



**010240**  
**02DILE**

[Overview](#)

[Specifications](#)

[Resources](#)



[Delivery program](#)

[Technical data](#)

[Design verification as per IEC/EN 61439](#)

[Technical data ETIM7.0](#)

[Approvals](#)

[Characteristics](#)

[Dimensions](#)

## DELIVERY PROGRAM

Accessories  
Auxiliary contact modules

Description  
with interlocked opposing contacts  
Switching elements according to EN 50005  
Switching elements according to EN 50012 are to be preferred.  
Version E combinations correspond to EN 50011 and are to be preferred.

Function  
for standard applications

Number of poles  
2 pole

Connection technique  
Screw terminals

### Rated operational current

AC-15  
220 V 230 V 240 V [L<sub>e</sub>]  
4 A

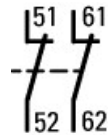
AC-15  
380 V 400 V 415 V [L<sub>e</sub>]  
2 A

## Contacts

NC = Normally closed  
2 NC

Mounting type  
Front fixing

Contact sequence



For use with  
DILEM-10(-G)(...)  
DILEM-01(-G)(...)  
DILEM-4(-G)(...)  
DILER40(-G)  
DILER31(-G)  
DILER22  
DILEEM-10(-G)(...)  
DILEEM-01(-G)(...)  
DILEM12-10(-G)(...)  
DILEM12-01(-G)(...)

## Instructions

Interlocked opposing contacts according to IEC/EN 60947-5-1 appendix L, inside the auxiliary contact modules, also for the integrated auxiliary contacts of the DILE(E)M

Auxiliary contacts used as mirror contacts according to IEC/EN 60947-4-1 Appendix F (not N/C late open)

## Code number and version of combination

Distinctive number  
42 E

with basic device  
DILER-40(-G)

33

with basic device  
DILER-31(-G)

24

with basic device  
DILER-22

## TECHNICAL DATA

### General

Standards  
IEC/EN 60947, VDE 0660, UL, CSA

Lifespan, mechanical  
AC operated [Operations]  
 $10 \times 10^6$

Lifespan, mechanical  
DC operated [Operations]  
 $20 \times 10^6$

Component lifespan at  $U_e = 240 \text{ V}$   
AC-15 [Operations]  
 $0.2 \times 10^6$

Component lifespan at  $U_e = 240 \text{ V}$   
DC  
L/R = 50 ms: 2 contacts in series at  $I_e = 0.5 \text{ A}$   
[Operations]  
 $0.15 \times 10^6$

Maximum operating frequency [Operations/h]  
9000

Climatic proofing  
Damp heat, constant, to IEC 60068-2-78  
Damp heat, cyclic, to IEC 60068-2-30

Ambient temperature  
Open  
-25 - +50 °C

Ambient temperature  
Enclosed  
- 25 - 40 °C

Ambient temperature  
Ambient temperature, storage  
- 40 - 80 °C

Mounting position  
Mounting position  
As required, except vertical with terminals A1/A2  
at the bottom

Mechanical shock resistance (IEC/EN 60068-2-27)  
Half-sinusoidal shock, 10 ms  
Basic unit with auxiliary contact module  
N/O contact  
10 g

Mechanical shock resistance (IEC/EN 60068-2-27)  
Half-sinusoidal shock, 10 ms  
Basic unit with auxiliary contact module  
N/C contact  
8 g

Degree of Protection  
IP20

Protection against direct contact when actuated  
from front (EN 50274)  
Finger and back-of-hand proof

Weight  
0.03 kg

Terminal capacities  
Screw terminals  
Solid  
1 x (0.75 - 2.5)  
2 x (0.75 - 2.5) mm<sup>2</sup>

Terminal capacities  
Screw terminals  
Flexible with ferrule  
1 x (0.75 - 1.5)  
2 x (0.75 - 1.5) mm<sup>2</sup>

Terminal capacities  
Screw terminals  
Solid or stranded  
Single 18 – 14/Double 18 – 14 AWG

Terminal capacities  
Screw terminals  
Terminal screw  
M3.5

Terminal capacities  
Screw terminals  
Pozidriv screw driver  
2 Size

Terminal capacities  
Screw terminals  
Standard screw driver  
0.8 x 5.5  
1 x 6 mm

Terminal capacities  
Screw terminals  
Max. tightening torque  
1.2 Nm

## Contacts

Interlocked opposing contacts within an auxiliary contact module (to IEC 60947-5-1 Annex L)  
Yes

Rated impulse withstand voltage [ $U_{imp}$ ]  
6000 V AC

Overvoltage category/pollution degree  
III/3

Rated insulation voltage [ $U_i$ ]  
690 V AC

Rated operational voltage [ $U_e$ ]  
600 V AC

Safe isolation to EN 61140  
between coil and auxiliary contacts  
300 V AC

Safe isolation to EN 61140  
between the auxiliary contacts  
300 V AC

Rated operational current  
Conventional free air thermal current, 1 pole  
Notes  
At maximum permissible ambient air temperature.

Rated operational current  
Conventional free air thermal current, 1 pole  
Conv. thermal current [ $I_{th}$ ]  
10 A

Rated operational current  
AC-15  
220 V 230 V 240 V [ $U_e$ ]  
4 A

Rated operational current  
AC-15  
380 V 400 V 415 V [ $U_e$ ]  
2 A

Rated operational current  
AC-15  
500 V [ $U_e$ ]  
1.5 A

Rated operational current  
DC current  
Switch-on and switch-off conditions based on  
DC-13, time constant as specified.

Rated operational current  
DC current  
DC L/R  $\square$  15 ms  
Contacts in series:  
1 [24 V]  
2.5 A

Rated operational current

DC current  
DC L/R □ 15 ms  
Contacts in series:  
2 [60 V]  
2.5 A

Rated operational current  
DC current  
DC L/R □ 15 ms  
Contacts in series:  
3 [110 V]  
1.5 A

Rated operational current  
DC current  
DC L/R □ 15 ms  
Contacts in series:  
3 [220 V]  
0.5 A

Rated operational current  
Control circuit reliability [Failure rate]  
<math>10^{-8}</math>, <math>< \text{one failure at 100 million operations}</math>  
(at  $U_e = 24 \text{ V DC}$ ,  $U_{\text{min}} = 17 \text{ V}$ ,  $I_{\text{min}} = 5.4 \text{ mA}$ )  $\lambda$

Short-circuit rating without welding  
Maximum overcurrent protective device  
220 V 230 V 240 V  
4 PKZM0

Short-circuit rating without welding  
Maximum overcurrent protective device  
380 V 400 V 415 V  
4 PKZM0

Short-circuit rating without welding  
Short-circuit protection maximum fuse  
500 V  
6 A gG/gL

Short-circuit rating without welding  
Short-circuit protection maximum fuse  
500 V  
10 A fast

Current heat loss at  $I_{\text{th}}$   
AC operated  
1.5 W

Current heat loss at  $I_{\text{th}}$   
DC operated  
1.5 W

Current heat loss at  $I_{th}$   
Current heat loss per auxiliary circuit at  $I_e$  (AC-  
15/230 V)  
0.24 CO

### Rating data for approved types

Auxiliary contacts  
Pilot Duty  
AC operated  
A600

Auxiliary contacts  
Pilot Duty  
DC operated  
P300

Auxiliary contacts  
General Use  
AC  
600 V

Auxiliary contacts  
General Use  
AC  
10 A

Auxiliary contacts  
General Use  
DC  
250 V

Auxiliary contacts  
General Use  
DC  
0.5 A

## DESIGN VERIFICATION AS PER IEC/EN 61439

### Technical data for design verification

Rated operational current for specified heat  
dissipation [ $I_h$ ]  
4 A



Heat dissipation per pole, current-dependent [ $P_{vid}$ ]  
0.24 W

Equipment heat dissipation, current-dependent  
[ $P_{vid}$ ]  
0 W

Static heat dissipation, non-current-dependent [ $P_{vs}$ ]  
0 W

Heat dissipation capacity [ $P_{diss}$ ]  
0 W

Operating ambient temperature min.  
-25 °C

Operating ambient temperature max.  
+50 °C

## 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 Strength of materials and parts  
10.2.3.1 Verification of thermal stability of enclosures  
Meets the product standard's requirements.

10.2 Strength of materials and parts  
10.2.3.2 Verification of resistance of insulating materials to normal heat  
Meets the product standard's requirements.

10.2 Strength of materials and parts  
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 Strength of materials and parts  
10.2.4 Resistance to ultra-violet (UV) radiation  
Meets the product standard's requirements.

10.2 Strength of materials and parts  
10.2.5 Lifting  
Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts  
10.2.6 Mechanical impact  
Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts  
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 Insulation properties  
10.9.3 Impulse withstand voltage  
Is the panel builder's responsibility.

10.9 Insulation properties  
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

Low-voltage industrial components (EG000017) / Auxiliary contact block (EC000041)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Component for low-voltage switching technology / Auxiliary switch block (ecl@ss10.0.1-27-37-13-02 [AKN342013])

Number of contacts as change-over contact

0

Number of contacts as normally open contact

0

Number of contacts as normally closed contact

2

Number of fault-signal switches

0

Rated operation current  $I_e$  at AC-15, 230 V

4 A

Type of electric connection  
Screw connection

Model  
Top mounting

Mounting method  
Front fastening

Lamp holder  
None

## 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

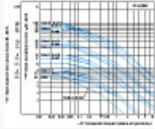
CSA Class No.  
3211-03

North America Certification  
UL listed, CSA certified

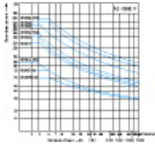
Specially designed for North America  
No

## CHARACTERISTICS

### Characteristic curve



### Characteristic curve



Short-time loading, 3-pole  
Time interval between two loading cycles: 15 minutes

## DIMENSIONS



83 mm DILE... + ...DILE(M)  
86 mm DILE...-C... + ...DILE(M)





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