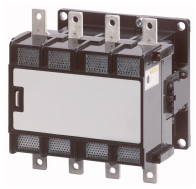
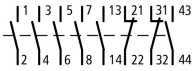


Contactor, 4p+2N/O+2N/C, 500A/AC1

Part no. DILP500/22(220-230V50HZ)
Article no. 207463
Catalog No. XTCFA500N22F

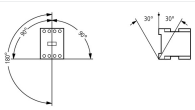
Powering Business Worldwide

Delivery programme

Product range			Contactors
Application			Contactors for 4 pole electric consumers
Subrange			Contactors larger than 200 A, 4 pole
Utilization category			AC-1: Non-inductive or slightly inductive loads, resistance furnaces
Connection technique			Screw terminals
Pole			4 pole
Rated operational current			
AC-1			
Conventional free air thermal current, 3 pole, 50 - 60 Hz			
Open			
at 40 °C	$I_{th} = I_e$	A	500
at 55 °C	$I_{th} = I_e$	A	470
at 60 °C	$I_{th} = I_e$	A	400
Conventional free air thermal current, 1 pole			
open	I_{th}	A	1400
Contacts			
N/O = Normally open			2 N/O
N/C = Normally closed			2 NC
Contact sequence			
For use with			DILP800-XHI…
Voltage AC/DC			AC operation

Technical data

General

Standards			IEC/EN 60947, VDE 0660
Lifespan, mechanical			
AC operated	Operations	x 10^6	5
Operating frequency, mechanical			
AC operated	Operations/h		3600
Climatic proofing			Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature		°C	
Open		°C	-40 - +70
Mounting position			
Mounting position			
Mechanical shock resistance (IEC/EN 60068-2-27)			
Half-sinusoidal shock, 15 ms			
Main contacts			
N/O contact		g	10
Degree of Protection			IP00
Protection against direct contact when actuated from front (EN 50274)			Finger and back-of-hand proof with terminal shroud
Terminal capacity main cable			
Solid		mm^2	1 x (70 - 300) 2 x (35 - 185)
Stranded		mm^2	1 x (70 - 300) 2 x (35 - 185)
Terminal capacity control circuit cables			

Solid		mm^2	2 x (0.5 - 2.5)
Main cable connection screw/bolt			M10
Tightening torque		Nm	12 - 16
Control circuit cable connection screw/bolt			M3.5
Tightening torque		Nm	1.2
Tool			
Control circuit cables			
Pozidriv screwdriver		Size	2

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	V AC	1000
Safe isolation to EN 61140			
between coil and contacts		V AC	1000
between the contacts		V AC	690
Making capacity (cos φ)	Up to 690 V	A	5000 According to IEC/EN 60947
Breaking capacity			
220 V 230 V		A	5000
380 V 400 V		A	5000
500 V		A	5000
660 V 690 V		A	5000
Short-circuit rating			
Short-circuit protection maximum fuse			
Type “2” coordination			
400 V	gG/gL 500 V	A	630
Type “1” coordination			
400 V	gG/gL 500 V	A	630

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	500
at 55 °C	$I_{th} = I_e$	A	470
at 60 °C	$I_{th} = I_e$	A	400
Conventional free air thermal current, 1 pole			
open	I_{th}	A	1400
AC-3			
Rated operational current			
Open, 3-pole: 50 – 60 Hz			
220 V 230 V	I_e	A	400
240 V	I_e	A	400
415 V	I_e	A	400
440V	I_e	A	400
500 V	I_e	A	370
660 V 690 V	I_e	A	370
1000 V	I_e	A	155
Motor rating	P	kWh	
220 V 230 V	P	kW	110
240V	P	kW	110
380 V 400 V	P	kW	200
415 V	P	kW	200
440 V	P	kW	200

660 V 690 V	P	kW	355
1000 V	P	kW	220

DC

Rated operational current, open			
DC-1			
60 V	I_e	A	370
110 V	I_e	A	370
220 V	I_e	A	370
440 V	I_e	A	370
DC-3			
60 V	I_e	A	450
110 V	I_e	A	450
220 V	I_e	A	450
440 V	I_e	A	450
DC-5			
60 V	I_e	A	450
110 V	I_e	A	450
220 V	I_e	A	450
440 V	I_e	A	450

Current heat loss

4 pole, at I_{th}		W	145

Magnet systems

Voltage tolerance		x U_c	
AC operated 50 Hz	Pick-up	x U_c	0.85 - 1.1
Power consumption of the coil in a cold state and 1.0 x U_c			
AC operated 50/60 Hz	Pick-up	VA	3500
AC operated 50/60 Hz	Sealing	VA	140
AC operated 50/60 Hz	Sealing	W	60
Duty factor		% DF	100
Switching times at 100 % U_c (approximate values)			
Main contacts			
AC operated			
Closing delay		ms	30 - 60
Opening delay		ms	10 - 20

Design verification as per IEC/EN 61439

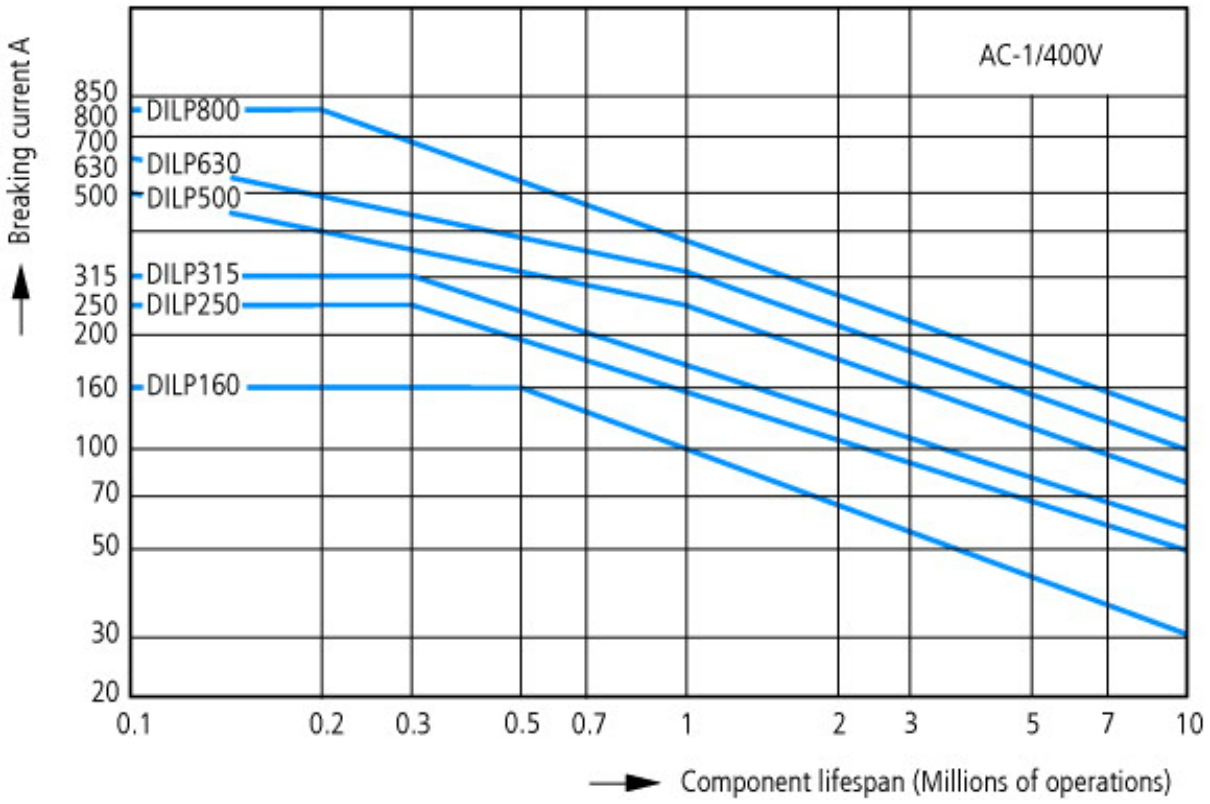
Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	500
Heat dissipation per pole, current-dependent	P_{vid}	W	36.25
Equipment heat dissipation, current-dependent	P_{vid}	W	0
Static heat dissipation, non-current-dependent	P_{vs}	W	60
Heat dissipation capacity	P_{diss}	W	0
Operating ambient temperature min.		°C	-40
Operating ambient temperature max.		°C	70
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.
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 (IL) is observed.

Technical data ETIM 5.0

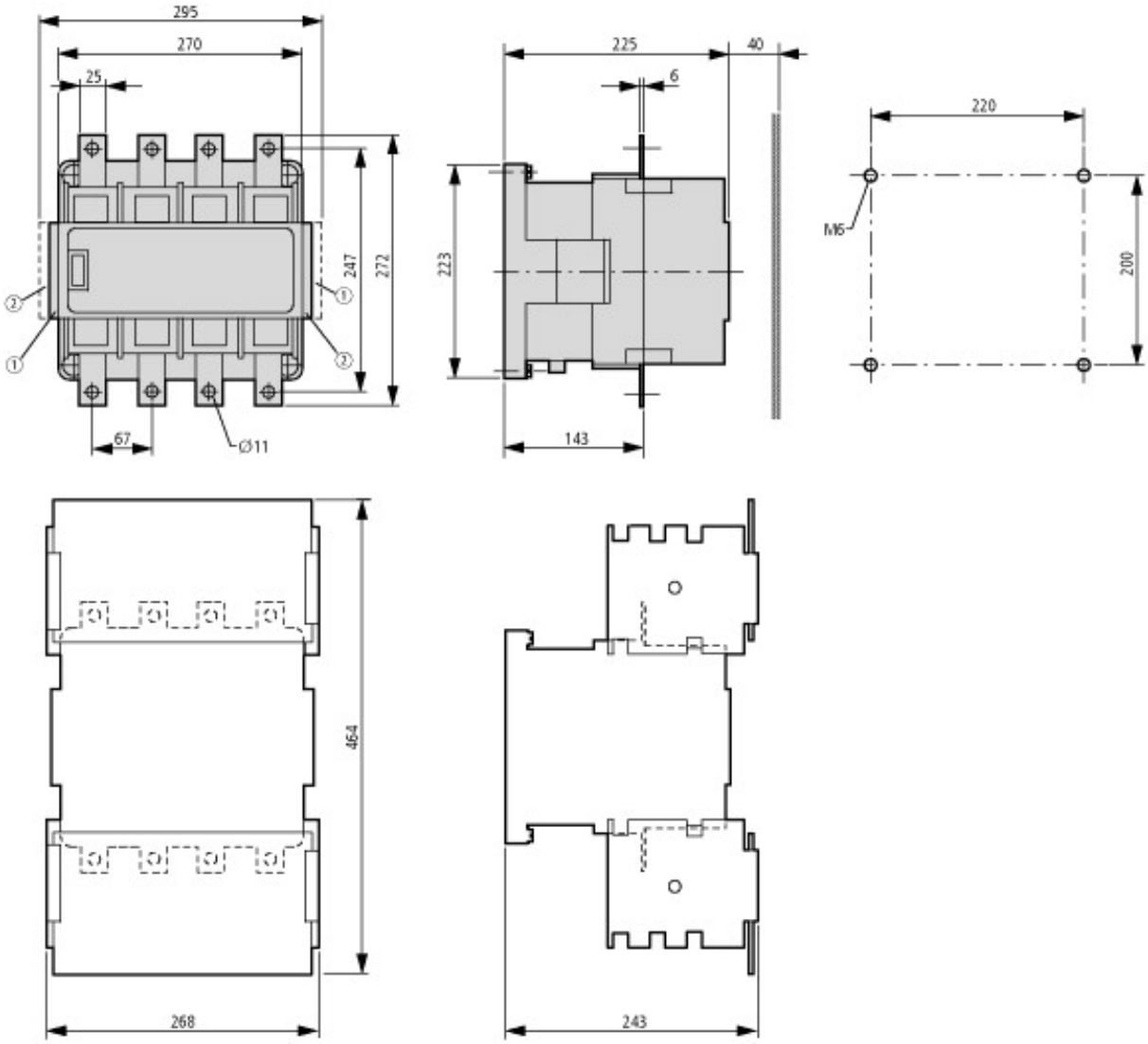
Low-voltage industrial components (EG000017) / Magnet contactor, AC-switching (EC000066)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Power contactor, AC switching (ecl@ss8-27-37-10-03 [AAB718011])			
Rated control supply voltage Us at AC 50HZ		V	220 - 230
Rated control supply voltage Us at AC 60HZ		V	0 - 0
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	500
Rated operation current Ie at AC-3, 400 V		A	400
Rated operation power at AC-3, 400 V		kW	200
Rated operation current Ie at AC-4, 400 V		A	0
Rated operation power Ie at AC-4, 400 V		kW	0
Modular version			No
Number of auxiliary contacts as normally open contact			2
Number of auxiliary contacts as normally closed contact			2
Connection type main current circuit			Rail connection
Number of normally closed contacts as main contact			0
Number of main contacts as normally open contact			4

Characteristics



Operating characteristics
Non inductive and slightly inductive loads
Electrical characteristics
Switch on: 1 × rated operational current
Switch off: 1 × rated operational current
Utilization category
100 % AC-1
Typical examples of application
Electric heat

Dimensions



① DILP800-XHI-SI

② DILP800-XHI11-SA

DILP500 + DILP800-XHB

Additional product information (links)

IL03407021Z (AWA2100-1679) 4 pole contactors > 160 A	
IL03407021Z (AWA2100-1679) 4 pole contactors > 160 A	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407021Z2010_10.pdf
Switchgear of Power Factor Correction Systems	http://www.moeller.net/binary/ver_techpapers/ver934en.pdf
X-Start - Modern Switching Installations Efficiently Fitted and Wired Securely	http://www.moeller.net/binary/ver_techpapers/ver938en.pdf
Mirror Contacts for Highly-Reliable Information Relating to Safety-Related Control Functions	http://www.moeller.net/binary/ver_techpapers/ver944en.pdf
Effect of the Cabel Capacitance of Long Control Cables on the Actuation of Contactors	http://www.moeller.net/binary/ver_techpapers/ver949en.pdf
Motor starters and "Special Purpose Ratings" for the North American market	http://www.moeller.net/binary/ver_techpapers/ver953en.pdf
Switchgear for Luminaires	http://www.moeller.net/binary/ver_techpapers/ver955en.pdf
Standard Compliant and Functionally Safe Engineering Design with Mechanical Auxiliary Contacts	http://www.moeller.net/binary/ver_techpapers/ver956en.pdf
The Interaction of Contactors with PLCs	http://www.moeller.net/binary/ver_techpapers/ver957en.pdf
Busbar Component Adapters for modern Industrial control panels	http://www.moeller.net/binary/ver_techpapers/ver960en.pdf