



## Mini contactor relay, 4NO/0NC, DC operated

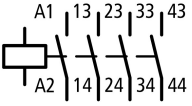


Powering Business Worldwide™

Part no. **DILER-40-G(24VDC)**

Article no. **010223**

### Program

Product range			DILER Mini-contactors
Application			Contactors relays
Connection technique			Screw terminals
Rated operational current			
AC-15			
220 V 230 V 240 V	$I_e$	A	6
380 V 400 V 415 V	$I_e$	A	3
Conv. thermal current	$I_{th}$	A	10
Contacts			
N/O = Normally open			4 N/O
Contact sequence			
For use with			...DILE
Actuating voltage			24 V DC
Voltage AC/DC			DC operation
Code number and version of combination			
Distinctive number			40 E
Auxiliary contact module			
Interlocked opposing contacts		40E	Conforms to EN 50011 - terminal markings of the coil according to EN 50005
Interlocked opposing contacts	02DILE	42E	EN 50011 - Use preferably this combination
Interlocked opposing contacts	04DILE	44E	EN 50011 - Use preferably this combination
Interlocked opposing contacts	11DILE	51E	EN 50011 - Use preferably this combination
1 early-make contact, 1 late-break contact	11DDILE	51	EN 50005
Interlocked opposing contacts	13DILE	53E	EN 50011 - Use preferably this combination
Interlocked opposing contacts	20DILE	60E	EN 50011 - Use preferably this combination
Interlocked opposing contacts	22DILE	62E	EN 50011 - Use preferably this combination
1 early-make contact, 1 late-break contact	22DDILE	62	EN 50005
Interlocked opposing contacts	31DILE	71E	EN 50011 - Use preferably this combination
Interlocked opposing contacts	40DILE	80E	EN 50011 - Use preferably this combination
<b>Instructions</b> Contact numbers to EN 50011 Coil terminal markings to EN 50005 Integrated diode-resistor combination Coil rating 2.6 W			

### Approbationen

UL approval	Yes
CSA approval	Yes
Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.	E29184
UL CCN	NKCR
CSA File No.	012528
CSA Class No.	3211-03
NA Certification	UL listed, CSA certified
Specially designed for NA	No

### General

Standards		IEC/EN 60947, VDE 0660, UL, CSA
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Lifespan, mechanical			
AC operated	Operations	x 10 <sup>6</sup>	10
DC operated	Operations	x 10 <sup>6</sup>	20
Maximum operating frequency		Ops./ h	
Maximum operating frequency		Operations h	9000
Climatic proofing			Damp heat, constant to IEC 60068-2-78 Damp heat, cyclic to IEC 60068-2-30
Climatic proofing			Damp heat, constant, to IEC 60068-2-78; Damp heat, cyclical, to IEC 60068-2-30
Ambient temperature		°C	
Open		°C	- 25 - 50
Enclosed		°C	- 25 - 40
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		g	
N/O contact		g	10
N/C contact		g	8
Protection type			IP20
Protection against direct contact when actuated from front (EN 90274)			Finger and back-of-hand proof
Weight			
AC operated		kg	0.17
DC operated		kg	0.2
Terminal capacities		mm <sup>2</sup>	
Screw terminals			
Solid		mm <sup>2</sup>	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)
Flexible with ferrule		mm <sup>2</sup>	1 x (0.75 - 1.5) 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 1 x 6
Max. tightening torque		Nm	1.2
Spring-loaded terminals			
Solid		mm <sup>2</sup>	1 x (1 - 2.5) 2 x (1 - 2.5)
Flexible with or without ferrule DIN 46228		mm <sup>2</sup>	1 x (1 - 2.5) 2 x (1 - 2.5)
Solid or stranded		AWG	1 x (16 - 14) 2 x (16 - 14)
Standard screwdriver		mm	0.6 x 3.5

## Contacts

Positive operating contacts to ZH 1/457, including auxiliary contact module			Yes
Rated impulse withstand voltage	U <sub>imp</sub>	V AC	6000
Overvoltage category/pollution degree			III/3
Rated insulation voltage	U <sub>i</sub>	V AC	690
Rated operational voltage	U <sub>e</sub>	V AC	600
Safe isolation to VDE 0106 Part 101 and Part 101/A1			
between coil and auxiliary contacts		V AC	300

between the auxiliary contacts		V AC	300
Rated operational current	$I_e$	A	
AC-15			
220/240 V	$I_e$	A	6
380/415 V	$I_e$	A	3
500 V	$I_e$	A	1.5
DC-13			
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 (at $U_e = 24$ V DC, $U_{min} = 17$ V, $I_{min} = 5.4$ mA)	Failure rate	$\lambda$	$<10^{-8}$ , < one failure at 100 million operations
Conv. thermal current	$I_{th}$	A	10
Short-circuit rating without welding			
Maximum overcurrent protective device			
220/240 V		PKZM0	4
380/415 V		PKZM0	4
Short-circuit protection maximum fuse			
500 V		A gG/ gL	6
500 V		A fast	10
Current heat loss at $I_{th}$			
AC operated		W	0.2
DC operated		W	0.3

## Magnet systems

Voltage tolerance		$x U_c$	
AC operated		$x U_c$	
Single-voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz	Pick-up	$x U_c$	0.8 - 1.1
Dual-frequency coil 50/60 Hz	Pick-up	$x U_c$	0.85 - 1.1
DC operated		$x U_c$	
Pick-up voltage	Pick-up	$x U_c$	0.85 - 1.3
at 24 V: without auxiliary contact component (40 °C)	Pick-up	$x U_c$	0.7 - 1.3
Power consumption			
50 Hz	Pick-up	VA	25
50 Hz	Sealing	VA	4.6
50 Hz	Sealing	W	1.3
60 Hz	Pick-up	VA	25
60 Hz	Sealing	VA	4.6
60 Hz	Sealing	W	1.3
50/60 Hz	Pick-up	VA	30 29
50/60 Hz	Sealing	VA	5.4 3.9
50/60 Hz	Sealing	W	1.6 1.1
DC operated	Pull-in = sealing	W	2.6
Duty factor		% DF	100
Switching times at 100 % $U_c$ (approximate values)			
AC operated closing delay		ms	14 - 21
AC operated N/O contact opening delay		ms	8 - 18

AC operated With auxiliary contact module Max. closing delay	ms	45
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

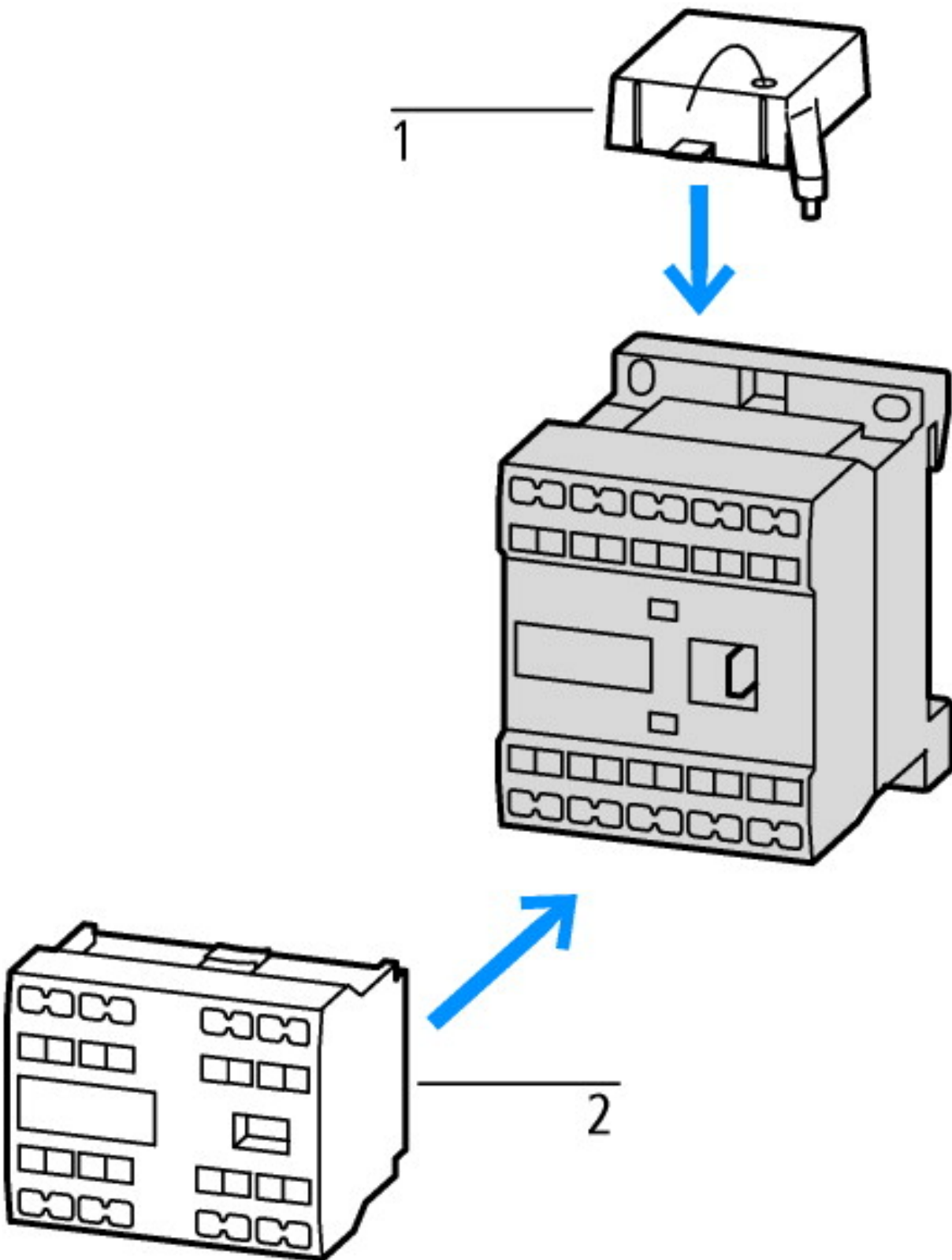
## Notes

**Notes** Making and breaking conditions to DC-13, time constant as stated  
 See transparent overlay "Fuses" for time/current characteristics (please enquire)  
 Use only equal cross-sections

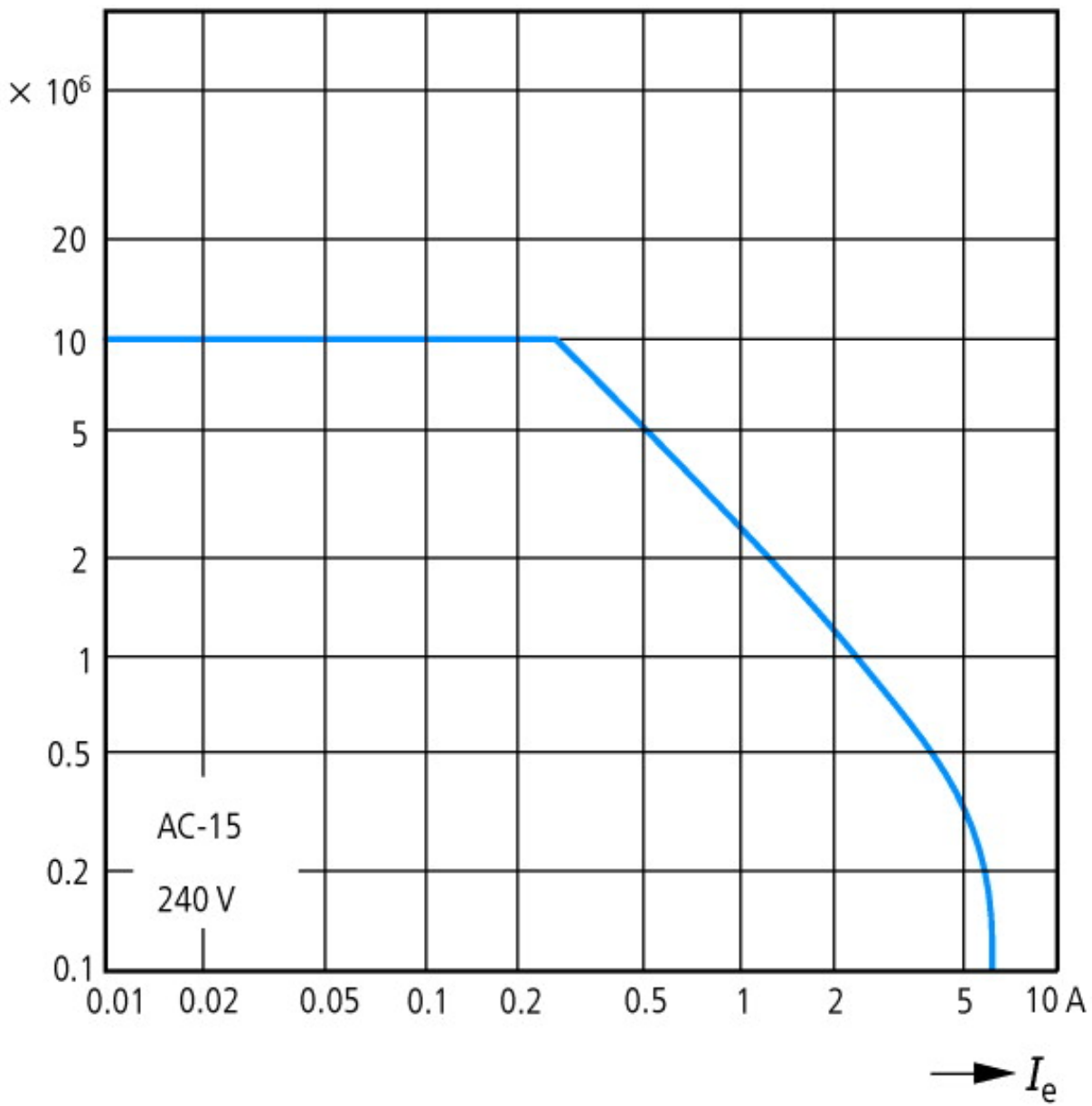
## Technical data according to ETIM 4.0

Connection type main circuit			Screw connection
Rated control voltage Us at DC		V	24
Rated control voltage Us at AC 60HZ		V	0
Rated control voltage Us at AC 50HZ		V	0
Number of auxiliary contacts as changeover contacts			0
Rated operation current Ie , 400 V		A	3
Number of auxiliary contacts as N/Cs			0
Number of auxiliary contacts as N/Os			4
Voltage type for actuation			DC
Number of auxiliary contacts as N/Os, leading			0
Number of auxiliary contacts as N/Cs, delayed switching			0

## Characteristics



1: Suppressor  
2: Auxiliary contact module



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

### CAD-Data

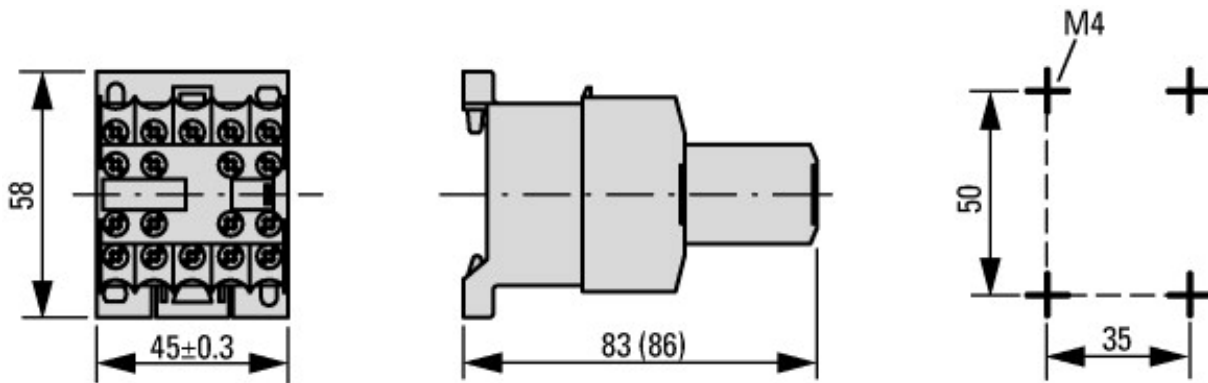
Product standards CAD data:

<http://eaton-moeller.partcommunity.com>

### Dimensions



DILER-...  
 DILER-...-G



DILER-... + ...DILE  
DILER-...-G + ...DILE

### Additional product information (links)

IL03407009Z (IL03407009Z) Mini contactor relay

[ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL03407009Z2010\\_10.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407009Z2010_10.pdf)