



**Contactor relay, 4N/O, DC current**

**Part no.** DILER-40-G(48VDC)  
**Article no.** 010255  
**Catalog No.** XTRM10A40WD

**Delivery program**

|   |                |   |   |
|---|----------------|---|---|
| Product range   |                |   | DILER Mini-contactors   |
| Application   |                |   | Contactor relays  |
| Description   |                |   | with interlocked opposing contacts  |
| Connection technique                                      |                |   | Screw terminals   |
| <b>Rated operational current</b>                          |                |   |   |
| Conventional free air thermal current, 3 pole, 50 - 60 Hz |                |   |   |
| Open  |                |   |   |
| at 50 °C  | $I_{th} = I_e$ | A | 10  |
| AC-15   |                |   |   |
| 220 V 230 V 240 V   | $I_e$          | A | 6   |
| 380 V 400 V 415 V   | $I_e$          | A | 3   |
| <b>Contacts</b>   |                |   |   |
| N/O = Normally open                                       |                |   | 4 N/O   |
| Contact sequence  |                |   |   |
| <b>Code number and version of combination</b>             |                |   |   |
| Distinctive number  |                |   | 40 E  |
| For use with  |                |   | ...DILE   |
| Actuating voltage   |                |   | 48 V DC   |
| Voltage AC/DC   |                |   | DC operation  |
| <b>Instructions</b>                                       |                |   | Contact numbers to EN 50011<br>Coil terminal markings to EN 50005<br>Integrated diode-resistor combination<br>Coil rating 2.6 W |

**Technical data**

|  |              |               |   |
|--|--------------|---------------|---|
| <b>General</b>   |              |               |   |
| Standards  |              |               | IEC/EN 60947, VDE 0660, UL, CSA                                 |
| Lifespan, mechanical   |              |               |   |
| DC operated  | Operations   | $\times 10^6$ | 20  |
| Maximum operating frequency  | Operations/h |               | 9000  |
| Climatic proofing  |              |               |   |
| Damp heat, constant, to IEC 60068-2-78<br>Damp heat, cyclic, to IEC 60068-2-30 |              |               |   |
| Ambient temperature  |              |               |   |
| Open   |              | °C            | -25 - +50   |
| Enclosed   |              | °C            | - 25 - 40   |
| Mounting position  |              |               |   |
| Mounting position  |              |               | As required, except vertical with terminals A1/A2 at the bottom |
| Mounting position  |              |               |   |

|   |  |                 |                                      |
|---|--|-----------------|--------------------------------------|
| Mechanical shock resistance (IEC/EN 60068-2-27)                       |  |                 |                                      |
| Half-sinusoidal shock, 10 ms  |  |                 |                                      |
| Basic unit with auxiliary contact module                              |  | g               |                                      |
| N/O contact   |  | g               | 10                                   |
| N/C contact   |  | g               | 8                                    |
| Degree of Protection  |  |                 | IP20                                 |
| Protection against direct contact when actuated from front (EN 50274) |  |                 | Finger and back-of-hand proof        |
| Weight  |  |                 |                                      |
| DC operated   |  | kg              | 0.2                                  |
| Terminal capacities   |  |                 |                                      |
| Screw terminals   |  |                 |                                      |
| Solid   |  | mm <sup>2</sup> | 1 x (0.75 - 2.5)<br>2 x (0.75 - 2.5) |
| Flexible with ferrule   |  | mm <sup>2</sup> | 1 x (0.75 - 1.5)<br>2 x (0.75 - 1.5) |
| Solid or stranded   |  | AWG             | 18 - 14                              |
| Terminal screw  |  |                 | M3.5                                 |
| Pozidriv screwdriver  |  | Size            | 2                                    |
| Standard screwdriver  |  | mm              | 0.8 x 5.5<br>1 x 6                   |
| Max. tightening torque  |  | Nm              | 1.2                                  |

## Contacts

|  |                |         |  |
|--|----------------|---------|--|
| Positive operating contacts to EN 60947-5-1 appendix L, including auxiliary contact module |                |         | Yes  |
| Rated impulse withstand voltage  | $U_{imp}$      | V AC    | 6000   |
| Overvoltage category/pollution degree  |                |         | III/3  |
| Rated insulation voltage   | $U_i$          | V AC    | 690  |
| Rated operational voltage  | $U_e$          | V AC    | 600  |
| Safe isolation to EN 61140   |                |         |  |
| between coil and auxiliary contacts  |                | V AC    | 300  |
| between the auxiliary contacts   |                | V AC    | 300  |
| Rated operational current  |                |         |  |
| Conventional free air thermal current, 3 pole, 50 - 60 Hz                                  |                |         |  |
| Open   |                |         |  |
| at 50 °C   | $I_{th} = I_e$ | A       | 10   |
| AC-15  |                |         |  |
| 220 V 230 V 240 V  | $I_e$          | A       | 6  |
| 380 V 400 V 415 V  | $I_e$          | A       | 3  |
| 500 V  | $I_e$          | A       | 1.5  |
| DC current   |                |         |  |
| Notes  |                |         | Switch-on and switch-off conditions based on DC-13, time constant as specified.                                    |
| DC-13 L/R - 15 ms  |                |         |  |
| Contacts in series:  |                | A       |  |
| 1  | 24 V           | A       | 2.5  |
| 2  | 60 V           | A       | 2.5  |
| 3  | 110 V          | A       | 1.5  |
| 3  | 220 V          | A       | 0.5  |
| Control circuit reliability  |                |         |  |
| Failure rate   | $\lambda$      |         | $<10^{-8}$ , < one failure at 100 million operations<br>(at $U_e = 24$ V DC, $U_{min} = 17$ V, $I_{min} = 5.4$ mA) |
| Short-circuit rating without welding   |                |         |  |
| Maximum overcurrent protective device  |                |         |  |
| 220 V 230 V 240 V  |                | PKZM0   | 4  |
| 380 V 400 V 415 V  |                | PKZM0   | 4  |
| Short-circuit protection maximum fuse  |                |         |  |
| 500 V  |                | A gG/gL | 6  |
| 500 V  |                | A fast  | 10   |

|  |         |         |  |
|--|---------|---------|--|
| Current heat loss at $I_{th}$  |         |         |  |
| DC operated  |         | W       | 0.3  |
| <b>Magnet systems</b>  |         |         |  |
| Voltage tolerance  |         |         |  |
| DC operated  |         |         |  |
| Notes  |         |         | Smoothed DC, three-phase bridge rectifiers or smoothed double-wave rectification |
| Pick-up voltage  |         |         | 0.85 1.3   |
| at 24 V: without auxiliary contact component (40 °C)                 | Pick-up | x $U_c$ | 0.7 - 1.3  |
| <b>Power consumption</b>   |         |         |  |
| DC operation   |         |         |  |
| Power consumption Pick-up = Sealing                                  |         | VA/W    | 2.6  |
| duty factor  |         | % DF    | 100  |
| <b>Changeover time at 100 % <math>U_c</math> (recommended value)</b> |         |         |  |
| DC operated closing delay  |         | ms      | 26 - 35  |
| DC operated N/O contact opening delay                                |         | ms      | 15 - 25  |
| DC operated With auxiliary contact module Max. closing delay         |         | ms      | 70   |

## Design verification as per IEC/EN 61439

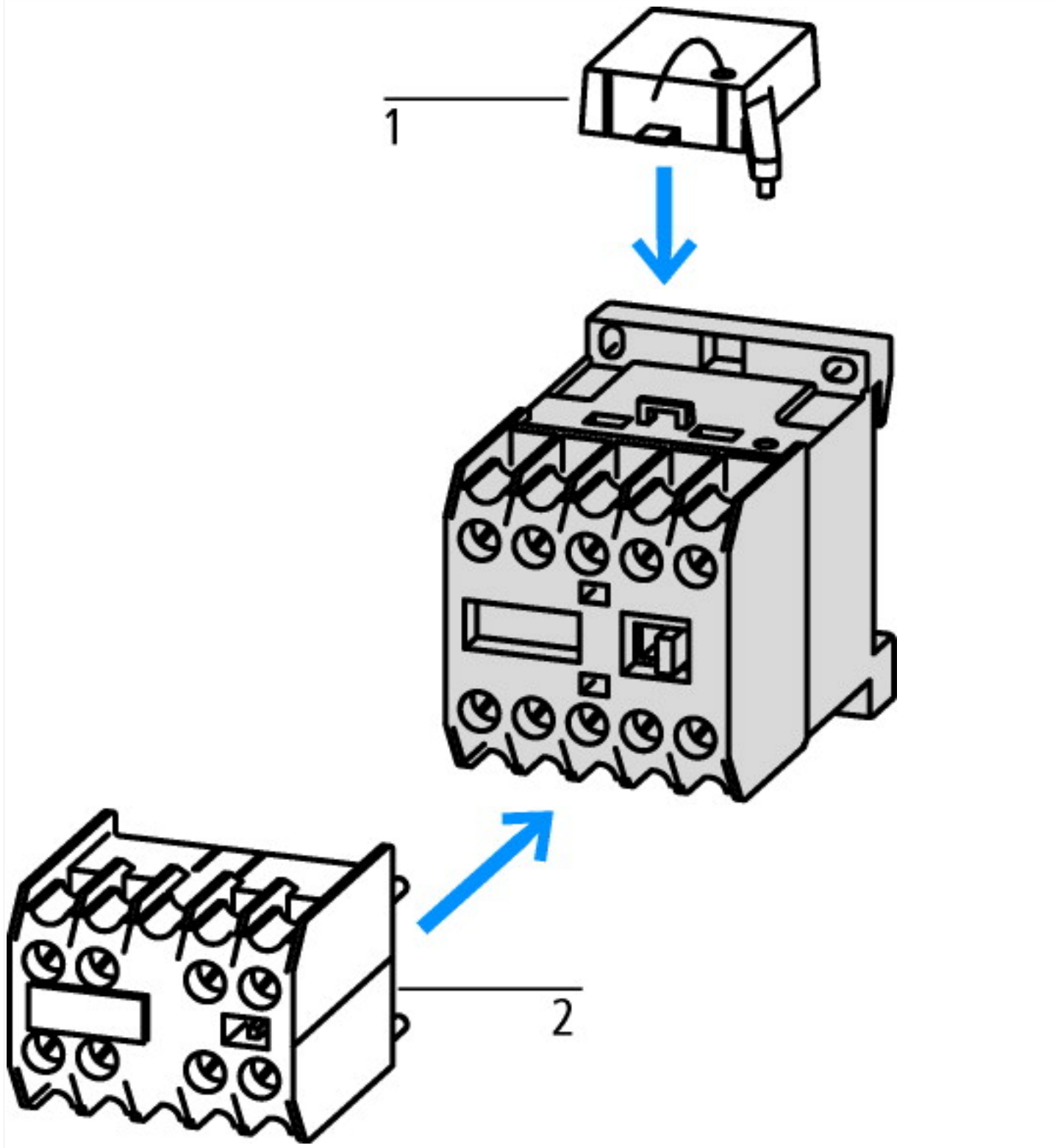
|  |            |    |     |
|--|------------|----|-----|
| <b>Technical data for design verification</b>  |            |    |     |
| Rated operational current for specified heat dissipation   | $I_n$      | A  | 6   |
| Heat dissipation per pole, current-dependent   | $P_{vid}$  | W  | 0.4 |
| Equipment heat dissipation, current-dependent  | $P_{vid}$  | W  | 0   |
| Static heat dissipation, non-current-dependent   | $P_{vs}$   | W  | 2.3 |
| Heat dissipation capacity  | $P_{diss}$ | W  | 0   |
| Operating ambient temperature min.   |            | °C | -25 |
| Operating ambient temperature max.   |            | °C | 50  |
| <b>IEC/EN 61439 design verification</b>  |            |    |     |
| 10.2 Strength of materials and parts   |            |    |     |
| 10.2.2 Corrosion resistance  |            |    |     |
| 10.2.2.1 Verification of thermal stability of enclosures   |            |    |     |
| 10.2.2.2 Verification of resistance of insulating materials to normal heat   |            |    |     |
| 10.2.2.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects |            |    |     |
| 10.2.4 Resistance to ultra-violet (UV) radiation   |            |    |     |
| 10.2.5 Lifting   |            |    |     |
| 10.2.6 Mechanical impact   |            |    |     |
| 10.2.7 Inscriptions  |            |    |     |
| 10.3 Degree of protection of ASSEMBLIES  |            |    |     |
| 10.4 Clearances and creepage distances   |            |    |     |
| 10.5 Protection against electric shock   |            |    |     |
| 10.6 Incorporation of switching devices and components   |            |    |     |
| 10.7 Internal electrical circuits and connections  |            |    |     |
| 10.8 Connections for external conductors   |            |    |     |
| 10.9 Insulation properties   |            |    |     |
| 10.9.2 Power-frequency electric strength   |            |    |     |
| 10.9.3 Impulse withstand voltage   |            |    |     |
| 10.9.4 Testing of enclosures made of insulating material   |            |    |     |
| 10.10 Temperature rise   |            |    |     |
| 10.11 Short-circuit rating   |            |    |     |
| 10.12 Electromagnetic compatibility  |            |    |     |
| 10.13 Mechanical function  |            |    |     |

## Technical data ETIM 6.0

|  |   |                  |
|--|---|------------------|
| Low-voltage industrial components (EG000017) / Contactor relay (EC000196)  |   |                  |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Contactor relay (ecl@ss8.1-27-37-10-01 [AAB716011]) |   |                  |
| Rated control supply voltage Us at AC 50HZ   | V | 0 - 0            |
| Rated control supply voltage Us at AC 60HZ   | V | 0 - 0            |
| Rated control supply voltage Us at DC  | V | 48 - 48          |
| Voltage type for actuating   |   | DC               |
| Rated operation current Ie , 400 V   | A | 3                |
| Connection type auxiliary circuit  |   | Screw connection |
| Mounting method  |   | DIN-rail/screw   |
| Interface  |   | No               |
| Number of auxiliary contacts as normally closed contact  |   | 0                |
| Number of auxiliary contacts as normally open contact  |   | 4                |
| Number of auxiliary contacts as normally closed contact, delayed switching   |   | 0                |
| Number of auxiliary contacts as normally open contact, leading   |   | 0                |
| With LED indication  |   | No               |
| Number of auxiliary contacts as change-over contact  |   | 0                |
| Manual operation possible  |   | No               |

## 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  |



1: Suppressor  
2: Auxiliary contact module



Component lifespan (operations)  
 $I_e$  = Rated operational current

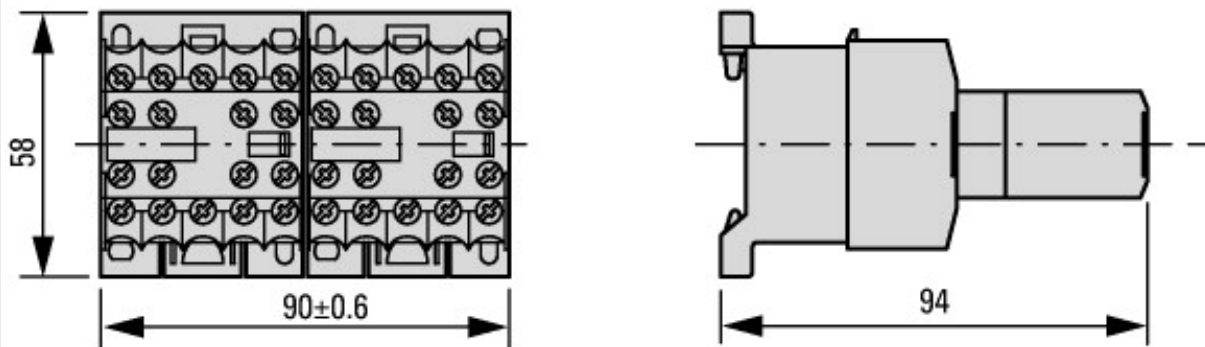
## Dimensions



DILER...  
 DILER...-G(-C)



DILER-...(-C) + ...DILE(-C)  
 DILER-...-G(-C) + ...DILE(-C)



2DILE-... + MVDILE + ...DILE  
 2DILE-...-G + MVDILE + ...DILE

## Additional product information (links)

**IL03407009Z (AWA2100-0882) Mini contactor relay**

IL03407009Z (AWA2100-0882) Mini contactor relay

[ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL03407009Z2016\\_03.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407009Z2016_03.pdf)

UL/CSA: Approved rating data

<http://de.ecat.moeller.net/flip-cat/?edition=HPLTE&startpage=5.84>