276531
DILA-XHIC13

Overview
Specifications
Resources

Delivery program
Technical data
Design verification as per IEC/EN 61439
Technical data ETIM 7.0
Approvals
Dimensions

DELIVERY PROGRAM

Accessories
Auxiliary contact modules

Description
with interlocked opposing contacts
Switching elements according to EN 50005
Version E combinations correspond to EN 50011 and are to be preferred.
The DC operated contactor DILA(C)-22 must only be combined with 2-pole auxiliary contacts.

Function
for standard applications

Number of poles
4 pole

Connection technique
Spring-loaded terminals

Rated operational current

Conventional free air thermal current, 1 pole
Open
at 60 °C [I_{th}]
16 A

AC-15
220 V 230 V 240 V [I_e]
4 A

AC-15
380 V 400 V 415 V [I_e]
4 A

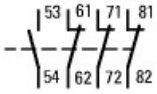
Contacts

N/O = Normally open
1 N/O

N/C = Normally closed
3 NC

Mounting type
Front fixing

Contact sequence



For use with
DILA(C)…
DILM(C)7…
DILM(C)9…
DILM(C)12…
DILM(C)15…
DILM(C)17…
DILM(C)25…
DILM(C)32…
DILM38…
DILMP20…
DILMP32…
DILMP45…
DILL…
DILMF8…
DILMF11…
DILMF14…
DILMF17…
DILMF25…
DILMF32…

Type
Front mounting auxiliary contact

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 DILM7 - DILM32
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
53E

with basic device
DILA(C)-40

44

with basic device
DILA(C)-31

35

with basic device
DILA(C)-22

TECHNICAL DATA

General

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

Lifespan, mechanical
AC operated [Operations]
10×10^6

Lifespan, mechanical
DC operated [Operations]
10×10^6

Component lifespan
at U_e = 230 V, AC-15, 3 A [Operations]
1.3×10^6

Maximum operating frequency [Operations/h]
9000

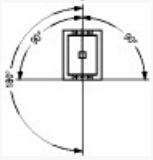
Climatic proofing
Damp heat, constant, to IEC 60068-2-78
Damp heat, cyclic, to IEC 60068-2-30

Ambient temperature
Open
-25 - +60 °C

Ambient temperature
Enclosed
- 25 - 40 °C

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

Mounting position
Mounting position



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

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

Degree of Protection
IP20

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

Weight
0.057 kg

Terminal capacities
Screw terminals
Terminal screw
M3.5

Terminal capacities
Spring-loaded terminals
Flexible with ferrule
1 x (0.75 - 1.5)
2 x (0.75 - 1.5) mm^2

Terminal capacities
Spring-loaded terminals
Solid or stranded
18 – 14 AWG

Terminal capacities
Spring-loaded terminals
Standard screwdriver
0.6 x 3.5 mm

Contacts

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

N/C contact (not late-break contact) suitable as a mirror contact (to IEC/EN 60947-4-1 Annex F)
DILM7 - DILM32

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]
500 V AC

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

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

Rated operational current
Conventional free air thermal current, 1 pole
at 60 °C [I_{th}]
16 A

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

Rated operational current
AC-15
380 V 400 V 415 V [I_e]
4 A

Rated operational current
AC-15
500 V [I_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 □ 15 ms
Contacts in series:
1 [24 V]
10 A

Rated operational current
DC current
DC L/R □ 15 ms
Contacts in series:
1 [60 V]
6 A

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

Rated operational current
DC current
DC L/R □ 15 ms
Contacts in series:
1 [110 V]
3 A

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

Rated operational current
DC current
DC L/R □ 15 ms
Contacts in series:
1 [220 V]
1 A

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

Rated operational current
DC current
DC L/R □ 50 ms
Contacts in series:
3 [24 V]
2.5 A

Rated operational current
DC current
DC L/R □ 50 ms
Contacts in series:
3 [60 V]
1 A

Rated operational current
DC current
DC L/R □ 50 ms
Contacts in series:

3 [110 V]
0.5 A

Rated operational current
DC current
DC L/R □ 50 ms
Contacts in series:
3 [220 V]
0.25 A

Rated operational current
DC current
DC-13 (6xP)
24 V [I_e]
2.5 A

Rated operational current
DC current
DC-13 (6xP)
60 V [I_e]
1 A

Rated operational current
DC current
DC-13 (6xP)
110 V [I_e]
0.5 A

Rated operational current
DC current
DC-13 (6xP)
220 V [I_e]
0.25 A

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

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

Current heat loss at I_{th}
AC operated
2.6 W

Current heat loss at I_{th}
DC operated
2.6 W

Current heat loss at I_{th}
Current heat loss per auxiliary circuit at I_e (AC-15/230 V)
0.16 ∞

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
1 A

DESIGN VERIFICATION AS PER IEC/EN 61439

Technical data for design verification

Rated operational current for specified heat dissipation [I_n]
4 A

Heat dissipation per pole, current-dependent [P_{vid}]
0.16 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.
+60 °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
1

Number of contacts as normally closed contact
3

Number of fault-signal switches
0

Rated operation current Ie at AC-15, 230 V
4 A

Type of electric connection

Spring clamp 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

DIMENSIONS

Contactor with auxiliary contact module