



Product Range Catalog **SmartWire-DT™**

The cost-optimized
communication system
for switching devices



EATON

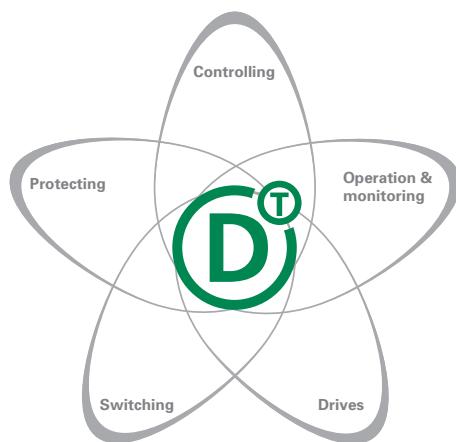
Powering Business Worldwide

SmartWire-DT™.

Cost-optimized communication for switchgear

Manufacturers of machines and systems strive to achieve a balance between the maximum level of functionality and cost optimization. SmartWire-DT is a communication system for industrial switchgear based on the concept of continued development in the control panel and in the peripherals: from control through to protection and switching, and extending to driving, operation and monitoring.

A technology that benefits you, both now, and in the future.



SmartWire-DT: The easy way to connect.

SmartWire-DT reduces the wiring effort and expense with many switchgear systems by more than 60% and helps along the entire value-added chain – from the design to the construction, to the commissioning up to system expansion – in the reduction of costs. SmartWire-DT relies on the tried-and-tested Eaton Moeller industrial switchgear and grants intelligent communication features.

Efficient planning and engineering

Fault-free mounting and wiring

Quick to commission

Comfortable operation

Maintenance with direct diagnostics

Simple to expand

SmartWire-DT - System

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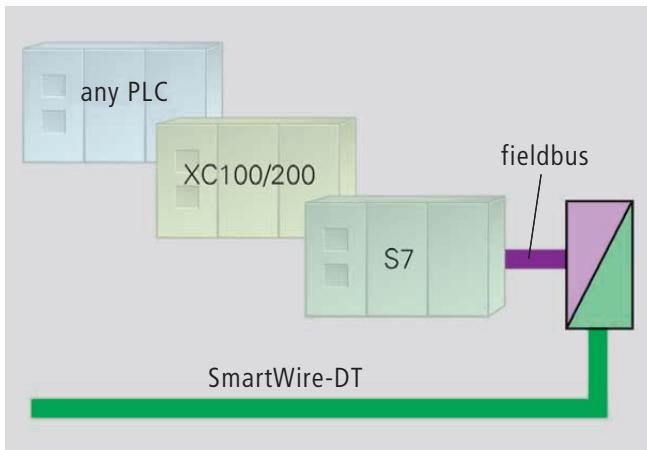
Description

SmartWire-DT

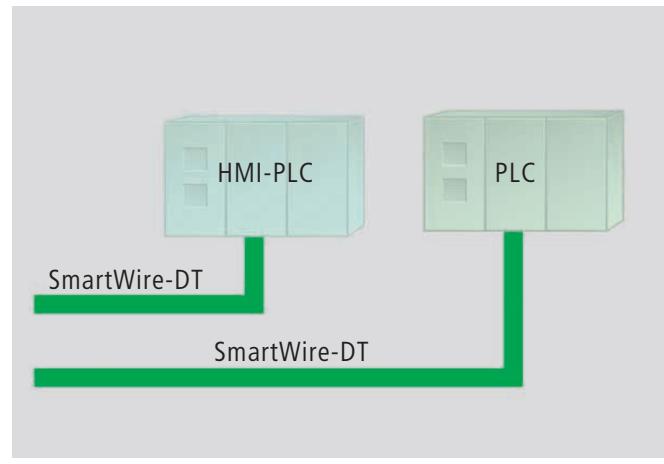
Secures your know-how

SmartWire-DT significantly cuts your wiring requirement and helps you save costs across the entire value chain. From design through construction, programming, commissioning to extending your system.

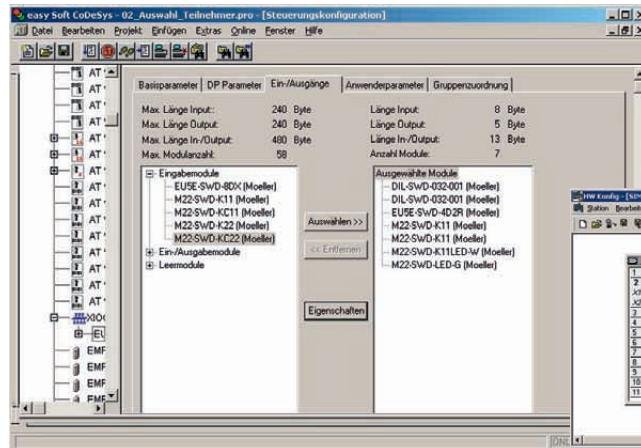
Utilizing Eaton's industrial switchgear, SmartWire-DT is based on tried-and-tested technology. SmartWire-DT makes Eaton industrial switchgear communications-capable. You can use the SmartWire-DT technology flexibly. The connection via standard fieldbus systems (e.g. PROFIBUS, CANopen) allows use on the controller platforms of many manufacturers. Another option is the use of Eaton automation components with an integrated SmartWire-DT interface.



Connection via standard fieldbus systems

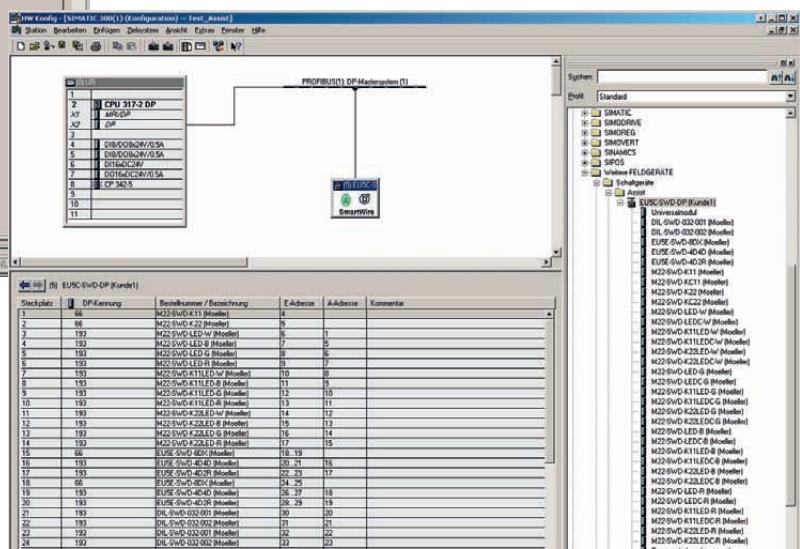


Connection via integrated SmartWire-DT interface



SmartWire-DT in the CoDeSys PLC configuration

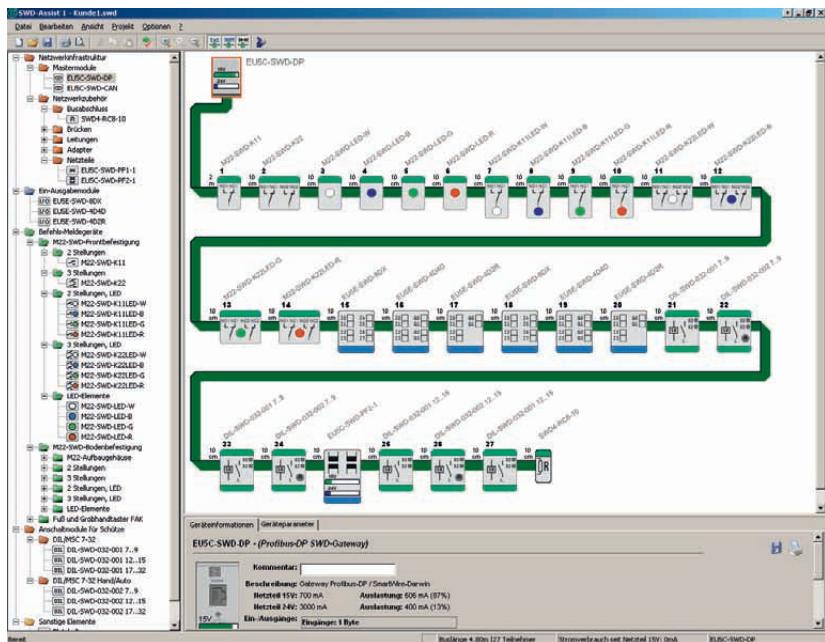
SmartWire-DT in the STEP 7 control configuration





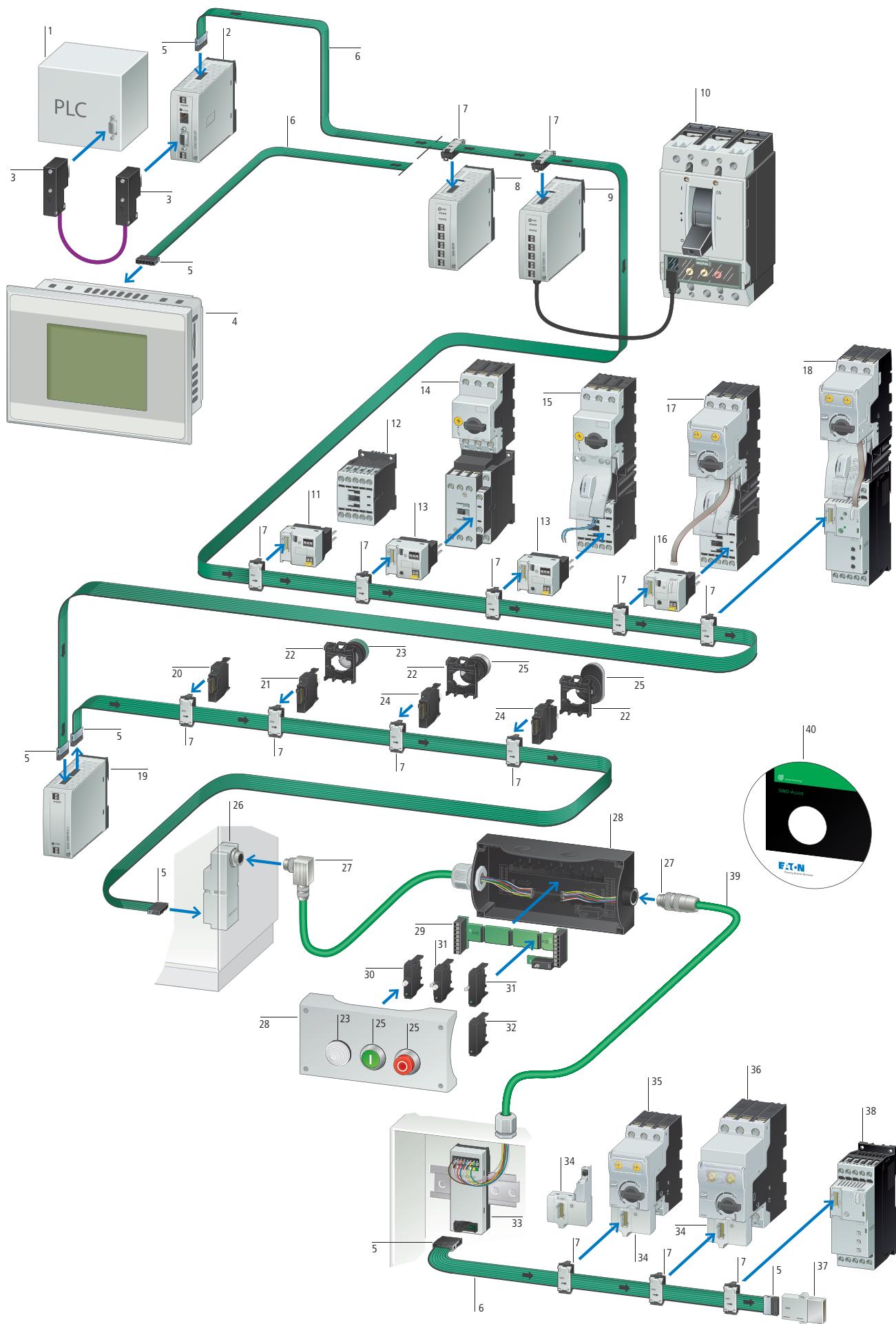
Planning and ordering help (SWD-Assist)

- Easy generation of applications with the system SmartWire-DT
- Integrated function for the generation of ordering lists
- Integrated validity check
- Online functionality
 - simple preliminary commissioning of SmartWire-DT inputs and outputs and function testing
 - easy diagnostics of SmartWire-DT slave
- Download
 - Free download under <http://downloadcenter.moeller.net>



The SWD-Assist software supports you in the fast and safe planning and commissioning of a SmartWire-DT line.

System overview





Programmable logic controller (PLC)	1	SmartWire-DT contactor module with Hand-0-Automatic switch	13	SmartWire-DT function elements for front mount	24	SmartWire-DT PKE module (motor protective circuit breaker)	34
SmartWire-DT Gateways	2	Motor protective circuit breakers	14	SmartWire-DT operating elements	25	Motor protective circuit breaker PKZ12, PKZ32	35
Data plug Sub-D 9 pole	3	Motor starter MSC	15	SmartWire-DT control panel cable entry for flat to round cable	26	Motor-protective circuit-breakers PKZ65	36
SmartWire-DT HMI-PLC	4	SmartWire-DT PKE module (motor starter)	16	SmartWire-DT plug connector	27	SmartWire-DT network termination for 8 pole ribbon cable	37
SmartWire-DT blade terminal 8 pole	5	Motor starter with electronic motor protection PKE	17	Surface mounting enclosure RMQ-Titan	28	DS7 soft starters	38
SmartWire-DT SmartWire-DT 8 pole	6	Soft starter DS7 with electronic motor protection from PKE	18	SmartWire-DT card for function elements, floor-fixing	29	SmartWire-DT Round cable, 8-pole	39
SmartWire-DT external device plug 8 pole	7	SmartWire-DT powerfeed card	19	SmartWire-DT LED elements for base fixing	30	SmartWire-DT planning and ordering aid, SWD-Assist	40
SmartWire-DT I/O modules	8	SmartWire-DT Universal slave, front mount	20	SmartWire-DT function elements for base fixing	31		
SmartWire-DT Connection for NZM	9	SmartWire-DT LED elements, front mount	21	SmartWire-DT Universal slave for base fixing	32		
NZM circuit-breakers	10	RMQ-Titan mounting adapter for flush mounting plates	22	SmartWire-DT adapter for flat/round cable for top-hat rail mounting	33		
SmartWire-DT contactor module	11						
DILM contactors	12						
		RMQ-Titan indicator light	23				

Features

SmartWire-DT HMI-PLC

- with SmartWire-DT master interface and PLC function
- Compact design with light plastic enclosures
- Wide selection of onboard interfaces
- 3.5", 5.7" or 7" TFT-LCD screen

SmartWire-DT Gateways

- Connection of SmartWire-DT to field bus.
- Fieldbus address setting with DIP switches
- Automatic baud rate detection
- Feeding the supply voltage for the SmartWire-DT slaves
- Supplies the control voltage for the motor starter or contactor
- Configuration button for automatic addressing of the SmartWire-DT slaves.
- Support of up to 99 SmartWire-DT slaves.

SmartWire-DT slave

- Function element for connecting to RMQ-Titan pilot devices.
- Function element for connecting to DLM contactors
- Function element for connecting to PKZ/PKE motor-protective circuit-breakers
- Function module for connecting to NZM2,3,4 circuit-breakers
- Connection of digital and analog input/output modules

SmartWire-DT Assist (SWD-Assist)

- Easy creation of SmartWire-DT networks
- Integrated validity check
- Generation of ordering lists.
- Online-Functionality
 - Simple pre-commissioning
 - Configuration check and comparison
 - Display of parameters and diagnostics
 - easy diagnostics of SmartWire-DT slave
- Free download under: <http://downloadcenter.moeller.net>

Ordering

SmartWire-DT HMI-PLC

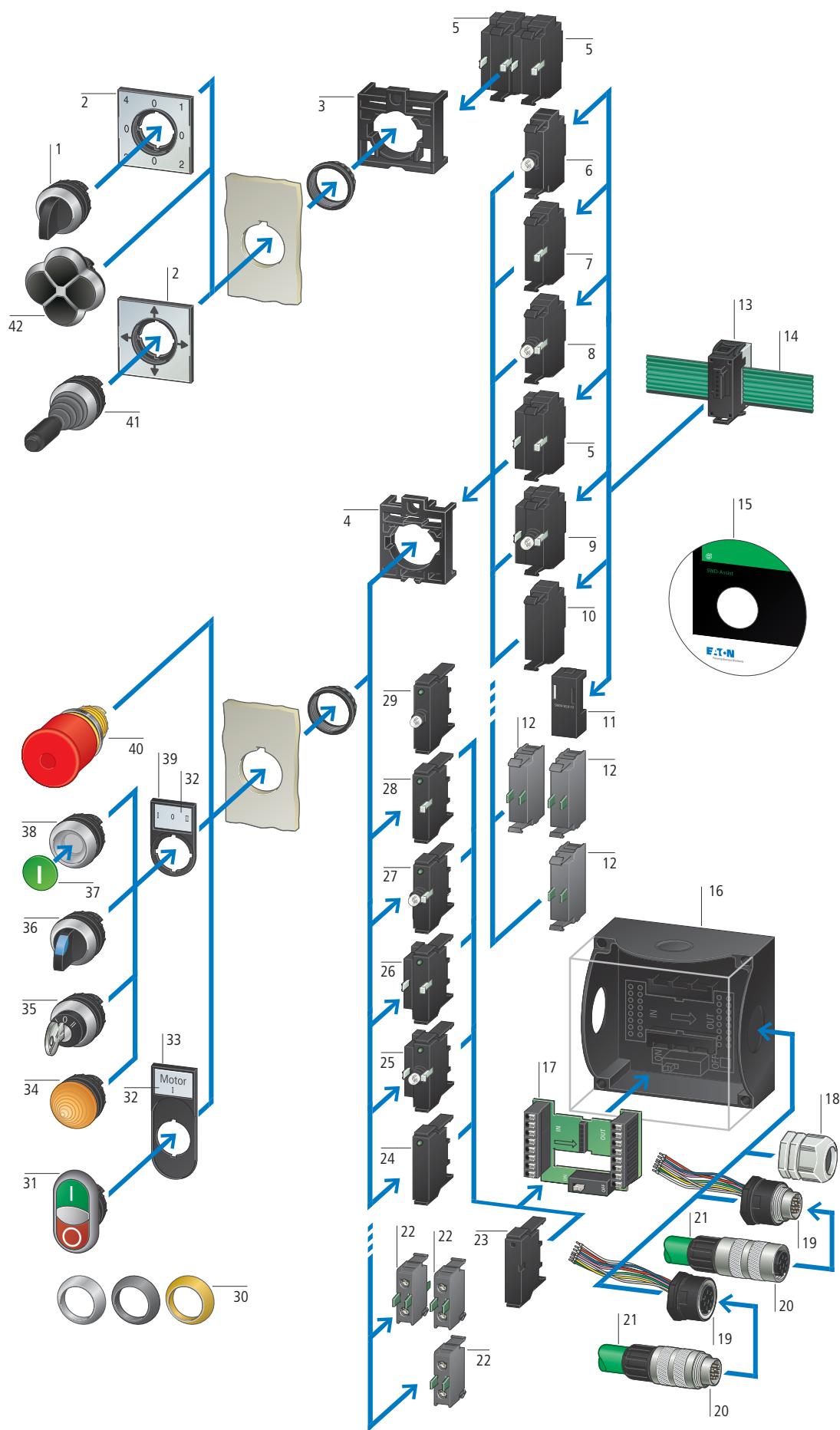


Type with	Front type	Screen diagonal	Resolution	Communication interface	Part no. Article no.	Price see price list	Std. pack	Information relevant for export to North America
		Inch	Pixel					
SmartWire-DT HMI-PLC								
• Including PLC function								
• Integrated interfaces: SWD master, Ethernet 100/10, USB, communication interfaces								
	Resistive-Touch TFT-LCD 64 k Colours	Standard membrane (fully enclosed)	3.5 5.7 5.7 7 7	320 x 240 640 x 480 640 x 480 800 x 480 800 x 480	— CAN RS485 PROFIBUS RS485 CAN RS485 PROFIBUS RS485	XV-102-BE-35TQRC-10 153524 XV-102-E6-57TVRC-10 153525 XV-102-E8-57TVRC-10 153526 XV-102-E6-70TWRC-10 153527 XV-102-E8-70TWRC-10 153528	1 off	NA Certification Request filed for UL and CSA



Description	Part no. Article no.	Price see price list	Std. pack	Information relevant for export to North America
SmartWire-DT Gateways				
Gateway to the connection to the field bus and for supply of the SmartWire-DT slaves and switchgears.				
 <ul style="list-style-type: none"> Connection to PROFIBUS-DP as slave Automatic baud rate detection from 9.6 kBit/s to 12 Mbit/s Address range 1 - 126 9-pole Sub-D socket Connection of up to 58 SmartWire-DT subscribers 	EU5C-SWD-DP 116308		1 off	UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No. 3211-07 NA Certification UL Listed, CSA certified
<ul style="list-style-type: none"> Connection to CANopen as slave Automatic baud rate detection from 10 Kbit/s to 1 Mbit/s Address range 1 - 32 9-pinSUB?Dplug connector Connection of up to 99 SmartWire-DT subscribers 	EU5C-SWD-CAN 116307			NA Certification Request filed for UL and CSA
<ul style="list-style-type: none"> Connection Ethernet IP or MODBUS as slave. Address set with DIP switch or DHCP Integrated Ethernet switch Connection of up to 99 SmartWire-DT subscribers Separate diagnostics interface 	EU5C-SWD-EIP-MODTCP 153163			NA Certification Request filed for UL and CSA
SmartWire-DT I/O modules				
SmartWire-DT subscriber for the connection of digital I/O signals				
 <ul style="list-style-type: none"> Module with 8 24 V DC digital inputs 	EU5E-SWD-8DX 116381		1 off	UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No. 3211-07 NA Certification UL Listed, CSA certified
<ul style="list-style-type: none"> Module with 4 24 V DC digital inputs, 3-wire connection with 24 V DC, 0.5 A supply 	EU5E-SWD-4DX 144060			NA Certification Request filed for UL and CSA
<ul style="list-style-type: none"> Module with 4 24 V DC digital inputs and 4 24 V DC, 0.5 A digital outputs 	EU5E-SWD-4D4D 116382			UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No. 3211-07 NA Certification UL Listed, CSA certified
<ul style="list-style-type: none"> Module with 4 24 V DC digital inputs and 2 250 V AC, 3 A relay outputs 	EU5E-SWD-4D2R 116383			UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No. 3211-07 NA Certification UL Listed, CSA certified
<ul style="list-style-type: none"> Module with 8 24 V DC, 0.5 A digital outputs 	EU5E-SWD-X8D 144061			NA Certification Request filed for UL and CSA
SmartWire-DT slave for the connection of analog I/O signals				
 <ul style="list-style-type: none"> Module with 4 0-10 V, 0-20 mA analog inputs, can be configured individually 	EU5E-SWD-4AX 144062		1 off	NA Certification Request filed for UL and CSA
<ul style="list-style-type: none"> Module with 2 0-10 V, 0-20 mA analog inputs and 2 0-10 V, 0-20 mA analog outputs, can be configured individually 	EU5E-SWD-2A2A 144063			
<ul style="list-style-type: none"> Module with 4 PT100, PT1000, Ni1000 temperature inputs, 2/3-wire connection, can be configured individually 	EU5E-SWD-4PT 144064			
SmartWire-DT powerfeed module				
For additional control voltage feeder for the motor starter and contactors				
 <ul style="list-style-type: none"> For the formation of emergency switching off groups for motor starters and contactors 	EU5C-SWD-PF1-1 116309		1 off	UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No. 3211-07 NA Certification UL Listed, CSA certified
<ul style="list-style-type: none"> for the supply of other SmartWire-DT slaves For additional control voltage feeder for the motor starter and contactors For the formation of emergency switching off groups for motor starters and contactors 	EU5C-SWD-PF2-1 116380		1 off	

System overview





RMQ-Titan, 4 way selector switch actuator →HPL0200-2010	1	Universal slave for front →HPL0200-2010	10	RMQ-Titan, M22 contact elements for base fixing →HPL0200-2010	22	RMQ-Titan, Label mount for double actuator pushbuttons →HPL0200-2010	33
RMQ-Titan, label with label mount for 4-way selector switch and joystick →HPL0200-2010	2	Link for SmartWire-DT device plug → features	11	Jumper for SmartWire-DT board → page 11	23	RMQ-Titan, indicator light →HPL0200-2010	34
SmartWire-DT front mounting adapter for 2 x M22-mart-K22 → page 11	3	RMQ-Titan, M22 contact elements for front mounting →HPL0200-2010	12	Universal slave for base fixing → HPL0200-2010	24	RMQ-Titan, key-operated button →HPL0200-2010	35
RMQ-Titan, front mounting adapter with three mounting locations → page 11	4	SmartWire-DT external device plug → page 17	13	SmartWire-DT function element with 3 positions and LED for base fixing → features	25	RMQ-Titan, selector switch actuator →HPL0200-2010	36
SmartWire-DT function element with 3 positions and LED for front mounting → Features	5	SmartWire-DT flat band conductor → page 17	14	SmartWire-DT function element with 3 positions for base fixing → features	26	RMQ-Titan, button plates/button lenses →HPL0200-2010	37
SmartWire-DT LED element for front mounting → Features	6	SWD-Assist, Planning and ordering help → features	15	SmartWire-DT function element with 2 positions and LED for base fixing → features	27	RMQ-Titan, pushbuttons →HPL0200-2010	38
SmartWire-DT function element with 2 positions for front mounting → Features	7	RMQ-Titan, surface mounting enclosure →HPL0200-2010	16	SmartWire-DT function element with 2 positions for base fixing → features	28	RMQ-Titan, label mounts →HPL0200-2010	39
SmartWire-DT function element with 2 positions and LED for front mounting → features	8	SmartWire-DT board for surface mounting enclosure → Features	17	SmartWire-DT function element with 2 positions for base fixing → features	29	RMQ-Titan, Emergency-Stop pushbutton (for safety circuits use only standard contacts M22) →HPL0200-2010	40
SmartWire-DT function element with 3 positions and LED for front mounting → features	9	Cable gland for SmartWire-DT round cable →HPL0200-2010	18	SmartWire-DT bulkhead plug/socket with assembled signal cables → Features	19	RMQ-Titan, Bezel →HPL0200-2010	41
		SmartWire-DT socket/plug for round cable → Features	20	RMQ-Titan, double actuator pushbutton →HPL0200-2010	31	RMQ-Titan, joystick →HPL0200-2010	42
		SmartWire-DT round cable → page 18	21	RMQ-Titan, insert labels →HPL0200-2010	32	RMQ-Titan, 4 way position switches →HPL0200-2010	42

Features

SmartWire-DT RMQ interface for front mounting → page 10

- Adaptation with standard adapter M22-A or M22-SWD-A4 for 4-way selector switch/pushbutton and joystick.
- Combination with standard pilot devices of the RMQ-Titan M22 series.
- Types with one or two change-over contacts and with/without integrated LED element.
- LED elements in four colors.
- SmartWire-DT diagnostics LED for signalling the communication status of the function element.
- Connection to SmartWire-DT ribbon cable with external device plug

Link for external device plug → page 11

- Connection to SmartWire-DT external device plug
- Suitable for the bridging of already adapted SmartWire-DT external device plugs (e.g. as a placeholder).

Surface mounting enclosure with PCB → page 11

- Connection of SmartWire-DT-Function elements for base fixing.
- Type with 1, 2, 3, 4 and 6 slots.
- Bridging of free slots with links for base fixing.
- Integrated connectable terminator.

SmartWire-DT RMQ interface for base fixing → page 10

- For use with SmartWire-DT board, RMQ-Titan surface mounting enclosure and RMQ-Titan M22 pilot devices.
- Types with one or two change-over contacts and with/without integrated LED element.
- LED elements in four colors.
- SmartWire-DT diagnostics LED for signalling of the communication status of the function elements.

Housing bushing socket → page 18

- Use for RMQ-Titan M22 surface mounting enclosure or control panel.
- Type plug/socket.
- Prefabricated signal cable with ferrules for connection to PCB for surface mounting enclosure.

Planning and ordering help (SWD-Assist)

- Easy generation of applications with the system SmartWire-DT.
- Integrated function for the generation of ordering lists.
- Integrated validity check.
- Online-Functionality:
 - simple preliminary commissioning of SmartWire-DT inputs and outputs and function testing.
 - easy diagnostics of SmartWire-DT slave
- Free download under: <http://downloadcenter.moeller.net>

Ordering

	Number of contacts	Contact sequence	Contact travel diagram stroke in connection with front element	Configuration	Colour LED	Part no. Article no.	Price see price list	Std. pack
Function elements								
Front fixing	1 changeover contact	L I			without LED	M22-SWD-K11 115964	20 off	
	2 changeover contact	L I L I			without LED	M22-SWD-K22 115965	10 off	
Base fixing								
Front fixing	1 changeover contact	L I			without LED	M22-SWD-KC11 115995	20 off	
	2 changeover contact	L I L I			without LED	M22-SWD-KC22 115996	10 off	
Front fixing	1 changeover contact	L I				M22-SWD-K11LED-W 115972	20 off	
	1 changeover contact	L I				M22-SWD-K11LED-B 115973		
						M22-SWD-K11LED-G 115974		
						M22-SWD-K11LED-R 115975		
2 changeover contact	L I L I				M22-SWD-K22LED-W 115978	10 off		
	2 changeover contact	L I L I				M22-SWD-K22LED-B 115979		
						M22-SWD-K22LED-G 115980		
						M22-SWD-K22LED-R 115981		
Base fixing	1 changeover contact	L I				M22-SWD-K11LEDC-W 116003	20 off	
	1 changeover contact	L I				M22-SWD-K11LEDC-B 116004		
						M22-SWD-K11LEDC-G 116005		
						M22-SWD-K11LEDC-R 116006		
2 changeover contact	L I L I				M22-SWD-K22LEDC-W 116009	10 off		
	2 changeover contact	L I L I				M22-SWD-K22LEDC-B 116010		
						M22-SWD-K22LEDC-G 116011		
						M22-SWD-K22LEDC-R 116012		

Notes

Information relevant for export to North America



SmartWire-DT function elements can be combined with RMQ-Titan operating elements M22... → HPL chapter "Pilot devices"

UL File No.	E29184
UL CCN	NKCR
CSA File No.	2324643
CSA Class No.	3211-07
NA Certification	UL Listed, CSA certified

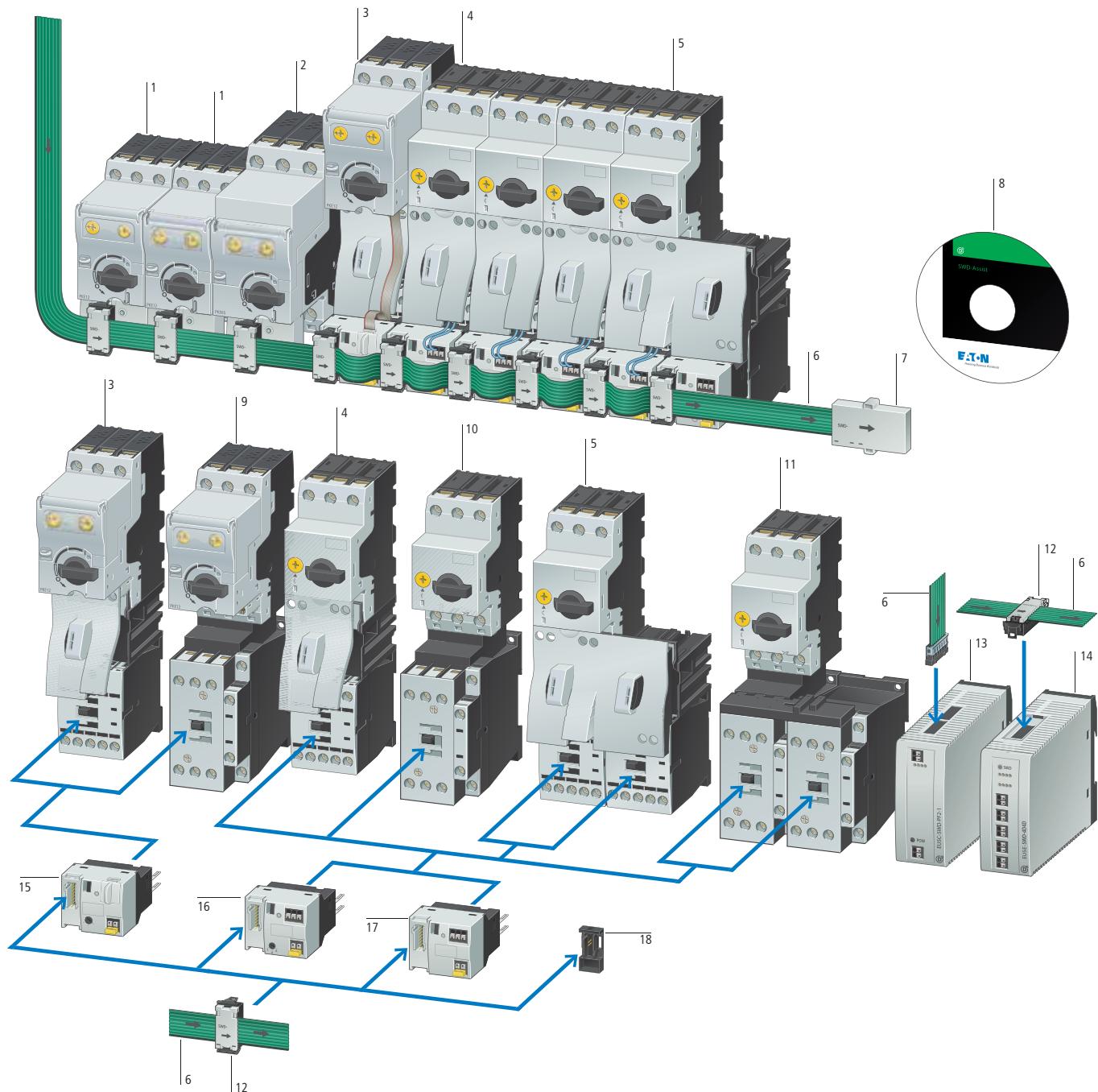


	Configuration	Colour LED	Part no. Article no.	Price see price list	Std. pack	Information relevant for export to North America
LED elements						
Front fixing			M22-SWD-LED-W 115966	20 off		UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No.3211-07 NA CertificationUL Listed, CSA certified
			M22-SWD-LED-B 115967			
			M22-SWD-LED-G 115968			
			M22-SWD-LED-R 115969			
Base fixing			M22-SWD-LEDC-W 115997	20 off		UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No.3211-07 NA CertificationUL Listed, CSA certified
			M22-SWD-LEDC-B 115998			
			M22-SWD-LEDC-G 115999			
			M22-SWD-LEDC-R 116000			
Fixing adapters						
Front fixing			M22-A 216374	50 off		UL/CSA certification not required
			M22-A-GVP 216375	500 off		UL/CSA certification not required
	For 2 function elements M22-SWD-K2... For use with M22-WR4, -WRJ4, -D4 in conjunction with M22-(SWD)-K		M22-SWD-A4 116016	10 off		UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No.3211-07 NA CertificationUL Listed, CSA certified
Cards						
PCBs for surface mounting enclosure M22-I.. for mounting base function elements M22-SWD-...K...						
		Number of mounting locations:	1			
			2			
			3			
			4			
			6			
			M22-SWD-I1-LP01 115990	1 off		UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No.3211-07 NA CertificationUL Listed, CSA certified
			M22-SWD-I2-LP01 115991			
			M22-SWD-I3-LP01 115992			
			M22-SWD-I4-LP01 115993			
			M22-SWD-I6-LP01 115994			
Link						
For bridging of open mounting locations on card.						
Base fixing						
			M22-SWD-SEL8-10 116698	5 off		UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No.3211-07 NA CertificationUL Listed, CSA certified

Notes

SmartWire-DT function elements can be combined with RMQ-Titan operating elements M22... → HPL chapter "Pilot devices"

System overview



PKE12, PKE32 networkable motor protective circuit breaker with PKE-XTUA-... trip block up to 15 kW → Features	1	Reversing starters MSC-R based on PKZM0 up to 5.5 kW → HPL0200-2010	5	DOL starters MSC-D based on PKZM0 up to 15 kW → HPL0200-2010	10	SmartWire-DT PKE module → features	15
PKE65 networkable motor protective circuit breaker with PKE-XTUA-... trip block up to 30 kW → Features	2	SmartWire-DT flat band conductor → page 17	6	Reversing starters MSC-R based on PKZM0 up to 15 kW → HPL0200-2010	11	SmartWire-DT contactor module with hand/auto functionality → features	16
Networkable PKE-based motor starters MSC-DEA up to 5.5 kW → Features	3	Network terminator → page 17	7	SmartWire-DT external device plug → page 17	12	SmartWire-DT protective module → features	17
DOL starters MSC-D based on PKZM0 up to 5.5 kW → HPL0200-2010	4	Planning and ordering help, SWD-Assist → features	8	Power feeder module → features	13	Link for external device plug → page 17	18
		Networkable PKE-based motor starters MSC-DEA up to 15 kW → Features	9	SmartWire-DT input/output module with relay outputs → features	14		



Features

SmartWire-DT protective modules

→ page 14

- Pluggable onto contactors in the xStart range
- Suitable for contactors DILM7(24VDC)...DILM38(RDC24), DILMC7(24VDC)...DILMC32(RDC24), DILA, DILMP20(24VDC)...DILMP45(RDC24)
- Use of the standard accessories in the xStart range
- Suitable for contactor combinations with PKZ or with Z overloads
- Integrated switch position polling
- Integrated mechanical switch position display
- Contactor actuation
- SmartWire-DT diagnostics LED for signalling communication status and signalling the switch command via SmartWire-DT
- Two independently fed digital inputs for scanning potentially isolated contacts, such as motor protective circuit breaker auxiliary contacts.
- Connection to SmartWire-DT flat band conductor via external device plug.

SmartWire-DT input/output modules

→ page 7

- Digital module with 4 24 V DC digital inputs and 2 relay outputs to actuate DILM contactors, including frame size 3.
- Connection to SmartWire-DT through external device plug.

SmartWire-DT PKE module

(motor starter) → page 14

- Pluggable onto contactors in the xStart range
- Suitable for motor starters MSC-DEA... (24 V DC) or DILM(C)7-DILM(C)32 in combination with PKE12/32 and trip block PKE-XTUA...
- Use the standard switchgear of the xStart range
- Use of the standard accessories in the xStart range
- Built-in mechanical contactor switching state display
- Built-in contactor switching state scanning
- Transmission of PKE-specific data (switch position PKE, relative motor current, thermal motor image, trip indications (overload, short-circuit,...), type PKE trip block, set value overload release and time-lag class).
- Communication cable (PKE32-COM) for connection to PKE trip block included as standard.
- Contactor actuation
- Selectable ZMR functionality (contactor opening on overload)
- SmartWire-DT diagnostics LED for signalling the communication status of the module and signalling the switch command via SmartWire-DT
- Hand/Auto functionality for automatic or manual switching-on of the connected contactor.
- Connection to SmartWire-DT flat band conductor via external device plug

SmartWire-DT PKE module (motor protective circuit breaker)

→ page 14

- Can be fitted to PKE12, PKE32, PKE65 motor protective circuit breaker with PKE-XTUA... trip block
- Use of standard accessories for PKE motor protective circuit breaker
- Transmission of PKE-specific data (switch position PKE, relative motor current, thermal motor image, trip indications (overload, short-circuit,...), type PKE trip block, set value overload release and time-lag class)
- Remote tripping of PKE motor protective circuit breaker
- SmartWire-DT diagnostics LED for signalling of the communication status of the module
- Connection to SmartWire-DT flat band conductor via external device plug

Link for external device plug → page 17

- Connection to SmartWire-DT external device plug
- Suitable for the bridging of already adapted external device plugs (e.g. as a wildcard).

Powerfeed module → page 7

- SmartWire-DT supply voltage incoming unit.
- 24 V DC supply voltage incoming unit for activation of the contactors.
- Assembly of emergency stop groups.

Planning and ordering help (SWD-Assist)

- Easy generation of applications with the system SmartWire-DT.
- Integrated function for the generation of ordering lists.
- Integrated validity check.
- Online-Functionality:
 - simple preliminary commissioning of SmartWire-DT inputs and outputs and function testing.
 - easy diagnostics of SmartWire-DT slave
- Free download under: <http://downloadcenter.moeller.net>

Safety engineering

Emergency stop disconnection to IEC/EN 954-1, switching category 3; EN ISO 13849-1 PL d; IEC 62061 SIL 2

Central switch off of the control voltage at the gateway or power feeder module. Combination with safety-orientated switchgears possible.

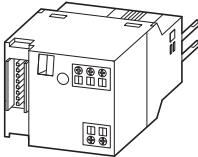
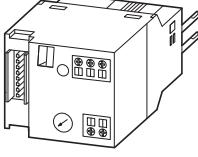
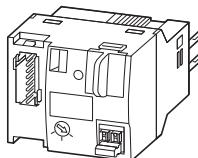
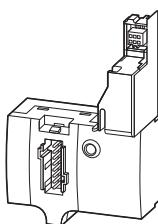
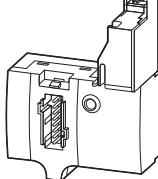
Engineering notes

The number of motor starters or DILM contactors that can be connected is dependant upon the power consumption of the magnet systems per SmartWire Darwin line. To increase the number of SmartWire-Darwin modules that can be connected power feeder modules can be used.

Power consumption/current consumption 24-V-SWD-control voltage U_{AUX}

	DIL-SWD-32...	PKE-SWD-32
Pull-in power		
for DILM(C) 7-9, DILA	W 3	3
for DILM(C) 12-15, DILMP20	W 4.5	4.5
for DILM(C) 17-38, DILMP32-45	W 12	12
Pick-up current		
for DILM(C) 7-9, DILA	mA 125	125
for DILM(C) 12-15, DILMP20	mA 188	188
for DILM(C) 17-38, DILMP32-45	mA 500	500
Sealing power		
for DILM(C) 7-9, DILA	W 3	3
for DILM(C) 12-15, DILMP20	W 4.5	4.5
for DILM(C) 17-38, DILMP32-45	W 0.5	0.5
Holding current		
for DILM(C) 7-9, DILA	mA 125	125
for DILM(C) 12-15, DILMP20	mA 188	188
for DILM(C) 17-38, DILMP32-45	mA 21	21

Ordering

Description	For use with	Part no. Article no.	Price see price list	Std. pack	Informa- tion relevant for export to North America
SmartWire-DT protective modules^{1),2)}					
SmartWire-DT module for surface-mounting on contactors. Per contactor 1 module.					
	Two digital inputs for potential-free contacts. 1 electrical interlock for the surface mounting of reversing starters. Messages: Switch status Contactor, status of the digital inputs 1 and 2. Commands: Contactor actuation	DILM(C)7... - DILM(C)32 DILM38 DILA MSC-D(E)...(24VDC)	DIL-SWD-32-001 118560	5 off	4)
	Two digital inputs for potential-free contacts. 1 electrical interlock for the surface mounting of reversing starters. 1-0-A switch for manual or automatic operation. Messages: contactor switching position, status of the digital inputs 1 and 2, 1-0-A switch position. Commands: Contactor actuation	DILM(C)7... - DILM(C)32 DILM38 DILA MSC-D(E)...(24VDC)	DIL-SWD-32-002 118561	5 off	4)
SmartWire-DT PKE module (motor-starter combinations)^{1),3)}					
SmartWire-DT module for connection of motor-starter combination, model "Extended" 24 V DC (MSC-DEA...) up to 15 kW. 1 module per contactor and PKE.					
	Surface-mounting to contactors. Connecting cable between module and trip block PKE-XTUA... included as standard. 1 electrical interlock for the surface mounting of reversing starters. 1-0-A switch for manual or automatic operation. Selectable overload relay function (ZMR) for connecting the contactor on overload. Messages: - Switch position contactor/PKE/1-0-A switch - Motor current in % - Thermal motor image in % - Trip-indicating auxiliary contact (Overload, Short-circuit,...) - Set value of overload releases - Set value Verification time (CLASS), Part no. Trip block. Commands: contactor actuation, activation of overload relay function (ZMR)	DILM(C)7... - DILM(C)32 MSC-DEA	PKE-SWD-32 126895	4 off	5)
SmartWire-DT PKE (motor protective circuit breaker)					
SmartWire-DT module for connecting PKE motor protective circuit breakers with PKE-XTUA... trip block					
	Fitted on PKE motor protective circuit breaker Messages: - Switch position PKE - Motor current in % - Thermal motor image in % - Trip-indicating auxiliary contact (Overload, Short-circuit,...) - Set value of overload releases - Set time lag (CLASS) - Type of trip block Commands: Remote disconnection of motor protective circuit breaker	PKE12 PKE32 PKE65	PKE-SWD 150613	1 off	5)
			PKE-SWD-SP 150614	1 off	5)

Notes

- 1) For current consumption of the contactor coils > 3 A (UL: 2 A) use additional power feed module.
A2 connections must not be bridged.
- 2) Wiring sets DILM 12-XRL and PKZM0-XRM12 cannot be used.
- 3) Connection terminals for electrical interlocking are not suitable for safety technology.
- 3) Additional SWD contactor module required for actuation of reversing starter.

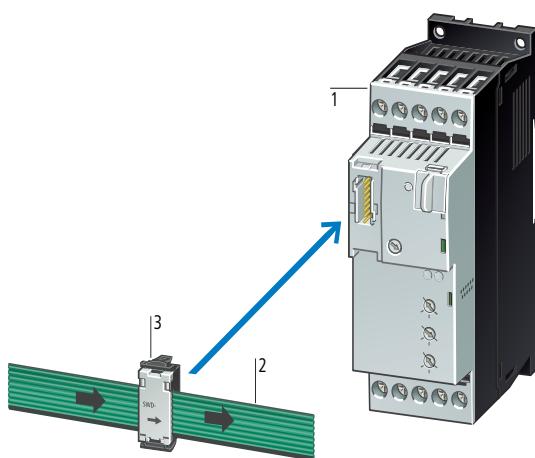
Information relevant for export to North America



- 4) UL File No. E29184
UL CCN NKCR
CSA File No. 2324643
CSA Class No. 3211-07
NA Certification UL Listed, CSA certified
- 5) NA Certification Request filed für UL and CSA



System overview



SmartWire-DT soft starter DS7

1 Short description

The soft starters DS7-...-D are designed for connection to SmartWire-DT. These two-phase-controlled soft starters control three-phase motors for applications with normal operating frequency in the performance range from 4 to 200 A (1.5 to 110 kW at 400 V mains voltage). Due to Eaton's special control method the true run behavior of a DS7 can be compared with that of three-phase soft starters.

SmartWire-DT provides a direct connection to the DS7, without control signal wiring. Through Smart-Wire-Darwin the PLC transmits all control signals directly to the soft starter. The device data are available for processing in the master control system without additional configuration. The connection with SmartWire-DT is fast, easy, inexpensive and convenient.

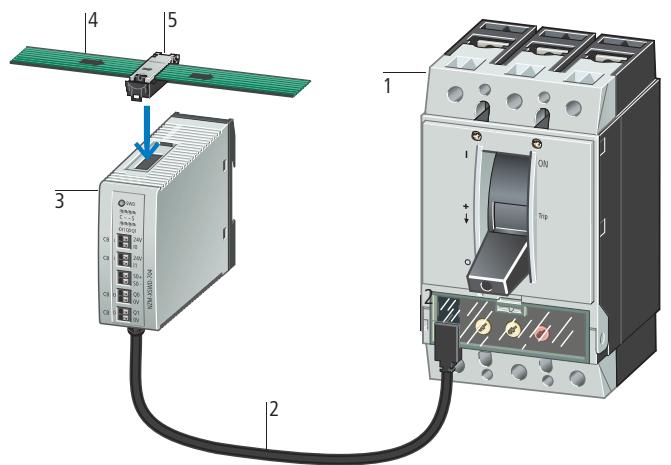
Notes

For further details see section "Soft starters"

Ordering

	Rated operational current of the soft starter I _e A	Assigned motor rating P kW	Part no. Article no.	Price see price list	Std. pack	Notes
Soft starters						
Soft starters for three-phase loads, mains supply voltage 230 – 480 V AC (50/60 Hz) Rated control circuit voltage U _c : 24 V DC SmartWire-DT						
(4)	1.5	2	DS7-34DSX004N0-D 134943		1 off 	Product Standards IEC/EN 60947-4-2; GB 14048.6; UL 508; CSA-C22.2 No 0-M91; CSA-C22.2 No 14-05 CE marking
(7)	3	3	DS7-34DSX007N0-D 134945		NA Certification Request filed for UL and CSA	
(9)	4	5	DS7-34DSX009N0-D 134946		Suitable for Max. Voltage Rating 480 V	Branch circuits
(12)	5.5	7.5	DS7-34DSX012N0-D 134947		Degree of Protection IP20; UL/CSA Type 1	
(16)	7.5	10	DS7-34DSX016N0-D 134948			
(24)	11	15	DS7-34DSX024N0-D 134949			
(32)	15	20	DS7-34DSX032N0-D 134950			
(41)	22	30	DS7-34DSX041N0-D 134952			
(55)	30	40	DS7-34DSX055N0-D 134953			
(70)	37	50	DS7-34DSX070N0-D 134954			
(81)	45	60	DS7-34DSX081N0-D 134955			
(100)	55	75	DS7-34DSX100N0-D 134956			
(135)	75	100	DS7-34DSX135N0-D 134957			
(160)	90	125	DS7-34DSX160N0-D 134958			
(200)	110	150	DS7-34DSX200N0-D 134959			

System overview



SmartWire-DT Circuit-breaker NZM	1
Connection cable from NZM to NZMX-SWD-704	2
NZM-Interface for Smart-Wire-DT	3
SmartWire-DT flat band conductor	4
SmartWire-DT external device plug	5

Short description

The NZM interface module implements the data connection between NZM2/3/4 circuit-breakers with electronic release and SmartWire-DT.

The following status data is transferred:

- On-Off-Tripped
- Load warnings
- Reason for last trip
- Actual currents as well as switch type
- Actual settings of the rotary coding switches.

The switch can also be operated with a remote operator.

Note:

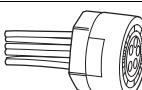
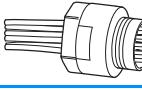
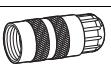
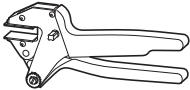
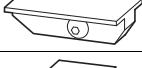
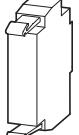
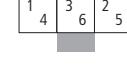
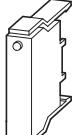
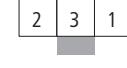
Further details see section "Circuit-breakers NZM" in the Main Catalogue.

Ordering

Description	Part no. Article no.	Price see price list	Std. pack	Notes	Information relevant for export to North America  
SmartWire-DT NZM interface					
 The module implements the data connection between the NZM2/3/4 with electronic release and the SmartWire-Darwin. The following data is transmitted <ul style="list-style-type: none"> • Status data (ON/OFF/TRIPPED) • Load warnings • Reason for last trip • The actual currents • The switch type • The current settings of the rotary coding switches The switch can also be operated with a remote operator. <ul style="list-style-type: none"> • 2 digital inputs for the switch status • 2 transistor outputs for remote operation • Retentive memory for energy data (kWh) Energy data is transmitted through digital input (S_0) from an external energy measuring module NZN...-XMC-SO.	NZM-XSWD-704 135530		1 off	A connection cable to the circuit-breaker is included as standard.	NA Certification Request filed for UL and CSA



Description	Part no. Article no.	Price see price list	Std. pack	Information relevant for export to North America
Flat band conductor, 8 pole				
For laying the SmartWire-DT network inside the control panel.				
	Length: 100 m Length: 3 m Prefabricated with 2 blade terminals SWD4-8MF2. Length: 5 m Prefabricated with 2 blade terminals SWD4-8MF2. Length: 10 m Prefabricated with 2 blade terminals SWD4-8MF2.	SWD4-100LF8-24 116026 SWD4-3LF8-24-2S 116027 SWD4-5LF8-24-2S 116028 SWD4-10LF8-24-2S 116029	1 off 	UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No. 3211-07 NA Certification UL Listed, CSA certified
External device plugs				
External device plug for connecting SmartWire-DT stations				
		SWD4-8SF2-5 116022	10 off 	UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No. 3211-07 NA Certification UL Listed, CSA certified
Link				
Bridging open mounting locations for external device plugs				
	Link for device plug SWD4-8SF2-5	SWD4-SEL8-10 116021	5 off 	UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No. 3211-07 NA Certification UL Listed, CSA certified
Blade terminal				
	8-pin blade terminal for connection to gateway, power feeder module, coupling	SWD4-8MF2 116023	10 off 	UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No. 3211-07 NA Certification UL Listed, CSA certified
Coupling				
	Coupling for 8-pin blade terminal	SWD4-8SFF2-5 116024	1 off 	UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No. 3211-07 NA Certification UL Listed, CSA certified
Network terminator				
	Network terminator for 8-pole flat band conductor	SWD4-RC8-10 116020	1 off 	UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No. 3211-07 NA Certification UL Listed, CSA certified
Cable adapters				
	Cable adapter for flat cable (plug) to round cable (terminal)	SWD4-8FRF-10 121377	1 off 	UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No. 3211-07 NA Certification UL Listed, CSA certified
Switch cabinet bushing				
Transition from SWD ribbon cable to round cable, can be plugged-in on both sides. Additional control voltage feeder for the motor starter and contactors. Suitable for wall thickness to 4 mm. Protection type IP67, drill hole 18.5 mm. Connection of ribbon cable with blade terminal SWD4-8MF2 8-pole				
	Connection round cable via socket. Connection round cable via plug.	SWD4-SFL8-20 121380 SWD4-SML8-20 121381	1 off 1 off 	UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No. 3211-07 NA Certification UL Listed, CSA certified

Description	Part no. Article no.	Price see price list	Std. pack	Information relevant for export to North America
Round cable, 8 pole For laying the SmartWire-DT network outside of the control panel. 	SWD4-50LR8-24 116030	1 off		UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No. 3211-07 NA Certification UL Listed, CSA certified
Length: 50 m, HK-SO-Li2YY, 8 mm diameter				
Length: 250 m, HK-SO-Li2YY, 8 mm diameter	SWD4-250LR8-24 144878	1 off		
Housing bushing socket for flush mounting in surface mounting enclosure M22-I... 8-pole socket, IP67, for connection to SWD4-S(M,F)-67... 8 prefabricated cables for connection to PCB M22-SWD-I-...				
	SWD4-SF8-20 116031	1 off		UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No. 3211-07 NA Certification UL Listed, CSA certified
8-pole socket, M20				
	SWD4-SM8-20 116032	1 off		UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No. 3211-07 NA Certification UL Listed, CSA certified
8-pole plug, M20				
Connectors for SWD round conductors				
	SWD4-SF8-67 116033	1 off		UL File No. E29184 UL CCN NKCR CSA File No. 2324643 CSA Class No. 3211-07 NA Certification UL Listed, CSA certified
8-pole socket, flat				
	SWD4-SM8-67 116034			
8-pole plug, flat				
	SWD4-SF8-67W 116035			
8-pole socket, 90° angled				
	SWD4-SM8-67W 116036			
8-pole plug, 90° angled				
Tools for plugs				
	SWD4-CRP-1 116025	1 off		UL/CSA certification not required
Pliers for external device plugs				
	SWD4-CRP-2 116699			
Pliers for blade terminal				
	SWD4-CRPAD-1 116700			
Insert for toggle lever press of external device plugs				
	SWD4-CRPAD-2 116701			
Insert for toggle lever press of blade terminal				
Description	Configuration	Part no. Article no.	Price see price list	Std. pack
Universal slave for configured but not yet installed SmartWire-DT slaves				
	Front mount		M22-SWD-NOP 147637	20 off
				NA Certification Request filed for UL and CSA
	Base fixing		M22-SWD-NOPC 147638	20 off
				NA Certification Request filed for UL and CSA



Engineering

Current consumption 15-V-SWD supply voltage		Article no.	Current consumption mA	Notes
Part no.				
M22-SWD-K11		115964	10	-
M22-SWD-K22		115965	10	-
M22-SWD-NOP		147637	10	-
M22-SWD-LED-W		115966	22	-
M22-SWD-LED-B		115967	22	-
M22-SWD-LED-G		115968	22	-
M22-SWD-LED-R		115969	22	-
M22-SWD-K11LED-W		115972	22	-
M22-SWD-K11LED-B		115973	22	-
M22-SWD-K11LED-G		115974	22	-
M22-SWD-K11LED-R		115975	22	-
M22-SWD-K22LED-W		115978	22	-
M22-SWD-K22LED-B		115979	22	-
M22-SWD-K22LED-G		115980	22	-
M22-SWD-K22LED-R		115981	22	-
M22-SWD-KC11		115995	10	-
M22-SWD-KC22		115996	10	-
M22-SWD-NOPC		147638	10	-
M22-SWD-LEDC-W		115997	22	-
M22-SWD-LEDC-B		115998	22	-
M22-SWD-LEDC-G		115999	22	-
M22-SWD-LEDC-R		116000	22	-
M22-SWD-K11LEDC-W		116003	22	-
M22-SWD-K11LEDC-B		116004	22	-
M22-SWD-K11LEDC-G		116005	22	-
M22-SWD-K11LEDC-R		116006	22	-
M22-SWD-K22LEDC-W		116009	22	-
M22-SWD-K22LEDC-B		116010	22	-
M22-SWD-K22LEDC-G		116011	22	-
M22-SWD-K22LEDC-R		116012	22	-
DIL-SWD-32-001		118560	40	-
DIL-SWD-32-002		118561	40	-
PKE-SWD-32		126895	58	-
EU5E-SWD-8DX		116381	16	-
EU5E-SWD-4D4D		116382	33	-
EU5E-SWD-4D2R		116383	45	-
EU5E-SWD-4DX		144060	33	-
EU5E-SWD-X8D		144061	43	-
EU5E-SWD-4AX		144062	22	-
EU5E-SWD-2A2A		144063	22	-
EU5E-SWD-4PT		144064	22	-
M22-SWD-I1-LP01		115990	17	with terminating resistor switched on
M22-SWD-I2-LP01		115991	17	
M22-SWD-I3-LP01		115992	17	
M22-SWD-I4-LP01		115993	17	
M22-SWD-I6-LP01		115994	17	
SWD4-RC8-10		116020	17	-

Technical data

	XV-102-BE-35TQRC-10	XV-102-E6-57TVRC-10 XV-102-E8-57TVRC-10	XV-102-E6-70TWRC-10 XV-102-E8-70TWRC-10	
Display				
Screen diagonal/part no.	3.5" TFT-LCD (color)	5.7" TFT-LCD (color)	7" TFT-LCD (color)	
Resolution	QVGA (320 × 240 pixels or 240 × 320 pixels in portrait format)	VGA (640 × 480 pixels or 480 × 640 pixels in portrait format)	WVGA (800 × 480 pixels or 480 × 800 pixels in portrait format)	
Visible screen area	70 mm x 53 mm	115 mm x 86 mm	152 mm x 91 mm	
Color resolution (grayscale or color)	64 k Colours	64 k Colours	64 k Colours	
Contrast ratio (Normally)	Normally 300:1	Normally 300:1	Normally 300:1	
Brightness	Normally 250 cd/m ²	Normally 250 cd/m ²	Normally 250 cd/m ²	
Backlight	LED, dimmable via software			
Lifespan of backlight	Normally 40000 h			
Resistive touch protective screen	Touch sensor (glass with foil)			
Operation				
Technology	Resistive-Touch, 4-conductor	Resistive-Touch, 4-conductor	Resistive-Touch, 4-conductor	
System				
Processor	RISC, 32 bit, 400 MHz	RISC, 32 bit, 400 MHz	RISC, 32 bit, 400 MHz	
Internal memory	64 MByte	64 MByte	64 MByte	
DRAM (OS-, Program and data memory)	Approx. 128 Byte available	Approx. 128 Byte available	Approx. 128 Byte available	
NAND FLASH (can be used for data security)	Approx. 32 kByte available	Approx. 32 kByte available	Approx. 32 kByte available	
External memory	SD Memory Card Slot	SDA Specification 1.00	SDA Specification 1.00	
Real-time clock (battery back-up)	Battery	Zero maintenance	Zero maintenance	
	Backup time at zero voltage	Normally 10 years	Normally 10 years	
Operating system		Windows CE	Windows CE	
Engineering				
Visualisation software	CODESYS-2/GALILEO/EPAM	CODESYS-2/GALILEO/EPAM	CODESYS-2/GALILEO/EPAM	
PLC-Programming software	CODESYS-2	CODESYS-2	CODESYS-2	
Target and Web visualization	yes	yes	yes	
Interfaces, communication				
SWD Master	yes	yes	yes	
Ethernet	100Base-TX/10Base-T	100Base-TX/10Base-T	100Base-TX/10Base-T	
USB Host	no	USB 2.0 (1.5 - 12 Mbit/s), not galvanically isolated		
USB device		USB 2.0, not galvanically isolated		
CAN-Master, easyNet	no	yes	yes	
PROFIBUS-Master, MPI	no	no	no	
RS485	no	yes	yes	
Power supply				
Rated operational voltage	24 V DC SELV (safety extra low voltage)			
Permissible voltage	Effective: 19.2 - 30.0 V DC (rated operating voltage -20 %/+25 %) Absolute with ripple: 18.0 - 31.2 V DC Battery powered: 18.0 - 31.2 V DC (rated operating voltage -25 %/+30 %) 35 V DC for a duration of < 100 ms			
Voltage dips	10 ms from rated operating voltage (24 V DC), 5 ms from undervoltage (20.4 V DC)			
Power consumption	Max. 5 W	Max. 10 W	Max. 10 W	Max. 10 W
Protection against polarity reversal	yes	yes	yes	yes
Fuse	yes (fuse not accessible)			
Potential isolation	no	no	no	no
General				
Front type	Standard membrane (fully enclosed)			
IP protection classes	IP65	IP65	IP65	IP65
Front	IP65	IP65	IP65	IP65
Rear	IP20	IP20	IP20	IP20
Approvals	cUL	cUL	cUL	cUL
Approvals				
Explosion protection (according to ATEX 94/9/EC)	II 3D Ex II T70°C IP5x: Zone 22, Category 3D			
Applied standards and directives	EN 61000-6-2, EN 61000-6-4, EN 61131-2			
EMC (relevant for CE)	EN 60079-0, EN 61241-1, EN 13463			
Explosion protection (relevant for CE)	UL 508 (in preparation)			
Security	EN 50178, EN 61131-2			
Product standards	approx. 0.3 kg			
Weight	approx. 0.3 kg	approx. 0.6 kg	approx. 0.6 kg	approx. 0.6 kg



	XV-102-BE-35TQRC-10	XV-102-E6-57TVRC-10 XV-102-E8-57TVRC-10	XV-102-E6-70TWRC-10 XV-102-E8-70TWRC-10	
Environmental specifications				
Temperature				
Operation	0 - 50°C	0 - 50°C	0 - 50°C	0 - 50°C
Storage/transport	-20 - +60°C	-20 - +60°C	-20 - +60°C	-20 - +60°C
Relative humidity	10 - 95%, non-condensing			
Impact resistance	To IEC 68-2-27	To IEC 68-2-27	To IEC 68-2-27	
Vibration	To IEC 68-2-6	To IEC 68-2-6	To IEC 68-2-6	
Supply voltage U_{Aux}				
Rated operational voltage	V	24 DC -15 % +20 %	24 DC -15 % +20 %	24 DC -15 % +20 %
Residual ripple of input voltage	%	≤ 5	≤ 5	≤ 5
Protection against polarity reversal		yes	yes	yes
max. current	I _{max}	A	3 ¹⁾	3 ¹⁾
Short-circuit strength		no, external fuse FAZ Z3	no, external fuse FAZ Z3	no, external fuse FAZ Z3
Heat dissipation	W	Part no. 1	Part no. 1	Part no. 1
Potential isolation		no	no	no
Rated operating voltage of 24-V-DC slaves	V	Normally U _{Aux} - 0.2	Normally U _{Aux} - 0.2	Normally U _{Aux} - 0.2
Supply voltage U_{Pow}				
Supply voltage	V	24 DC -15 % + 20 %	24 DC -15 % + 20 %	24 DC -15 % + 20 %
Input voltage residual ripple	%	≤ 5	≤ 5	≤ 5
Protection against polarity reversal		yes	yes	yes
Rated operational current	I	A	0.7	0.7
Overload proof		yes	yes	yes
Inrush current and length	A	12.5 A/6 ms	12.5 A/6 ms	12.5 A/6 ms
Heat dissipation at 24 V DC	W	1.0	1.0	1.0
Potential isolation between U _{Pow} and 15 V SmartWire-DT supply voltage		no	no	no
Bridging voltage dips	ms	10	10	10
Repeat rate	s	1	1	1
Status display	LED	yes	yes	yes
SmartWire-DT supply voltage				
Rated operational voltage	U _e	V	14.5 ± 3 %	14.5 ± 3 %
max. current	I _{max}	A	0.7 ²⁾	0.7 ²⁾
Short-circuit strength		yes	yes	yes
Connection supply voltages				
Connection Type		Push in terminals	Push in terminals	Push in terminals
solid	mm ²	0.2 - 1.5 (AWG 24 - 16)	0.2 - 1.5 (AWG 24 - 16)	0.2 - 1.5 (AWG 24 - 16)
Flexible with ferrule	mm ²	0.25 - 1.5	0.25 - 1.5	0.25 - 1.5
SmartWire-DT network				
Slave type		SmartWire-DT master	SmartWire-DT master	SmartWire-DT master
Number of SmartWire-DT slaves		99	99	99
Baud rate	kBd	125, 250	125, 250	125, 250
Address setting		automatic	automatic	automatic
Status display	LED	SmartWire-DT master LED: green, Configurations LED: red		
Connections		Plug, 8-pole		
Plug connectors		Blade terminal SWD4-8MF2		

Notes

¹⁾ If contactors with a total power consumption > 3 A are connected, a power feeder module EU5C-SWD-PF1/2 has to be used.

²⁾ If SmartWire-DT modules with a total power consumption > 0.7 A are connected, a power feeder module EU5C-SWD-PF2 has to be used.

	EU5C-SWD-DP	EU5C-SWD-CAN	EU5C-SWD-EIP-MODTCP	EU5C-SWD-PF1-1	EU5C-SWD-PF2-1
General					
Standards	IEC/EN 61131-2 EN 50178				
Dimensions (W x H x D)	mm	35 x 90 x 127	35 x 90 x 124		
Weight	kg	0.16	0.16	0.17	0.11
Mounting		Top-hat rail IEC/EN 60715, 35 mm			
Mounting position		Vertical			
Ambient conditions, mechanical					
Protection type (IEC/EN 60529, EN50178, VBG 4)		IP20	IP20	IP20	IP20
Vibrations (IEC/EN 61131-2:2008)					
Constant amplitude 3,5 mm	Hz	5 - 8.4	5 - 8.4	5 - 8.4	5 - 8.4
Constant acceleration 1 g	Hz	8.4 - 150	8.4 - 150	8.4 - 150	8.4 - 150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms	Impacts	9	9	9	9
Drop to IEC/EN 60068-2-31	Drop height	mm	50	50	50
Free fall, packaged (IEC/EN 60068-2-32)	m	0.3	0.3	0.3	0.3
Electromagnetic compatibility (EMC)					
Overvoltage category		II	II	II	II
Pollution degree		2	2	2	2
Electrostatic discharge (IEC/EN 61131-2:2008)					
Air discharge (Level 3)	kV	8	8	8	8
Contact discharge (Level 2)	kV	4	4	4	4
Electromagnetic fields (IEC/EN 61131-2:2008)					
80 - 1000 MHz	V/m	10	10	10	10
1.4 - 2 GHz	V/m	3	3	3	3
2 - 2.7 GHz	V/m	1	1	1	1
Radio interference suppression (SmartWire-DT)		EN 55011 Class A			
Burst (IEC/EN 61131-2:2008, Level 3)					
Supply cables	kV	2	2	2	2
CAN/DP bus cable	kV	1	1	—	—
SmartWire-DT cables	kV	1	1	1	1
Surge (IEC/EN 61131-2:2008, Level 1)					
Supply cables/CAN/DP bus cable		Supply cables 0.5 kV, CAN/DP bus cable 1 kV			
Radiated RFI (IEC/EN 61131-2:2008, Level 3)	V	10	10	10	10
Climatic environmental conditions					
Operating ambient temperature (IEC 60068-2)	°C	-25 - +55	-25 - +55	-25 - +55	-25 - +55
Condensation		prevent with 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
Supply voltage U_{Aux}					
Rated operational voltage	V	24 DC -15% +20%			
Residual ripple on the input voltage	%	≤ 5	≤ 5	≤ 5	≤ 5
Protection against polarity reversal		Yes	Yes	Yes	Yes
Max. current	I _{max}	A	3	3	3
			If contactors with a total power consumption > 3 A are connected, a power feeder module EU5C-SWD-PF1/2 has to be used.		
Short-circuit rating		no, external fuse FAZ Z3			
Power loss	W	Normally 1	Normally 1	Normally 1	Normally 1
Potential isolation		No	No	No	No
Rated operating voltage of 24-V-DC slaves	V	typ. U _{Aux} - 0.2	typ. U _{Aux} - 0.2	typ. U _{Aux} - 0.2	typ. U _{Aux} - 0.2



		EU5C-SWD-DP	EU5C-SWD-CAN	EU5C-SWD-EIP-MODTCP	EU5C-SWD-PF1-1	EU5C-SWD-PF2-1
Supply voltage U_{Pow}						
Supply voltage	V	24 DC -15 % + 20 %	24 DC -15 % + 20 %	24 DC -15 % + 20 %	–	24 DC -15 % + 20 %
Input voltage ripple	%	≤ 5	≤ 5	≤ 5	–	≤ 5
Siemens MPI, (optional)		yes	yes	yes	–	yes
Rated current	I A	0.7	0.7	0.7	–	0.7
Overload proof		yes	yes	yes	–	yes
Inrush current and duration	A	12.5 A/6 ms	12.5 A/6 ms	12.5 A/6 ms	–	12.5 A/6 ms
Heat dissipation at 24 V DC	W	3.8	3.8	3.8	–	3.8
Potential isolation between U _{Pow} and 15 V SmartWire-DT supply voltage		No	No	No	–	Yes
Bridging voltage dips	ms	10	10	10	–	10
Repetition rate	s	1	1	1	–	1
Status indication	LED	yes	yes	yes	–	yes
SmartWire-DT supply voltage						
Rated operating voltage	U _e V	14,5 ± 3 %	14,5 ± 3 %	14,5 ± 3 %	–	14,5 ± 3 %
max. current	I _{max} A	0.7	0.7	0.7	–	0.7
		If SmartWire-DT modules with a total power consumption > 0.7 A are connected, a power feeder module EU5C-SWD-PF2 has to be used.				
Short-circuit rating		yes	yes	yes	–	yes
Connection supply and inputs/outputs						
Connection type		Push in terminals				
Solid	mm ²	0.2 - 1.5	0.2 - 1.5	0.2 - 1.5	0.2 - 1.5	0.2 - 1.5
Flexible with ferrule	mm ²	0.25 - 1.5	0.25 - 1.5	0.25 - 1.5	0.25 - 1.5	0.25 - 1.5
UL/CSA solid or stranded	AWG	24 - 16	24 - 16	24 - 16	24 - 16	24 - 16
SmartWire-DT network						
Station type		SmartWire-DT master				
Number of SmartWire-DT slaves		58	99	99	–	–
Baud Rates	kBd	125 250	125 250	125 250	–	–
Address allocation		automatic	automatic	automatic	–	–
Status indication	LED	SmartWire-DT master LED: green Configurations LED: red				
Connection SmartWire-DT		Plug, 8-pole				
Plug connectors		Blade terminal SWD4-8MF2				
Fieldbus interface						
Function		PROFIBUS DP slave	CANopen slave	Ethernet IP/MODBUS-TCP Slave	–	–
Protocol		PROFIBUS-DP	CANopen	Ethernet IP/MODBUS-TCP	–	–
Input data, max.	Byte	240	128	Ethernet-IP: 502 MODBUS-TCP: 1024	–	–
Output data, max.	Byte	240	128	Ethernet-IP: 502 MODBUS-TCP: 1024	–	–
Baud Rates		up to 12 MB	to 1 MB	10/100 Mbit	–	–
Baud rates switching		automatic	automatic	automatic	–	–
Address		2 ... 125	2 ... 32	–	–	–
Address allocation		DIP switch	DIP switch	Dip switch/DHCP/BOOTP Selection via DIP switch	–	–
Status display interface	LED	Two-coloured red/green	Two-coloured red/green	Link status: yellow (10 MBit), green (100 MBit) flashing	–	–
Terminating resistor		switchable via plug	DIP switches	–	–	–
Terminal type		1 x D-SUB socket, 9-pin	1 x D-SUB socket, 9-pin	2 x RJ45 (2-channel switch)	–	–
Potential isolation		yes	yes	yes	–	–



	EU5E-SWD-8DX	EU5E-SWD-4DX	EU5E-SWD-4D2R	EU5E-SWD-4D4D	EU5E-SWD-X8D	
General						
Standards	IEC/EN 61131-2 EN 50178					
Dimensions (W x H x D)	mm	35 x 90 x 101				
Weight	kg	0.1	0.1	0.1	0.1	0.1
Mounting	Top-hat rail IEC/EN 60715, 35 mm					
Mounting position	Vertical					
Ambient conditions, mechanical						
Protection type (IEC/EN 60529)	IP20					
Vibrations (IEC/EN 61131-2:2008)						
Constant amplitude 3,5 mm	Hz	5 - 8.4	5 - 8.4	5 - 8.4	5 - 8.4	
Constant acceleration 1 g	Hz	8.4 - 150	8.4 - 150	8.4 - 150	8.4 - 150	
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms	Impacts	9	9	9	9	
Drop to IEC/EN 60068-2-31	Drop height	mm	50	50	50	50
Free fall, packaged (IEC/EN 60068-2-32)	m	0.3	0.3	0.3	0.3	
Electromagnetic compatibility (EMC)						
Overvoltage category	II					
Pollution degree	2					
Electrostatic discharge (IEC/EN 61131-2:2008)						
Air discharge (Level 3)	kV	8	8	8	8	
Contact discharge (Level 2)	kV	4	4	4	4	
Electromagnetic fields (IEC/EN 61131-2:2008)						
80 - 1000 MHz	V/m	10	10	10	10	
1.4 - 2 GHz	V/m	3	3	3	3	
2 - 2.7 GHz	V/m	1	1	1	1	
Radio interference suppression (SmartWire-DT)	EN 55011 Class A					
Burst (IEC/EN 61131-2:2008, Level 3)						
Supply cables	kV	2	2	2	2	
Signal lines	kV	1	1	1	1	
SmartWire-DT cables	kV	1	1	1	1	
Surge (IEC/EN 61131-2:2008, Level 1)	-					
Radiated RFI (IEC/EN 61131-2:2008, Level 3)	V	10	10	10	10	
Climatic environmental conditions						
Operating ambient temperature (IEC 60068-2)	°C	-25 - +55	-25 - +55	-25 - +55	-25 - +55	
Condensation	prevent with 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	
SmartWire-DT network						
Station type	SmartWire-DT slave					
Baud rate setting	automatic					
SmartWire-DT status LED	LED	Green				
Connection	Plug, 8-pole Connection plug: external device plug SWD4-8SF2-5					
Current consumption (15 V SWD supply)	→ page 19					
Connection supply and I/O						
Connection type	Push in terminals	Push in terminals	Push in terminals	Push in terminals	Push in terminals	
Solid	mm²	0.2 - 1.5 (AWG 24 - 16)				
Flexible with ferrule	mm²	0.25 - 1.5 (AWG 24 - 16)				
		Minimum length 8 mm				



		EU5E-SWD-8DX	EU5E-SWD-4DX	EU5E-SWD-4D2R	EU5E-SWD-4D4D	EU5E-SWD-X8D
24 V DC supply for output supply						
Rated operational voltage	U _e	V	–	24 DC -15 % / +20 %	–	24 DC -15 % / +20 %
Residual ripple on the input voltage		%	–	≤ 5	–	≤ 5
Protection against polarity reversal			–	yes	–	yes
Digital inputs						
Number		8		4 (3-wire connection with power supply I+, I-)	4	4
Input current		mA	typ. 4 at 24 V DC			–
Voltage level to IEC/EN 61131-2						
Limit value type 1			Low < 5 V DC; High > 15 V DC			–
Input delay			High Low typ. < 0.2 ms Low High typ. < 0.2 ms			–
Status display		LED	yellow			–
Eingangsversorgung I+, I-						
Overload proof		–	yes, with diagnostics	–	–	–
Output current per input supply		A	–	≤ 0.5	–	–
Supply voltage		V	–	U _e - 0.16 V	–	–
Digital semi-conductor outputs						
Number		–	–	–	4	8
Output current		A	–	–	–	–
Short-circuit tripping current		A	–	–	–	max. 1.2 over 3 ms
Lamp load	R _{LL}	W	–	–	–	≤ 3
Overload proof		–	–	–	yes, with diagnostics	yes, with diagnostics
Switching capacity		–	–	–	–	EN 60947-5-1 utilization category DC-13
Status display		LED	–	–	yellow	yellow
Relay outputs						
Number		–	–	2	–	–
Contact type art		–	–	N/O contact	–	–
Operations						
Utilization category AC-1, 250 V, 6 A		–	–	> 6 x 10 ⁴	–	–
Utilization category AC-15, 250 V, 3 A		–	–	> 5 x 10 ⁴	–	–
Utilization category DC-13, 24 V, 1 A		–	–	> 2 x 10 ⁵	–	–
Safe isolation according to EN 50178		V AC	–	230	–	–
Minimum load current		mA	–	100 mA, 12 V DC	–	–
Pick-up/drop-out time		ms	–	5/2.5	–	–
Bounce duration		ms	–	–	–	–
Short-circuit protection			–	–	–	–
Status display		LED	–	–	yellow	–
Potential isolation						
Inputs for SmartWire-DT		yes	yes	yes	yes	yes
Outputs to SmartWire-DT		–	yes	–	yes	–
Output to input		–	–	–	no	–
Output to output		–	–	yes	no	no

	EU5E-SWD-4AX	EU5E-SWD-2A2A	EU5E-SWD-4PT
General			
Standards	IEC/EN 61131-2 EN 50178		
Dimensions (W x H x D)	mm	35 x 90 x 101	
Weight	kg	0.1	0.1
Mounting		Top-hat rail IEC/EN 60715, 35 mm	
Mounting position		Vertical	
Ambient conditions, mechanical			
Protection type (IEC/EN 60529)		IP20	IP20
Vibrations (IEC/EN 61131-2:2008)			
Constant amplitude 3,5 mm	Hz	5 - 8.4	5 - 8.4
Constant acceleration 1 g	Hz	8.4 - 150	8.4 - 150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms	Impacts	9	9
Drop to IEC/EN 60068-2-31	Drop height	mm	50
Free fall, packaged (IEC/EN 60068-2-32)	m	0.3	0.3
Electromagnetic compatibility (EMC)			
Overvoltage category		II	II
Pollution degree		2	2
Electrostatic discharge (IEC/EN 61131-2:2008)			
Air discharge (Level 3)	kV	8	8
Contact discharge (Level 2)	kV	4	4
Electromagnetic fields (IEC/EN 61131-2:2008)			
80 - 1000 MHz	V/m	10	10
1.4 - 2 GHz	V/m	3	3
2 - 2.7 GHz	V/m	1	1
Radio interference suppression (SmartWire-DT)		EN 55011 Class A	
Burst (IEC/EN 61131-2:2008, Level 3)			
Supply cables	kV	2	2
Signal lines	kV	2	2
SmartWire-DT cables	kV	2	2
Surge (IEC/EN 61131-2:2008, Level 1)		Supply cables 1.0 kV	
Radiated RFI (IEC/EN 61131-2:2008, Level 3)	V	10	10
Climatic environmental conditions			
Operating ambient temperature (IEC 60068-2)	°C	-25 - +55	-25 - +55
Condensation		prevent with suitable measures	
Storage	°C	-40 - 70	-40 - 70
relative humidity, non-condensing (IEC/EN 60068-2-30)	%	5 - 95	5 - 95
SmartWire-DT network			
Station type		SmartWire-DT slave	
Baud rate setting		automatic	
SmartWire-DT status LED	LED	Green	
Connection		Plug, 8-pole Connection plug: external device plug SWD4-8SF2-5	
Current consumption (15 V SWD supply)		→ page 19	→ page 19
Connection supply and I/O			→ page 19
Connection type		Push in terminals	
Solid	mm²	0.25 - 1.5 (AWG 24 - 16)	
Flexible with ferrule	mm²	0.25 - 1.5 (AWG 24 - 16)	
		Minimum length 8 mm	
24 V DC supply for output supply			
Rated operational voltage	U _e	V	24 DC -15 % / +20 %
Residual ripple on the input voltage		%	≤ 5
Current consumption		mA	10
Protection against polarity reversal		yes	yes



	EU5E-SWD-4AX	EU5E-SWD-2A2A	EU5E-SWD-4PT
Analog inputs			
Quantity	4 (2-wire connection, screened, length < 10 m)	2 (2-wire connection, screened, length < 10 m)	–
Parametrierung			
Part no.	Voltage, current	Voltage, current	–
Averaging	adjustable	adjustable	–
Voltage			
Input voltage	V	0 - 10	0 - 10
Input impedance	kΩ	13.3	13.3
Max. current			
Input current	mA	0 - 20	0 - 20
Input impedance	Ω	< 250	< 250
Resolution	Bit	12	12
Conversion time	ms	20	20
Total error	%	± 1	± 1
Repetition accuracy	%	± 0.5	± 0.5
Dielectric strength	V	±30	±30
Analog outputs			
Number	–	2 (2-wire connection, screened)	–
Parametrierung			
Part no.	–	Voltage, current	–
Mittelwertbildung	–	–	–
Voltage			
Output voltage	V	–	0 - 10
Max. output current	mA	–	10
Max. current			
Output current	mA	–	0 - 20
Load resistance	Ω	–	< 500
- Overload and short-circuit proof		–	yes
Resolution	Bit	–	12
Conversion time	ms	–	20
Total error	%	–	± 1
Repetition accuracy	%	–	± 0.5
Temperatureeingänge			
Number	–	–	4 (2, 3-wire connection, screened, length < 10 m)
Parametrierung			
Averaging	–	–	adjustable
Temperature sensor	–	–	PT100, PT1000, Ni1000
Temperature range	°C	–	PT100, PT1000: -50 - +200 Ni1000: -50 - +150
Resolution	°C	–	0.1
Conversion time	ms	–	250
Display		–	°C, °F, raw value
Total error	%	–	± 1
Repetition accuracy	%	–	± 0.5
Potential isolation			
Inputs for SmartWire-DT	Yes	Yes	Yes
Outputs to SmartWire-DT	–	Yes	–
Input to input	No	No	No
Output to input	–	no	–
Output to output	–	No	–



		M22-SWD-NOP...	M22-SWD-K11	M22-SWD-KC11	M22-SWD-LED-...
General					
Standards		IEC/EN 61131-2 EN 50178	IEC/EN 61131-2 EN 50178	IEC/EN 61131-2 EN 50178	IEC/EN 61131-2 EN 50178
Dimensions (W x H x D)	mm	12 x 42 x 39	12 x 42 x 39	12 x 45 x 37	10 x 42 x 45
Weight	g	10	10	10	10
Mounting position		As required	As required	As required	As required
Ambient conditions, mechanical					
Protection type (IEC/EN 60529, EN50178, VBG 4)		IP20	IP20	IP20	IP20
Vibrations (IEC/EN 61131-2:2008)					
Constant amplitude 3,5 mm	Hz	5 - 8.4	5 - 8.4	5 - 8.4	5 - 8.4
Constant acceleration 1 g	Hz	8.4 - 150	8.4 - 150	8.4 - 150	8.4 - 150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms	Impacts	9	9	9	9
Drop to IEC/EN 60068-2-31	Drop height	mm	50	50	50
Free fall, packaged (IEC/EN 60068-2-32)	m	0.3	0.3	0.3	0.3
Electromagnetic compatibility (EMC)					
Overvoltage category		Not applicable	Not applicable	Not applicable	Not applicable
Pollution degree		2	2	2	2
Electrostatic discharge (IEC/EN 61131-2:2008)					
Air discharge (Level 3)	kV	8	8	8	8
Contact discharge (Level 2)	kV	4	4	4	4
Electromagnetic fields (IEC/EN 61131-2:2008)					
80 - 1000 MHz	V/m	10	10	10	10
1.4 - 2 GHz	V/m	3	3	3	3
2 - 2.7 GHz	V/m	1	1	1	1
Radio interference suppression (SmartWire-DT)		EN 55011 Class A	EN 55011 Class A	EN 55011 Class A	EN 55011 Class A
Burst (IEC/EN 61131-2:2008, Level 3)					
Supply cables	kV	2	2	2	2
SmartWire-DT cables	kV	1	1	1	1
Radiated RFI (IEC/EN 61131-2:2008, Level 3)	V	10	10	10	10
Climatic environmental conditions					
Operating ambient temperature (IEC 60068-2)	°C	-30 - +55	-30 - +55	-30 - +55	-30 - +55
Condensation		prevent with suitable measures			
Storage	°C	-40 - 80	-40 - 80	-40 - 80	-40 - 80
relative humidity, non-condensing (IEC/EN 60068-2-30)	%	5 - 95	9 ... 95	9 ... 95	9 ... 95
SmartWire-DT network					
Station type		SmartWire-DT slave			
Number		-	-	-	-
Baud rate setting		automatic	automatic	automatic	automatic
SmartWire-DT status LED	LED	Green	Green	Green	Green
Connections		Plug, 8-pole	Plug, 8-pole	Plug, 8-pole	Plug, 8-pole
Plug connectors		SWD4-8SF2-5	SWD4-8SF2-5	M22-SWD-I...LP	SWD4-8SF2-5
Number of insertion cycles		≥ 50	≥ 50	≥ 50	≥ 50
Current consumption (15 V SWD supply)		→ page 19			
Function element					
Contacts		-	1 changeover contact	1 changeover contact	-
Lifespan mechanical/electrical	Operations	-	1 x 10 ⁶	1 x 10 ⁶	-
LED display	LED	No	No	No	Yes
Diagnostics		Yes	Yes	Yes	No
Fixing		Front fixing	Front fixing	Base fixing	Front fixing



M22-SWD-LED... EN 50178	M22-SWD-K11-LED... EN 50178	M22-SWD-K11LEDC-... EN 50178	M22-SWD-K22 EN 50178	M22-SWD-KC22 EN 50178	M22-SWD-K22-LED... EN 50178	M22-SWD-K22LEDC-... EN 50178
IEC/EN 61131-2 EN 50178	IEC/EN 61131-2 EN 50178	IEC/EN 61131-2 EN 50178	IEC/EN 61131-2 EN 50178	IEC/EN 61131-2 EN 50178	IEC/EN 61131-2 EN 50178	IEC/EN 61131-2 EN 50178
10 x 45 x 42	12 x 42 x 45	12 x 45 x 42	17 x 42 x 39	17 x 45 x 37	17 x 42 x 45	17 x 45 x 42
10	10	10	14	14	14	14
As required	As required	As required	As required	As required	As required	As required
IP20	IP20	IP20	IP20	IP20	IP20	IP20
5 - 8.4	5 - 8.4	5 - 8.4	5 - 8.4	5 - 8.4	5 - 8.4	5 - 8.4
8.4 - 150	8.4 - 150	8.4 - 150	8.4 - 150	8.4 - 150	8.4 - 150	8.4 - 150
9	9	9	9	9	9	9
50	50	50	50	50	50	50
0.3	0.3	0.3	0.3	0.3	0.3	0.3
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
2	2	2	2	2	2	2
8	8	8	8	8	8	8
4	4	4	4	4	4	4
10	10	10	10	10	10	10
3	3	3	3	3	3	3
1	1	1	1	1	1	1
EN 55011 Class A	EN 55011 Class A	EN 55011 Class A	EN 55011 Class A	EN 55011 Class A	EN 55011 Class A	EN 55011 Class A
2	2	2	2	2	2	2
1	1	1	1	1	1	1
10	10	10	10	10	10	10
-30 - +55	-30 - +55	-30 - +55	-30 - +55	-30 - +55	-30 - +55	-30 - +55
prevent with suitable measures						
-40 - 80	-40 - 80	-40 - 80	-40 - 80	-40 - 80	-40 - 80	-40 - 80
9 ... 95	9 ... 95	9 ... 95	5 - 95	5 - 95	5 - 95	5 - 95
SmartWire-DT slave						
-	-	-	-	-	-	-
automatic	automatic	automatic	automatic	automatic	automatic	automatic
Green	Green	Green	Green	Green	Green	Green
Plug, 8-pole	Plug, 8-pole	Plug, 8-pole	Plug, 8-pole	Plug, 8-pole	Plug, 8-pole	Plug, 8-pole
M22-SWD-I...LP	SWD4-8SF2-5	M22-SWD-I...LP	SWD4-8SF2-5	M22-SWD-I...LP	SWD4-8SF2-5	M22-SWD-I...LP
≥ 50	≥ 50	≥ 50	≥ 50	≥ 50	≥ 50	≥ 50

→ page 19

-	1 changeover contact	1 changeover contact	2 changeover contact	2 changeover contact	2 changeover contact	2 changeover contact
-	1 x 10 ⁶					
Yes	Yes	Yes	No	No	Yes	Yes
No	Yes	Yes	Yes	Yes	Yes	Yes
Base fixing	Front fixing	Base fixing	Front fixing	Base fixing	Front fixing	Base fixing

	DIL-SWD-32-001	DIL-SWD-32-002	PKE-SWD-32	NZM-XSWD-704
General				
Standards	IEC/EN 61131-2 EN 50178 IEC/EN 60947			
Dimensions (W x H x D)	mm	45 x 38 x 76	45 x 38 x 76	45 x 38 x 76
Weight	kg	0.04	0.04	0.1
Mounting		on DILM7 to DILM38	on DILM7 to DILM38	– Top-hat rail IEC/EN 60715, 35 mm
Mounting position		as DILM7 to DILM38	as DILM7 to DILM38	– Vertical
Ambient conditions, mechanical				
Protection type (IEC/EN 60529, EN50178, VBG 4)		IP20	IP20	– IP20
Vibrations (IEC/EN 61131-2:2008)				
Constant amplitude 3,5 mm	Hz	5 - 8.4	5 - 8.4	5 - 8.4
Constant acceleration 1 g	Hz	8.4 - 150	8.4 - 150	8.4 - 150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms	Impacts	9	9	9
Drop to IEC/EN 60068-2-31	Drop height	mm	50	50
Free fall, packaged (IEC/EN 60068-2-32)		m	0.3	0.3
Electromagnetic compatibility (EMC)				
Overvoltage category		II	II	II
Pollution degree		2	2	2
Electrostatic discharge (IEC/EN 61131-2:2008)				
Air discharge (Level 3)	kV	8	8	8
Contact discharge (Level 2)	kV	4	4	4
Electromagnetic fields (IEC/EN 61131-2:2008)				
80 - 1000 MHz	V/m	10	10	10
1.4 - 2 GHz	V/m	3	3	3
2 - 2.7 GHz	V/m	1	1	1
Radio interference suppression (SmartWire-DT)		EN 55011 Class A	EN 55011 Class A	EN 55011 Class A
Burst (IEC/EN 61131-2:2008, Level 3)				
Supply cables	kV	–	–	2
CAN/DP bus cable	kV	1	1	1
SmartWire-DT cables	kV	1	1	1
Radiated RFI (IEC/EN 61131-2:2008, Level 3)	V	10	10	10
Climatic environmental conditions				
Operating ambient temperature (IEC 60068-2)	°C	-25 - +60	-25 - +60	-25 - +55
Condensation		prevent with suitable measures	prevent with suitable measures	prevent with suitable measures
Storage	°C	-30 - 70	-30 - 70	-30 - 70
relative humidity, non-condensing (IEC/EN 60068-2-30)	%	5 - 95	5 - 95	5 - 95
SmartWire-DT network				
Station type		SmartWire-DT slave	SmartWire-DT slave	SmartWire-DT slave
Address allocation		automatic	automatic	automatic
SmartWire-DT status LED	LED	green/orange	green/orange	green
Connections		Plug, 8-pole	Plug, 8-pole	Plug, 8-pole
Plug connectors		External device plug SWD4-8SF2-5	External device plug SWD4-8SF2-5	External device plug SWD4-8SF2-5
Current consumption (15 V SWD supply)		→ page 19		



	DIL-SWD-32-001	DIL-SWD-32-002	PKE-SWD-32	NZM-XSWD-704
Mode parameter				
Manual/automatic mode	No	yes	yes	–
Setting	–	Rotary switch	Rotary switch	–
Connection auxiliary contact				
Number	2	2	–	–
Rated voltage	U _e V DC	15	15	–
		selfsupplied	selfsupplied	–
Input current at 1 signal, typical	mA	3	3	–
Potential isolation	No	No	–	–
Cable length	m	≤2.8	≤2.8	2.8
Connection type		Push in terminals	Push in terminals	Push in terminals
Terminal capacities				
Solid	mm ²	0.2 - 1.5 (AWG 24 - 16)	0.2 - 1.5 (AWG 24 - 16)	0.2 - 1.5 (AWG 24 - 16)
Flexible with ferrule	mm ²	0.25 - 1.5	0.25 - 1.5	0.25 - 1.5
		Minimum length 8 mm	Minimum length 8 mm	Minimum length 8 mm

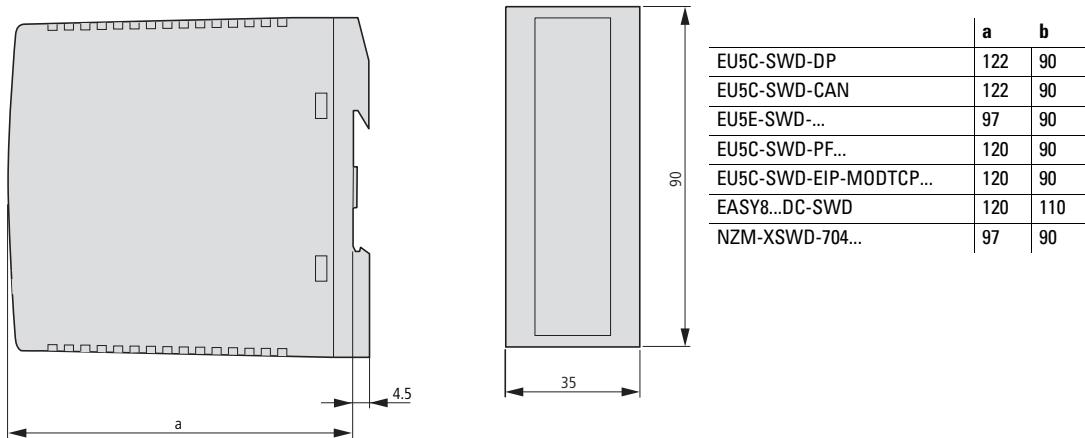


Part no.		SWD4-RC8-10	SWD4-8SF2-5	SWD4-8SFF2-5
General				
Standards		IEC/EN 61131-2 EN 50178	IEC/EN 61131-2 EN 50178	IEC/EN 61131-2 EN 50178
Dimensions (W x H x D)	mm	48.5 x 34.5 x 10	15 x 36.5 x 17.5	48.5 x 34.5 x 10
Weight	kg	–	–	–
Weight	g	10	5.5	4.5
Mounting position		As required	As required	As required
Ambient conditions, mechanical				
Protection type (IEC/EN 60529, EN50178, VBG 4)		IP20	IP20	IP20
Vibrations (IEC/EN 61131-2:2008)				
Constant amplitude 3,5 mm	Hz	5 - 8.4	5 - 8.4	5 - 8.4
Constant acceleration 1 g	Hz	8.4 - 150	8.4 - 150	8.4 - 150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms	Impacts	9	9	9
Drop to IEC/EN 60068-2-31	Drop height	mm	50	–
Free fall, packaged (IEC/EN 60068-2-32)	m	0.3	–	–
Electromagnetic compatibility (EMC)				
Overvoltage category		II	–	–
Pollution degree		2	–	–
Electrostatic discharge (IEC/EN 61131-2:2008)				
Air discharge (Level 3)	kV	8	–	8
Contact discharge (Level 2)	kV	4	–	4
Electromagnetic fields (IEC/EN 61131-2:2008)				
80 - 1000 MHz	V/m	10	–	–
1.4 - 2 GHz	V/m	3	–	–
2 - 2.7 GHz	V/m	1	–	–
Radio interference suppression (SmartWire-DT)		EN 55011 Class A	–	–
Burst (IEC/EN 61131-2:2008, Level 3)				
SmartWire-DT cables	kV	1	–	–
Radiated RFI (IEC/EN 61131-2:2008, Level 3)	V	10	–	–
Climatic environmental conditions				
Operating ambient temperature (IEC 60068-2)	°C	-25 - +55	-25 - +55	-25 - +55
Condensation		prevent with suitable measures	prevent with suitable measures	prevent with suitable measures
Storage	°C	-40 - 70	-40 - 70	-40 - 70
relative humidity, non-condensing (IEC/EN 60068-2-30)	%	5 - 95	5 - 95	5 - 95
Connection options				
SWD-In		Plug, 8-pole	Plug connector	Plug, 8-pole
Number of insertion cycles		≥ 200	≥ 1	≥ 200
SWD-Out		–	Socket, 8-pole	Plug, 8-pole
Number of insertion cycles		–	≥ 200	≥ 200
Current consumption (15 V SWD supply)		→ page 19		



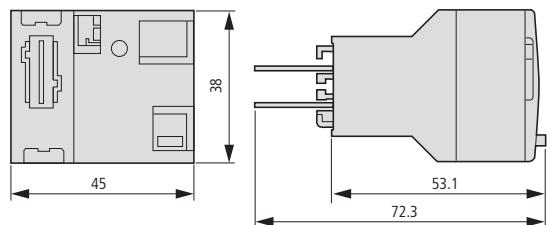
Dimensions

SmartWire-DT gateways, SmartWire-DT input/output modules, powerfeed modules



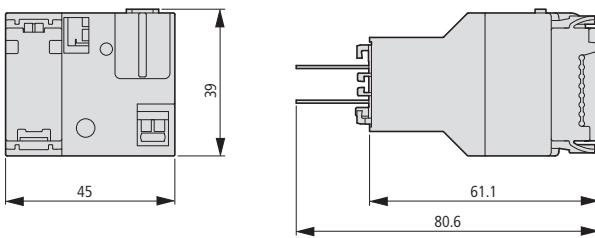
SmartWire-DT protective modules

DIL-SWD-32-001
DIL-SWD-32-002

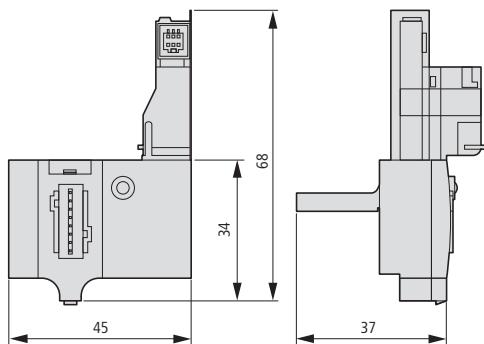


SmartWire-DT PKE module (motor-starter combinations)

PKE-SWD-32

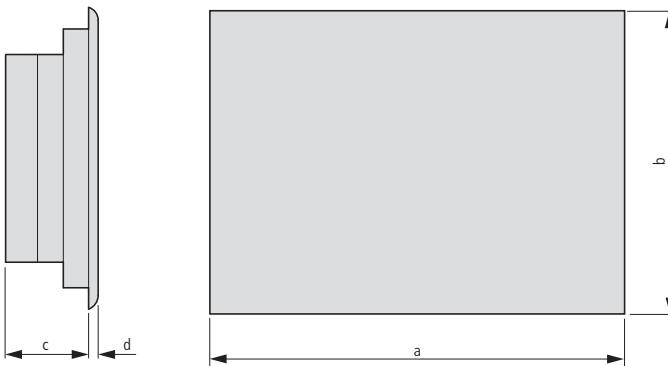


SWD-PKE-Modul (motor protective circuit breaker)



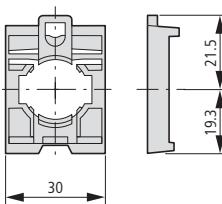
SmartWire-DT HMI-PLC

Part no.	a	b	c	d	e	f
XV-102-...-35...	136	100	25	5	123	87
XV-102-...-57...	170	130	34	5	157	117
XV-102-...-70...	210	135	33	5	197	122

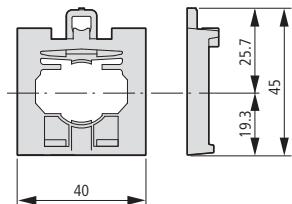


Fixing adapter (front mount) for 3-contacts-/LED elements

M22-A-...

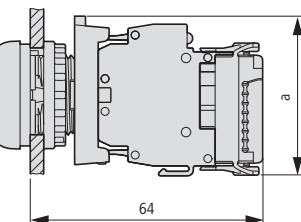


M22-SWD-A4



Function element, universal slave

M22-SWD-K...
M22-SWD-LED...
M22-SWD-NOP...



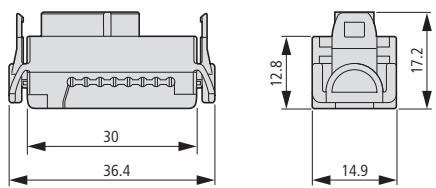
SmartWire-DT soft starter

DS7-34DSX...

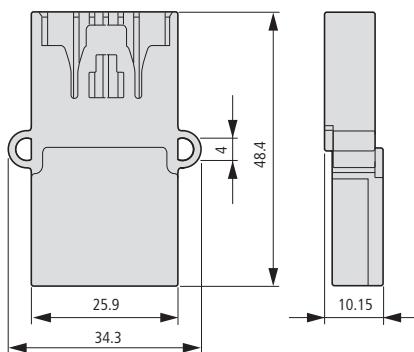
Dimension → Chapter "Soft starter"

External device plugs

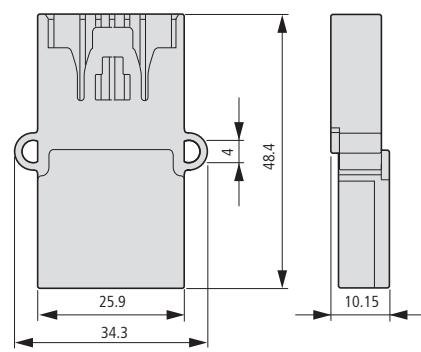
SWD4-8SF2-5

**Network terminator**

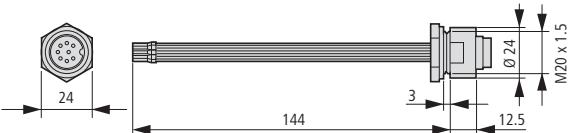
SWD4-RC8-10

**Coupling**

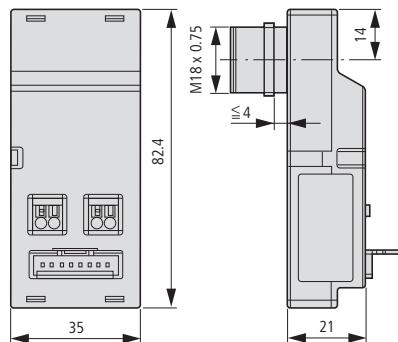
SWD4-8SFF2-5

**Housing bushing plug**

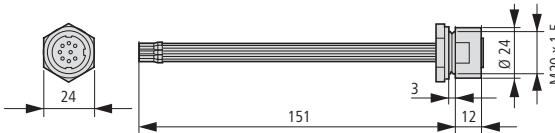
SWD4-SM8-20

**Switch cabinet bushing plug**

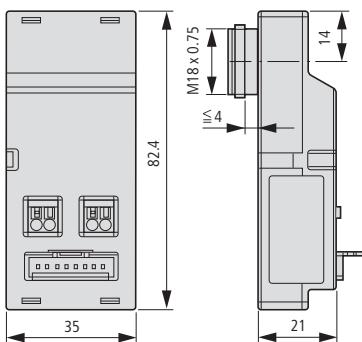
SWD4-SM8-20

**Housing bushing socket**

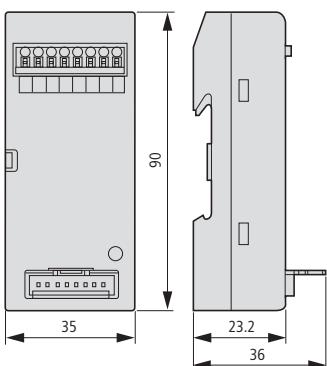
SWD4-SF8-20

**Switch cabinet bushing socket**

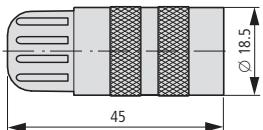
SWD4-SFL8-20

**Adapter flat cable on round cable**

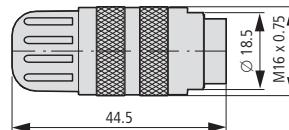
SWD4-8FRF2-10

**Plug connectors for SmartWire-DT round cables, straight**

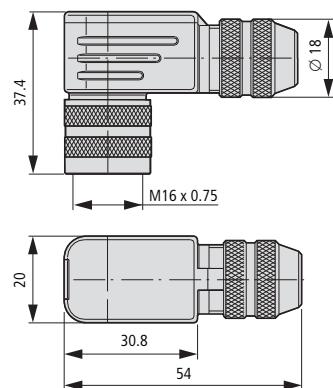
SWD4-SF8-67



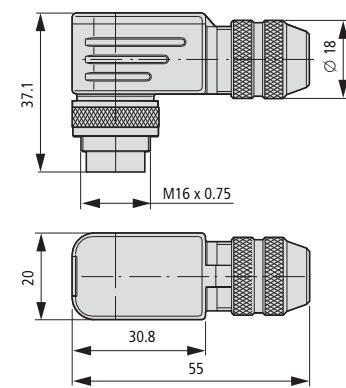
SWD4-SM8-67

**Connectors for SmartWire-DT round cables, angled**

SWD4-SF8-67W



SWD4-SM8-67W



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