

DATASHEET - DILM8-11(230V50HZ,240V60HZ)-PI



Contactor, 3 pole, 380 V 400 V 3 KW, 1 N/O, 1 NC, 230 V 50 Hz, 240 V 60 Hz, AC operation, Push in terminals



Part no. DILM8-11(230V50HZ,240V60HZ)-PI
Catalog No. 199264
Alternate Catalog No. XTCEPI008C11F

Delivery program

Product range			Contactors
Application			Contactors for Motors
Subrange			Contactors up to 95 A, 3 pole
Utilization category			AC-1: Non-inductive or slightly inductive loads, resistance furnaces AC-3/AC-3e: Normal AC induction motors: Starting, switching off while running AC-4: Normal AC induction motors: starting, plugging, reversing, inching
Notes			Also suitable for motors with efficiency class IE3.
Connection technique			Push in terminals
Number of poles			3 pole

Rated operational current

AC-3			
Notes			At maximum permissible ambient temperature (open.) Also tested according to AC-3e.
380 V 400 V	I _e	A	8
AC-1			
Conventional free air thermal current, 3 pole, 50 - 60 Hz			
Open			
at 40 °C	I _{th} = I _e	A	40
enclosed	I _{th}	A	32
Conventional free air thermal current, 1 pole			
open	I _{th}	A	88
enclosed	I _{th}	A	80

Max. rating for three-phase motors, 50 - 60 Hz

AC-3			
220 V 230 V	P	kW	2
380 V 400 V	P	kW	3
660 V 690 V	P	kW	6.7
AC-4			
220 V 230 V	P	kW	2
380 V 400 V	P	kW	3.6
660 V 690 V	P	kW	6.7

Contacts

N/O = Normally open			1 N/O
N/C = Normally closed			1 NC

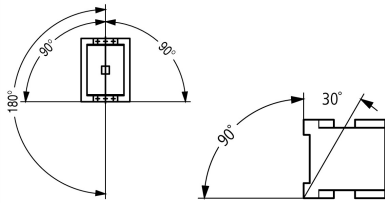
Contact sequence			
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Instructions			Contacts to EN 50 012. with mirror contact.
Can be combined with auxiliary contact			DILM32-XHI...-PI DILA-XHI(V)...-PI
Actuating voltage			230 V 50 Hz, 240 V 60 Hz
Voltage AC/DC			AC operation

Connection to SmartWire-DT		no
Frame size		2

Technical data

General

Standards			IEC/EN 60947, VDE 0660, UL, CSA
Operating frequency, mechanical			
AC operated	Operations/h		5000
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature			
Open	°C		-25 - +60
Enclosed	°C		- 25 - 40
Storage	°C		- 40 - 80
Mounting position			
Mechanical shock resistance (IEC/EN 60068-2-27)			
Half-sinusoidal shock, 10 ms			
Main contacts			
N/O contact	g		10
Auxiliary contacts			
N/O contact	g		7
N/C contact	g		5
Mechanical shock resistance (IEC/EN 60068-2-27) when tabletop-mounted			
Half-sinusoidal shock, 10 ms			
Main contacts			
N/O contact	g		5.7
Auxiliary contacts			
N/O contact	g		3.4
N/C contact	g		3.4
Degree of Protection			IP20
Protection against direct contact when actuated from front (EN 50274)			Finger and back-of-hand proof
Altitude	m		Max. 2000
Weight			
AC operated	kg		0.44
Spring-loaded terminal connection			
Tool			
Standard screwdriver			3.0 x 0.5
Push-in terminals			
Terminal capacity main cable			
Solid	mm ²		1 x (1 - 6) 2 x (1 - 6)
flexible	mm ²		1 x (1 - 10) 2 x (1 - 6)
flexible with ferrules	mm ²		1 x (1 - 6) 2 x (1 - 4)
flexible with ultrasonic welded busbar end	mm ²		1 x (1 - 10) 2 x (1 - 6)
flexible with uninsulated wire end ferrule	mm ²		1 x (1 - 6) 2 x (1 - 6)
Solid or stranded	AWG		18 - 8
Stripping length	mm		12
Standard screwdriver			3.0 x 0.5
Terminal capacity control circuit cables			

Solid		mm ²	1 x (0,5 - 2,5) 2 x (0,5 - 2,5)
flexible		mm ²	1 x (0,5 - 2,5) 2 x (0,5 - 2,5)
flexible with ferrules		mm ²	1 x (0,5 - 1,5) 2 x (0,5 - 1,5)
flexible with ultrasonic welded busbar end		mm ²	1 x (0,5 - 2,5) 2 x (0,5 - 2,5)
flexible with uninsulated wire end ferrule		mm ²	1 x (0,5 - 2,5) 2 x (0,5 - 2,5)
Solid or stranded		AWG	20 - 14
Stripping length		mm	10
Tool			
Standard screwdriver		mm	3.0 x 0.5

Main conducting paths

Rated impulse withstand voltage	U _{imp}	V AC	8000
Overvoltage category/pollution degree			III/3
Rated insulation voltage	U _i	V AC	690
Rated operational voltage	U _e	V AC	690
Safe isolation to EN 61140			
between coil and contacts		V AC	400
between the contacts		V AC	400
Making capacity (p.f. to IEC/EN 60947)			
	Up to 690 V	A	112
Breaking capacity			
220 V 230 V		A	70
380 V 400 V		A	70
500 V		A	50
660 V 690 V		A	40
Short-circuit rating			
Short-circuit protection maximum fuse			
Type "2" coordination			
400 V	gG/gL 500 V	A	35
690 V	gG/gL 690 V	A	35
Type "1" coordination			
400 V	gG/gL 500 V	A	63
690 V	gG/gL 690 V	A	50

AC

AC-1			
Rated operational current			
Conventional free air thermal current, 3 pole, 50 - 60 Hz			
Open			
at 40 °C	I _{th} = I _e	A	40
at 50 °C	I _{th} = I _e	A	38
at 55 °C	I _{th} = I _e	A	37
at 60 °C	I _{th} = I _e	A	35
enclosed	I _{th}	A	32
Conventional free air thermal current, 1 pole			
open	I _{th}	A	88
enclosed	I _{th}	A	80
AC-3			
Rated operational current			
Open, 3-pole: 50 – 60 Hz			
Notes			At maximum permissible ambient temperature (open.) Also tested according to AC-3e.
220 V 230 V	I _e	A	8
240 V	I _e	A	8

380 V 400 V	I _e	A	8
415 V	I _e	A	8
440V	I _e	A	8
500 V	I _e	A	8
660 V 690 V	I _e	A	8
Motor rating	P	kWh	
220 V 230 V	P	kW	2
240V	P	kW	2
380 V 400 V	P	kW	3
415 V	P	kW	3.9
440 V	P	kW	4
500 V	P	kW	4.8
660 V 690 V	P	kW	6.7
AC-4			
Open, 3-pole: 50 – 60 Hz			
220 V 230 V	I _e	A	8
240 V	I _e	A	8
380 V 400 V	I _e	A	8
415 V	I _e	A	8
440 V	I _e	A	8
500 V	I _e	A	8
660 V 690 V	I _e	A	8
Motor rating	P	kWh	
220 V 230 V	P	kW	2
240 V	P	kW	2.1
380 V 400 V	P	kW	3.6
415 V	P	kW	3.7
440 V	P	kW	4
500 V	P	kW	4.7
660 V 690 V	P	kW	6.7

Current heat loss

3 pole, at I _{th} (60°)	W	7.9
Current heat loss at I _e to AC-3/400 V	W	0.3
Impedance per pole	mΩ	2.7

Magnet systems

Voltage tolerance			
AC operated	Pick-up	x U _c	0.8 - 1.1
Drop-out voltage AC operated	Drop-out	x U _c	0.3 - 0.6
Power consumption of the coil in a cold state and 1.0 x U _S			
50 Hz	Pick-up	VA	52
50 Hz	Sealing	VA	7.1
50 Hz	Sealing	W	2.1
60 Hz	Pick-up	VA	67
60 Hz	Sealing	VA	8.7
60 Hz	Sealing	W	2.1
Duty factor		% DF	100
Changeover time at 100 % U _S (recommended value)			
Main contacts			
AC operated			
Closing delay		ms	16 - 22
Opening delay		ms	8 - 14
Arcing time		ms	10

Electromagnetic compatibility (EMC)

Emitted interference		According to EN 60947-1
Interference immunity		According to EN 60947-1

Rating data for approved types

Switching capacity			
Maximum motor rating			
Three-phase			
200 V 208 V		HP	1.5
230 V 240 V		HP	2
460 V 480 V		HP	3
575 V 600 V		HP	5
Single-phase			
115 V 120 V		HP	0.25
230 V 240 V		HP	1
General use		A	20
Auxiliary contacts			
General Use			
AC		V	600
AC		A	10
DC		V	250
DC		A	1
Short Circuit Current Rating		SCCR	
Basic Rating			
SCCR		kA	5
max. Fuse		A	125
max. CB		A	125

Design verification as per IEC/EN 61439

Technical data for design verification			
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	60

Technical data ETIM 7.0

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@ss10.0.1-27-37-10-03 [AAB718015])			
Rated control supply voltage Us at AC 50HZ		V	230 - 230
Rated control supply voltage Us at AC 60HZ		V	240 - 240
Rated control supply voltage Us at DC		V	0 - 0
Voltage type for actuating			AC
Rated operation current Ie at AC-1, 400 V		A	40
Rated operation current Ie at AC-3, 400 V		A	8
Rated operation power at AC-3, 400 V		kW	3
Rated operation current Ie at AC-4, 400 V		A	5
Rated operation power at AC-4, 400 V		kW	2.2
Rated operation power NEMA		kW	0
Modular version			No
Number of auxiliary contacts as normally open contact			1
Number of auxiliary contacts as normally closed contact			1
Type of electrical connection of main circuit			Spring clamp connection
Number of normally closed contacts as main contact			0
Number of main contacts as normally open contact			3

Approvals

Product Standards			IEC/EN 60947-4-1; UL 60947-4-1; CSA - C22.2 No. 60947-4-1-14; CE marking
UL File No.			E29096

UL Category Control No.		NLDX
CSA File No.		012528
CSA Class No.		2411-03, 3211-04
North America Certification		UL listed, CSA certified
Specially designed for North America		No

Characteristics

- 1: Overload relay
- 2: Suppressor
- 3: Auxiliary contact modules

Switching conditions for non-motor consumers, 3 pole, 4 pole
 Operating characteristics
 Non inductive and slightly inductive loads
 Electrical characteristics
 Switch on: 1 x rated operational current
 Switch off: 1 x rated operational current
 Utilization category
 100 % AC-1
 Typical examples of application
 Electric heat

Dimensions

