


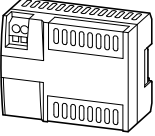










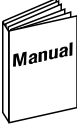
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	Inputs		Outputs		Supply voltage	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America					
	Digital	Relay	Relay	Transistor					 					
I/O expansions														
Can be used through easyLink														
	12	6	–	–	100 - 240 V AC	EASY618-AC-RE 212314	1 off  	Product Standards	IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ, NRAQ7 CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -					
	12	–	–	8	24 V DC	EASY620-DC-TE 212313								
12	6	–	–	24 V DC	EASY618-DC-RE 232112									
	–	2	–	–	24 V DC	EASY202-RE1) 232186								
	6	4	–	–	24 V DC	EASY410-DC-RE 114293								
	6	–	–	4	24 V DC	EASY410-DC-TE 114294								
											NA Certification	Request filed for UL and CSA		
											Degree of Protection	IEC: IP20, UL/CSA Type: -		
Coupling module														
Can be used through easyLink														
	For remote connection of a digital I/O expansion up to 30 m.					EASY200-EASY 212315	1 off  	Product Standards	IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ, NRAQ7 CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -					
Bus modules														
Can be used through easyLink														
	AS-Interface	Slave 4 inputs, 4 outputs, 4 parameter bits Addresses available 0 to 31		–		EASY205-ASI 221598	1 off  	Product Standards	IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ, NRAQ7 CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -					
		PROFIBUS-DP	Slave Addresses available 1 to 126		24 V DC						EASY204-DP 212316			
		CANopen	Addresses available 1 to 127		24 V DC						EASY221-CO 233539			
		DeviceNet	Addresses available 0 to 63		24 V DC						EASY222-DN 233540			
Ethernet gateway														
	Serial interface easyRelay or MFD-...CP8/CP10... to Ethernet, for connecting to easyOPC server, easySoft, or easyCom				24 V DC	EASY209-SE 101520	1 off  							



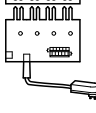

Notes


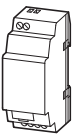

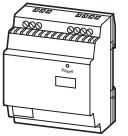



¹⁾ Not for use in combination with basic unit EASY719-DA-...
Cannot be used on the EASY200-EASY coupling module

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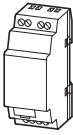


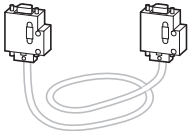





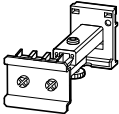

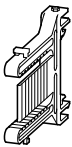

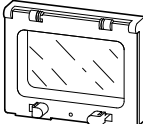


Supply voltage	Description	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America 
Remote text display					
Display/keypad Monochrome display 132 × 64 pixels with switchable backlight IP65, removable silver front frame					
	With keypad, with Moeller company logotype NEMA 4x in conjunction with MFD-XM-80 protective diaphragm → 12/29	MFD-80-B 265251		1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking E135462 UL File No. UL CCN CSA File No. CSA Class No. NA Certification Degree of Protection E135462 NRAQ 012528 2252-01 + 2258-02 UL Listed, CSA certified IEC: IP65, in combination with MFD-XM-80: UL/CSA Type 4X
	With keypad, without Moeller company logotype NEMA 4x in conjunction with MFD-XM-80 protective diaphragm → 12/29	MFD-80-B-X 284905			
	Without keypad, with Moeller company logotype	MFD-80 265250		1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking E135462 UL File No. UL CCN CSA File No. CSA Class No. NA Certification Degree of Protection E135462 NRAQ 012528 2252-01 + 2258-02 UL Listed, CSA certified IEC: IP65, UL/CSA Type 4X
	Without keypad, without Moeller company logotype NEMA 4x	MFD-80-X 284904			
Power supply unit/communication modules IP20, can be combined with display/operating unit MFD-80... as remote text display					
	24 V DC With connection cable (5 m, can be cut to length)	MFD-CP4-500 274094		1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking E135462 UL File No. UL CCN CSA File No. CSA Class No. NA Certification Degree of Protection E135462 NRAQ 012528 2252-01 + 2258-02 UL Listed, CSA certified IEC: IP20, UL/CSA Type: -
	100 - 240 V AC With connection cable (5 m, can be cut to length)	MFD-AC-CP4-500 286823			
	24 V DC Without connection cable	MFD-CP4 280888			
	100 - 240 V AC Without connection cable	MFD-AC-CP4 286822			
Programming software					
	Menu selection in 13 languages Operating systems: Windows 2000 SP4, Windows XP SP3, Windows Vista (32 Bit), Windows 7 (32 Bit)	EASY-SOFT-BASIC 284545 EASY-SOFT-PRO 266040		1 off 	UL/CSA certification not required
Programming cable					
	SUB-D, 9 pole, serial, 2 m	EASY-PC-CAB 202409		1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking E135462 UL File No. UL CCN CSA File No. CSA Class No. NA Certification Degree of Protection E135462 NRAQ 012528 2252-01 + 2258-02 UL Listed, CSA certified IEC: IP20, UL/CSA Type: -
	USB, 2 m	EASY-USB-CAB 107926		1 off	
Connecting cables					
	For connecting the MFD(-AC)-CP4 or EASY209-SE with easy500/easy700, 5 m, can be cut to length	MFD-CP4-500-CAB5 280886		1 off 	
Memory cards					
	32-kB module	EASY-M-32K 270884		1 off 	
Manuals					
	Deutsch	AWB2528-1508D 278499		1 off	
	English	AWB2528-1508GB 278500		1 off	



Supply voltage	Description	For use with	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America 
Input/output simulators						
	24 V DC	With plug-in power supply unit 100 - 240 V AC/ 24 V DC	easy500-DC EASY412-DC-SIM 212318		1 off	
	24 V DC	With plug-in power supply unit 120 V AC/24 V DC, plug for North America	easy500-DC EASY412-DC-SIM-NA 222566			
	24 V DC	With plug-in power supply unit 100 - 240 V AC/ 24 V DC	easy700-DC easy800-DC EC4P EASY800-DC-SIM 256278			

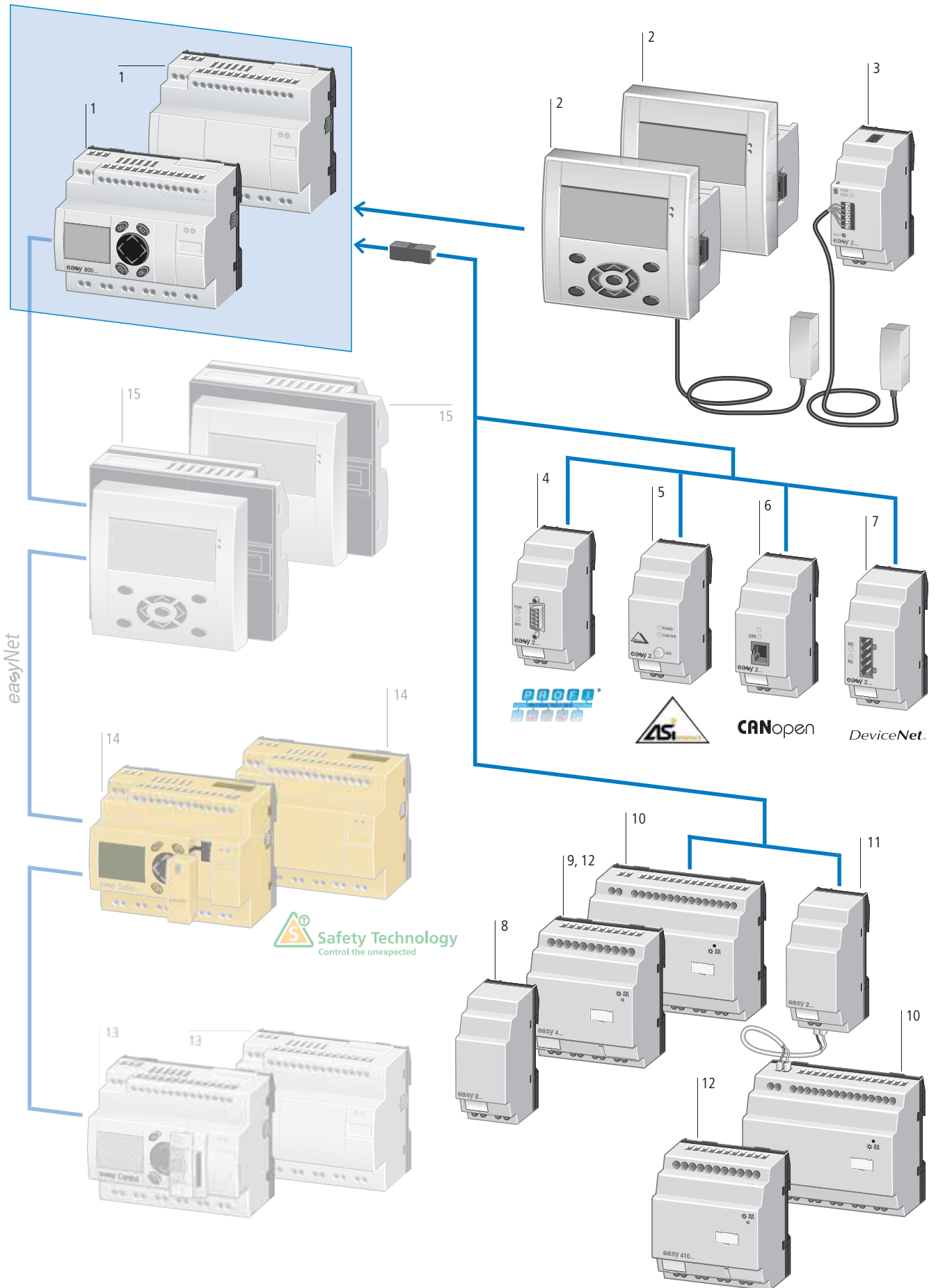
Description	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America 
Switched-mode power supply units				
Primary-switched mode, stabilized				
	EASY200-POW 229424		1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking E135462
	EASY400-POW 212319		1 off	UL File No. UL CCN CSA File No. CSA Class No. NA Certification Degree of Protection NRAQ 012528 2252-01 + 2258-02 UL Listed, CSA certified IEC: IP20, UL/CSA Type: -
	EASY430-POW 110940		1 off 	Product Standards IEC/EN see Technical Data; UL 508;
	EASY500-POW 110941		1 off 	CSA C22.2 No. 107.1-01; CE marking E300415
	EASY600-POW 262399		1 off 	UL File No. UL CCN CSA File No. UL report applies to both US and Canada 3211-87, 3211-07 UL Listed, certified by UL for use in Canada IEC: IP20, UL/CSA Type: -

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Description	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America 
Ballast				
To increase the AC input current				
 6 channels, cable length up to 100 m	EASY256-HCI 231168		1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2252-01 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
PROFIBUS-DP data cable				
 Twisted pair, without plug, 2-core, 2 x 0.64 mm ² (only suitable for fixed wiring) 100 m	ZB4-900-KB1 206983		100 m	
PROFIBUS-DP bus connector plug				
 Pins, 9 pole Cable entry, angled 90°	ZB4-209-DS2 206982		1 off	
 Metallized insulated housing Maximum transfer rate 12 MBit/s Integrated switch (accessible from the outside) for the bus terminating resistors Terminal block for two cable entries, with straight or 90° angled cable entry, as required	ZB4-209-DS3 217820		1 off	
Connection plug				
 Bus connector plug between base unit and expansion unit/bus module	EASY-LINK-DS 221607		1 off 	UL/CSA certification not required
Fixing bracket For screw fixing to mounting plate				
 3 fixing brackets per easy400, 500, 600, 700, 800, EC4P, ES4P 2 fixing brackets per easy200 3 fixing brackets per, MFD...-CP8/CP10...	ZB4-101-GF1 061360		9 off 	UL/CSA certification not required
Telescopic clip				
 With 35mm top-hat rail to IEC/EN 60715 for adjusting the mounting depth when rear mounting in CI-K... enclosures and cabinets. Stepless adjustment via scale from 75 – 115 mm. Screw and snap fastening	M22-TA 226161		1 off 	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94-91; CE marking UL File No. E29184 UL CCN NKCR CSA File No. 012528 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified
Top-hat rail adapter for inspection flap window				
 12 mm x 66 mm x 82 mm Mounting on hinged inspection window, for front fitting of devices. Complete set, consisting of 2 brackets and 4 screws	SKF-HA 233782		1 off 	UL/CSA certification not required
Inspection window				
 94 mm x 77 mm x 25 mm (4 space units) For use with easy500	SKF-FF4 233780		1 off 	UL/CSA certification not required
130 mm x 77 mm x 25 mm (6 space units) For use with EASY700, EASY800, EC4P, ES4P	SKF-FF6 233781		1 off 	



System overview



Basic device

easy800	1
Expandable: Digital and analog inputs/outputs and bus systems AS-Interface, CANopen, PROFIBUS-DP, DeviceNet	
Bus system easyNet on board	
24 V DC = easy...DC... 100 - 240 V AC = easy...AC...	
12 digital inputs 4 usable as analog inputs (DC versions)	
6 relay outputs (max. 10 A, UL) or 8 transistor outputs	
1 analog output, optional on DC versions	
Display and keypad optional	
Bolt-on and top-hat rail mounting	
Screw terminals	
Technical overview	
→ Page 12/14	

Remote text display

Consists of:	
Display/operating unit MFD-80(-B)	2
Power supply/communication module	2
Including connection cable (5 m, can be cut to length) for easy800 24 V DC = MFD-CP4-800 100 - 240 V AC = MFD-AC-CP4-800	
Spring-loaded terminals	
→ Page 12/16	

Ethernet gateway

EASY209-SE	3
24 V DC Serial interface easyRelay to Ethernet	
→ Page 12/16	

Bus modules

EASY204-DP4	4
PROFIBUS DP connection as slave, 24 V DC	
→ Page 12/16	
EASY205-ASI	5
AS-Interface connection as slave	
→ Page 12/16	
EASY221-CO	6
CANopen connection, 24 V DC	
→ Page 12/16	
EASY222-DN	7
DeviceNet connection, 24 V DC	
→ Page 12/16	

Output expansion

EASY202-RE	8
2 relay outputs (max. 10 A, UL)	
Bolt-on and top-hat rail mounting	
Screw terminals	
→ Page 12/15	

I/O expansions

EASY406-DC-ME	9
24 V DC 1 digital input	
2 analog inputs (2 × 0–10 V, 2 × 0–20 mA, or 2 × Pt100; voltage inputs can be combined in any arrangement Voltage inputs (0–10 V) can optionally be used as digital inputs	
2 transistor outputs	
1 analog output (0–10 V)	
Bolt-on and top-hat rail mounting	
Screw terminals	
→ Page 12/15	

EASY411-DC-ME	9
24 V DC 1 digital input	
6 analog inputs (2 × 0–10 V, 2 × 0–20 mA and 2 × Pt100; voltage inputs (0–10 V) can optionally be used as digital inputs	
2 transistor outputs/ 2 analog outputs (0–10 V)	
Bolt-on and top-hat rail mounting	
Screw terminals	
→ Page 12/15	

EASY6...	10
24 V DC 12 digital inputs	
6 relay outputs (max. 10 A, UL) or 8 transistor outputs	
Bolt-on and top-hat rail mounting	
Screw terminals	
→ Page 12/15	

EASY410...	12
24 V DC 6 digital inputs	
4 relay outputs (max. 10 A, UL) or 4 transistor outputs	
Bolt-on and top-hat rail mounting	
Screw terminals	
→ Page 12/15	

Coupling module

EASY200-EASY	11
For remote connection of a digital I/O expansion through two-pole connection cable (max. 30 m); e.g. NYM 3 × 1.5 mm ²	
Bolt-on and top-hat rail mounting	
Screw terminals	
→ Page 12/15	

Compact PLC easyControl

EC4P	13
→ Page 14/64	

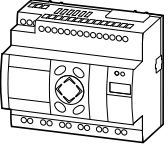


Safety control relays easySafety

ES4P	14
→ Page 13/5	

Multi-function display MFD-Titan	15
→ Page 12/22	



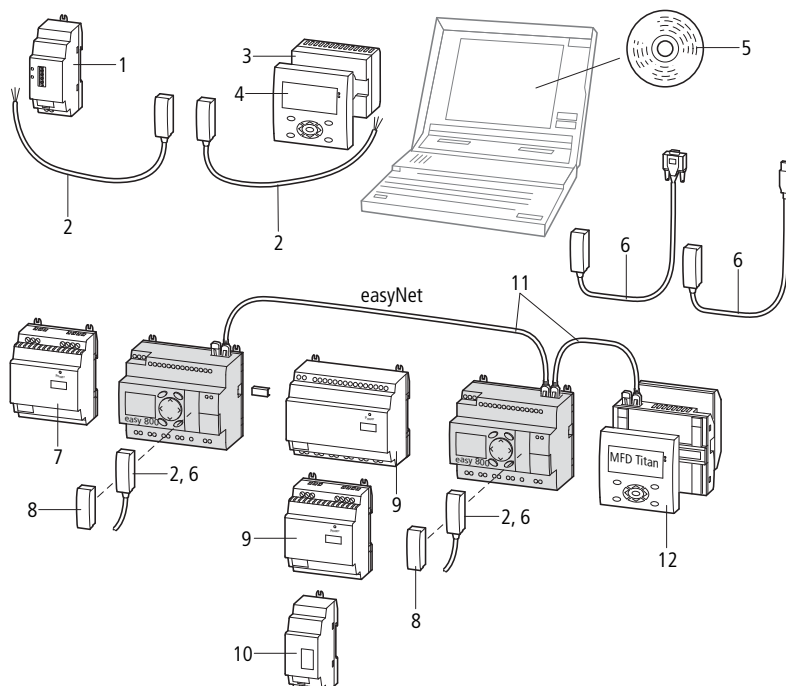
Ordering

Inputs		Outputs			Other features		Supply voltage	Part no. Article no.	Price See price list	Std. pack
Digital	Of which can be used as analog	Relay 10 A (UL)	Transistor	Analog	Display + keypad	Real-time clock				
easy800										
Expandable: Digital and analog inputs/outputs and bus systems AS-Interface, CANopen, PROFIBUS-DP, DeviceNet Bus system easyNet on board Individual laser inscription possible with EASY-COMBINATION-* → Page 12/6										
										
easyNet on board										
12	-	6	-	-	✓	✓	100 - 240 V AC	EASY819-AC-RC 256267	1 off  	
12	-	6	-	-	-	✓	100 - 240 V AC	EASY819-AC-RCX 256268		
12	4	6	-	-	✓	✓	24 V DC	EASY819-DC-RC 256269		
12	4	6	-	-	-	✓	24 V DC	EASY819-DC-RCX 256270		
12	4	6	-	1	✓	✓	24 V DC	EASY820-DC-RC 256271		
12	4	6	-	1	-	✓	24 V DC	EASY820-DC-RCX 256272		
12	4	-	8	-	✓	✓	24 V DC	EASY821-DC-TC 256273		
12	4	-	8	-	-	✓	24 V DC	EASY821-DC-TCX 256274		
12	4	-	8	1	✓	✓	24 V DC	EASY822-DC-TC 256275		
12	4	-	8	1	-	✓	24 V DC	EASY822-DC-TCX 256276		

Information relevant for export to North America



Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking
 UL File No. E135462
 UL CCN NRAQ
 CSA File No. 012528
 CSA Class No. 2252-01 + 2258-02
 NA Certification UL Listed, CSA certified
 Degree of Protection IEC: IP20, UL/CSA Type: -



Accessories

- 1 Ethernet gateway → Page 12/16
- 2 Connection cable → Page 12/27
- 3 Power supply unit/communication module → Page 12/23
- 4 Display/keypad → Page 12/16
- 5 Programming software → Page 12/9
- 6 PC programming cable → Page 12/9
- 7 Switched-mode power supply unit → Page 12/10
- 8 Memory card → Page 12/9
- 9 Inputs/outputs expansion → Page 12/15
- 10 output expansion units, bus module, coupling module → Page 12/16
- 11 easyNet → Page 12/18
- 12 Multi-function display MFD-Titan → Page 12/22


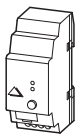

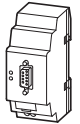

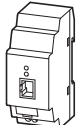

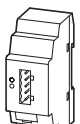

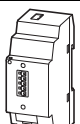

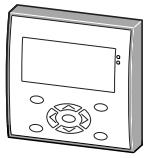




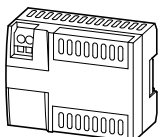

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	Inputs		Outputs		Supply voltage	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
	Digital	Relay 10 A (UL)	Transistor						
I/O expansions									
Can be used through easyLink									
	12	6	–		100 - 240 V AC	EASY618-AC-RE 212314		1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ, NRAQ7 CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
	12	–	8		24 V DC	EASY620-DC-TE 212313			
	12	6	–		24 V DC	EASY618-DC-RE 232112		1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ, NRAQ7 CSA File No. 012528 CSA Class No. 2252-01 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
	–	2	–		24 V DC	EASY202-RE1) 232186			
	6	4	–		24 V DC	EASY410-DC-RE 114293		1 off 	Product Standards IEC/EN see Technical Data; UL 508; CE marking; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987 UL File No. E135462 UL CCN NRAQ, NRAQ7 CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
	6	–	4		24 V DC	EASY410-DC-TE 114294			




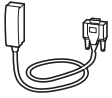



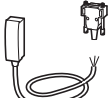
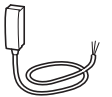



Coupling module									
Can be used through easyLink									
	For remote connection of a digital I/O expansion up to 30 m.					EASY200-EASY 212315		1 off 	Product Standards IEC/EN see Technical Data; UL 508; CE marking; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987 UL File No. E135462 UL CCN NRAQ, NRAQ7 CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -

	Inputs		Outputs			Supply voltage	Part no. Article no.	Price See price list	Std. pack
	Digital / analog	Of which usable as digital	Relays 10 A (UL)	Transistor	Analog				
I/O expansions									
Can be used through easyLink									
	1 / 2 ²⁾	2	–	2	1	24 V DC	EASY406-DC-ME 114295		1 off
	1 / 6 ³⁾	2	–	2	2	24 V DC	EASY411-DC-ME 116567		1 off


Notes									
¹⁾ Not for use in combination with EASY719-DA-...basic unit Cannot be used on the EASY200-EASY coupling module ²⁾ 2 x 0 - 10 V, 2 x 0 - 20 mA, 2 x RTD (2/3-wire connection); any combination Voltage inputs (0–10 V) can optionally be used as digital inputs ³⁾ 2 x 0 - 10 V, 2 x 0 - 20 mA, 2 x Pt100 (2/3 wire connection); Voltage inputs (0–10 V) can optionally be used as digital inputs					Information relevant for export to North America				
						NA Certification	Request filed for UL and CSA		
						Degree of Protection	IEC: IP20, UL/CSA Type: -		


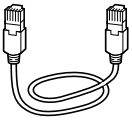







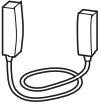

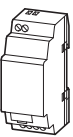




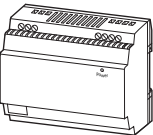

Description	Supply voltage	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America 
Bus modules					
Can be used through easyLink					
	AS-Interface Slave 4 inputs, 4 outputs, 4 parameter bits Addresses available 0 to 31	–	EASY205-ASI 221598	1 off 	Product Standards IEC/EN see Technical Data; UL 508; CE marking; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987 E135462 NRAQ, NRAQ7 UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
	PROFIBUS-DP Slave Addresses available 1 to 126	24 V DC	EASY204-DP 212316	1 off 	
	CANopen Addresses available 1 to 127	24 V DC	EASY221-CO 233539	1 off 	
	DeviceNet Addresses available 0 to 63	24 V DC	EASY222-DN 233540	1 off 	
Ethernet gateway					
	Serial interface easyRelay or MFD...CP8/CP10... to Ethernet, for connecting to easyOPC server, easySoft, or easyCom	24 V DC	EASY209-SE 101520	1 off 	
Remote text display					
Display/keypad Monochrome display 132 × 64 pixels with switchable backlight IP65, removable silver front frame					
	With keypad, with Moeller company logotype NEMA 4x in conjunction with MFD-XM-80 protective diaphragm → 12/29		MFD-80-B 265251	1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking E135462 NRAQ UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP65, in combination with MFD-XM-80: UL/CSA Type 4X
	With keypad, without Moeller company logotype NEMA 4x in conjunction with MFD-XM-80 protective diaphragm → 12/29		MFD-80-B-X 284905	1 off 	
	Without keypad, with Moeller company logotype		MFD-80 265250	1 off 	
	Without keypad, without Moeller company logotype NEMA 4x		MFD-80-X 284904	1 off 	
Power supply unit/communication modules					
IP20, can be combined with display/operating unit MFD-80... as remote text display					
	With connection cable (5 m, can be cut to length)	24 V DC	MFD-CP4-800 274095	1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking E135462 NRAQ UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
	With connection cable (5 m, can be cut to length)	100 - 240 V AC	MFD-AC-CP4-800 286824		
	Without connection cable	24 V DC	MFD-CP4 280888		
	Without connection cable	100 - 240 V AC	MFD-AC-CP4 286822		

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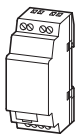


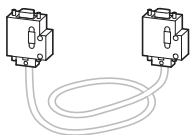




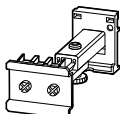

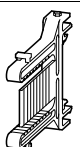

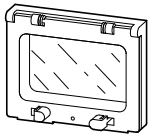

Description	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America 
Programming software				
 Menu selection in 13 languages Operating systems: Windows 2000 SP4, Windows XP SP3, Windows Vista (32 Bit), Windows 7 (32 Bit)	EASY-SOFT-PRO 266040		1 off 	UL/CSA certification not required
Programming cable				
 Sub-D, 9 pole, serial, 2 m	EASY800-PC-CAB 256277		1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking E135462
 USB, 2 m	EASY800-USB-CAB 106408		1 off 	UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2258-02 NA Certification UL Listed, CSA certified
Modem cable				
 Configurable modem, printer and programming cable, possible transfer rate 56 kbaud, 9 pole Sub-D plug (plug + socket for assembly by user)	EASY800-MO-CAB 286079		1 off	
Connecting cables				
 For connecting MFD(-AC)-CP4 with easy800/MFD-.-CP8/CP10... 5 m, can be cut to length	MFD-CP4-800-CAB5 280887		1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking E135462 UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
Memory cards				
 256-kB module	EASY-M-256K 256279		1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking E135462 UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -



Supply voltage	Description	For use with	Part no. Article no.	Price See price list	Std. pack
Input/output simulator					
24 V DC	With plug-in power supply unit 100 - 240 V AC/ 24 V DC	easy700-DC easy800-DC EC4P	EASY800-DC-SIM 256278		1 off
Manual					
	User manual, German		AWB2528-1423D 261371		1 off
	User manual, English		AWB2528-1423GB 262671		1 off

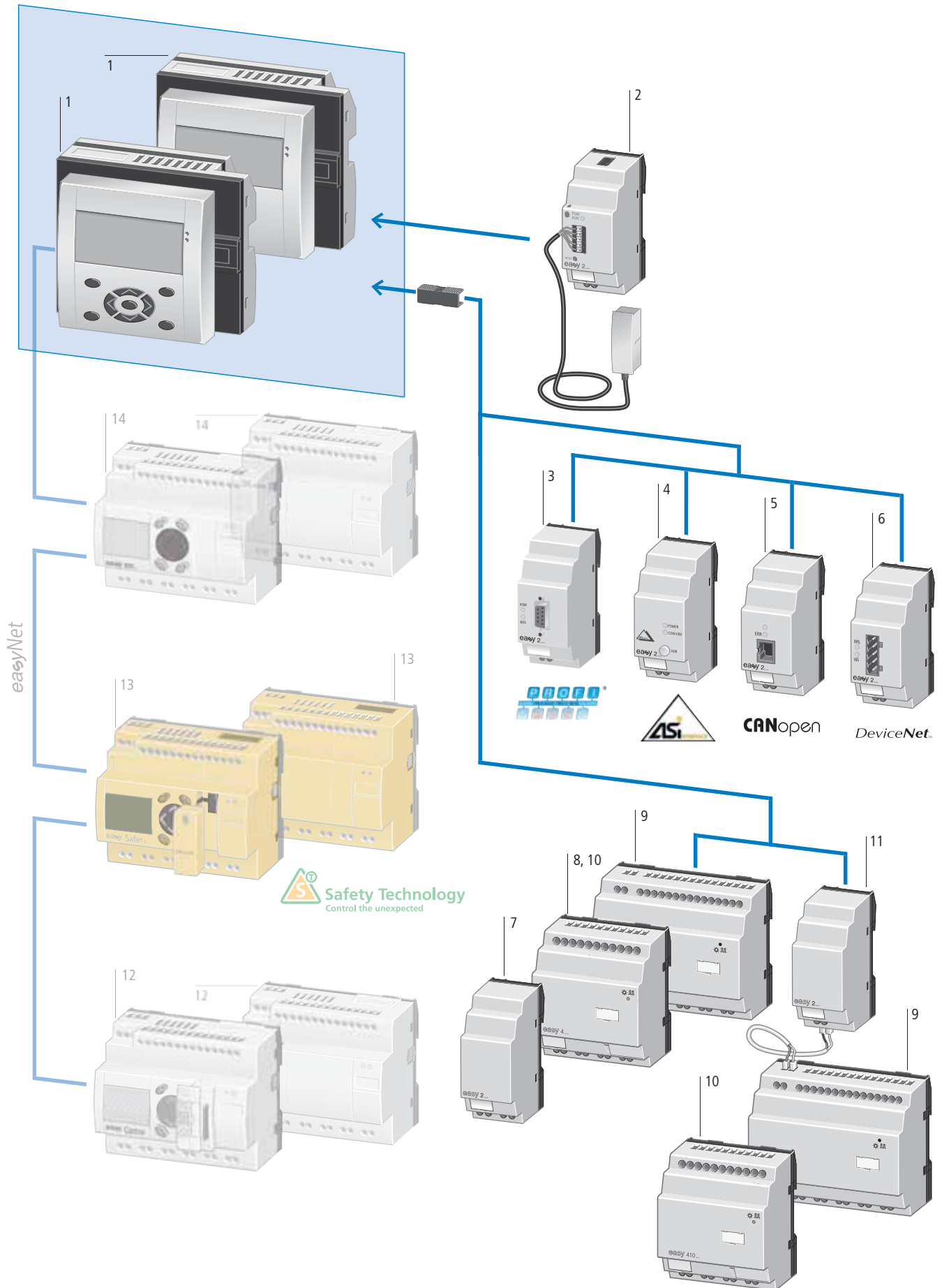
Description	For use with	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America 
Network connection cables					
	Length: 0.3 m	easyNet	EASY-NT-30 256283	1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
	Length: 0.8 m	easyNet	EASY-NT-80 256284		
	Length: 1.5 m	easyNet	EASY-NT-150 256285		
Bus termination resistor					
	8 pole, RJ45, 124 Ω Connection to PIN 1 and PIN 2	easyNet	EASY-NT-R 256281	2 off 	
Data cable					
	4 x 0.14 mm ² , twisted pair, AWG 26 Length: 100 m	easyNet	EASY-NT-CAB 256286	1 off 	UL File No. E135462 UL CCN NRAQ NA Certification UL Listed Degree of Protection IEC: IP 20, UL/CSA Type: -
Bus connector plug					
	8 pole, RJ45	easyNet	EASY-NT-RJ45 256280	10 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
Crimping tool					
	For RJ45 plug	EASY-NT-CAB EASY-NT-RJ45	EASY-RJ45-TOOL 256282	1 off	
Point-to-point connection cable					
	Serial interface for connecting MFD-...-CP8/CP10... to easy800 or MFD-...-CP8/CP10..., 5 m, can be cut to length		MFD-800-CAB5 266041	1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
Switched-mode power supply units					
Primary-switched mode, stabilized					
	Rated input voltage: 50/60 Hz: 100 - 240 V Rated output voltage: 24 V/12 V DC Rated output current: 0.35 A/20 mA		EASY200-POW 229424	1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
	Rated input voltage: 50/60 Hz: 100 - 240 V AC Rated output voltage (residual ripple): 24 V DC (± 3 %) Rated output current: 1.25 A		EASY400-POW 212319	1 off	
			EASY430-POW 110940	1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 107.1-01; CE marking
	Rated input voltage: 50/60 Hz: 100 - 240 V AC Rated output voltage (residual ripple): 24 V DC (± 3 %) Rated output current: 2.5 A		EASY500-POW 110941	1 off 	UL File No. E300415 UL CCN NMTR, NMTR7 CSA File No. UL report applies to both US and Canada
	Rated input voltage: 50/60 Hz: 100 - 240 V AC Rated output voltage (residual ripple): 24 V DC (± 3 %) Rated output current: 4.2 A		EASY600-POW 262399	1 off 	CSA Class No. 3211-87, 3211-07 NA Certification UL Listed, certified by UL for use in Canada Degree of Protection IEC: IP20, UL/CSA Type: -

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Description	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America 
Ballast				
To increase the AC input current				
	6 channels, cable length up to 100 m EASY256-HCI 231168		1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2252-01 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
PROFIBUS-DP data cable				
	Twisted pair, without plug, 2-core, 2 x 0.64 mm ² (only suitable for fixed wiring) 100 m ZB4-900-KB1 206983		100 m	
PROFIBUS-DP bus connector plug				
	Pins, 9 pole Cable entry, angled 90° ZB4-209-DS2 206982		1 off	
	Metallized insulated housing Maximum transfer rate 12 Mbits/s Integrated plug, accessible from outside, for bus terminating resistors Terminal block for two cable entries, with straight or 90° angled cable entry, as required ZB4-209-DS3 217820		1 off	
Connection plug				
	Bus connector plug between base unit and expansion unit/bus module EASY-LINK-DS 221607		1 off 	UL/CSA certification not required
Fixing bracket For screw fixing to mounting plate				
	3 fixing brackets per easy400, 500, 600, 700, 800, EC4P, ES4P 2 fixing brackets per easy200 3 fixing brackets per MFD...-CP8/CP10-... ZB4-101-GF1 061360		9 off 	UL/CSA certification not required
Telescopic clip				
	With 35 mm top-hat rail to IEC/EN 60715 for mounting depth compensation when rear mounting in CI-K... enclosures and cabinets. Stepless adjustment via scale from 75 – 115 mm. Screw and snap fastening M22-TA 226161		1 off 	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94-91; CE marking UL File No. E29184 UL CCN NKCR CSA File No. 012528 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified
Top-hat rail adapter for inspection flap window				
	12 mm x 66 mm x 82 mm Mounting on hinged inspection window, for front fitting of devices. Complete set, consisting of 2 brackets and 4 screws SKF-HA 233782		1 off 	UL/CSA certification not required
Inspection window				
	130 mm x 77 mm x 25 mm (6 space units) For use with EASY700, EASY800, EC4P, ES4P SKF-FF6 233781		1 off 	UL/CSA certification not required



System overview



MFD-Titan

The multi-function display MFD-Titan can be used in the following combinations:

Power supply unit/CPU
Power supply unit/CPU + I/O modules
Power supply unit/CPU + display and operating unit
Power supply unit/CPU + display and operating unit + I/O modules

→ Page 12/22

I/O modules 1

24 V DC
100 - 240 V AC

12 digital inputs
4 usable as analog inputs
(DC versions)

4 relay outputs (max. 10 A, UL)
or 4 transistor outputs

1 analog output,
optional on DC versions

Spring-loaded terminals

→ Page 12/24

I/O modules with temperature measuring 1

24 V DC

6 digital inputs
2 of which usable as analog inputs
2 Pt 100 or 2 Ni1000 RTD inputs

4 transistor outputs

1 Analog output, optional

Spring-loaded terminals

→ Page 12/24

Power supply unit/CPU module 1

24 V DC
100 - 240 V AC

Bus system easyNet optionally
on-board

→ Page 12/22

Display/keypad 1

24 V DC

Monochrome display
132 × 64 pixels

With or without keypad

Custom laser labeling possible

→ Page 12/16

Ethernet gateway

EASY209-SE 2

24 V DC

Serial interface, PSU/CPU module to
Ethernet

→ Page 12/16

Bus modules

EASY204-DP 3

PROFIBUS DP connection as slave,
24 V DC

→ Page 12/16

EASY221-CO 5

CANopen connection, 24 V DC

→ Page 12/16

EASY205-ASI 4

AS-Interface connection as slave

→ Page 12/16

EASY222-DN 6

DeviceNet connection, 24 V DC

→ Page 12/16

Output expansion

EASY202-RE 7

2 relay outputs (max. 10 A, UL)

Bolt-on and top-hat rail mounting

Screw terminals

→ Page 12/15

I/O expansions

EASY406-DC-ME 8

24 V DC

1 digital input

2 analog inputs
(2 × 0–10 V, 2 × 0–20 mA, 2 × RTD);
any combination
Voltage inputs (0–10 V) can optionally
be used as digital inputs

2 transistor outputs

1 analog output (0 - 10 V)

Bolt-on and top-hat rail mounting

Screw terminals

→ Page 12/15

EASY411-DC-ME 8

24 V DC

1 digital input

6 analog inputs
(2 × 0 - 10 V, 2 × 0 - 20 mA, 2 × Pt100);
Voltage inputs (0–10 V) can optionally
be used as digital inputs

2 transistor outputs/
2 Analog outputs (0 - 10 V)

Bolt-on and top-hat rail mounting

Screw terminals

→ Page 12/15

EASY6... 9

24 V DC

12 digital inputs

6 relay outputs (max. 10 A, UL)
or 8 transistor outputs

Bolt-on and top-hat rail mounting

Screw terminals

→ Page 12/15

EASY410... 10

24 V DC

6 digital inputs

4 relay outputs (max. 10 A, UL)
or 4 transistor outputs

Bolt-on and top-hat rail mounting

Screw terminals

→ Page 12/15

Coupling module

EASY200-EASY 11

For remote connection of a digital
I/O expansion through two-pole
connection cable (max. 30 m);
e.g. NYM 3 × 1.5 mm²

→ Page 12/15

Compact PLC easyControl

EC4P 12

→ Page 14/64

Safety control relays
easySafety

ES4P 13

→ Page 13/5


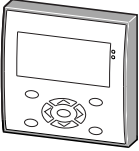




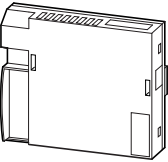

Control relays easy800

EASY8... 14

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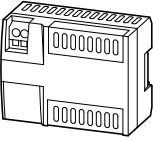




Ordering

Supply voltage	Description	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America 
Display/keypad					
Monochrome display 132 × 64 pixels with switchable backlight IP65, removable silver front frame					
	With keypad, with Moeller company logotype NEMA 4x in conjunction with MFD-XM-80 protective diaphragm → 12/29	MFD-80-B 265251		1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking E135462 UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP65, in combination with MFD-XM-80: UL/CSA Type 4X
	With keypad, without Moeller company logotype NEMA 4x in conjunction with MFD-XM-80 protective diaphragm → 12/29	MFD-80-B-X 284905		1 off 	
	Without keypad, with Moeller company logotype NEMA 4x	MFD-80 265250		1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking E135462 UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP65, UL/CSA Type 4X
	Without keypad, without Moeller company logotype NEMA 4x	MFD-80-X 284904		1 off 	
Power supply unit/CPU module					
Can be combined with display and control unit MFD-80-.. and I/O module; expandable: Digital and analog inputs/outputs and bus systems AS-Interface, CANopen, PROFIBUS-DP, DeviceNet; bus system easyNet optional on-board IP20 Spring-loaded terminals					
	Supply voltage				
	100 - 240 V AC	Program and screen memory, with easyNet	MFD-AC-CP8-NT 274092	1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking E135462 UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
	100 - 240 V AC	Program and screen memory, without easyNet	MFD-AC-CP8-ME 274091		
	24 V DC	Program and screen memory, without easyNet	MFD-CP8-ME 267164		
	24 V DC	Program and screen memory, with easyNet	MFD-CP8-NT 265253		
	24 V DC	Dual program and screen memory as MFD-...-CP8..., without easyNet	MFD-CP10-ME ¹⁾ 133801		
	24 V DC	Dual program and screen memory as MFD-...-CP8..., with easyNet	MFD-CP10-NT ¹⁾ 133800	1 off	

¹⁾ Note¹⁾ For availability please inquire

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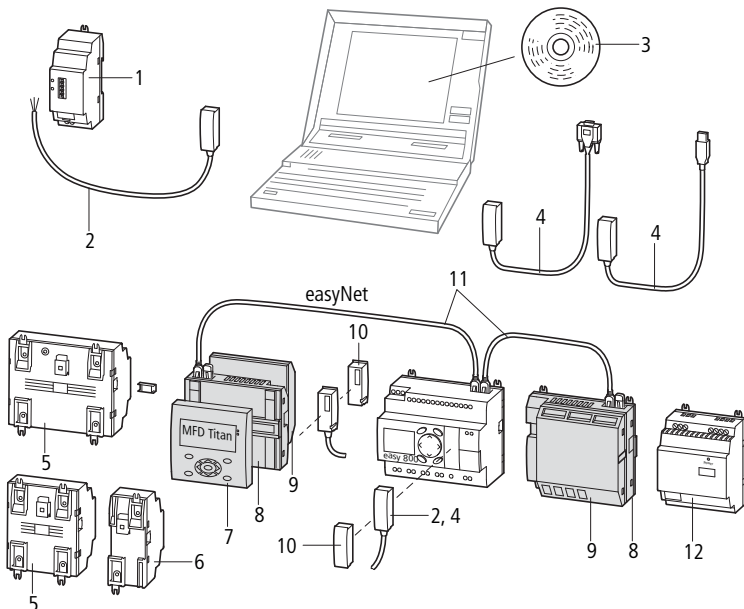
Supply voltage	Description	For use with	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America 
Power supply unit/communication modules						
IP20, can be combined with display/operating unit MFD-80... as remote text display						
	24 V DC	With connection cable (5 m, can be cut to length)	easy500 easy700	MFD-CP4-500 274094	1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking E135462 UL File No. UL CCN CSA File No. NRAQ CSA Class No. 012528 NA Certification 2252-01 + 2258-02 Degree of Protection UL Listed, CSA certified IEC: IP20, UL/CSA Type: -
	24 V DC	With connection cable (5 m, can be cut to length)	easy800 EC4P ES4P	MFD-CP4-800 274095		
	100 - 240 V AC	With connection cable (5 m, can be cut to length)	easy500 easy700	MFD-AC-CP4-500 286823		
	100 - 240 V AC	With connection cable (5 m, can be cut to length)	easy800 EC4P ES4P	MFD-AC-CP4-800 286824		
	24 V DC	Without connection cable		MFD-CP4 280888		
	100 - 240 V AC	Without connection cable		MFD-AC-CP4 286822		
Customized inscription, user program						
<ul style="list-style-type: none"> Customized inscription of multi-function display with labeling software Labeleditor or Supply of multi-function display programmed with user program 		MFD-80... MFD-CP8... MFD-CP10...	MFD-COMBINATION-* 265260	1 off 	UL/CSA certification not required	

Notes

Procedure and ordering example for Labeleditor inscription software
 Individually inscribe your device in 4 stages:
 - Download the inscription software: www.moeller.net/support, keyword: "Labeleditor"
 - Creation of label template (menu-guided in the software)
 - Send the label template to the factory by email. The email address is automatically set for the selected product by the program. When your template is sent, the Labeleditor issues a file name such as "EASY_12345.zip". This file name is part of the article to be ordered (see Ordering examples).
 - Send order to the Eaton office or the electrical wholesalers.

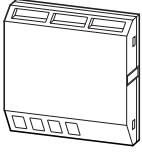










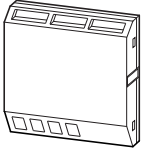












Ordering example: MFD-Titan

MFD-80-B multi-function display with "company name":
 1 x MFD-COMBINATION-*
 1 x MFD-80-B
 1 x the file name "MFD_xxxxx.zip" issued by the Labeleditor



Accessories

1 Ethernet gateway	→ Page 12/16
2 Connection cable	→ Page 12/27
3 Programming software	→ Page 12/9
4 PC programming cable	→ Page 12/9
5 Inputs/outputs expansion	→ Page 12/15
6 output expansion, bus module, coupling module	→ Page 12/16
7 Display/keypad	→ Page 12/16
8 Power supply unit/CPU module	→ Page 12/23
9 I/O module	→ Page 12/17
10 Memory card	→ Page 12/9
11 easyNet	→ Page 12/18
12 Switched-mode power supply unit	→ Page 12/10

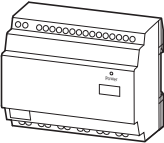

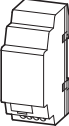
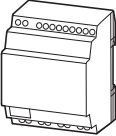
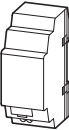

Power supply	For use with	Inputs			Outputs			Temperature range	Part no. Article no.	Price See price list	Std. pack
		Digital	Of which can be used as analog	Pt100	Relays 10 A (UL)	Transistor	Analog				
I/O modules											
IP20, spring-loaded terminals											
											
24 V DC	MFD-CP8... MFD-CP10...	12	4	-	4	-	-	-	MFD-R16 265254	1 off  	
24 V DC	MFD-CP8... MFD-CP10...	12	4	-	-	4	-	-	MFD-T16 265255	1 off  	
24 V DC	MFD-CP8... MFD-CP10...	12	4	-	4	-	1	-	MFD-RA17 265364	1 off  	
24 V DC	MFD-CP8... MFD-CP10...	12	4	-	-	4	1	-	MFD-TA17 265256	1 off  	
100 - 240 V DC	MFD-AC-CP8...	12	-	-	4	-	-	-	MFD-AC-R16 274093	1 off  	
I/O module with temperature measuring											
IP20, spring-loaded terminals Temperature range configurable											
											
24 V DC	MFD-CP8... as of device version 08, MFD-CP10...	6	2	2	-	4	-	-40...+90 °C 0...+250 °C 0...+400 °C	MFD-TP12-PT-A 106042	1 off  	
		6	2	2	-	4	-	-200...+200 °C 0...+850 °C	MFD-TP12-PT-B 106043	1 off  	
		6	2	-	-	4	-	-40...+90 °C 0...+250 °C	MFD-TP12-NI-A 106044	1 off  	
		6	2	2	-	4	1	-40...+90 °C 0...+250 °C 0...+400 °C	MFD-TAP13-PT-A 106045	1 off  	
		6	2	2	-	4	1	-200...+200 °C 0...+850 °C	MFD-TAP13-PT-B 106046	1 off  	
		6	2	-	-	4	1	-40...+90 °C 0...+250 °C	MFD-TAP13-NI-A 106047	1 off  	

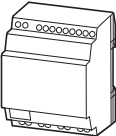


Information relevant for export to North America



Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking
 UL File No. E135462
 UL CCN NRAQ
 CSA File No. 012528
 CSA Class No. 2252-01 + 2258-02
 NA Certification UL Listed, CSA certified
 Degree of Protection IEC: IP20, UL/CSA Type: -

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	Inputs			Outputs			Supply voltage	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
	Digital	Relay 10 A (UL)	Transistor	Relay 10 A (UL)	Transistor	Transistor					
I/O expansions											
Can be used through easyLink											
	12	6	–	100 - 240 V AC	EASY618-AC-RE 212314	1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ, NRAQ7 CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -				
	12	–	8	24 V DC	EASY620-DC-TE 212313						
	12	6	–	24 V DC	EASY618-DC-RE 232112						
	–	2	–	24 V DC	EASY202-RE1) 232186						
	6	4	–	24 V DC	EASY410-DC-RE 114293			NA Certification Request filed for UL and CSA			
	6	–	4	24 V DC	EASY410-DC-TE 114294				Degree of Protection IEC: IP20, UL/CSA Type: -		
Coupling module											
Can be used through easyLink											
	For remote connection of a digital I/O expansion up to 30 m.			EASY200-EASY 212315	1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ, NRAQ7 CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -					


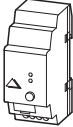

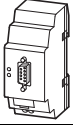
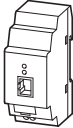
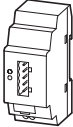
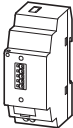

	Inputs		Outputs			Supply voltage	Part no. Article no.	Price See price list	Std. pack
	Digital / Analog	Of which usable as digital	Relay 10 A (UL)	Transistor	Analog				
I/O expansions									
Can be used through easyLink									
	1 / 2 ²⁾	2	–	2	1	24 V DC	EASY406-DC-ME 114295	1 off 	
	1 / 6 ³⁾	2	–	2	2	24 V DC	EASY411-DC-ME 116567		1 off 




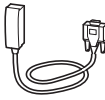


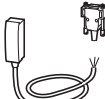
Notes

- 1) Not for use in combination with basic unit EASY719-DA-... Cannot be used on the EASY200-EASY coupling module
- 2) 2 x 0 - 10 V, 2 x 0 - 20 mA, 2 x RTD (2/3-wire connection); any combination
Voltage inputs (0–10 V) can optionally be used as digital inputs
- 3) 2 x 0 - 10 V, 2 x 0 - 20 mA, 2 x Pt100 (2/3 wire connection);
Voltage inputs (0–10 V) can optionally be used as digital inputs







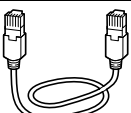







Information relevant for export to North America

 NA Certification Request filed for UL and CSA
Degree of Protection IEC: IP20, UL/CSA Type: -



Description		Supply voltage	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
						
Bus modules						
Can be used through easyLink						
	AS-Interface	Slave 4 inputs, 4 outputs, 4 parameter bits Addresses available 0 to 31	–	EASY205-ASI 221598	1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking E135462 UL File No. NRAQ, NRAQ7 UL CCN 012528 CSA File No. 2252-01 + 2258-02 CSA Class No. UL Listed, CSA certified NA Certification Degree of Protection IEC: IP20, UL/CSA Type: -
	PROFIBUS-DP	Slave Addresses available 1 to 126	24 V DC	EASY204-DP 212316		
	CANopen	Addresses available 1 to 127	24 V DC	EASY221-CO 233539		
	DeviceNet	Addresses available 0 to 63	24 V DC	EASY222-DN 233540		
Ethernet gateway						
	Serial interface easyRelay or MFD-...CP8/CP10... to Ethernet, for connection to easyOPC server, easySoft, or easyCom	24 V DC	EASY209-SE 101520	1 off 		

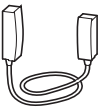

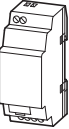

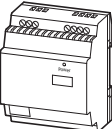


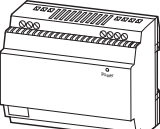

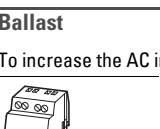

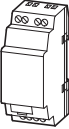

Description		For use with	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
						
Programming software						
	Menu selection in 13 languages Operating systems: Windows 2000 SP4, Windows XP SP3, Windows Vista (32-bit), Windows 7 (32-bit)		EASY-SOFT-PRO 266040		1 off 	
Programming cable						
	SUB-D, 9 pole, serial, 2 m		EASY800-PC-CAB 256277		1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2258-02 NA Certification UL Listed, CSA certified
	USB, 2 m		EASY800-USB-CAB 106408		1 off	
	Configurable modem, printer and programming cable, possible transfer rate 56 kbaud, 9 pole Sub-D plug (plug + socket for self connection)		EASY800-MO-CAB 286079		1 off	
Connecting cables						

HPL12027EN



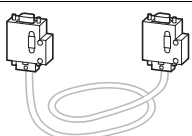




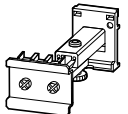

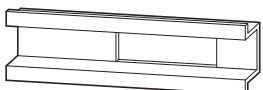

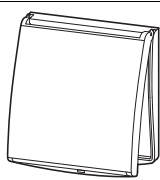

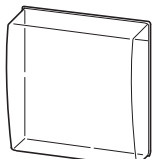

Description	For use with	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
 <p>For connecting the MFD (-AC)-CP4 or EASY209-SE with easy500/easy700, 5 m, can be cut to length</p> <p>For connecting the MFD (-AC)-CP4 or EASY209-SE with easy800/MFD-...-CP8/CP10..., 5 m, can be cut to length</p>		MFD-CP4-500-CAB5 280886		1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking
		MFD-CP4-800-CAB5 280887		1 off 	UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
Memory cards					
	256-kB module	MFD-...-CP8	EASY-M-256K 256279	1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking
	512-kB module	MFD-CP10...	EASY-M-512K¹⁾ 134969	1 off	UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
Manuals					
	German	MFD-Titan	AWB2528-1480D 267187	1 off	
	English	MFD-Titan	AWB2528-1480GB 267188	1 off	
Network connection cables					
	Length: 0.3 m	easyNet	EASY-NT-30 256283	1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking
	Length: 0.8 m	easyNet	EASY-NT-80 256284	1 off 	
	Length: 1.5 m	easyNet	EASY-NT-150 256285	1 off 	UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
Bus termination resistor					
	8 pole, RJ45, 124 Ω Connection to PIN 1 and PIN 2	easyNet	EASY-NT-R 256281	2 off 	UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
Data cable					
	4 x 0.14 mm ² , twisted pair, AWG 26 Length: 100 m	easyNet	EASY-NT-CAB 256286	1 off 	UL File No. E135462 UL CCN NRAQ NA Certification UL Listed Degree of Protection IEC: IP 20, UL/CSA Type: -

Note ¹⁾ For availability please inquire

Description	For use with	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
Bus connector plug					
	8 pole, RJ45	easyNet	EASY-NT-RJ45 256280	10 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
Crimping tool					
-	For RJ45 plug	EASY-NT-CAB EASY-NT-RJ45	EASY-RJ45-TOOL 256282	1 off	

Description	For use with	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
Point-to-point connection cable					
	Serial interface for connecting MFD-....-CP8/CP10... to easy800 or MFD-....-CP8/CP10..., 5 m, can be cut to length	easy800 MFD-....-CP8	MFD-800-CAB5 266041	1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
Switched-mode power supply units					
Primary-switched mode, stabilized					
	Rated input voltage: 50/60 Hz: 100 - 240 V Rated output voltage: 24 V/12 V DC Rated output current: 0.35 A/20 mA		EASY200-POW 229424	1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
	Rated input voltage: 50/60 Hz: 100 - 240 V AC Rated output voltage (residual ripple): 24 V DC (± 3 %) Rated output current: 1.25 A		EASY400-POW 212319	1 off	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 107.1-01; CE marking UL File No. E300415 UL CCN NMTR, NMTR7 CSA File No. UL report applies to both US and Canada CSA Class No. 3211-87, 3211-07 NA Certification UL Listed, certified by UL for use in Canada Degree of Protection IEC: IP20, UL/CSA Type: -
	Rated input voltage: 50/60 Hz: 100 - 240 V AC Rated output voltage (residual ripple): 24 V DC (± 3 %) Rated output current: 2.5 A		EASY430-POW 110940	1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 107.1-01; CE marking UL File No. E300415 UL CCN NMTR, NMTR7 CSA File No. UL report applies to both US and Canada CSA Class No. 3211-87, 3211-07 NA Certification UL Listed, certified by UL for use in Canada Degree of Protection IEC: IP20, UL/CSA Type: -
	Rated input voltage: 50/60 Hz: 100 - 240 V AC Rated output voltage (residual ripple): 24 V DC (± 3 %) Rated output current: 4.2 A		EASY500-POW 110941	1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2252-01 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
	Rated input voltage: 50/60 Hz: 100 - 240 V AC Rated output voltage (residual ripple): 24 V DC (± 3 %) Rated output current: 4.2 A		EASY600-POW 262399	1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2252-01 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -
Ballast					
To increase the AC input current					
	6 channels, cable length up to 100 m		EASY256-HCI 231168	1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2252-01 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP20, UL/CSA Type: -

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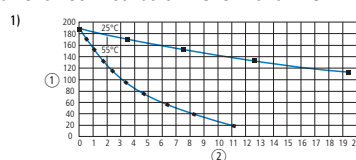
Description	For use with	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America 
PROFIBUS-DP data cable					
	Twisted pair, without plug, 2-core, 2 x 0.64 mm ² (only suitable for fixed wiring) 100 m	ZB4-900-KB1 206983		100 m	
PROFIBUS-DP bus connector plug					
	Pins, 9 pole Cable entry, angled 90°	ZB4-209-DS2 206982		1 off	
	Metallised insulated housing Maximum transfer rate 12 MBit/s Integrated switch (accessible from the outside) for the bus terminating resistors Terminal block for two cable entries, with straight or 90° angled cable entry, as required	ZB4-209-DS3 217820		1 off	
Connection plug					
	Bus connector plug between base unit and expansion unit/bus module	EASY-LINK-DS 221607		1 off 	UL/CSA certification not required
Fixing bracket For screw fixing to mounting plate					
	3 fixing brackets per easy400, 500, 600, 700, 800, EC4P, ES4P 2 fixing brackets per easy200 3 fixing brackets per MFD...-CP8/CP10...	ZB4-101-GF1 061360		9 off 	UL/CSA certification not required
Telescopic clip					
	With 35mm top-hat rail to IEC/EN 60715 for mounting depth compensation when rear mounting in CI-K... enclosures and cabinets. Stepless adjustment via scale from 75 – 115 mm. Screw and snap fastening	M22-TA 226161		1 off 	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94-91; CE marking UL File No. E29184 UL CCN NKCR CSA File No. 012528 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified
Mounting rail to IEC/EN 60715 Mounting rail with cutout specifically for MFD...-CP8/CP10... for fixing easy expansion units (2 space units) Length: 142.5 mm					
	easy200	MFD-TS-144 274090		1 off 	UL/CSA certification not required
Protective cover					
	Transparent Protection against accidental actuation sealable Application without front frames	MFD-80... MFD-XS-80 265259		1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified
Protective diaphragm					
	Transparent version for harsh environmental conditions and application in the food industry For increasing the degree of protection to NEMA 4X for MFD-80-B	MFD-80... MFD-XM-80 265258		1 off 	Product Standards IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No. E135462 UL CCN NRAQ CSA File No. 012528 CSA Class No. 2252-01 + 2258-02 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP65, UL/CSA Type 4X



Technical data		EASY200-EASY EASY202-RE	EASY4...-DC-...E EASY512-...	EASY6... EASY7...	EASY8...-...
General					
Standards		EN 55011, EN 55022, IEC/EN 61000-4, IEC 60068-2-6, IEC 60068-2-27			
Dimensions (W x H x D)	mm	35.5 x 90 x 58 (2 space units)	71.5 x 90 x 58 (4 space units)	107.5 x 90 x 58 (6 space units)	107.5 x 90 x 72 (6 space units)
Weight	kg	0.07	0.2	0.3	0.3
Mounting		Top-hat rail IEC/EN 60715, 35 mm or screw fixing using fixing brackets ZB4-101-GF1 (accessories).			
Terminal capacity					
Solid	mm ²	0.2 - 4 (AWG 22 - 12)			
Flexible with ferrule	mm ²	0.2 - 2.5 (AWG 22 - 12)			
Flat-blade screwdriver	mm	3.5 x 0.8			
Max. tightening torque	Nm	0.6			
Ambient climatic conditions					
Operating ambient temperature	°C	-25...55, low temperatures to IEC 60068-2-1, high temperatures to IEC 60068-2-2			
Condensation		Prevent condensation by means of suitable measures			
LCD display (clearly legible)	°C	0 - 55	0 - 55	0 - 55	0 - 55
Storage	°C	-40 - 70	-40 - 70	-40 - 70	-40 - 70
Relative humidity, non-condensing (IEC/EN 60068-2-30)	%	5 - 95	5 - 95	5 - 95	5 - 95
Air pressure (in operation)	hPa	795 - 1080	795 - 1080	795 - 1080	795 - 1080
Ambient mechanical conditions					
Protection type (IEC/EN 60529, EN50178, VBG 4)		IP20	IP20	IP20	IP20
Vibrations (IEC/EN 60068-2-6)					
Constant amplitude 0.15 mm	Hz	10 - 57	10 - 57	10 - 57	10 - 57
Constant acceleration, 2 g	Hz	57 - 150	57 - 150	57 - 150	57 - 150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms	Shocks	18	18	18	18
Drop to IEC/EN 60068-2-31 Drop height	mm	50	50	50	50
Free fall, packaged (IEC/EN 60068-2-32)	m	1	1	1	1
Mounting position		Vertical or horizontal			
Electromagnetic compatibility (EMC)					
Overvoltage category/pollution degree		II/2	II/2	II/2	II/2
Electrostatic discharge (ESD), to IEC EN 61000-4-2					
Air discharge	kV	8	8	8	8
Contact discharge	kV	6	6	6	6
Electromagnetic fields (RFI), to IEC EN 61000-4-2	V/m	10	10	10	10
Radio interference suppression		EN 55011 Class B, EN 55022 Class B			
Burst to IEC/EN 61000-4-4					
Supply cables	kV	2	2	2	2
Signal cables	kV	2	2	2	2
Power pulses (surge), to IEC/EN 61000-4-5	kV	2 (supply cables, symmetrical, EASY...AC)			
Power pulses (surge), to IEC/EN 61000-4-5	kV	0.5 (supply cables, symmetrical, EASY...DC)			
Radiated RFI, to IEC/EN 61000-4-6	V	10	10	10	10
Insulation resistance					
Clearance in air and creepage distances		EN 50178, UL 508, CSA C22.2, No. 142			
Insulation resistance		EN 50178	EN 50178	EN 50178	EN 50178
Back-up/accuracy of the real-time clock					
Back-up time		—	— ¹⁾	— ¹⁾	¹⁾
Accuracy of the real-time clock at 55 °C	s/day	—	— Normally ± 5 (± 0.5 h/Year)	— Normally ± 5 (± 0.5 h/Year)	Normally ± 5 (± 0.5 h/Year)
Repetition accuracy of timing relays					
Accuracy of timing relay (of value)	%	—	— ± 1	— ± 0.02	± 0.02
Resolu- tion	Range "S"	ms	— 10	— 10	5
	Range "M:S"	s	— 1	— 1	1
	Range "H:M"	min	— 1	— 1	—
Retentive memory					
Write cycles of the retentive memory (minimum)		—	— 1000000 (10 ⁶)	— 1000000 (10 ⁶)	— 10000000 (10 ¹⁰) (read/write cycles)

Notes

For additional technical data EASY5... and EASY7... → AWB2528-1508D, EASY8... → AWB2528-1423D



- ① Back-up time (hours)
② Service life (years)

			EASY512-DA-...	EASY719-DA-...
Power supply				
Rated operational voltage	U_e	V	12 DC (-15/+30%)	12 DC (-15/+30%)
Permissible range		V DC	10.2...15.6	10.2...15.6
Ripple		%	≤ 5	≤ 5
Input current				
At rated voltage		mA	Normally 140	Normally 200
Voltage dips (IEC/EN 61131-2)		ms	10	10
Heat dissipation		W	Normally 2	Normally 3.5
Digital inputs 12 V DC				
Number			8	12
Inputs can be used as analog inputs			2 (I7, I8)	4 (I7, I8, I11, I12)
Status display			LCD display (if provided)	LCD display (if provided)
Potential isolation				
From power supply			No	No
Between digital inputs			No	No
From the outputs			Yes	Yes
Rated operating voltage	U_e	V DC	12	12
On signal "0"	U_e	V DC	4 (I1 - I8)	4 (I1 - I12)
On signal "1"	U_e	V DC	8 (I1 - I8)	8 (I1 - I12)
Input current on signal "1"				
I1 to I6		mA	3.3 (at 12 V DC)	3.3 (at 12 V DC)
I7, I8, I11, I12		mA	1.1 (at 12 V DC)	1.1 (At 12 V DC)
I9 to I10		mA	–	3.3 (at 12 V DC)
Delay time from 0 to 1				
Debounce ON		ms	20	20
Debounce OFF		ms	Normally 0.3 (I1 - I6), 0.35 (I7, I8)	Normally 0.3 (I1 - I6, I9, I10), 0.35 (I7, I8, I11, I12)
Delay time from 1 to 0				
Debounce ON		ms	20	20
Debounce OFF		ms	Normally 0.3 (I1 - I6), 0.15 (I7, I8)	Normally 0.4 (I1 - I6, I9, I10), 0.35 (I7, I8, I11, I12)
Cable length (unshielded)		m	100	100
Frequency counters			2 (I3, I4)	2 (I3, I4)
High-speed counter inputs			2 (I1, I2)	2 (I1, I2)
Maximum counter frequency		kHz	< 1	< 1
Pulse shape			Square	Square
Cable length shielded		m	< 30	< 30
Analog inputs				
Number			2 (I7, I8)	4 (I7, I8, I11, I12)
Potential isolation				
From power supply			No	No
From the digital inputs			No	No
From the outputs			Yes	Yes
Between the inputs			No	No
Input type			DC voltage	DC voltage
Signal range		V DC	0 - 10	0 - 10
Resolution, analog		V	0.01	0.01
Resolution, digital		V	0.01	0.01
Resolution		Bit	10 (value 1 - 1023)	10 (value 0 - 1023)
Input impedance		kΩ	11.2	11.2
Accuracy of actual value				
Two EASY devices		%	± 3	± 3
Within a single device		%	± 2, (I7, I8, I11, I12) ± 0.12 V	± 2, (I7, I8, I11, I12) ± 0.12 V
Conversion time analog/digital		ms	Input delay ON: 20; Input delay OFF: each cycle time	Input delay ON: 20; Input delay OFF: each cycle time
Input current		mA	< 1	< 1
Cable length shielded		m	< 30	< 30

Relay outputs

→ See technical data, relay outputs

NotesFor additional Technical Data EASY5... and EASY7... → AWB2528-1508D, EASY8...
→ AWB2528-1423D

			EASY512-AB-...	EASY719-AB-...
Power supply				
Rated operational voltage	U _e	V	24 AC	24 AC
Permissible range		V AC	20.4...26.4	20.4...26.4
Frequency		Hz	50/60 (± 5%)	50/60 (± 5%)
Input current				
At 24 V AC 50/60 Hz		mA	Normally 200	Normally 300
Voltage dips (IEC/EN 61131-2)		ms	20	20
Heat dissipation				
At 24 V AC		VA	Normally 5	Normally 7
Digital inputs 24 V DC				
Number			8	12
Inputs can be used as analog inputs			2 (I7, I8)	4 (I7, I8, I11, I12)
Status display			LCD display (if provided)	LCD display (if provided)
Potential isolation				
From power supply			No	No
Between digital inputs			No	No
From the outputs			Yes	Yes
Rated operational voltage	U _e	V	24 AC	24 AC
Rated voltage L (sinusoidal)				
On signal "0"		V AC	0 - 6	0 - 6
On signal "1"	U _e	V	(I7, I8) > 7 AC, > 9.5 DC (I1 - I6) 14 - 26.4 AC	(I7, I8, I11, I12) > 7 AC, > 9.5 DC (I1 - I6, I9, I10) 14 - 26.4 AC
Rated frequency		Hz	50 - 60	50 - 60
Input current on signal "1"				
I1 to I6		mA	4 (at 24 V AC, 50 Hz)	4 (at 24 V AC, 50 Hz)
I7, I8		mA	2 (at 24 V AC, 50 Hz) 2 (at 24 V DC)	2 (at 24 V AC, 50 Hz) 2 (at 24 V DC)
I9, I10		mA	–	4 (At 24 V AC, 50 Hz)
I11, I12		mA	–	2 (at 24 V AC, 50 Hz) 2 (at 24 V DC)
Delay time (0 - 1/1 - 0) I1 - I12				
Debounce ON, 50/60 Hz		ms	80/66%	80/66%
Debounce OFF, 50/60 Hz		ms	20/16%	20/16%
Max. admissible cable length (per input)				
Maximum remote installation distance		m	40	40
I9, I10		m	–	Normally 40
Analog inputs				
Number			2 (I7, I8)	4 (I7, I8, I11, I12)
Potential isolation				
From power supply			No	No
From the digital inputs			No	No
From the outputs			Yes	Yes
Between the inputs			No	No
Input type				
Signal range		V DC	0 - 10	0 - 10
Resolution, analog		V	0.01	0.01
Resolution, digital		V	0.01	0.01
Resolution		Bit	10 (value 1 - 1023)	10 (value 0 - 1023)
Input impedance		kΩ	11.2	11.2
Accuracy of actual value				
Two EASY devices		%	± 3	± 3
Within a single device		%	± 2, (I7, I8) ± 0.12 V	± 2, (I7, I8, I11, I12) ± 0.12 V
Conversion time analog/digital				
Input current		mA	< 1	< 1
Cable length shielded		m	< 30	< 30
Relay outputs			→ See technical data, relay outputs	

Notes

For additional technical data EASY5... and EASY7... → AWB2528-1508D, EASY8... → AWB2528-1423D

			EASY410-DC-RE EASY410-DC-TE	EASY512-DC-...	EASY6..-DC-E	EASY7..-DC-...	EASY7..-DC-...	EASY8..-DC-...
Power supply								
Rated operational voltage	U _e	V	24 DC (-15/+20%)					
Permissible range		V DC	20.4...28.8	20.4...28.8	20.4...28.8	20.4...28.8	20.4...28.8	20.4...28.8
Ripple		%	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5
Input current								
At rated voltage		mA	Normally 140	Normally 80	Normally 140	Normally 140	Normally 140	Normally 140
Voltage dips (IEC/EN 61131-2)		ms	10	10	10	10	10	10
Heat dissipation		W	Normally 3.5	Normally 2	Normally 3.4	Normally 3.5	Normally 3.5	Normally 3.4
Digital inputs 24 V DC								
Number			6	8	12	12	12	12
Inputs can be used as analog inputs			-	2 (I7, I8)	-	4 (I7, I8, I11, I12)	4 (I7, I8, I11, I12)	4 (I7, I8, I11, I12)
Status display			LCD display (if provided)					
Potential isolation								
From power supply			No	No	No	No	No	No
Between digital inputs			No	No	No	No	No	No
From the outputs			Yes	Yes	Yes	Yes	Yes	Yes
From PC interface, memory card, easyNet, easyLink			-	-	-	-	-	Yes
Rated operating voltage	U _e	V DC	24	24	24	24	24	24
On signal "0"	U _e	V DC	< 5 (R1 - R6)	< 5 (I1 - I8)	< 5 (I1 - I12, R1 - R12)	< 5 (I1 - I12, R1 - R12)	< 5 (I1 - I12, R1 - R12)	< 5 (I1 - I6, I9, I10) < 8 (I7, I8, I11, I12)
On signal "1"	U _e	V DC	> 15.0 (R1 - R6)	> 15 (I1 - I6), > 8 (I7, I8)	-	> 15.0 (I1 - I6, I9, I10), > 8.0 (I7, I8, I11, I12)	> 15.0 (I1 - I6, I9, I10), > 8.0 (I7, I8, I11, I12)	> 15.0 (I1 - I6, I9, I10), > 8.0 (I7, I8, I11, I12)
Input current on signal "1"								
R1 - R6 (R12)		mA	3.3 (at 24 V DC)	-	3.3 (at 24 V DC)	-	-	-
I1 to I6		mA	-	3.3 (at 24 V DC)	-	3.3 (at 24 V DC)	3.3 (at 24 V DC)	3.3 (at 24 V DC)
I7, I8		mA	-	2.2 (at 24 V DC)	-	2.2 (at 24 V DC)	2.2 (at 24 V DC)	2.2 (at 24 V DC)
I9, I10		mA	-	-	-	3.3 (at 24 V DC)	3.3 (at 24 V DC)	3.3 (at 24 V DC)
I11, I12		mA	-	-	-	2.2 (at 24 V DC)	2.2 (at 24 V DC)	2.2 (at 24 V DC)
Delay time from 0 to 1								
Debounce ON		ms	20	20	20	20	20	20
Debounce OFF		ms	Normally 0.25 (R1 - R6)	Normally 0.25 (I1 - I8)	Normally 0.25 (R1 - R12)	Normally 0.25 (I1 - I12)	Normally 0.25 (I1 - I12)	Normally 0.1 (I1 - I4), normally 0.25 (I5 - I12)
Delay time from 1 to 0								
Debounce ON		ms	20	20	20	20	20	20
Debounce OFF		ms	-	-	-	-	-	Normally 0.1 (I1 - I4), normally 0.4 (I5, I6, I9, I12), normally 0.2 (I7, I8, I11, I12)
Cable length (unshielded)		m	100	100	100	100	100	100
Frequency counters								
Number			-	2 (I3, I4)	-	2 (I3, I4)	2 (I3, I4)	4 (I1, I2, I3, I4)
Counter frequency		kHz	-	< 1	-	< 1	< 1	< 5
Pulse shape			-	Square	-	Square	Square	Square
Incremental counters								
Number			-	-	-	-	-	2 (I1 + I2, I3 + I4)
Counter frequency		kHz	-	≤ 1	-	≤ 1	≤ 1	≤ 3
Pulse shape			-	-	-	-	-	Square
Counter inputs I1 and I2, I3 and I4			-	-	-	-	-	2
Signal offset			-	-	-	-	-	90°
Mark-to-space ratio			-	-	-	-	-	1:1
High-speed counter inputs								
Number			-	2 (I1, I2)	-	2 (I1, I2)	2 (I1, I2)	4 (I1, I2, I3, I4)
Cable length, shielded		m	-	< 20	-	< 20	< 20	< 20
Counter frequency		kHz	-	< 1	-	< 1	< 1	< 5
Pulse shape			-	Square	-	Square	Square	Square
Cable length (unshielded)		m	-	100	100	100	100	100
Relay outputs	→ See technical data, relay outputs							
Transistor outputs	→ See technical data, transistor outputs							
Notes	For additional technical data EASY5... and EASY7... → AWB2528-1508D, EASY8... → AWB2528-1423D							



		EASY406...-DC-ME	EASY411-DC-ME	EASY512-DC-...	EASY7...-DC-...	EASY8...-DC-...
Analog inputs						
Number		2	6	2 (I7, I8)	4 (I7, I8, I11, I12)	4 (I7, I8, I11, I12)
Potential isolation						
From power supply		No	No	No	No	No
From the digital inputs		No	No	No	No	No
From the outputs		No	No	Yes	Yes	Yes
From PC interface, memory card, easyNet, easyLink		Yes	Yes	No	No	Yes
Input type		DC voltage	DC voltage	DC voltage	DC voltage	DC voltage
Signal range	V DC	0 - 10	0 - 10	0 - 10	0 - 10	0 - 10
Resolution, analog	V	–	–	0.01	0.01	0.01
Resolution, digital	V	–	–	0.01	0.01	0.01
Resolution	Bit	10 (value 0 - 1023)				
Input impedance	kΩ	11.2	11.2	11.2	11.2	11.2
Accuracy of actual value						
Two EASY devices	%	± 3	± 3	± 3	± 3	± 3
Within a single device	%	< ± 3 %	< ± 3 %	± 2, (I7, I8, I11, I12) ± 0.12 V	± 2, (I7, I8, I11, I12) ± 0.12 V	± 2, (I7, I8, I11, I12) ± 0.12 V
Conversion time analog/digital	ms	800	800	Input delay ON: 20; input delay OFF: every cycle time		Each CPU cycle
Input current	mA	< 1	< 1	< 1	< 1	< 1
Cable length shielded	m	< 10	< 10	< 30	< 30	< 30
Analog outputs						
Number		1	2	–	–	1
Potential isolation						
From power supply		No	No	No	No	No
From the digital inputs		No	No	No	No	No
From the digital outputs easyLink		No	No	No	No	Yes
easyLink		Yes	Yes	No	No	Yes
Output type		DC voltage	DC voltage	–	–	DC voltage
Signal range						
Signal range min. voltage	V	0	0	–	–	0
Signal range max. voltage	V	10	10	–	–	10
Max. output current	A	0.01	0.01	–	–	0.01
Load resistance		1 kΩ	1 kΩ	–	–	1 kΩ
Overload and short-circuit protection		Yes	Yes	–	–	Yes
Resolution, analog	V DC	0.01	0.01	–	–	0.01
Resolution, digital	Bit	10 (value 0 - 1023)	10 (value 0 - 1023)	–	–	10, (value: 0 – 1023)
Recovery time	μs	–	–	–	–	100
Accuracy						
-25 °C - 55 °C	%	2	2	–	–	2
25°C	%	1	1	–	–	1
Conversion time analog/digital	ms	200	200	Input delay ON: 20; input delay OFF: every cycle time		Each CPU cycle
Network easyNet						
Stations	Number	–	–	–	–	Max. 8
Data transfer rate/distance		–	–	–	–	1000 Kbit/s, 6 m 500 Kbit/s, 25 m 250 Kbit/s, 60 m 125 Kbit/s, 125 m 50 Kbit/s, 300 m 20 Kbit/s, 700 m 10 Kbit/s, 1000 m
Potential isolation						
Of the 2 additional inputs		–	–	–	–	Yes
Potential isolation		–	–	–	–	Yes
Electrical isolation between inputs and internal power supply		–	–	–	–	Yes
Potential isolation		–	–	–	–	Yes
Bus termination (first and last station)		–	–	–	–	Yes
Terminal type		–	–	–	–	RJ45, 8 pole
Notes						
For additional technical data EASY5... and EASY7... → AWB2528-1508D, EASY8... → AWB2528-1423D						

			EASY512-AC-R..	EASY618-AC-RE	EASY719-AC-RC.	EASY819-AC-RC.
Power supply						
Rated operational voltage	U_e	V	100/110/115/120/230/240 AC (+10/-15 %)			
Permissible range		V AC	85...264	85...264	85...264	85...264
Frequency		Hz	50/60 (± 5%)	50/60 (± 5%)	50/60 (± 5%)	50/60 (± 5%)
Input current						
At 115/120 V AC 60 Hz		mA	Normally 40	Normally 70	Normally 70	Normally 70
At 230/240 V AC 50 Hz		mA	Normally 20	Normally 35	Normally 35	Normally 35
Voltage dips (IEC/EN 61131-2)		ms	20	20	20	20
Heat dissipation						
At 115/120 V AC		VA	Normally 5	Normally 10	Normally 10	Normally 10
At 115/230 V AC		VA	Normally 5	Normally 10	Normally 10	Normally 10
Digital inputs 115/230 V AC						
Number			8	12	12	12
Status display			LCD display (if provided)			
Potential isolation						
From power supply			No	No	No	No
Between digital inputs			No	No	No	No
From the outputs			Yes	Yes	Yes	Yes
Potential isolation			-	-	-	Yes
Rated voltage L (sinusoidal)						
On signal "0"		V AC	0 - 40	0 - 40	0 - 40	0 - 40
On signal "1"		V AC	79 - 264	79 - 264	79 - 264	79 - 264
Rated frequency		Hz	50 - 60	50 - 60	50 - 60	50 - 60
Input current on signal "1"						
R1 to R12		mA		12 x 0.25 (at 115 V AC, 60 Hz) 12 x 0.5 (at 230 V AC, 50 Hz)		
I1 to I6		mA	6 x 0.25 (at 115 V AC, 60 Hz) 6 x 0.5 (at 230 V AC, 50 Hz)		6 x 0.25 (at 115 V AC, 60 Hz) 6 x 0.5 (at 230 V AC, 50 Hz)	6 x 0.25 (at 115 V AC, 60 Hz) 6 x 0.5 (at 230 V AC, 50 Hz)
I7, I8		mA	2 x 4 (at 115 V AC, 60 Hz) 2 x 6 (at 230 V AC, 50 Hz)		2 x 4 (at 115 V AC, 60 Hz) 2 x 6 (at 230 V AC, 50 Hz)	2 x 4 (at 115 V AC, 60 Hz) 2 x 6 (at 230 V AC, 50 Hz)
I9 to I12		mA			4 x 0.25 (at 115 V AC, 60 Hz) 4 x 0.5 (at 230 V AC, 50 Hz)	4 x 0.25 (at 115 V AC, 60 Hz) 4 x 0.5 (at 230 V AC, 50 Hz)
Delay time						
Delay time (0 - 1/1 - 0) I1 - I6, I9 - I12, R1 - R12						
	Debounce ON, 50/60 Hz	ms	80/66%	80/66%	80/66%	80/66%
	Debounce OFF, 50/60 Hz	ms	20/16%	20/16%	20/16%	20/16%
Delay time I7, I8 (1 - 0)						
	Debounce ON, 50/60 Hz	ms	160/150	80/66%	80/66%	120/100
	Debounce OFF, 50/60 Hz	ms	100/100	20/16%	20/16%	40/33%
Delay time I7, I8 (0 - 1)						
	Debounce ON, 50/60 Hz	ms	80/66%	80/66%	80/66%	80/66%
	Debounce OFF, 50/60 Hz	ms	20/16%	20/16%	20/16%	20/16%
Max. admissible cable length (per input)						
R1 to R12		m	-	Normally 40	-	-
I1 to I6		m	Normally 40	Normally 40	Normally 40	Normally 60
I7, I8		m	Normally 100	Normally 100	Normally 100	Normally 100
I9 to I12		m	-	Normally 40	Normally 40	Normally 60
Relay outputs			→ See technical data, relay outputs			
Notes			For additional technical data EASY5... and EASY7... → AWB2528-1508D, EASY8... → AWB2528-1423D			



			MFD-80..	MFD-CP4...	MFD-AC-CP4.. MFD-AC-CP8..	MFD-CP10.. MFD-CP8..
General						
Standards			EN 61000-6-1/-2/-3/-4, IEC 60068-2-6, IEC 60068-2-27			
Dimensions (W x H x D)		mm	86.5 x 86.5 x 21.5 (with buttons) 86.5 x 86.5 x 20 (without buttons)	75 x 58 x 36.2	107.5 x 90 x 30	107.5 x 90 x 30
Weight		kg	0.13	0.16	0.14	0.14
Mounting			2 x 22.5 mm, display fastened using 2° threaded fixing rings. Wall thickness: without top-hat rail (CPU) 1 – 6 mm with top-hat rail 1 – 4 mm	Plug-fitted to the display fixing shaft	Fitted on the fixing shaft of the display or on top-hat rail according to IEC/EN 60715, 35 mm deep (without display)	Fitted on the fixing shaft of the display or on top-hat rail according to IEC/EN 60715, 35 mm deep (without display)
Terminal capacity						
Solid		mm ²	–	–	0.24 (AWG 24 - 12)	0.24 (AWG 24 - 12)
Flexible with ferrule		mm ²	–	–	0.22.5 (AWG 24 - 12)	0.22.5 (AWG 24 - 12)
Flat-blade screwdriver		mm	–	–	3.5 x 0.6	3.5 x 0.6
Max. tightening torque		Nm	–	–	–	–
Ambient climatic conditions						
Operating ambient temperature		°C	-25 - 55, low temperatures to IEC 60068-2-1, high temperatures to IEC 60068-2-2			
Condensation			Prevent condensation by means of suitable measures			
LCD display (clearly legible)		°C	-5 - 50			
Storage		°C	-40 - 70	-40 - 70	-40 - 70	-40 - 70
Relative humidity, non-condensing (IEC/EN 60068-2-30)		%	5 - 95	5 - 95	5 - 95	5 - 95
Air pressure (in operation)		hPa	795 - 1080	795 - 1080	795 - 1080	795 - 1080
Ambient mechanical conditions						
Protection type (IEC/EN 60529, EN50178, VBG 4)			IP65	IP20	IP20	IP20
Vibrations (IEC/EN 60068-2-6)						
Constant amplitude 0.15 mm		Hz	10 - 57	10 - 57	10 - 57	10 - 57
Constant acceleration, 2 g		Hz	57 - 150	57 - 150	57 - 150	57 - 150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms		Shocks	18	18	18	18
Drop to IEC/EN 60068-2-31	Drop height	mm	50	50	50	50
Free fall, packaged (IEC/EN 60068-2-32)		m	1	1	1	1
Mounting position			Vertical or horizontal			

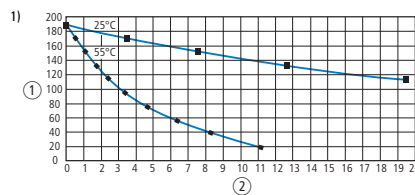


	MFD-80..	MFD-CP4...	MFD-AC-CP4.. MFD-AC-CP8..	MFD-CP10.. MFD-CP8..
Electromagnetic compatibility (EMC)				
Overvoltage category/ pollution degree	–	–	–	–
Electrostatic discharge (ESD), to IEC EN 61000-4-2				
Air discharge	kV	8	8	8
Contact discharge	kV	6	6	6
Electromagnetic fields (RFI), to IEC EN 61000-4-2	V/m	10	10	10
Radio interference suppression	EN 55011 Class B, EN 55022 Class B			
Burst to IEC/EN 61000-4-4				
Supply cables	kV	2	2	2
Signal cables	kV	2	2	2
High-energy pulses (surge) (IEC/EN 61000-4-5, Level 2)				
Supply cables, symmetrical		–	0.5	1
Radiated RFI, to IEC/EN 61000-4-6	V	10	10	10
Insulation resistance				
Clearance in air and creepage distances	EN 50178, UL 508, CSA C22.2, No. 142			
Insulation resistance	EN 50178			
Back-up/accuracy of the real-time clock				
Back-up time	–	–	1)	1)
Accuracy of the real-time clock at 55 °C	s/day	–	Normally ±5 s/day (±0.5 h/Year)	Normally ±5 s/day (±0.5 h/Year)
Repetition accuracy of timing relays				
Accuracy of timing relay (of value)	%	–	± 0.02	± 0.02
Resolution				
Range "S"	ms	–	5	5
Range "M:S"	s	–	1	1
Range "H:M"	min	–	1	1
Retentive memory				
Write cycles of the retentive memory (minimum)	–	–	10 ¹⁰ (read/write cycles)	10 ¹⁰ (read/write cycles)



Notes

For additional technical data EASY5... and EASY7... → AWB2528-1508D, EASY8... → AWB2528-1423D



- ① Backup time (hours)
- ② Service life (years)

			MFD-CP4..	MFD-CP8.. MFD-CP10..	MFD-AC-CP4.. MFD-AC-CP8..
Power supply					
Rated operational voltage	U _e	V	24 DC (-15/+20 %)	24 DC (-15/+20 %)	100/110/115/120//230/240 AC (+10/-15 %)
Permissible range		V AC			85...264
Permissible range		V DC	20.4...28.8	20.4...28.8	
Ripple		%	≤ 5	≤ 5	–
Frequency		Hz	–	–	50/60 (± 5%)
Input current					
At 115/120 V AC 60 Hz		mA	–	–	Normally 90
At 230/240 V AC 50 Hz		mA	–	–	Normally 60
At 24 V DC		mA	Normally 185	Normally 200	–
Voltage dips (IEC/EN 61131-2)		ms	10	10	10
Heat dissipation					
At 115/120 V AC		VA	–	–	Normally 11
At 230/240 V AC		VA	–	–	Normally 15
At 24 V DC		W	1.5	3.4	–
Point-to-point connection					
Stations			1	–	–
Baud rate					
easy500, easy700		MBit/s	9.6 kBaud	–	–
easy800, MFD, EC4P			19.2 kBaud	–	–
Distance		m	Max. 5	Max. 5	Max. 5
Potential isolation					
From power supply			Yes	–	–
From the connected device			Yes	–	–
Terminal type			Spring-loaded terminals	–	–
Power pulses					
Stations		Number	Max. 1	Max. 8	Max. 8
Data transfer rate/distance			–	1000 Kbit/s, 6 m 500 Kbit/s, 25 m 250 Kbit/s, 40 m 125 Kbit/s, 125 m 50 Kbit/s, 300 m 20 Kbit/s, 700 m 10 Kbit/s, 1000 m	1000 Kbit/s, 6 m 500 Kbit/s, 25 m 250 Kbit/s, 40 m 125 Kbit/s, 125 m 50 Kbit/s, 300 m 20 Kbit/s, 700 m 10 Kbit/s, 1000 m
Potential isolation					
From power supply			–	Yes	Yes
From the inputs			–	–	Yes
From the outputs			–	Yes	Yes
From PC interface, memory card, easyNet, easyLink			–	Yes	Yes
Bus termination (first and last station)			–	Yes	Yes
Terminal type			–	RJ45, 8 pole	RJ45, 8 pole



			MFD-R16 MFD-RA17	MFD-AC-R16	MFD-T16 MFD-TA17	MFD-T.P..
General						
Standards			EN 61000-6-1/-2/-3/-4, IEC/EN 61000-4, IEC 60068-2-6, IEC 60068-2-27	EN 61000-6-1/-2/-3/-4, IEC/EN 61000-4, IEC 60068-2-6, IEC 60068-2-27	EN 61000-6-1/-2/-3/-4, IEC/EN 61000-4, IEC 60068-2-6, IEC 60068-2-27	EN 61000-6-1/-2/-3/-4, IEC 60068-2-6, IEC 60068-2-27
Dimensions (W x H x D)		mm	89 x 90 x 44	89 x 90 x 44	89 x 90 x 25 (built-in)	89 x 90 x 25 (built-in)
Weight		kg	0.15	0.15	0.14	0.14
Mounting	Fitted into the power supply unit.					
Terminal capacity						
Solid		mm ²	0.24 (AWG 24 - 12)	0.24 (AWG 24 - 12)	0.24 (AWG 24 - 12)	0.24 (AWG 24 - 12)
Flexible with ferrule		mm ²	0.22.5 (AWG 24 - 12)	0.22.5 (AWG 24 - 12)	0.22.5 (AWG 24 - 12)	0.22.5 (AWG 24 - 12)
Flat-blade screwdriver		mm	3.5 x 0.6	3.5 x 0.6	3.5 x 0.6	3.5 x 0.6
Power supply						
Solid		mm ²	–	–	–	–
Flexible with ferrule		mm ²	–	–	–	–
Flat-blade screwdriver		mm	–	–	–	–
Data cable						
Solid		mm ²	0.08/2.5 (AWG 28 - 12)	0.08/2.5 (AWG 28 - 12)	0.08/2.5 (AWG 28 - 12)	0.08/2.5 (AWG 28 - 12)
Flexible with ferrule		mm ²	0.08/1.5 (AWG 28 - 12)	0.08/1.5 (AWG 28 - 12)	0.08/1.5 (AWG 28 - 12)	0.08/1.5 (AWG 28 - 12)
Ambient climatic conditions						
Operating ambient temperature		°C	-25 - 55, low temperatures to IEC 60068-2-1, high temperatures to IEC 60068-2-2			
Condensation	Prevent condensation by means of suitable measures					
LCD display (clearly legible)		°C				
Storage		°C	-40 - 70	-40 - 70	-40 - 70	-40 - 70
Relative humidity, non-condensing (IEC/EN 60068-2-30)		%	5 - 95	5 - 95	5 - 95	5 - 95
Air pressure (in operation)		hPa	795 - 1080	795 - 1080	795 - 1080	795 - 1080
Ambient mechanical conditions						
Pollution degree			2	2	2	2
Protection type (IEC/EN 60529, EN50178, VBG 4)			IP20	IP20	IP20	IP20
Vibrations (IEC/EN 60068-2-6)						
Constant amplitude 0.15 mm		Hz	10 - 57	10 - 57	10 - 57	10 - 57
Constant acceleration, 2 g		Hz	57 - 150	57 - 150	57 - 150	57 - 150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms		Shocks	18	18	18	18
Drop to IEC/EN 60068-2-31	Drop height	mm	50	50	50	50
Free fall, packaged (IEC/EN 60068-2-32)		m	1	1	1	1
Mounting position	Vertical or horizontal					
Electromagnetic compatibility (EMC)						
Electrostatic discharge (ESD), to IEC EN 61000-4-2						
Air discharge		kV	8	8	8	8
Contact discharge		kV	6	6	6	6
Electromagnetic fields (RFI), to IEC EN 61000-4-2		V/m	10	10	10	10
Radio interference suppression	EN 55011 Class B, EN 55022 Class B					
Burst to IEC/EN 61000-4-4						
Supply cables		kV	2	2	2	2
Signal cables		kV	2	2	2	2
Power pulses (surge) (IEC/EN 61000-4-5)		kV	2 (supply cables, symmetrical)	2 (supply cables, symmetrical)	2 (supply cables, symmetrical)	2 (supply cables symmetrical, MFD-AC-CP8..)
Power pulses (surge), to IEC/EN 61000-4-5		kV	0.5 (supply cables, symmetrical)	0.5 (supply cables, symmetrical)	0.5 (supply cables, symmetrical)	0.5 (supply cables, symmetrical, MFD-CP8..)
Radiated RFI, to IEC/EN 61000-4-6		V	10	10	10	10
Insulation resistance						
Clearance in air and creepage distances	EN 50178, UL 508, CSA C22.2, No. 142					
Insulation resistance	EN 50178					



			MFD-R16 MFD-RA17	MFD-T16 MFD-TA17	MFD-T...P...	MFD-AC-R16
Digital inputs 24 V DC						
Number			12	12	6	
Inputs can be used as analog inputs			4 (I7, I8, I11, I12)	4 (I7, I8, I11, I12)	2 (I11, I12)	
Potential isolation						
From power supply			No	No	No	
Between digital inputs			No	No	No	
From the outputs			Yes	Yes	Yes	
From PC interface, memory card, easy NET, easyLink			Yes	Yes	Yes	
Rated operating voltage	U _e	V DC	24	24	24	
On signal "0"	U _e	V DC	< 5.0 (I1 - I6, I9 - I10), < 8 (I7, I8, I11, I12)	< 5.0 (I1 - I6, I9 - I10), < 8 (I7, I8, I11, I12)	< 5.0 (I1 - I4), < 8.0 (I11, I12)	
On signal "1"	U _e	V DC	> 15.0 (I1 - I6, I9 - I10), > 8.0 (I7, I8, I11, I12)	> 15.0 (I1 - I6, I9 - I10), > 8.0 (I7, I8, I11, I12)	> 15.0 (I1 - I4), > 8.0 (I11, I12)	
Input current on signal "1"						
I1 to I6		mA	3.3 (at 24 V DC)	3.3 (at 24 V DC)	–	
I1 to I4		mA	–	–	3.3 (at 24 V DC)	
I7, I8		mA	2.2 (at 24 V DC)	2.2 (at 24 V DC)	–	
I9, I10		mA	3.3 (at 24 V DC)	3.3 (at 24 V DC)	–	
I11, I12		mA	2.2 (at 24 V DC)	2.2 (at 24 V DC)	2.2 (at 24 V DC)	
Delay time from 0 to 1						
Debounce ON		ms	20	20	20	
Debounce OFF		ms	Normally 0.1 (I1 - I4), normally 0.25 (I5 - I12)			
Delay time from 1 to 0						
Debounce ON		ms	20	20	20	
Debounce OFF		ms	Normally 0.1 (I1 - I4), normally 0.4 (I5, I6, I9, I10), normally 0.2 (I7, I8, I11, I12)	Normally 0.1 (I1 - I4), normally 0.4 (I5, I6, I9, I10), normally 0.2 (I7, I8, I11, I12)	Normally 0.1 (I1 - I4), normally 0.2 (I11, I12)	
Cable length (unshielded)		m	100	100	100	
Frequency counters						
Number			4 (I1, I2, I3, I4)	4 (I1, I2, I3, I4)	4 (I1, I2, I3, I4)	
Counter frequency		kHz	< 3	< 3	< 3	
Pulse shape			Square	Square	Square	
Incremental counters						
Number			2 (I1 + I2, I3 + I4)	2 (I1 + I2, I3 + I4)	2 (I1 + I2, I3 + I4)	
Counter frequency		kHz	≤ 3	≤ 3	≤ 3	
Pulse shape			Square	Square	Square	
Signal offset			90°	90°	90°	
High-speed counter inputs						
Number			4 (I1, I2, I3, I4)	4 (I1, I2, I3, I4)	4 (I1, I2, I3, I4)	
Counter frequency		kHz	< 3	< 3	< 3	
Pulse shape			Square	Square	Square	
Cable length, shielded		m	< 20	< 20	< 20	
Digital inputs 115/230 V AC						
Number						12
Status display						LCD display (if provided)
Potential isolation						
From power supply						No
Between digital inputs						No
From the outputs						Yes
From PC interface, memory card, easyNet, easyLink						Yes
Rated voltage L (sinusoidal)						
On signal "0"		V AC				0 - 40
On signal "1"		V AC				79 - 264
Rated frequency		Hz				50 - 60
Input current on signal "1"						
I1 to I12		mA				12 x 0.2 (at 115 V AC, 60 Hz), 12 x 0.5 (at 230 V AC, 50 Hz)
Delay time						
Delay time (0 - 1/1 - 0) I1 - I12, 50/60 Hz						10/100
Max. admissible cable length (per input)						
I1 to I12		m				Normally 60



		MFD-R... MFD-T...		MFD-RA17 MFD-TA17	MFD-TAP
Analog inputs			Analog outputs		
Number		4 (I7, I8, I11, I12) 2 (I11, I12) for MFD-T(A)P	Number	1	1
Potential isolation			Potential isolation		
From power supply		No	From power supply	No	No
From the digital inputs		No	From the digital inputs	No	No
From the outputs		Yes	From the digital outputs	Yes	Yes
From PC interface, memory card, easyNet, easyLink		Yes	From PC interface, memory card, easyNet, easyLink	Yes	Yes
Input type		DC voltage	Output type	DC voltage	DC voltage
Signal range	V DC	0 - 10	Signal range	V DC	0 - 10
Resolution, analog	V	0.01	Max. output current	A	0.01
Resolution, digital	V	0.01	Load resistance	kΩ	1
Resolution	Bit	10 (value 0 - 1023)	Overload and short-circuit protection	Yes	Yes
Input impedance	kΩ	11.2	Resolution, analog	V DC	0.01
Accuracy of actual value			Resolution, digital	Bit	10 (value 0 - 1023)
Two MFD devices	%	± 3	Resolution, digital	V DC	–
Within a single device	%	± 2 %	Recovery time	μs	100
Conversion time analog/digital	ms	Each CPU cycle	Accuracy		
Input current	mA	< 1	-25 °C - 55 °C	%	2
Cable length shielded	m	< 30	25C	%	1
			Conversion time, analog/digital	ms	Each CPU cycle

		MFD-TP, MFD-TAP	
Analog input temperature resistance Pt100 or Ni1000 sensors			
Number		2 x Pt 100 or 2 x Ni1000 (according to part no.)	
Input type resistance sensor			
Platinum sensor Pt100 according to DIN EN 60751, IEC 751		MFD-TP12-PT...	
Nickel sensor Ni1000 according to DIN 43760		MFD-TP12-NI...	
Temperature range			
Pt100, range A, selectable	°C, (°F)	-40 - +90, (-40 - 194); 0 - 250, (32 - 482); 0 - 400, (32 - 752)	
Ni1000, range A, selectable	°C, (°F)	-40 - +90, (-40 - 194); 0 - 250, (32 - 482)	
Pt100, range B	°C, (°F)	-0 - +8500, (32 - 1562); -200 - 200, (-328 - 392)	
Potential isolation			
From power supply		No	
From the digital inputs		No	
From the outputs		Yes	
From PC interface, memory card, easyNet, easyLink		Yes	
Resolution digital, scaling per sensor			
With operands "IA" and "MD", selectable under scaling	Bit	12 (0 - 4095)	
With operand "MD", selectable under scaling	°C, (°F)	1, 0.1, (1), (0.1)	
Measurement value resolution analog/digital	Bit	Depending upon the scaling	
Measuring current	mA	< 1.6	
Damage limit (in the case of a wiring error)		Apply external voltage	
Measurement method		Two or three wire per sensor, selectable by connection of sensor	
Accuracy (without EMC interference)			
Two MFD devices one above the other	%	Normally 1; maximal 1.6 (Pt), 1.2 (Ni)	
Pt100 RTD (offset error, linearity error, repetition accuracy, temperature dependency of the device included)	%	± 0.8 of measurement range	
Ni1000 RTD (offset error, linearity error, repetition accuracy, temperature dependency of the device included)	%	± 0,6 of measurement range	
Conversion time analog/digital			
Without sampling time setting, selectable per sensor	ms	200	
With sampling time (adjustable), selectable per sensor	ms	200 - 65535	
Additional measurement aids			
Filtering (software), analog input signal smoothing (Pt1 characteristic), only with set sampling time, selectable for each detector		Yes	
Filter for suppression of certain frequencies and their multiples	Hz	50, 60, 250, 500	
Diagnostics			
Card diagnostic		Yes	
Wire break diagnostic per sensor		Yes	
Wire break diagnostic per sensor		Yes	
Below lower measurement range		Yes	
Upper measuring range limit of sensor exceeded		Yes	
Cable length shielded	m	< 10	



			EASY4...-DC-ME	EASY512-DC-T..	EASY410-DC-TE EC4E-221-DT...
Transistor outputs					
Number			2	4	4
Rated operating voltage	U _e	V DC	24	24	24
Permissible range	U _e	V DC	20.4 - 28.8	20.4 - 28.8	20.4 - 28.8
Ripple		%	≤ 5	≤ 5	≤ 5
Supply current					
On signal "0"	Normally/ max.	mA	24V/2A	9/16	9/16
On signal "1"	Normally/ max.	mA	12/22	12/22	12/22
Protection against polarity reversal			Yes (Caution: A short circuit will result if 0 V or GND is applied to the outputs in the event that the supply voltage is connected to the wrong poles.)		
Potential isolation					
Potential isolation from power supply, inputs			No	Yes	Yes
From PC interface, memory card, easyNet, easyLink			Yes	Yes	Yes
From the inputs			-	-	-
Rated operational current on signal "1" DC	I _e	A	1	Max. 0.5	Max. 0.5
Lamp load without R _v		W	5	5	5
Residual current on signal "0" per channel		mA	< 0.1	< 0.1	< 0.1
Max. output voltage					
On "0" at external load < 10 MΩ		V	2.5	2.5	2.5
On "1" at I _e = 0.5 A		V	U = U _e - 1 V	U = U _e - 1 V	U = U _e - 1 V
Short-circuit protection			Yes, thermal (analysis via diagnostics input R16)	Yes, thermal (analysis via diagnostics input I16, I15; R15, R16)	Yes, thermal (analysis via diagnostics input R16)
Short-circuit tripping current for R _a ≤ 10 mΩ		A	1.4 ≤ I _e ≤ 4	0.7 ≤ I _e ≤ 2 per output	0.7 ≤ I _e ≤ 2 per output
Total short-circuit current		A	8	8	8
Peak short-circuit current		A	16	16	16
Thermal cutout			Yes	Yes	Yes
Max. operating frequency at constant resistive load R _L < 100 kΩ (dependent on program and load)		Ops/h	40000	40000	40000
Parallel connection of outputs					
With resistive load, inductive load with external suppressor circuit, combination within a group			Q1 and Q2	Group 1: Q1 to Q4	Group 1: Q1 to Q4
Number of outputs	Max.		2	4	4
Max. total current		A	2 (Attention! Outputs must be activated simultaneously and for the same duration)		
Status indication of the outputs			LCD display (if provided)		
Inductive load to EN 60947-5-1					
Without external suppressor circuit					
T _{0.95} = 1 ms, R = 48 Ω, L = 16 mH					
Utilization factor		g	0.25	0.25	0.25
Duty factor		% DF	100	100	100
Max. operating frequency f = 0.5 Hz (max. ED = 50 %)		Operations	1500	1500	1500
DC-13, T _{0.95} = 72 ms, R = 48 Ω, L = 1.15 H					
Utilization factor		g	0.25	0.25	0.25
Duty factor		% DF	100	100	100
Max. operating frequency f = 0.5 Hz (max. ED = 50 %)		Operations	1500	1500	1500
T _{0.95} = 15 ms, R = 48 Ω, L = 0.24 H					
Utilization factor		g	0.25	0.25	0.25
Duty factor		% DF	100	100	100
Max. operating frequency f = 0.5 Hz (max. ED = 50 %)		Operations	1500	1500	1500
With external suppressor circuit					
Utilization factor		g	1	1	1
Duty factor		% DF	100	100	100
Max. switching frequency, max. duty factor		Operations	Depending on the suppressor circuit		

Notes For additional technical data EASY5... and EASY7... → AWB2528-1508D, EASY8... → AWB2528-1423D, MFD-Titan → AWB2528-1480D

EASY620-DC-TE	EASY721-DC-T..	EASY8...-DC-T..	MFD-T..
8	8	8	4
24	24	24	24
20.4 - 28.8	20.4 - 28.8	20.4 - 28.8	20.4 - 28.8
≤ 5	≤ 5	≤ 5	≤ 5
18/32	18/32	18/32	18/32
24/44	24/44	24/44	24 /44
Yes (Caution: A short circuit will result if 0 V or GND is applied to the outputs in the event that the supply voltage is connected to the wrong poles.)			
Yes	Yes	Yes	Yes
Yes	Yes	Yes	-
-	-	Yes	Yes
Max. 0.5	Max. 0.5	Max. 0.5	Max. 0.5
5	5	3 (Q1 - Q4) 5 (Q5 - Q8)	5 (Q1 - Q4)
< 0.1	< 0.1	< 0.1	< 0.1
2.5	2.5	2.5	2.5
U = U _e - 1 V	U = U _e - 1 V	U = U _e - 1 V	U = U _e - 1 V
Yes, thermal (analysis via diagnostics input I16, I15; R15, R16)	Yes, thermal (analysis via diagnostics input I16, I15; R15, R16)	Yes, electronic (Q1 - Q4), thermal (Q5 - Q8), (analysis via diagnostics input I16, I15)	Thermal (Q1 - Q4), (analysis via diagnostics input I16)
0.7 ≤ I _e ≤ 2	0.7 ≤ I _e ≤ 2 per output	0.7 ≤ I _e ≤ 2 per output	0.7 ≤ I _e ≤ 2 per output
16	16	16	8
32	32	32	16
Yes	Yes	Yes	Yes
40000	40000	40000	40000
Group 1: S1 - S4 Group 2: S5 - S8	Group 1: Q1 to Q4 Group 2: Q5 to Q8	Group 1: Q1 to Q4 Group 2: Q5 to Q8	Group 1: Q1 to Q4
4	4	4	4
2 (Attention! Outputs must be activated simultaneously and for the same duration)			
LCD display (if provided)			
0.25	0.25	0.25	0.25
100	100	100	100
1500	1500	1500	1500
0.25	0.25	0.25	0.25
100	100	100	100
1500	1500	1500	1500
0.25	0.25	0.25	0.25
100	100	100	100
1500	1500	1500	1500
1	1	1	1
100	100	100	100
Depending on the suppressor circuit			

			EASY202-RE	EASY410-DC-RE EASY512-...-R.. MFD-R.. MFD-AC-R..	EASY618/719-...-R.. EASY8-...-R...
Relay outputs					
Number			2	4	6
Outputs in groups of			2	1	1
Parallel switching of outputs to increase performance			Not permissible	Not permissible	Not permissible
Protection of an output relay			Miniature circuit-breaker B16 or fuse 8 A (slow)		
Potential isolation					
From power supply			Yes	Yes	Yes
From the inputs			Yes	Yes	Yes
Electrical isolation in groups			Yes	Yes	Yes
Safe isolation according to EN 50178		V AC	300	300	300
Basic insulation		V AC	600	600	600
Lifespan, mechanical	Operations	x 10 ⁶	10	10	10
Contacts					
Conventional thermal current (10 A UL)		A	8	8	8
Recommended for load: 12 V AC/DC		mA	> 500	> 500	> 500
Short-circuit proof p.f. = 1, characteristic B16 at 600 A		A	16	16	16
Short-circuit proof p.f. = 0.5 - 0.7; characteristic B16 at 900 A		A	16	16	16
Rated impulse withstand voltage U _{imp} contact coil		kV	6	6	6
Rated operating voltage	U _e	V AC	250	250	250
Rated insulation voltage	U _i	V AC	250	250	250
Safe isolation to EN 50178 between coil and contact		V AC	300	300	300
Safe isolation to EN 50178 between two contacts		V AC	300	300	300
Making capacity					
AC-15, 230 V AC, 3 A	Operations		300000	300000	300000
DC-13, 24 V DC, 5 A, 0.1 Hz	Operations		200000	200000	200000
Breaking capacity					
AC--15, 250 V AC, 3 A (600 ops./h)	Operations		300000	300000	300000
DC-13, L/R ≤ 150 ms, 24 V DC, 1 A (500 S/h)	Operations		200000	200000	200000
Filament bulb load					
1000 W at 230/240 V AC	Operations		25000	25000	25000
500 W at 115/120 V AC	Operations		25000	25000	25000
Fluorescent lamp load					
Fluorescent lamp load 10 x 58 W at 230/240 V AC					
	With upstream electrical device	Operations	25000	25000	25000
	Uncompensated	Operations	25000	25000	25000
Fluorescent lamp load 1 x 58 W at 230/240 V AC, conventionally compensated					
	Operations		25000	25000	25000
Switching frequency					
Mechanical operations		x 10 ⁶	10	10	10
Switching frequency		Hz	10	10	10
Resistive load/lamp load		Hz	2	2	2
Inductive load		Hz	0.5	0.5	0.5
UL/CSA					
Continuous current at 240 V AC					
		A	10	10	10
Continuous current at 24 V DC					
		A	8	8	8
AC					
Control circuit rating codes (utilization category)			B 300 Light Pilot Duty		
Max. rated operational voltage		V AC	300	300	300
Max. thermal continuous current p.f. = 1 at B 300		A	5	5	5
Max. make/break p.f. ≠ capacity 1 at B 300		VA	3600/360	3600/360	3600/360
DC					
Control circuit rating codes (utilization category)			R 300 Light Pilot Duty		
Max. rated operational voltage		V DC	300	300	300
Max. thermal continuous current at R 300		A	1	1	1
Max. make/break capacity at R 300		VA	28/28	28/28	28/28

Notes

For additional technical data EASY5... and EASY7... → AWB2528-1508D, EASY8...
→ AWB2528-1423D, MFD → AWB2528-1480D

			EASY205-ASI EASY204-DP	EASY221-CO EASY222-DN
General				
Standards			EN 55011, EN 55022, IEC/EN 61000-4, IEC 62026	EN 55011, EN 55022, IEC/EN 61000-4, EN 50325
			EN 55011, EN 55022, IEC/EN 61000-4, IEC 61158	EN 55011, EN 55022, IEC/EN 61000-4, IEC 62026
Dimensions (W x H x D)		mm	35.5 x 90 x 58 (2 space units)	35.5 x 90 x 58 (2 space units)
Weight		kg	0.12 0.15	0.15
Mounting			Top-hat rail IEC/EN 60715, 35 mm or screw fixing using fixing brackets ZB4-101-GF1 (accessories).	
Terminal capacity				
Solid		mm ²	0.2 - 4 (AWG 22 - 12)	0.2 - 4 (AWG 22 - 12)
Flexible with ferrule		mm ²	0.2 - 2.5 (AWG 22 - 12)	0.2 - 2.5 (AWG 22 - 12)
Flat-blade screwdriver		mm	3.5 x 0.8	3.5 x 0.8
Max. tightening torque		Nm	0.6	0.6
Ambient climatic conditions				
Operating ambient temperature		°C	-25...55, low temperatures to IEC 60068-2-1, high temperatures to IEC 60068-2-2	
Condensation			Prevent condensation by means of suitable measures	
Storage		°C	-40 - 70	-40 - 70
Relative humidity, non-condensing (IEC/EN 60068-2-30)		%	5 - 95	5 - 95
Air pressure (in operation)		hPa	795 - 1080	795 - 1080
Ambient mechanical conditions				
Protection type (IEC/EN 60529, EN50178, VBG 4)			IP20	IP20
Vibrations (IEC/EN 60068-2-6)				
Constant amplitude 0.15 mm		Hz	10 - 57	10 - 57
Constant acceleration, 2 g		Hz	57 - 150	57 - 150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms		Shocks	18	18
Drop to IEC/EN 60068-2-31	Drop height	mm	50	50
Free fall, packaged (IEC/EN 60068-2-32)		m	1	1
Mounting position			Vertical or horizontal	Vertical or horizontal
Electromagnetic compatibility (EMC)				
Overvoltage category/pollution degree			II/2	II/2
Electrostatic discharge (ESD), to IEC EN 61000-4-2				
Air discharge		kV	8	8
Contact discharge		kV	6	6
Electromagnetic fields (IEC/EN 61000-4-3, RFI)		V/m	10	10
Radio interference suppression				
Burst to IEC/EN 61000-4-4			EN 55011 Class B, EN 55022 Class B	
AS-Interface cables		kV	2	–
Supply cables		kV	–	2
Signal cables		kV	–	2
Power pulses (surge), to IEC/EN 61000-4-5		kV	– 0.5 (supply cables, symmetrical)	0.5 (supply cables, symmetrical)
Radiated RFI, to IEC/EN 61000-4-6		V	10	10
Insulation resistance				
Clearance in air and creepage distances			EN 50178, UL 508, CSA C22.2, No. 142	
Insulation resistance			EN 50178	EN 50178



			EASY205-ASI	EASY204-DP	EASY221-CO	EASY222-DN
Power supply						
Rated operational voltage	U_e	V	26.5 - 31.6	24 (-15/+20 %)	24 (-15/+20 %)	24 (-15/+20 %)
Permissible range		V DC		20.4...28.8	20.4...28.8	20.4...28.8
Total power consumption of the AS interface		mA	≤ 30	–	–	–
Ripple		%	–	≤ 5	≤ 5	≤ 5
Max. current consumption (at 24 V DC)		mA	–	Normally 200	Normally 200	Normally 200
Voltage dips (IEC/EN 61131-2)		ms	–	10	10	10
Heat dissipation at 24 V DC		W	–	4.8	4.8	4.8
Protection against polarity reversal						
AS-Interface protection against polarity reversal			Yes	–	–	–
AS-Interface profile			7F (hex)	–	–	–
Slave address			0 - 31			
Addressing unit interface			3.5 mm socket	–	–	–
Power supply			–	Yes	Yes	Yes
LED indicators						
Supply			Power: green	Power LED (POW): green	RUN LED (RUN): green	Module status LED (MS): green
LED display			Com Error: red	LED PROFIBUS-DP (BUS): red	LED ERROR (ERR): red	Network status LED (NS): red/green
I/O addresses						
easy700/easy800 contact and coil ↔ AS-Interface			S1 → input 0 S2 → input 1 S3 → input 2 S4 → input 3 R1 ← outputs 0 R2 ← outputs 1 R3 ← outputs 2 R4 ← outputs 3 R5 ← PARAMETEROUTPUT 0 R6 ← PARAMETEROUTPUT 1 R7 ← PARAMETEROUTPUT 2 R8 ← PARAMETEROUTPUT 3	–	–	–
Network						
Terminal type			–	SUB-D 9 pole, socket	RJ45	5 pole, pluggable screw terminal
Potential isolation			–	Between bus and power supply (simple), between bus and power supply and easy base unit (safe isolation)		
Function			–	PROFIBUS-DP slave	CANopen slave	DeviceNet slave
Interface			–	RS485	CAN	CAN
Bus protocol			AS-Interface	PROFIBUS-DP	CANopen	DeviceNet
Baud rates			–	Automatic search up to 12 MBit/s	Automatic search up to 1 MBit/s	Automatic search up to 500 kBit/s
Bus terminating resistors			–	Can be connected via plug	Separate external bus termination required (120 Ω)	Separate external bus termination required (120 Ω)
Bus addresses			–	1 - 126 can be addressed via easy base unit with display or via EASY-SOFT	1 - 127 can be addressed via easy basic units with display or via easySoft	0 - 63 can be addressed via easy basic units with display or via easySoft
Services						
Cyclical			–	All data R1 - R16, S1 - S8		
Acyclical			–	Read/write, time, day, daylight saving time All parameters of the EASY function relay		

			EASY209-SE	EASY256-HCI
General				
Standards			EN 55011, EN 55022, IEC/EN 61000-4, EN 50178	
Dimensions (W x H x D)		mm	35.5 x 90 x 58 (2 space units)	35.5 x 90 x 58 (2 space units)
Weight		kg	0.15	0.15
Mounting			Top-hat rail IEC/EN 60715, 35 mm or screw fixing using fixing brackets ZB4-101-GF1 (accessories).	
Channels		Number	–	6
Voltage range for U _e				0 - 264
Current increase 115/230 V AC		mA	–	4/6
Delay time		ms	–	40/37
Cable length		m	–	100
Parallel switching of outputs to increase performance			–	Several possible (Off-delay extended depending on the number of parallel channels)
Type of resistance			–	Capacitive
Terminal capacity				
Solid		mm ²	0.2 - 4 (AWG 22 - 12)	0.2 - 4 (AWG 22 - 12)
Flexible with ferrule		mm ²	0.2 - 2.5 (AWG 22 - 12)	0.2 - 2.5 (AWG 22 - 12)
Flat-blade screwdriver		mm	3.5 x 0.8	3.5 x 0.8
Max. tightening torque		Nm	0.6	0.6
Data cable				
Solid		mm ²	0.25/1.5 (AWG 24/16)	–
Flexible with ferrule		mm ²	0.14/ 1 (AWG 26/17)	–
Ambient climatic conditions				
Operating ambient temperature		°C	-25...55	-25...55, low temperatures to IEC 60068-2-1, high temperatures to IEC 60068-2-2
Condensation			Prevent condensation by means of suitable measures	
Storage		°C	-40 - 70	-40 - 70
Relative humidity, non-condensing (IEC/EN 60068-2-30)		%	5 - 95	5 - 95
Air pressure (in operation)		hPa	795 - 1080	795 - 1080
Ambient mechanical conditions				
Protection type (IEC/EN 60529, EN50178, VBG 4)			IP20	IP20
Vibrations (IEC/EN 60068-2-6)				
Constant amplitude 0.15 mm		Hz	10 - 57	10 - 57
Constant acceleration, 2 g		Hz	57 - 150	57 - 150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms		Shocks	18	18
Drop to IEC/EN 60068-2-31	Drop height	mm	50	50
Free fall, packaged (IEC/EN 60068-2-32)		m	1	1
Mounting position			Vertical or horizontal	
Electromagnetic compatibility (EMC)				
Overvoltage category/pollution degree			II/2	II/2
Electrostatic discharge (ESD), to IEC EN 61000-4-2				
Air discharge		kV	8	8
Contact discharge		kV	6	6
Electromagnetic fields (IEC/EN 61000-4-3, RFI)	V/m		RS-232 line unshielded: 3, shielded: 10	10
Radio interference suppression			EN 55011 Class B, EN 55022 Class B	
Burst to IEC/EN 61000-4-4				
AS-Interface cables		kV	–	–
Supply cables		kV	2	–
Signal cables		kV	–	–
Ethernet interface cable		kV	2	–
COM interface cable		kV	2	–
Power pulses (surge), to IEC/EN 61000-4-5		kV	1 (supply cables, symmetrical)	2 (supply cables, symmetrical, EASY...DC)
Radiated RFI, to IEC/EN 61000-4-6		V	RS-232 line unshielded: 3, shielded: 10	10
Insulation resistance				
Clearance in air and creepage distances			EN 50178, UL 508, CSA C22.2, No. 142	
Insulation resistance			EN 50178	EN 50178



			EASY209-SE
Power supply			
Rated operational voltage	U_e	V	24 (-15/+20 %)
Permissible range		V DC	20.4...28.8
Ripple		%	≤ 5
Max. current consumption (at 24 V DC)		mA	Normally 65
Voltage dips (IEC/EN 61131-2)		ms	–
Heat dissipation at 24 V DC		W	1.7
Protection against polarity reversal			
Power supply			Yes
LED indicators			
Supply			Front-LED Power: ON
LED display			Front-LED COM active: flashes
RJ-45 socket, top			No Activity: OFF, Amber: Half Duplex, Green: Full Duplex
RJ-45 socket, bottom			No Link: OFF, Amber: 10 MBit/s, Green: 100 MBit/s
Gateway ready for operation			–
Power supply SmartWire (contactor)			–
Network Status (easyNet/CANopen)			–
Status SmartWire		LED	–
Reset			Front: per pushbuttons > 2s
Strain relief			By cable tie in fastener
Network			
Terminal type			–
Potential isolation			–
Bus protocol			–
Bus terminating resistors			–
Bus addresses			Default settings Ethernet: IP address 0.0.0.0 SUBNET screen: 255.255.0.0 coupling unit address 0.0.0.0 remote address 0.0.0.0



			EASY200-POW	EASY400-POW EASY430-POW	EASY500-POW	EASY600-POW
General						
Standards			EN 55011, EN 55022, IEC/EN 61000-4, IEC 60068-2-6, IEC 60068-2-27, EN 61000-6-2			
Dimensions (W x H x D)	mm		35.5 x 90 x 58 (2 space units)	71.5 x 90 x 58 (4 space units)	71.5 x 90 x 58 (4 space units)	107.5 x 90 x 58 (6 space units)
Weight	kg		0.1	0.25	0.28	0.3
Mounting			Top-hat rail IEC/EN 60715, 35 mm or screw fixing using fixing brackets ZB4-101-GF1 (accessories).			
Terminal capacity						
Solid	mm ²		0.2 - 4 (AWG 22 - 12)			
Flexible with ferrule	mm ²		0.2 - 2.5 (AWG 22 - 12)			
Flat-blade screwdriver	mm		3.5 x 0.8	3.5 x 0.8	3.5 x 0.8	3.5 x 0.8
Max. tightening torque	Nm		0.6	0.6	0.6	0.6
Ambient climatic conditions						
Operating ambient temperature	°C		-25...55, low temperatures to IEC 60068-2-1, high temperatures to IEC 60068-2-2	-25...55, low temperatures to IEC 60068-2-1, high temperatures to IEC 60068-2-2	-25 - 55, low temperatures to IEC 60068-2-1, high temperatures to IEC 60068-2-2; -25 - 45 to UL/CSA	-25...55, low temperatures to IEC 60068-2-1, high temperatures to IEC 60068-2-2
Condensation			Prevent condensation by means of suitable measures			
Storage	°C		-40 - 70	-40 - 70	-40 - 70	-40 - 70
Relative humidity, non-condensing (IEC/EN 60068-2-30)	%		5 - 95	5 - 95	5 - 95	5 - 95
Air pressure (in operation)	hPa		795 - 1080	795 - 1080	795 - 1080	795 - 1080
Max. installation altitude above sea level, observe derating at higher altitudes	m		2000	2000	2000	2000
Ambient mechanical conditions						
Pollution degree			2	2	2	2
Protection type (IEC/EN 60529, EN50178, VBG 4)			IP20	IP20	IP20	IP20
Vibrations (IEC/EN 60068-2-6)						
Constant amplitude 0.15 mm	Hz		10 - 57	10 - 57	10 - 57	10 - 57
Constant acceleration, 2 g	Hz		57 - 150	57 - 150	57 - 150	57 - 150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms	Shocks		18	18	18	18
Drop to IEC/EN 60068-2-31	Drop height	mm	50	50	50	50
Free fall, packaged (IEC/EN 60068-2-32)		m	1	1	1	1
Mounting position			Vertical or horizontal	Vertical or horizontal	Horizontal, terminals at top	Horizontal, terminals at top
Electromagnetic compatibility (EMC)						
Electrostatic discharge (ESD), to IEC EN 61000-4-2						
Air discharge	kV		8	8	8	8
Contact discharge	kV		6	6	6	6
Electromagnetic fields (RFI), to IEC EN 61000-4-2	V/m		10	10	10	10
Radio interference suppression			EN 55011 Class B; EN 55022 Class B, EN 50081-2 Class B			
Burst pulses (IEC/EN 61000-4-4, level 3)	kV		2	2	2	2
Power pulses (surge) (IEC/EN 61000-4-5)	kV		2 (supply cables, symmetrical)			
Power pulses (surge) (IEC/EN 61000-4-5, Level 2), 24 V	kV		0.5 (output cables, symmetrical)			
Radiated RFI, to IEC/EN 61000-4-6	V		10	10	10	10
Surge voltage (EN 50 178), 24 V	kV		6	6	6	6
Insulation resistance						
Clearance in air and creepage distances			EN 50178			
Insulation resistance			EN 50178			
Protection class U _{out} to U _{in}			Class II to IEC 60536			
Potential isolation primary/secondary			Yes, SELV (VDE 0100 Part 410; IEC 60364-4-41, HD 384.4.41 S2) EN 60950, EN 50178			
Input voltage						
Rated input voltage AC	V		100/120/230/240 (-15/+10 %)			
Protective switches AC			FAZ-C1/1 or FAZ-B6/1			
Rated input voltage DC	V		85 - 264	85 - 264	85 - 264	85 - 264
DC protective switches			FAZ-C2/1-DC	FAZ-C2/1-DC	FAZ-C2/1-DC	FAZ-C2/1-DC
Voltage range	V AC		85 - 264	85 - 264	85 - 264	85 - 264
Frequency range	Hz		47 - 63	47 - 63	47 - 63	47 - 63
Mains failure bridging 115/230 V (IEC/EN 61000-4-11)	ms		> 10/> 20	> 20/> 40	> 20/> 40	> 20/> 40
Fuse 115/230 V	A		1.5 slow	2/1 time delay	2/1 time delay	2/1 time delay

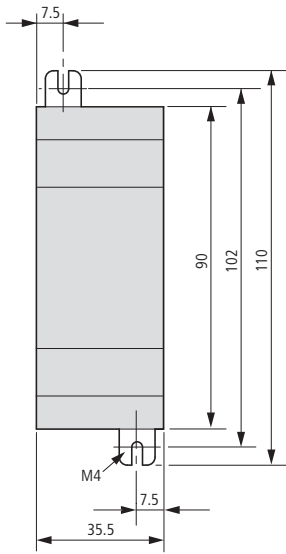


			EASY200-POW	EASY400-POW EASY430-POW	EASY500-POW	EASY600-POW
Rating data						
Efficiency	%		> 80	> 83	> 85	> 85
Power consumption	W		Normally 7	Normally 35	Normally 70	Normally 115
Heat dissipation	W		Normally 1	Normally 5	Normally 10	Normally 18
Input current						
Rated input current value 115/230 V AC	A		Approx. 0.17/0.05	Approx. 0.6/0.3	Approx. 0.8/0.4	Approx. 1/0.5
Inrush current at 230 C 25 V	A		< 5	< 18	< 30	< 30
Output voltage						
12 V DC (reference voltage)						
Rated value	V DC		12	–	–	–
Tolerance	%		± 4	–	–	–
Switching peaks	mV _{SS}		< 7	–	–	–
Effect of input voltage	%		± 1	–	–	–
Effect with 25 – 100 % load change	%		± 1	–	–	–
24 V DC						
Rated value	V DC		24	24	24	24
Tolerance	%		± 3	± 3	± 3	± 3
Switching peaks 115/230	mV _{SS}		< 50/30	< 5	< 5	< 5
Effect of input voltage	%		± 1	± 1	± 1	± 1
Effect with 25 – 100 % load change	%		± 1	± 2	± 2	± 2
Can be connected in parallel to increase power			–	– Yes	Yes	Yes
Output current						
12 V DC (reference voltage)						
Output current	mA		0 - 20	–	–	–
Effectiveness of current limitation	mA		20	–	–	–
Reduction of output voltage after current limitation	V		< 12	–	–	–
Overload proof			Yes, by current limitation permanently short-circuit proof	–	–	–
Proof against sustained short circuit			Yes	–	–	–
24 V DC						
Output current	A		0 - 0.35	0 - 1.25	0 - 2.5	0 - 4.2
Effectiveness of current limitation	A		> 0.4	> 1.5	> 2.8	> 4.8
Reduction of output voltage after current limitation	V		–	< 18	< 18	< 18
Overload proof			Yes, by current limitation			
Proof against sustained short circuit			Yes, hiccup-mode	Yes, hiccup mode, approx. 2 Hz		
Special load conditions						
Lamp load, cold, 24 V DC	W		2	10	–	–
Base load present	W		1	5	–	–
Behavior in the event of emergency switch off in 24 V circuit, switch off using contactor (contactor load, no damage)	W		6	30	–	–
Indication						
Indication of output voltage (LED, continuous green light = OK)	V DC		24	24	24	24

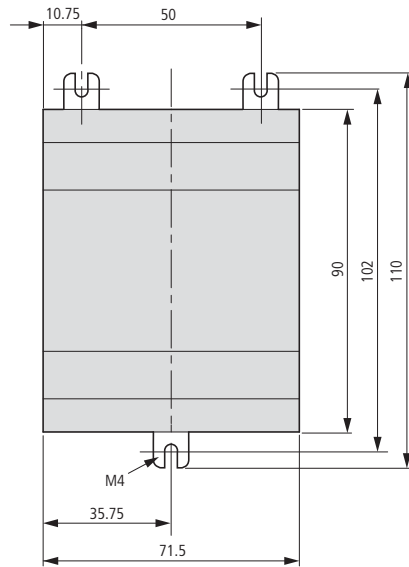


Dimensions

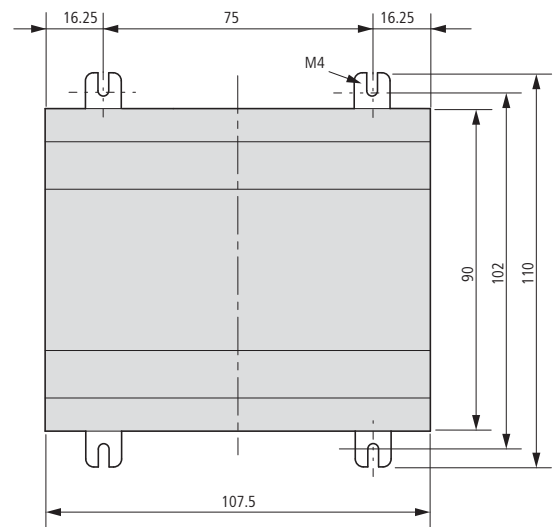
easy200



easy400
easy500



easy600
easy700



easy200

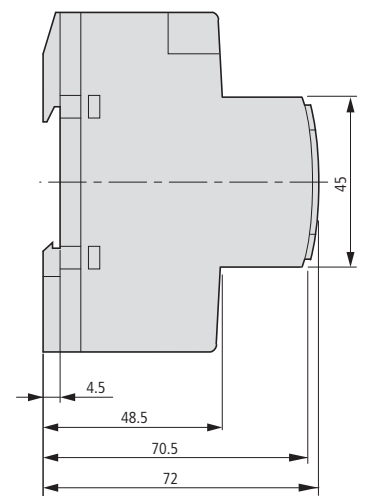
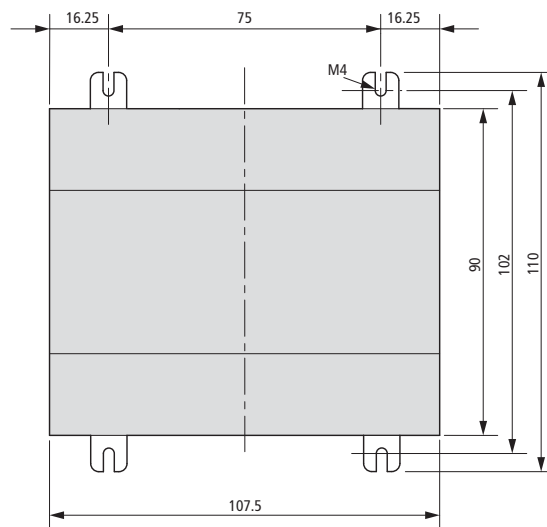
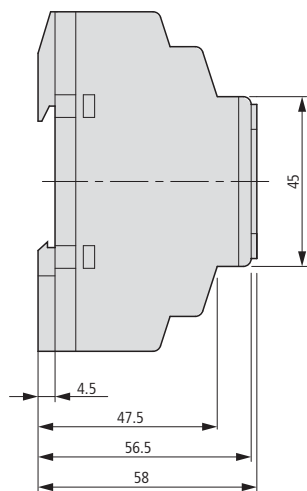
easy400

easy500

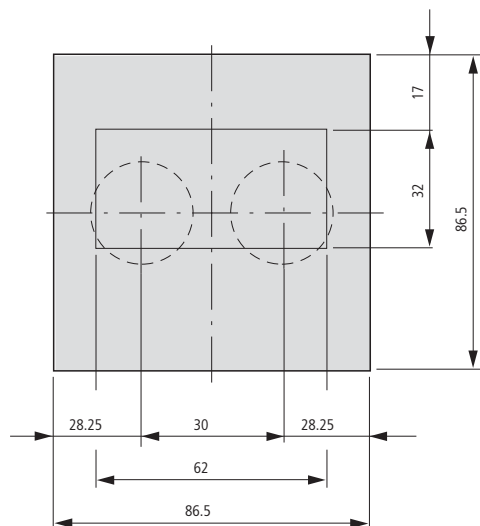
easy600

easy700

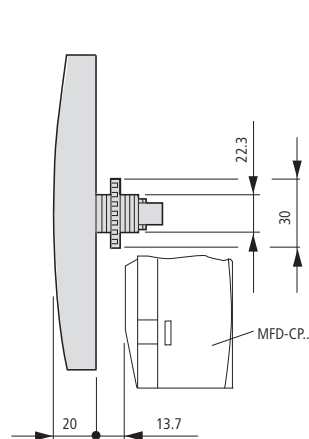
easy800



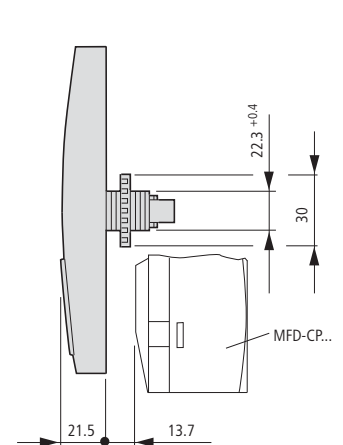
MFD-80...



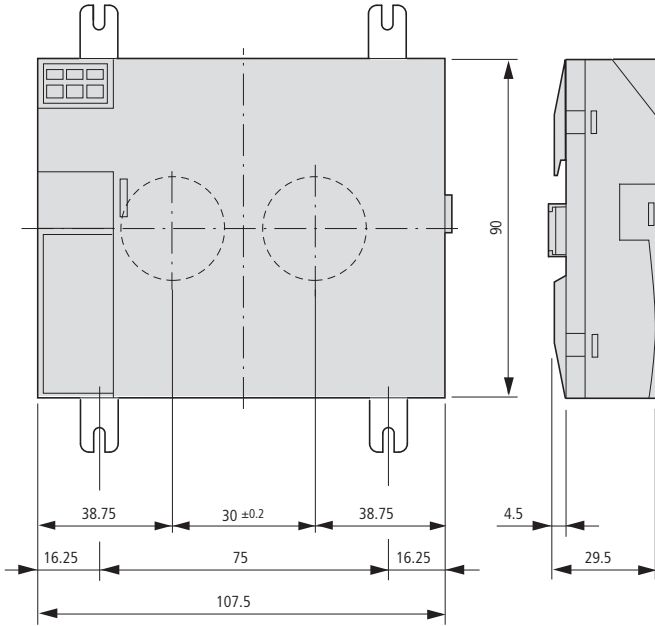
MFD-80



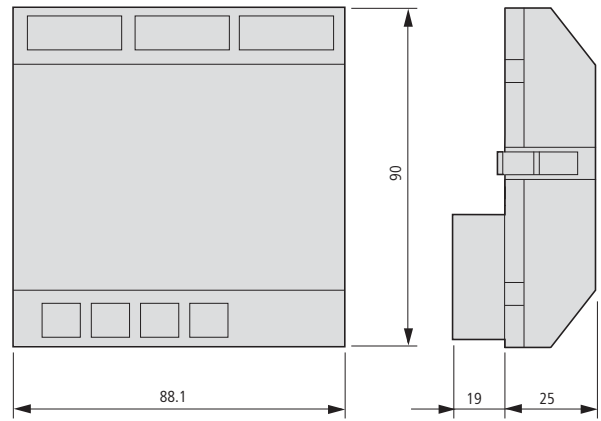
MFD-80-B



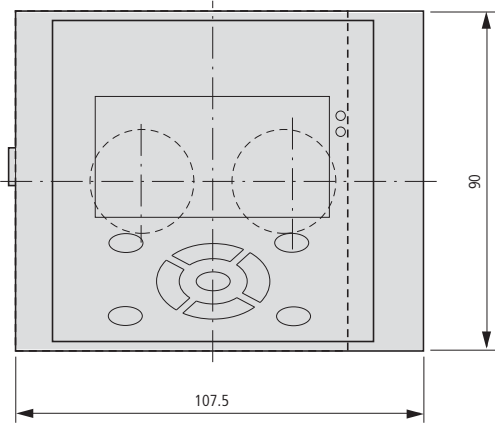
MFD-CP... , MFD-AC-CP...



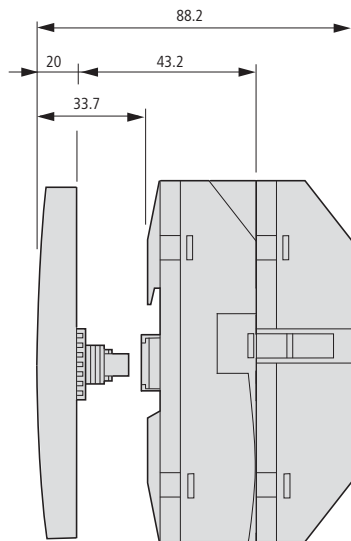
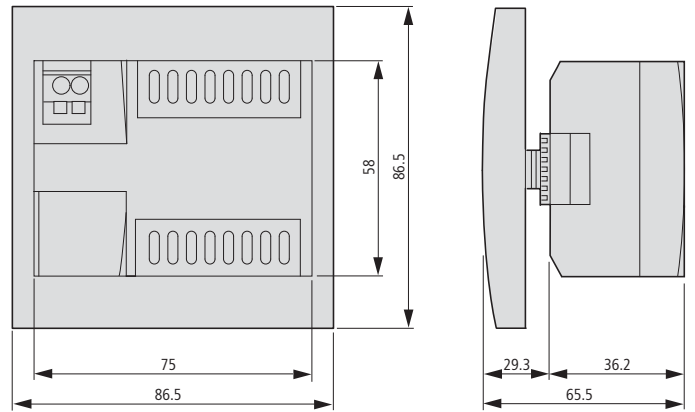
MFD-R... , MFD-T... , MFD-AC-R16



MFD-80... + MFD-CP... + MFD-R.../MFD-T...
MFD-80... + MFD-AC-CP... + MFD-AC-R16

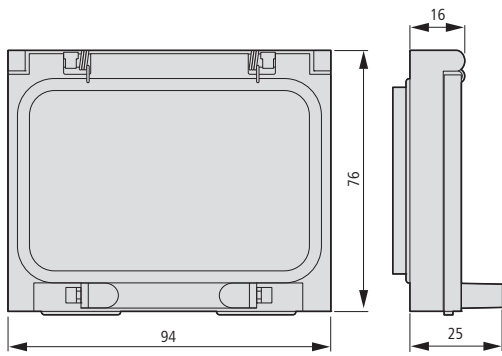


MFD-80... + MFD-CP4

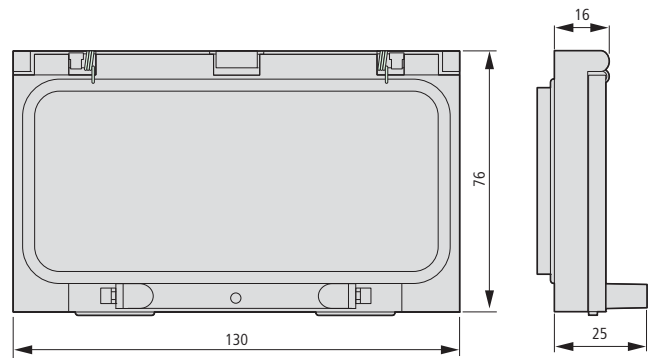


Hinged inspection windows

SKF-FF4

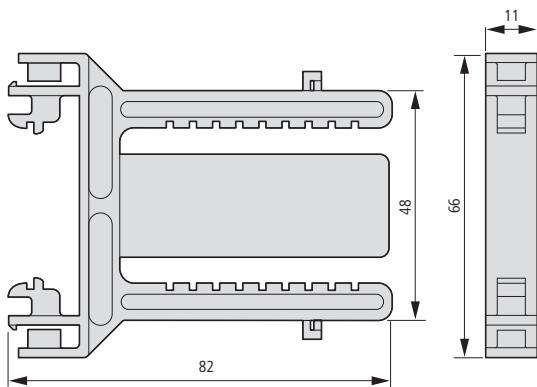


SKF-FF6



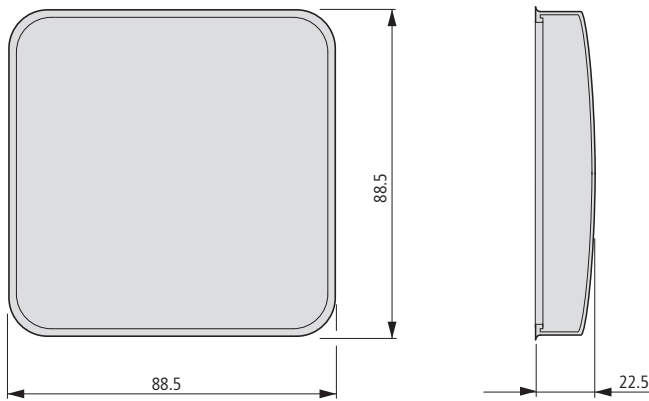
Top-hat rail adapter for hinged inspection window

SKF-HA



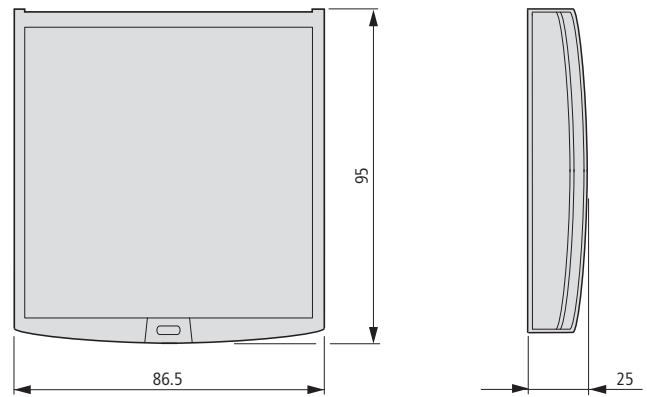
Protective diaphragm

MFD-XM-80



Protective cover

MFD-XS-80



Mounting rail

MFD-TS-144

