



**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.
<b>Notes</b>		<ul style="list-style-type: none"> <li>• Take account of the max. current consumption of the contactor coils per SmartWire chain.</li> <li>• Length of connection cable at the input and the electrical interlock &lt; 2.8 m.</li> <li>• The A2 connection of the contactors must not be bridged.</li> <li>• Electrical interlocking only possible via the terminals on the module for DILM.</li> <li>• Wiring kits DILM 12-XRL and PKZM0-XRM12 cannot be used.</li> <li>• Connection terminals for electrical interlocking are not suitable for safety technology.</li> </ul>

**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 <sup>2</sup>	0.34...1.5
Flexible with ferrule		mm <sup>2</sup>	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 $U_{AUX}$		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

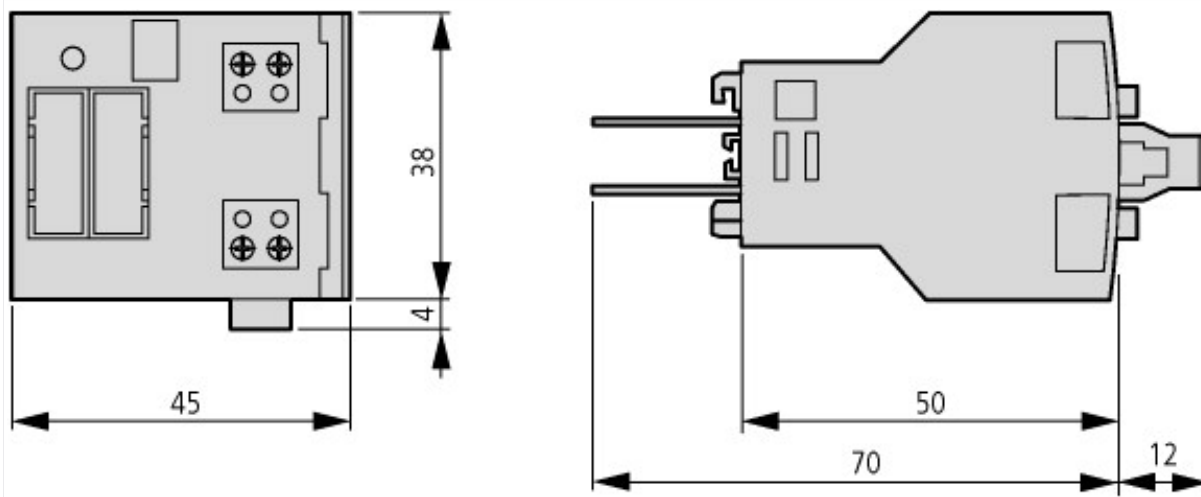
PLC's (EG000024) / Fieldbus, decentr. periphery - digital I/O module (EC001599)		
Electric engineering, automation, process control engineering / Control / Field bus, decentralized peripheral / Field bus, decentralized peripheral - digital I/O module (ecl@ss10.0.1-27-24-26-04 [BAA055014])		
Supply voltage 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

## Assets (links)

### Declaration of CE Conformity

00002794

### Instruction Leaflets

IL03407145Z2018\_05

### Manuals

MN03402001Z\_EN (English)