DATASHEET - SWIRE-DIL

Coupling module, SmartWire-DT, for contactors, DILM

Part no.	**SWIRE-DIL**
Catalog No.	**107028**
Alternate Catalog No.	**SWIRE-DIL**
EL-Nummer (Norway)	**4131950**

Delivery program

Subrange			Module
Basic function			Connection system SmartWire
Description			SmartWire module to assemble on the contactors DILM(C)7…DILM(C)38, DILA…, DIMP20 - One module is necessary per contactor. - Connection to SmartWire- Gateway as module. - Max. 16 SmartWire modules per rung. - 1 digital input for potential-free contact. - Signalling contactor switch position.

Notes

- Take account of the max. current consumption of the contactor coils per SmartWire chain.
- Length of connection cable at the input and the electrical interlock < 2.8 m.
- The A2 connection of the contactors must not be bridged.
- Electrical interlocking only possible via the terminals on the module for DILM.
- Wiring kits DILM 12-XRL and PKZM0-XRM12 cannot be used.
- Connection terminals for electrical interlocking are not suitable for safety technology.

Technical data

General

Standards			
General			IEC/EN 60947 EN 55011 EN 55022 IEC/EN 61000-4 IEC/EN 60068-2-27
Mounting			on DILM7…DILM38
Dimensions (W x H x D)		mm	45 x 44 x 81
Weight		kg	0.036

Terminal capacities

Solid		mm^2	0.34…1.5
Flexible with ferrule		mm^2	0.34…1.5
Solid or stranded		AWG	22…16
Standard screwdriver		mm	3.5 x 0.8
Max. tightening torque		Nm	0.5

Climatic environmental conditions

Ambient temperature			
Operation		°C	-25 - +60
Storage		°C	- 25 - + 70
Condensation			Take appropriate measures to prevent condensation
Relative humidity, non-condensing (IEC/EN 60068-2-30)		%	5 - 95
Air pressure (operation)		hPa	795 - 1080

Ambient conditions, mechanical

Protection type (IEC/EN 60529, EN50178, VBG 4)			IP20
Overvoltage category/pollution degree			2
Mounting position			as DILM7 to DILM38

Electromagnetic compatibility (EMC)

Electrostatic discharge (IEC/EN 61000-4-2, Level 3, ESD)		kV	
Air discharge		kV	8
Electromagnetic fields (IEC/EN 61000-4-3, RFI)	V/m		10
Radio interference suppression EN 55011, EN 55022			Class A
Burst Impulse (IEC/EN 61000-4-4, Level 3)			
Supply cable		kV	2

Signal lines		kV	2
power pulses (surge) (IEC/EN 61000-4-5, level 2)		kV	0.5 (supply cables, symmetrical)
Immunity to line-conducted interference to (IEC/EN 61000-4-6)		V	10

Insulation resistance

Clearance in air and creepage distances			EN 50178, EN 60947-1, UL 508, CSA C22.2 No 142
Insulation resistance			EN 50178, EN 60947-1

Voltage supply, Gateway electronic and SmartWire station electronics $U_{Gateway}$

Admissible range			Supply from Gateway or Power module
Heat dissipation at 24 V DC		W	typically 0.6

Power supply U_{AUX} (power supply for switching SmartWire elements e.g. contactor coils)

Rated operational voltage UAux		V DC	Supply from Gateway or Power module
Admissible range		V DC	Supply from Gateway or Power module

LEDs

Ready for operation			Ready: green
Status SmartWire			over Ready

Connection potential-free contacts

Number			1
Rated voltage (own supply)	U_e	V DC	17
Input current at “1” signal, typically		mA	5
max. conductor length		m	< 2.8

MODBUS

Potential isolation			
for supply voltage $U_{Gateway}$			No
To SmartWire			to supply voltage U_{AUX}: no to supply voltage $U_{Gateway}$: no

SmartWire

Connection types			Plug, 6-pole
Data/power cable			6 core flat-band cable
maximum cable length System SmartWire		m	4
Bus termination			Connector plug
Station address			1…16
Station			max. 16 per SmartWire chain
Address allocation			Automatic via SmartWire
Function			SmartWire-Slave
Data transfer time System SmartWire			
Write switch			typically 20 ms for all stations
Read status information			typically 10 ms per station

Relay outputs

Overvoltage category/pollution degree			III/3
Conventional thermal current	I_{th}	A	4

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	0
Heat dissipation per pole, current-dependent	P_{vid}	W	0
Equipment heat dissipation, current-dependent	P_{vid}	W	0
Static heat dissipation, non-current-dependent	P_{vs}	W	0.6
Heat dissipation capacity	P_{diss}	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	60
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			Meets the product standard's requirements.

10.2.4 Resistance to ultra-violet (UV) radiation			Meets the product standard's requirements.
10.2.5 Lifting			Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact			Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions			Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES			Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances			Meets the product standard's requirements.
10.5 Protection against electric shock			Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components			Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections			Is the panel builder's responsibility.
10.8 Connections for external conductors			Is the panel builder's responsibility.
10.9 Insulation properties			
10.9.2 Power-frequency electric strength			Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage			Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material			Is the panel builder's responsibility.
10.10 Temperature rise			The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating			Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.13 Mechanical function			The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Technical data ETIM 7.0

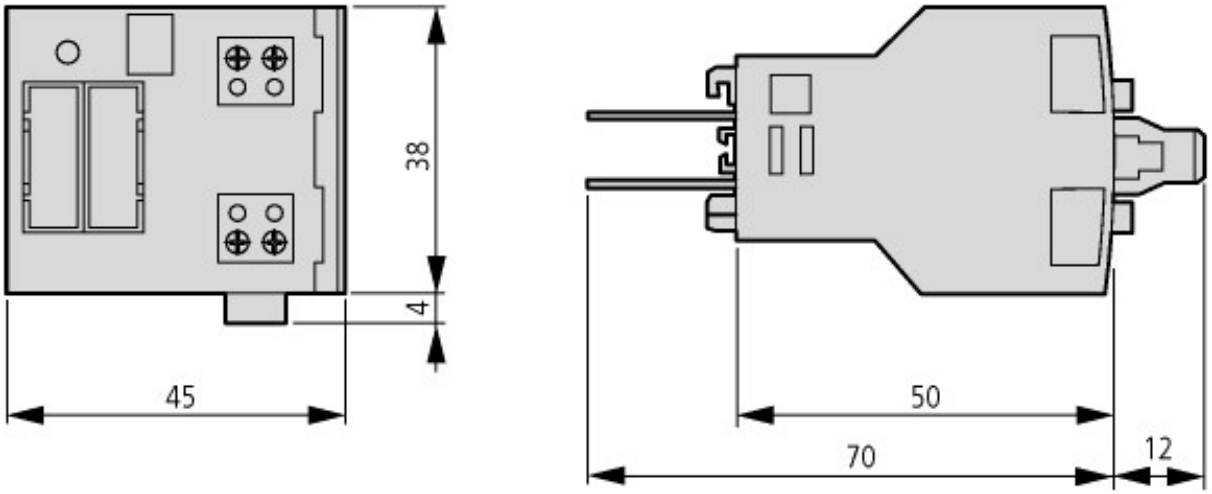
PLC's (EG000024) / Fieldbus, decentr. periphery - digital I/O module (EC001599)		
Electric engineering, automation, process control engineering / Control / Field bus, decentralized peripheral / Field bus, decentralized peripheral - digital I/O module (ecl@ss10.0.1-27-24-26-04 [BAA055014])		
Supply voltage AC 50 Hz	V	0 - 0
Supply voltage AC 60 Hz	V	0 - 0
Supply voltage DC	V	17 - 17
Voltage type of supply voltage		DC
Number of digital inputs		2
Number of digital outputs		1
Digital inputs configurable		No
Digital outputs configurable		No
Input current at signal 1	mA	5
Permitted voltage at input	V	17 - 17
Type of voltage (input voltage)		DC
Type of digital output		Other
Output current	A	0.5
Permitted voltage at output	V	20.4 - 28.8
Type of output voltage		DC
Short-circuit protection, outputs available		No
Number of HW-interfaces industrial Ethernet		0
Number of interfaces PROFINET		0
Number of HW-interfaces RS-232		0
Number of HW-interfaces RS-422		0
Number of HW-interfaces RS-485		0
Number of HW-interfaces serial TTY		0
Number of HW-interfaces parallel		0
Number of HW-interfaces Wireless		0
Number of HW-interfaces USB		0
Number of HW-interfaces other		2
With optical interface		No
Supporting protocol for TCP/IP		No
Supporting protocol for PROFIBUS		No
Supporting protocol for CAN		No

Supporting protocol for INTERBUS		No
Supporting protocol for ASI		No
Supporting protocol for KNX		No
Supporting protocol for MODBUS		No
Supporting protocol for Data-Highway		No
Supporting protocol for DeviceNet		No
Supporting protocol for SUCONET		No
Supporting protocol for LON		No
Supporting protocol for PROFINET IO		No
Supporting protocol for PROFINET CBA		No
Supporting protocol for SERCOS		No
Supporting protocol for Foundation Fieldbus		No
Supporting protocol for EtherNet/IP		No
Supporting protocol for AS-Interface Safety at Work		No
Supporting protocol for DeviceNet Safety		No
Supporting protocol for INTERBUS-Safety		No
Supporting protocol for PROFIsafe		No
Supporting protocol for SafetyBUS p		No
Supporting protocol for other bus systems		Yes
Radio standard Bluetooth		No
Radio standard WLAN 802.11		No
Radio standard GPRS		No
Radio standard GSM		No
Radio standard UMTS		No
IO link master		No
System accessory		Yes
Degree of protection (IP)		IP20
Type of electric connection		Screw connection
Time delay at signal exchange	ms	0 - 0
Fieldbus connection over separate bus coupler possible		Yes
Rail mounting possible		No
Wall mounting/direct mounting		No
Front build in possible		No
Rack-assembly possible		No
Suitable for safety functions		No
Category according to EN 954-1		1
SIL according to IEC 61508		None
Performance level acc. EN ISO 13849-1		None
Appendant operation agent (Ex ia)		No
Appendant operation agent (Ex ib)		No
Explosion safety category for gas		None
Explosion safety category for dust		None
Width	mm	45
Height	mm	38
Depth	mm	70

Approvals

Product Standards		IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.		E29184
UL Category Control No.		NKCR
CSA File No.		012528
CSA Class No.		2252-01
North America Certification		UL listed, CSA certified
Specially designed for North America		No

Dimensions



SWIRE-DIL

Additional product information (links)

IL03407145Z (AWA1210+1251-2359) Connection system SmartWire	
IL03407145Z (AWA1210+1251-2359) Connection system SmartWire	https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407145Z2018_05.pdf
Connection system SmartWire, module MN03402001Z (AWB1210+1251-1587/-1591)	
Anschlusssystem SmartWire, Modul MN03402001Z (AWB1210+1251-1587/-1591) - Deutsch	https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN03402001Z_DE.pdf
Connection system SmartWire, module MN03402001Z (AWB1210+1251-1587/-1591) - English	https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN03402001Z_EN.pdf
Connection system SmartWire, module MN03402001Z (AWB1210+1251-1587/-1591) - français	https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN03402001Z_FR.pdf
Connection system SmartWire, module MN03402001Z (AWB1210+1251-1587/-1591) - italiano	https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN03402001Z_IT.pdf