# DATASHEET - DILEM4(415V50HZ,480V60HZ)



Contactor, 4p, 4kW/400V/AC3

Part no. DILEM4(415V50HZ,480V60HZ)

Catalog No. 051807 Eaton Catalog No. XTMF9A00C



#### **Delivery program**

Delivery program			
Product range			Contactors
Application			Mini Contactors for Motors and Resistive Loads
Subrange			DILEM contactors
Utilization category			AC-1: Non-inductive or slightly inductive loads, resistance furnaces NAC-3: Normal AC induction motors: starting, switch off during running AC-4: Normal AC induction motors: starting, plugging, reversing, inching
Connection technique			Screw terminals
Number of poles			4 pole
Rated operational current			
AC-3			
380 V 400 V	l <sub>e</sub>	Α	9
AC-1			
Conventional free air thermal current, 3 pole, 50 - 60 Hz			
Open			
at 40 °C	$I_{th} = I_e$	Α	22
Max. rating for three-phase motors, 50 - 60 Hz			
AC-3			
220 V 230 V	P	kW	2.2
380 V 400 V	Р	kW	4
660 V 690 V	P	kW	4
AC-4			
220 V 230 V	Р	kW	1.5
380 V 400 V	Р	kW	3
660 V 690 V	Р	kW	3
Contact sequence			$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
For use with			DILEM
Actuating voltage			415 V 50 Hz, 480 V 60 Hz
Voltage AC/DC			AC operation

### **Technical data**

#### General

Standards			IEC/EN 60947, VDE 0660, CSA, UL
Lifespan, mechanical; Coil 50/60 Hz	Operations	x 10 <sup>6</sup>	7
Lifespan, mechanical	Operations	x 10 <sup>6</sup>	20
Maximum operating frequency			
Mechanical		Ops./h	9000
electrical (Contactors without overload relay)	Operations/h		Page 05/070
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature			
Open		°C	-25 - +50
Enclosed		°C	- 25 - 40
Storage		°C	
Min. ambient temperature, storage		°C	- 40
Ambient temperature, storage max.		°C	+ 80

Mounting position			As required, except vertical with terminals A1/A2 at the bottom
Mounting position			\
Mechanical shock resistance (IEC/EN 60068-2-27)			1.5
Half-sinusoidal shock, 10 ms			
Basic unit without auxiliary contact module			
Main contacts, make contacts		g	10
Basic unit with auxiliary contact module		9	
Main contacts make contact		g	
Make		g	10
Auxiliary contacts Make/break contacts		g	20 / 20
Degree of Protection		9	IP20
Protection against direct contact when actuated from front (EN 50274)			Finger and back-of-hand proof
Weight		kg	0.17
Terminal capacity of auxiliary and main contacts		9	
Screw terminals			
Solid		mm <sup>2</sup>	1 x (0.75 - 2.5)
		IIIIII	2 x (0.75 - 2.5)
Flexible with ferrule		$\text{mm}^2$	1 x (0.75 - 1.5) 2 x (0.75 - 1.5)
Solid or stranded		AWG	18 - 14
Stripping length		mm	8
Terminal screw			M3.5
Pozidriv screwdriver		Size	2
Standard screwdriver		mm	0.8 x 5.5
Max. tightening torque		Nm	1x6 1.2
Main conducting paths		IVIII	1.2
Rated impulse withstand voltage	U <sub>imp</sub>	V AC	6000
Overvoltage category/pollution degree			III/3
Rated insulation voltage	Ui	V AC	690
Rated operational voltage	U <sub>e</sub>	V AC	690
Safe isolation to EN 61140	· ·		
between coil and contacts		V AC	300
between the contacts		V AC	300
Making capacity (cos φ to IEC/EN 60947)		Α	110
Breaking capacity			
220 V 230 V		Α	90
380 V 400 V		Α	90
500 V		Α	64
660 V 690 V		Α	42
Short-circuit protection maximum fuse			
Type "2", 500 V	gL/gG	Α	10
Type "1", 500 V	gL/gG	Α	20
AC			
AC-1			
Rated operational current			
Conventional free air thermal current, 3 pole, 50 - 60 Hz			
Open			

at 40 °C	$I_{th} = I_e$	А	22
at 50 °C			
	I <sub>th</sub> =I <sub>e</sub>	A	20
at 55 ° C	I <sub>th</sub> =I <sub>e</sub>	A	19
enclosed	I <sub>th</sub>	Α	16
Notes			At maximum permissible ambient air temperature.
Conventional free air thermal current, 1 pole			
Notes			At maximum permissible ambient air temperature.
open	I <sub>th</sub>	Α	60
enclosed AC-3	I <sub>th</sub>	A	50
Rated operational current			
Open, 3-pole: 50 – 60 Hz			
Notes			At maximum permissible ambient air temperature.
220 V 230 V	I <sub>e</sub>	Α	9
240 V	I <sub>e</sub>	Α	9
380 V 400 V	I <sub>e</sub>	Α	9
415 V	I <sub>e</sub>	Α	9
440V	I <sub>e</sub>	Α	9
500 V	I <sub>e</sub>	A	6.4
660 V 690 V			4.8
Motor rating	I <sub>e</sub>	A kWh	T-U
	P		22
220 V 230 V 240V	P	kW	2.2 2.5
380 V 400 V	P	kW	4
360 V 400 V 415 V	P	kW	4.3
440 V	P	kW	4.6
500 V	P	kW	
660 V 690 V	P	kW	4
AC-4	Г	KVV	•
Rated operational current			
Open, 3-pole: 50 – 60 Hz			
Notes			At maximum permissible ambient air temperature.
220 V 230 V	I <sub>e</sub>	A	6.6
240 V		A	6.6
	l <sub>e</sub>		
380 V 400 V	l <sub>e</sub>	A	6.6
415 V	l <sub>e</sub>	A	6.6
440 V	l <sub>e</sub>	Α	6.6
500 V	l <sub>e</sub>	Α	5
660 V 690 V	l <sub>e</sub>	Α	3.4
Motor rating	P	kWh	
220 V 230 V	P	kW	1.5
240 V	P	kW	1.8
380 V 400 V	P	kW	3
415 V	P	kW	3.1
440 V	P	kW	3.3
500 V	P	kW	3
660 V 690 V	P	kW	3
DC			
Rated operational current open			
DC 1			
DC-1		^	20
12 V	l <sub>e</sub>	A	20
12 V 24 V	I <sub>e</sub>	A A	20
12 V			

Description plane in the plane is a part of	220 V	I <sub>e</sub>	Α	20
Major 12	Current heat losses (3- or 4-pole)			
Mapper   M			W	7.9
A C spontred				
Single-voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz, 6	Voltage tolerance			
Death-requency coil 50500 Na	AC operated			
Voltage tolerance Dual-frequency coil 5090 Hz, max, prick-up voltage   Pawer consumption	Single-voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz	Pick-up	$x U_{c}$	0.8 - 1.1
Processor Consumption	Dual-frequency coil 50/60 Hz	Pick-up	x U <sub>c</sub>	
AC operation   Single-voltage coil 50 Hz and dual-voltage coil 50 Hz 00 Hz	Voltage tolerance Dual-frequency coil 50/60 Hz, max. pick-up voltage		x U <sub>c</sub>	1.1
Single-voltage coil 58 Hz and duni-voltage coil 50 Hz, 50 Hz	Power consumption			
Single-voltage coil 50 Hz and dissil-voltage coil 50 Hz, 50 Hz	AC operation			
Simple -voltage coil 50 Hz and dual-voltage coil 50 Hz. 60 Hz   Sealing   VA	Single-voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz	Pick-up	VA	25
Single-voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz	Single-voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz	Pick-up	W	22
Duty factor         % DF         100           Switching times at 100 % Uc         mm         1           Make contact         mm         1           Closing delay         ms         14           Closing delay min.         ms         2           Opening delay min.         ms         8           Opening delay min.         ms         8           Closing delay with top mounting auxiliary centact         ms         18           Reversing contactors         ms         18           Changeover time at 110 % Uc         ms         12           Changeover time at 110 % Uc         ms         12           Changeover time at 800 V AC         ms         12           Abutiact         ms         12           Coverologiac category pollution degree         ms         10           Raced insulation voltage         Uc         VAC         600           Raced apparational voltage         Uc         VAC         600           Raced poperational voltage         Uc	Single-voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz	Sealing	VA	4.6
Switching times at 100 % Uç         ms           Make contact         ms           Closing delay min.         ms         14           Closing delay max.         ms         21           Opening delay max.         ms         22           Opening delay max.         ms         8           Opening delay max.         ms         8           Opening delay max.         ms         8           Closing delay with top mounting auxiliary contact         ms         45           Reversing contactors         ms         45           Changeover time at 10 % Uç         ms         16           Changeover time min.         ms         12           Acting in max         ms         12           Arching in max         ms         12           Acting in max         ms         12           Acting in max         ms         12           Return in min.         ms         12           Changeover time min.         ms         12           Acting in max at 800 AC         ms         12           Rated insulation of the MOSPY-5-1 appendix L, including auxiliary contact         ms         12           Rated in minulae withstand voltage         U, VAC         600 </td <td>Single-voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz</td> <td>Sealing</td> <td>W</td> <td>1.8</td>	Single-voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz	Sealing	W	1.8
Make contact   ms	Duty factor		% DF	100
Closing delay min.         ns         14           Closing delay max.         ns         14           Oponing delay min.         ns         8           Reversing centactors         ns         4           Changeover time din.         ns         16           Changeover time min.         ns         16           Changeover time max.         ns         12           Arcing time at 80 V AC         ns         12           Auxiliary contacts         ys         10           Rated insulation voltage         U <sub>im</sub> V AC         600           Rated operating contacts to EN 65947-51 appendix L, including auxiliary contacts         ys         90           Rated insulation voltage         U <sub>im</sub> V AC         600           Rated operating contacts to EN 65947-51 appendix L, including auxiliary contacts         y AC         600           Rated insulation voltage         U <sub>i</sub> V AC         600           Safe isolation to EN 61140         y         6         60	Switching times at 100 % $\mathrm{U}_{\mathrm{C}}$			
Closing delay mix.	Make contact		ms	
Closing delay max.         ms         1           Opening delay         ms         8           Opening delay max.         ms         8           Opening delay max.         ms         18           Opening delay max.         ms         18           Closing delay with top montring auxiliary contact         ms         15           Reversing contactors         ms         15           Changeover time min.         ms         21           Changeover time min.         ms         12           Arcing time at 880 V AC         ms         21           Positive operating contacts to EN 6947-51 appendix L including auxiliary contact         ms         21           Rated impulse withstand voltage         June         VA         20           Rated operating contacts to EN 6947-51 appendix L including auxiliary contact         me         10         10           Positive operating contacts to the 8947-51 appendix L including auxiliary contact         y         00         10           Rated insulaison voltage         y         VA         90           Rated operational voltage         y         VA         30           Act 15         y         X         30           Between the auxiliary contacts         y	Closing delay		ms	
Opening delay min.         ms         8           Opening delay min.         ms         8           Opening delay min.         ms         18           Closing delay with top mounting auxiliary contact         ms         18           Reversing contactors         ms         45           Changeover time at 110 % U <sub>c</sub> ms         16           Changeover time max.         ms         21           Arcing time at 880 V AC         ms         21           Auxiliary contacts         ms         21           Positive appraising contacts to EN 80947-5-1 appendix L, including auxiliary contact         VAC         6000           Rated impulse withstand voltage         U <sub>I</sub> VAC         6000           Overvoltage category/pollution degree         U <sub>I</sub> VAC         600           Rated appraisonal voltage         U <sub>I</sub> VAC         600           Safe Isolation to EN B1140         VAC         600         600           between oil and auxiliary contacts         VAC         30         30           Bated operational current         I <sub>I</sub> VAC         30           Bated operational current         I <sub>I</sub> A         3           Contacts in series:         I <sub>I</sub>	Closing delay min.		ms	14
Dipaning delay min.   Dipaning delay max.   ms   18   18			ms	21
No			ms	
Closing delay with top mounting auxiliary contact   Reversing contactors			ms	
Reversing contactors				
Changeover time at 110 % U <sub>c</sub> ms         16           Changeover time min.         ms         21           Arcing time at 890 VAC         ms         12           Auxiliary contacts           Positive operating contacts to EN 80947-5-1 appendix L, including auxiliary contact module         VAC         6000           Rated inpulse withstand voltage         U <sub>imp</sub> VAC         6000           Overvoltage category/pollution degree         U <sub>I</sub> VAC         600           Rated insulation voltage         U <sub>i</sub> VAC         600           Safe isolation to EN 61140         VAC         600           between coil and auxiliary contacts         VAC         300           between coil and auxiliary contacts         VAC         300           Rated operational current         VAC         300           AC-15         VAC         300           Rated operational current         VAC         30           AC-15         A         6           380 V 415 V         A         6           380 V 415 V         A         1           Contacts in series:         A         C           Contacts in series:         A         C           3         C<			ms	45
Changeover time min.         ms         16           Changeover time max.         ms         21           Arcing time at 690 V AC         ms         12           Auxiliary contacts           Positive operating contacts to EN 60947-5-1 appendix L, including auxiliary contact module         Ves           Rated impulse withstand voltage         Using         VAC         6000           Overvoltage catagory/pollution degree         Ui         VAC         690           Rated operational voltage         Ui         VAC         690           Rated polaridinal voltage         Ui         VAC         600           Safe isolation to R6 61140         VAC         600           between the auxiliary contacts         VAC         300           between the auxiliary contacts         VAC         300           Bated operational current         VAC         300           AC-15         220 Y 240 V         Ie         A         6           380 V 415 V         Ie         A         6           380 V 415 V         Ie         A         1.5           DC UR ≤ 15 ms         Image: Color of the polymer in the				
Changeover time max.         ms         21           Arcing time at 690 V AC         ms         12           Auxiliary contacts           Positive operating contacts to EN 60947-5-1 appendix L, including auxiliary contact module         Ves           Rated impulse withstand voltage         U <sub>imp</sub> V AC         6000           Overvoltage category/pollution degree         III/3         IIII/3           Rated insulation voltage         U <sub>e</sub> V AC         690           Rated operational voltage         V AC         600           Safe isolation to EN 61140         V AC         300           between coil and auxiliary contacts         V AC         300           between the auxiliary contacts         V AC         300           Rated operational current         V AC         300           AC-15         V AC         30           220 V 240 V         I <sub>e</sub> A         6           380 V 415 V         I <sub>e</sub> A         3           500 V         I <sub>e</sub> A         1.5           1         2 V AC         A         2.5           2         3         100 V         A         2.5           3         3         20 V				
Arcing time at 690 V AC         ms         12           Auxiliary contacts           Positive operating contacts to EN 60947-5-1 appendix L, including auxiliary contact of official product         Very Contacts         4000           Rated impulse withstand voltage         U <sub>lum</sub> V AC         6000           Overvoltage category/pollution degree         III/3         600           Rated insulation voltage         U <sub>l</sub> V AC         690           Rated operational voltage         V AC         600           Safe isolation to EN 61140         V AC         300           between coil and auxiliary contacts         V AC         300           between the auxiliary contacts         V AC         300           AC-15         V AC         300           220 V 240 V         I <sub>e</sub> A         6           380 V 415 V         I <sub>e</sub> A         3           500 V         I <sub>e</sub> A         3           DC L/R ≤ 15 ms         2         A         25           1         2         A         2.5           2         3         1.5           3         3         1.5           4         2.5           3         3 </td <td>•</td> <td></td> <td></td> <td></td>	•			
Auxiliary contacts           Positive operating contacts to EN 60947-5-1 appendix L, including auxiliary contact module         Ves           Rated impulse withstand voltage         U <sub>imp</sub> VAC 6000           Overvoltage category/pollution degree         III/3           Rated insulation voltage         U <sub>i</sub> VAC 690           Rated operational voltage         U <sub>e</sub> VAC 690           Safe isolation to EN 61140         VAC 300           between coil and auxiliary contacts         VAC 300           between the auxiliary contacts         VAC 300           Rated operational current         VAC 300           AC-15         VAC 300           220 V 240 V         I <sub>e</sub> A 3 3           380 V 415 V         I <sub>e</sub> A 3 3           500 V         I <sub>e</sub> A 3 1.5           DC L/R ≤ 15 ms         A           Contacts in series:         A           1         24 V A 2.5           2         2           3         100 V A 2.5           3         100 V A 2.5 <td></td> <td></td> <td></td> <td></td>				
Positive operating contacts to EN 60947-5-1 appendix L, including auxiliary contact module         Vac         Yes           Rated impulse withstand voltage         U <sub>imp</sub> VAC         6000           Overvoltage category/pollution degree         III/3           Rated insulation voltage         U <sub>i</sub> VAC         800           Rated operational voltage         U <sub>e</sub> VAC         600           Safe isolation to EN 61140         VAC         300           between coil and auxiliary contacts         VAC         300           Between the auxiliary contacts         VAC         300           Rated operational current         VAC         300           AC-15         VAC         300           220 V 240 V         I <sub>e</sub> A         6           380 V 415 V         I <sub>e</sub> A         3           500 V         I <sub>e</sub> A         1.5           Contacts in series:         A         1.5           1         24 V         A         2.5           2         20 V         A         2.5           3         3         4         2.5           1         20 V         A         2.5           2         20 V         A         2.5           3         3         4 <td></td> <td></td> <td>1115</td> <td></td>			1115	
Overvoltage category/pollution degree         Ui         V AC         690           Rated insulation voltage         Ue         V AC         690           Rated operational voltage         Ue         V AC         600           Safe isolation to EN 61140         V AC         300           between coil and auxiliary contacts         V AC         300           Rated operational current         V AC         300           AC-15         V AC         300           220 V 240 V         Ie         A         6           380 V 415 V         Ie         A         3           500 V         Ie         A         1.5           DC L/R ≤ 15 ms         A         1.5           Contacts in series:         A         2.5           2         60 V         A         2.5           3         100 V         A         1.5           3         20 V         A         0.5           Conv. thermal current         Ith         A         10	Positive operating contacts to EN 60947-5-1 appendix L, including auxiliary contact	t		Yes
Rated insulation voltage       Ui       V AC       690         Rated operational voltage       Ue       V AC       600         Safe isolation to EN 61140       V AC       300         between coil and auxiliary contacts       V AC       300         Bated operational current       V AC       300         AC-15       V AC       300         220 V 240 V       Ie       A       6         380 V 415 V       Ie       A       3         500 V       Ie       A       1.5         DC L/R ≤ 15 ms       A       L         Contacts in series:       A       2.5         1       24 V       A       2.5         2       60 V       A       2.5         3       100 V       A       1.5         3       20 V       A       0.5         Conv. thermal current       Inh       A       10	Rated impulse withstand voltage	$U_{imp}$	V AC	6000
Rated operational voltage       Ue       V AC       600         Safe isolation to EN 61140       V AC       300         between coil and auxiliary contacts       V AC       300         Bated operational current       V AC       300         AC-15       V AC       300         220 V 240 V       Ie       A       6         380 V 415 V       Ie       A       3         500 V       Ie       A       1.5         DC L/R ≤ 15 ms       A       1.5         Contacts in series:       A       24 V       A       2.5         2       60 V       A       2.5         3       100 V       A       1.5         3       220 V       A       0.5         Conv. thermal current       Ith       A       10	Overvoltage category/pollution degree			III/3
Safe isolation to EN 61140       V AC       300         between coil and auxiliary contacts       V AC       300         Rated operational current       V AC       300         AC-15       V AC       300         220 V 240 V       I <sub>e</sub> A       6         380 V 415 V       I <sub>e</sub> A       3         500 V       I <sub>e</sub> A       1.5         DC L/R ≦ 15 ms       A       L         Contacts in series:       A       2.5         2       60 V       A       2.5         2       60 V       A       2.5         3       100 V       A       1.5         Conv. thermal current       I <sub>th</sub> A       10	Rated insulation voltage	Ui	V AC	690
between coil and auxiliary contacts       V AC       300         between the auxiliary contacts       V AC       300         Rated operational current       V AC       300         AC-15       V AC       300         220 V 240 V       I <sub>e</sub> A       6         380 V 415 V       I <sub>e</sub> A       3         500 V       I <sub>e</sub> A       1.5         DC L/R ≦ 15 ms       A       Contacts in series:       A         1       24 V       A       2.5         2       60 V       A       2.5         3       100 V       A       1.5         3       220 V       A       0.5         Conv. thermal current       I <sub>th</sub> A       10	Rated operational voltage	U <sub>e</sub>	V AC	600
between the auxiliary contacts       V AC       300         Rated operational current         AC-15       V AC       10         220 V 240 V       Ie       A       6         380 V 415 V       Ie       A       3         500 V       Ie       A       1.5         DC L/R ≦ 15 ms       A       Contacts in series:       A         1       24 V       A       2.5         2       60 V       A       2.5         3       100 V       A       1.5         3       20 V       A       0.5         Conv. thermal current       Ith       A       10	Safe isolation to EN 61140			
Rated operational current         AC-15       220 V 240 V       I <sub>e</sub> A       6         380 V 415 V       I <sub>e</sub> A       3         500 V       I <sub>e</sub> A       1.5         DC L/R ≦ 15 ms       A          Contacts in series:       A       24 V       A       2.5         2       60 V       A       2.5         3       100 V       A       1.5         3       220 V       A       0.5         Conv. thermal current       I <sub>th</sub> A       10	between coil and auxiliary contacts		V AC	300
AC-15  220 V 240 V  1e A B B Conv. thermal current    AC-15   A   B   B   B     A   B     A     A   B     A			V AC	300
$\begin{array}{cccccccccccccccccccccccccccccccccccc$				
380 V 415 V       Ie       A       3         500 V       Ie       A       1.5         DC L/R ≤ 15 ms       A          Contacts in series:       A       24 V       A       2.5         2       60 V       A       2.5         3       100 V       A       1.5         3       220 V       A       0.5         Conv. thermal current       Ith       A       10				
500 V       I <sub>e</sub> A       1.5         DC L/R ≤ 15 ms       A          Contacts in series:       A       2.5         1       24 V       A       2.5         2       60 V       A       2.5         3       100 V       A       1.5         3       220 V       A       0.5         Conv. thermal current       I <sub>th</sub> A       10				
DC L/R ≦ 15 ms         Contacts in series:       A         1       24 V       A       2.5         2       60 V       A       2.5         3       100 V       A       1.5         3       220 V       A       0.5         Conv. thermal current       Ith       A       10		l <sub>e</sub>		
Contacts in series:       A         1       24 V       A       2.5         2       60 V       A       2.5         3       100 V       A       1.5         3       220 V       A       0.5         Conv. thermal current       Ith       A       10		le	Α	1.5
1       24 V       A       2.5         2       60 V       A       2.5         3       100 V       A       1.5         3       220 V       A       0.5         Conv. thermal current       Ith       A       10				
2 60 V A 2.5 3 100 V A 1.5 3 220 V A 0.5 Conv. thermal current I <sub>th</sub> A 10				
3 100 V A 1.5 3 220 V A 0.5 Conv. thermal current I <sub>th</sub> A 10				
3 220 V A 0.5 Conv. thermal current I <sub>th</sub> A 10				
Conv. thermal current I <sub>th</sub> A 10				
(at $U_e = 24$ V DC, $U_{min} = 17$ V, $I_{min} = 5.4$ mA)	Control circuit reliability	Failure rate	λ	$<10^{-8}$ , $<$ one failure at 100 million operations (at $U_e = 24$ V DC, $U_{min} = 17$ V, $I_{min} = 5.4$ mA)
Component lifespan at U <sub>e</sub> = 240 V	Component lifespan at $U_e = 240 \text{ V}$			

AC-15	Operations	x 10 <sup>6</sup>	0.2
DC current			
$L/R = 50$ ms: 2 contacts in series at $I_e = 0.5$ A	Operations	x 10 <sup>6</sup>	0.15
Notes			Switch-on and switch-off conditions based on DC-13, time constant as specified
Short-circuit rating without welding			
Maximum overcurrent protective device			
Short-circuit protection only			PKZM0-4
Short-circuit protection maximum fuse			
500 V		A gG/gL	6
500 V		A fast	10
Current heat loss at a load of $I_{th}$ per contact		W	1.1
Rating data for approved types			
Switching capacity			
Maximum motor rating			
Three-phase			
200 V 208 V		HP	2
230 V 240 V		HP	3
460 V 480 V		HP	5
575 V 600 V		HP	5
Single-phase			
115 V 120 V		HP	0.5
230 V 240 V		НР	1.5
General use		Α	15
Short Circuit Current Rating		SCCR	
Basic Rating			
SCCR		kA	5

### **Design verification as per IEC/EN 61439**

max. Fuse

Design verincation as per illo/liv 01433			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	22
Heat dissipation per pole, current-dependent	$P_{\text{vid}}$	W	2.39
Equipment heat dissipation, current-dependent	$P_{\text{vid}}$	W	9.56
Static heat dissipation, non-current-dependent	$P_{vs}$	W	1.8
Heat dissipation capacity	P <sub>diss</sub>	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	50
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.

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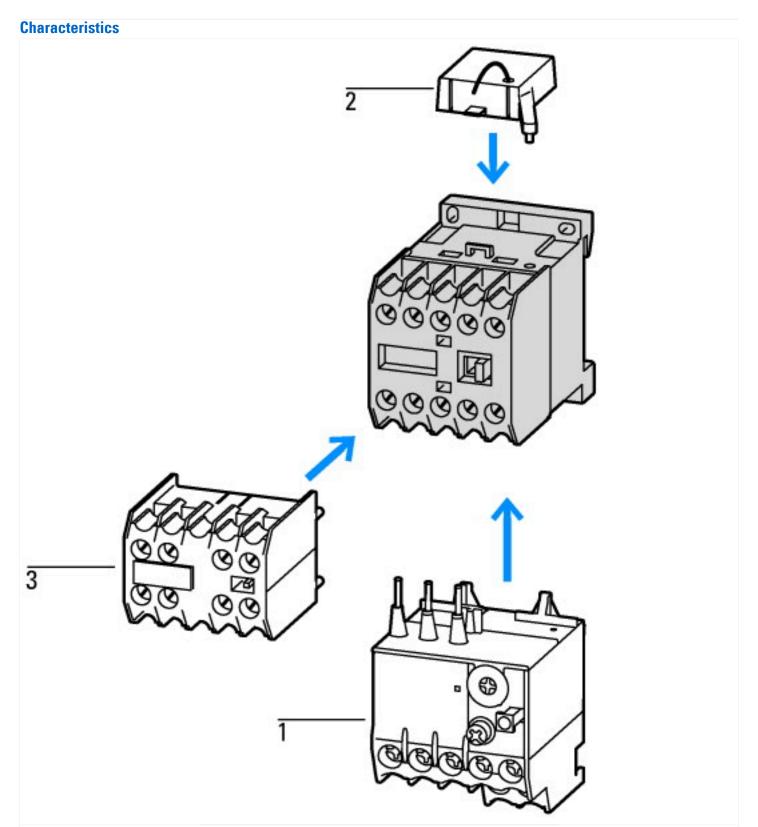
10.6 Incorporation of switching devices and components	Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections	Is the panel builder's responsibility.
10.8 Connections for external conductors	Is the panel builder's responsibility.
10.9 Insulation 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 (II ) is observed

# **Technical data ETIM 6.0**

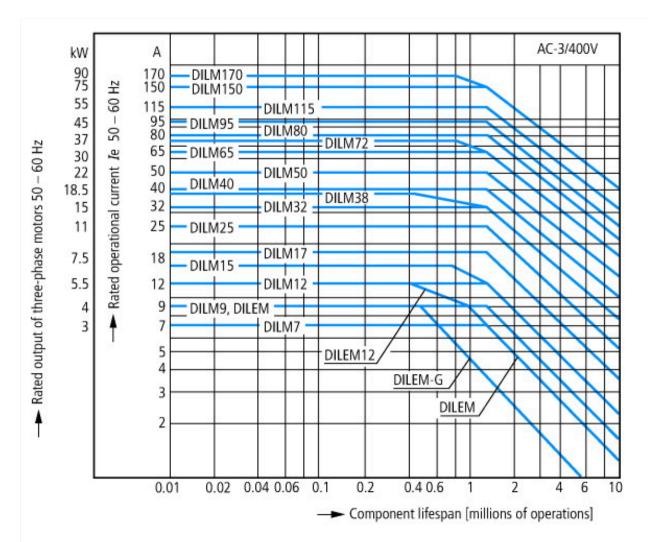
Low-voltage industrial components (EG000017) / Power contactor, AC switching (EC000066)					
Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Power contactor, AC switching (ecl@ss8.1-27-37-10-03 [AAB718012])					
Rated control supply voltage Us at AC 50HZ		V	415 - 415		
Rated control supply voltage Us at AC 60HZ		V	480 - 480		
Rated control supply voltage Us at DC		V	0 - 0		
Voltage type for actuating			AC		
Rated operation current le at AC-1, 400 V		Α	22		
Rated operation current le at AC-3, 400 V		Α	9		
Rated operation power at AC-3, 400 V		kW	4		
Rated operation current le  at AC-4, 400 V		Α	6.6		
Rated operation power le at AC-4, 400 V		kW	3		
Modular version			No		
Number of auxiliary contacts as normally open contact			0		
Number of auxiliary contacts as normally closed contact			0		
Type of electrical connection of main circuit			Screw connection		
Number of normally closed contacts as main contact			0		
Number of main contacts as normally open contact			4		

# **Approvals**

• •	
Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.	E29096
UL Category Control No.	NLDX
CSA File No.	012528
CSA Class No.	3211-04
North America Certification	UL listed, CSA certified
Specially designed for North America	No



1: Overload relay 2: Suppressor 3: Auxiliary contact modules Enclosure totally insulated



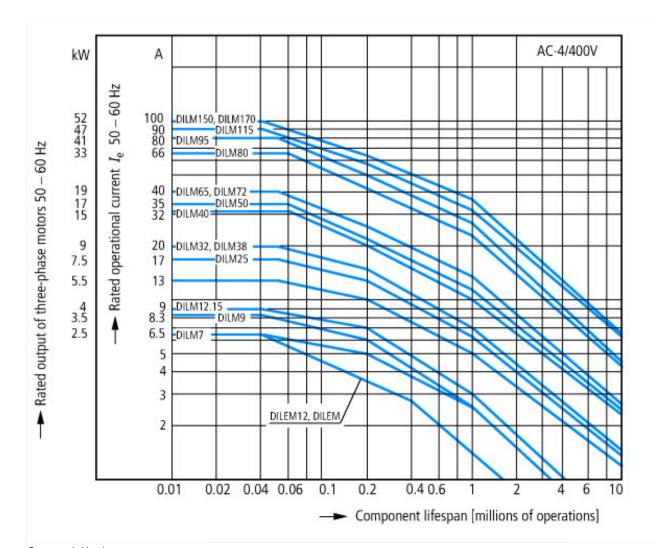
Squirrel-cage motor Operating characteristics Starting:from rest Stopping:after attaining full running speed Electrical characteristics Make: up to 6 x rated motor current Break: up to 1 x rated motor current Utilization category 100 % AC-3 Typical applications Compressors Lifts Mixers Pumps Escalators Agitators

Fans Conveyor belts Centrifuges

Hinged flaps Bucket-elevators

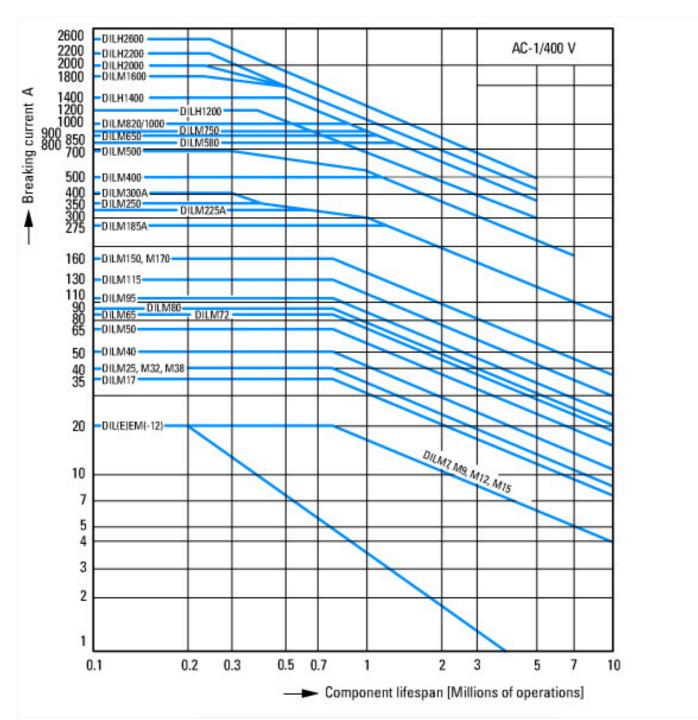
Air conditioning system

General drives in manufacturing and processing machines



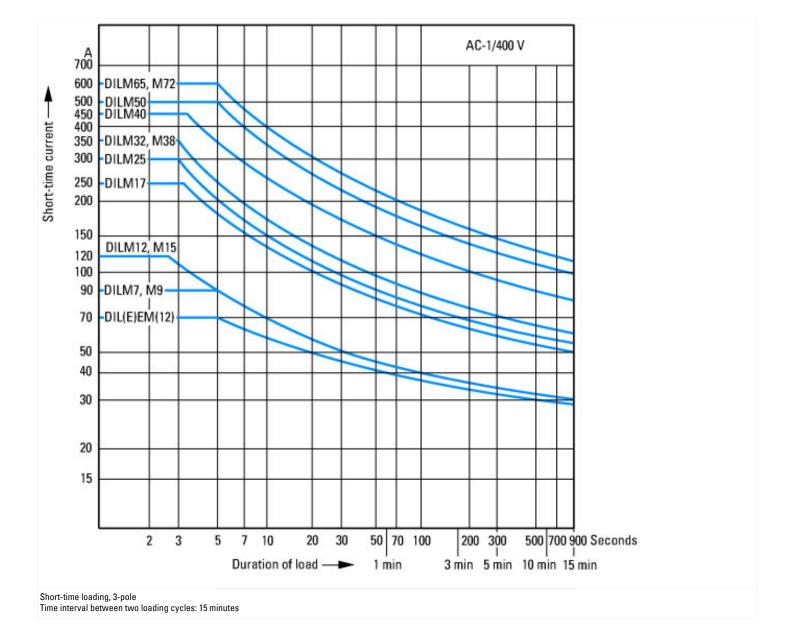
Extreme switching duty Squirrel-cage motor Operating characteristics Inching, plugging, reversing Electrical characteristics Make: up to 6 x rated motor current Break: up to 6 x rated motor current Utilization category 100 % AC-4 Typical applications Printing presses Wire-drawing machines Centrifuges

Special drives for manufacturing and processing machines

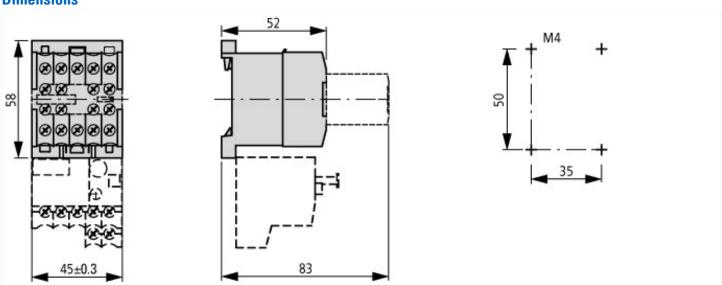


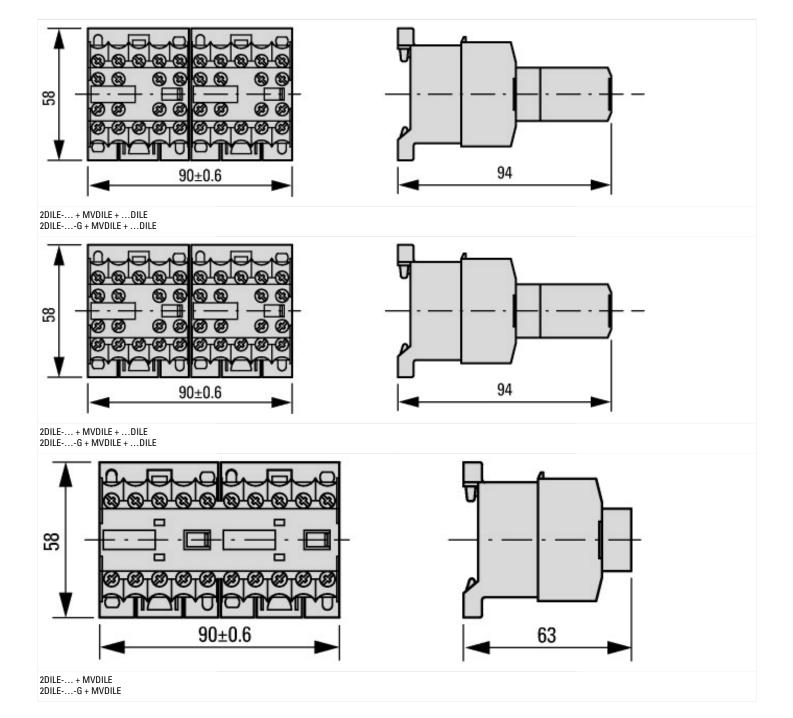
Switching duty for non-motor loads, 3-pole, 4-pole Operating characteristics
Non-inductive or slightly inductive loads
Electrical characteristics
Make: 1 x rated current
Break: 1 x rated current
Utilization category
100 % AC-1
Typical applications

Electric heat



## **Dimensions**





## **Additional product information (links)**

IL03407009Z (AWA2100-0882) Mini contactor relay

IL03407009Z (AWA2100-0882) Mini contactor relay

ftp://ftp.moeller.net/DOCUMENTATION/AWA\_INSTRUCTIONS/IL03407009Z2018\_04.pdf