Datasheet - DILM185-11N(AC/DC24)

Contactor, 3 Pole, 1N/O,1 NC, AC/DC 24: 24 V AC/DC, AC/DC operation, Screw connection

Part no.	**DILM185-11N(AC/DC24)**
Article no.	**CMN00817**
Catalog No.	**CMN00817**

Delivery program

Product range	Contactors
Application	Contactors for Motors
Subrange	Contactors up to 500 A, 3 pole
Utilization category	AC-1: Non-inductive or slightly inductive loads, resistance furnaces AC-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	3 Pole

Rated operational current

AC-3			
380 V 400 V	I_e	A	185
AC-1			
Conventional free air thermal current, 3 pole, 50 / 60 Hz			
Open			
at 40 °C	$I_{th} = I_e$	A	305
at 60 °C		A	278
enclosed	I_{th}	A	222
Conventional free air thermal current, 1 pole			
open	I_{th}	A	620
enclosed	I_{th}	A	566

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

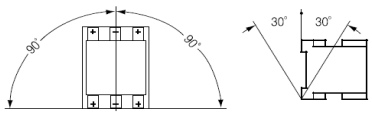
AC-3			
220 V 230 V	P	kW	55
380 V 400 V	P	kW	90
500 V	P	kW	132
660 V 690 V	P	kW	140
1000V	P	kW	108
AC-4			
220 V 230 V	P	kW	21
380 V 400 V	P	kW	37
500 V	P	kW	46
660 V 690 V	P	kW	55
1000V	P	kW	36

Contacts

N/O = Normally open	1 N/O and 1N/C
Instructions	Contacts to EN 50 012.
Can be combined with auxiliary contact	DILM520-XHI...SI; DILM520-XHI...SA
Actuating voltage	24 V AC/DC
Voltage AC/DC	AC/DC operation
Connection to SmartWire-DT	no

Technical data

General

Standards			IEC/EN 60947, GB/T 14048
Lifespan, mechanical			
AC/DC operated	Operations	x 10^6	8
Operating frequency, mechanical			
AC/DC operated	Operations/h	max.	2400
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	10
N/C contact		g	8
Degree of Protection			IP00
Protection against direct contact when actuated from front (EN 50274)			Finger and back-of-hand proof
Altitude		m	Max. 3000
Weight			
AC operated		kg	4
Screw connector terminals			
Terminal capacity main cable			
Terminal capacity (busbar)	width	mm	25

Terminal capacity (flexible with cable lug)		mm^2	50 - 240
Solid or stranded		AWG	2/0 - 500 MCM
Terminal screw			M10
Tightening torque		Nm	24
Tool			
Hexagon socket-head spanner		Size	8 mm AF
Terminal capacity control circuit cables(A1/A2)			
Solid		mm^2	2 x (0.2 - 1.5) 1 x (0.2 - 4)
Flexible with ferrule		mm^2	2 x (0.2 - 1.5) 1 x (0.2 - 2.5)
Solid or stranded		AWG	28 - 12
Stripping length		mm	7-8
Terminal screw			M2.5
Tightening torque		Nm	0.5
Tool			
Standard screwdriver		mm	0.6 x 3.5
Terminal capacity control circuit cables (X1,X2,COM)			
Solid		mm^2	2 x (0.2 - 0.75) 1 x (0.2 - 1.5)
Flexible with ferrule		mm^2	2 x (0.2 - 0.75) 1 x (0.2 - 1.5)
Solid or stranded		AWG	28 - 14
Stripping length		mm	6-7
Terminal screw			M2
Tightening torque		Nm	0.25
Tool			
Standard screwdriver		mm	0.4x 2.5

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	1000
Rated operational voltage	U_e-max	V AC	1000
Making capacity (p.f. to IEC/EN 60947)			
Breaking capacity	Up to 690 V	A	2700
220 V 230 V		A	2250
380 V 400 V		A	2250
500 V		A	2250
660 V 690 V		A	2250
1000 V		A	760
Short-circuit rating			
Short-circuit protection maximum fuse			
Type “2” coordination			
400 V	gG/gL 500 V	A	250
690 V	gG/gL 690 V	A	250
1000 V	gG/gL 1000 V	A	160
Type “1” coordination			
400 V	gG/gL 500 V	A	400
690 V	gG/gL 690 V	A	315
1000 V	gG/gL 1000 V	A	200

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	305
at 60 °C	$I_{th} = I_e$	A	278
enclosed	I_{th}	A	222
Conventional free air thermal current, 1 pole			
open	I_{th}	A	620
enclosed	I_{th}	A	566
AC-3			
Rated operational current			
Open, 3-pole: 50 ／60 Hz			
220 V 230 V	I_e	A	185
380 V 400 V	I_e	A	185
500 V	I_e	A	185
660 V 690 V	I_e	A	150
1000V	I_e	A	76
380 V 400 V	I_e	A	185
Motor rating	P	kWh	
220 V 230 V	P	kW	55
380 V 400 V	P	kW	90
500 V	P	kW	132
660 V 690 V	P	kW	140
1000V	P	kW	108
AC-4			
Open, 3-pole: 50 – 60 Hz			
220 V 230 V	I_e	A	66
380 V 400 V	I_e	A	66
500 V	I_e	A	66
660 V 690 V	I_e	A	57
1000V	I_e	A	26
Motor rating	P	kWh	

220 V 230 V	P	kW	21
380 V 400 V	P	kW	37
500 V	P	kW	46
660 V 690 V	P	kW	55
1000V	P	kW	36
Impedance per pole(average)		mΩ	< = 0.18

Magnet systems

Voltage tolerance			
AC operated	Pick-up	x U_c	0.8 - 1.1
DC operated	Pick-up	x U_c	0.8-1.25
Drop-out voltage AC operated	Drop-out	x U_c	0.1-0.6
Drop-out voltage DC operated	Drop-out	x U_c	0.1-0.6
Power consumption of the coil in a cold state and 1.0 x U_S			
AC operated	Pick-up	VA	＜540
DC operated	Pick-up	W	＜380
AC operated	Sealing	VA	＜12.4
DC operated	Sealing	W	＜7.8
Duty factor		% DF	100
Changeover time at 100 % U_S (recommended value)			
Main contacts			
AC/DC operated			
Closing delay		ms	＜70
Opening delay		ms	＜50

Electromagnetic compatibility (EMC)

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

Design verification as per IEC/EN 61439

Technical data for design verification

Rated operational current for specified heat dissipation	I_n	A	185
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	60

Technical data ETIM 9.0

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	24 - 24
Rated control supply voltage Us at AC 60HZ	V	24 - 24
Rated control supply voltage Us at DC	V	24 - 24
Voltage type for actuating		AC/DC
Rated operation current Ie at AC-1, 400 V	A	305
Rated operation current Ie at AC-3, 400 V	A	185
Rated operation power at AC-3, 400 V	kW	90
Rated operation current Ie at AC-4, 400 V	A	66
Rated operation power at AC-4, 400 V	kW	37
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		Screw 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; CE marking，CCC
Specially designed for North America	No

Characteristics

1: Auxiliary contact modules

Dimensions

Width	mm	120
Height	mm	198
Depth	mm	190

Contactor with auxiliary contact module
distance at side to earthed parts: 8 mm