

**Contactor, 4 pole, 800 A, 2 N/O, 2 NC, 220 V 50 Hz, 230 V 50 Hz, AC operation, Screw terminals**



**Part no.** DILP800/22(220-230V50HZ)  
**Catalog No.** 207469  
**Alternate Catalog No.** XTCFA800N22F

## Delivery program

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
Number of poles			4 pole
<b>Rated operational current</b>			
AC-1			
Conventional free air thermal current, 3 pole, 50 - 60 Hz			
Open			
at 40 °C	$I_{th} = I_e$	A	800
at 55 °C	$I_{th} = I_e$	A	650
at 60 °C	$I_{th} = I_e$	A	575
Conventional free air thermal current, 1 pole			
open	$I_{th}$	A	2240
<b>Contacts</b>			
N/O = Normally open			2 N/O
N/C = Normally closed			2 NC
Contact sequence			
For use with			DILP800-XHI...
Actuating voltage			220 V 50 Hz 230 V 50 Hz
Voltage AC/DC			AC operation

## Technical data

<b>General</b>			
Standards			IEC/EN 60947, VDE 0660
Lifespan, mechanical			
AC operated	Operations	$\times 10^6$	5
Operating frequency, mechanical			
AC operated	Operations/h		3600
Climatic proofing			Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature			
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 <sup>2</sup>	1 x (70 - 300) 2 x (35 - 185)
Stranded		mm <sup>2</sup>	1 x (70 - 300) 2 x (35 - 185)
Terminal capacity control circuit cables			
Solid		mm <sup>2</sup>	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 <sub>imp</sub>	V AC	8000
Overvoltage category/pollution degree			III/3
Rated insulation voltage	U <sub>i</sub>	V AC	1000
Rated operational voltage	U <sub>e</sub>	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	5500 According to IEC/EN 60947
Breaking capacity			
220 V 230 V		A	5400
380 V 400 V		A	5400
500 V		A	5400
660 V 690 V		A	5400
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	800

## AC

AC-1			
Rated operational current			
Conventional free air thermal current, 3 pole, 50 - 60 Hz			
Open			
at 40 °C	I <sub>th</sub> = I <sub>e</sub>	A	800
at 55 °C	I <sub>th</sub> = I <sub>e</sub>	A	650
at 60 °C	I <sub>th</sub> = I <sub>e</sub>	A	575
Conventional free air thermal current, 1 pole			
open	I <sub>th</sub>	A	2240
AC-3			
Rated operational current			
Open, 3-pole: 50 – 60 Hz			
220 V 230 V	I <sub>e</sub>	A	550
240 V	I <sub>e</sub>	A	550
415 V	I <sub>e</sub>	A	550
440V	I <sub>e</sub>	A	550
500 V	I <sub>e</sub>	A	550
660 V 690 V	I <sub>e</sub>	A	550
1000 V	I <sub>e</sub>	A	175
Motor rating	P	kWh	

220 V 230 V	P	kW	160
240V	P	kW	160
380 V 400 V	P	kW	280
415 V	P	kW	280
440 V	P	kW	280
660 V 690 V	P	kW	500
1000 V	P	kW	250

## DC

Rated operational current, open			
DC-1			
60 V	I <sub>e</sub>	A	800
110 V	I <sub>e</sub>	A	800
220 V	I <sub>e</sub>	A	800
440 V	I <sub>e</sub>	A	650
DC-3			
60 V	I <sub>e</sub>	A	650
110 V	I <sub>e</sub>	A	650
220 V	I <sub>e</sub>	A	650
440 V	I <sub>e</sub>	A	650
DC-5			
60 V	I <sub>e</sub>	A	650
110 V	I <sub>e</sub>	A	650
220 V	I <sub>e</sub>	A	650
440 V	I <sub>e</sub>	A	650

## Current heat loss

4 pole, at I <sub>th</sub>		W	240
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## Magnet systems

Voltage tolerance			
AC operated	Pick-up	x U <sub>c</sub>	
Min. pick-up voltage, AC operated		x U <sub>c</sub>	0.85
Pick-up voltage AC operated, max.		x U <sub>c</sub>	1.1
Power consumption of the coil in a cold state and 1.0 x U <sub>S</sub>			
Dual-frequency coil 50/60 Hz	Pick-up	VA	3500
Dual-frequency coil 60 Hz	Sealing	VA	140
Dual-frequency coil 50/60 Hz	Sealing	W	60
Duty factor		% DF	100
Changeover time at 100 % U <sub>S</sub> (recommended value)			
Main contacts			
AC operated			
Closing delay		ms	
Switching times of main contacts AC operated Closing delay, min.		ms	30
Switching times of main contacts AC operated Closing delay, max.		ms	60
Opening delay		ms	
Switching times of main contacts AC operated Opening delay, min.		ms	10
Switching times of main contacts AC operated Opening delay, max.		ms	20

## Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I <sub>n</sub>	A	800
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	60
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	0
Static heat dissipation, non-current-dependent	P <sub>vs</sub>	W	60
Heat dissipation capacity	P <sub>diss</sub>	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.

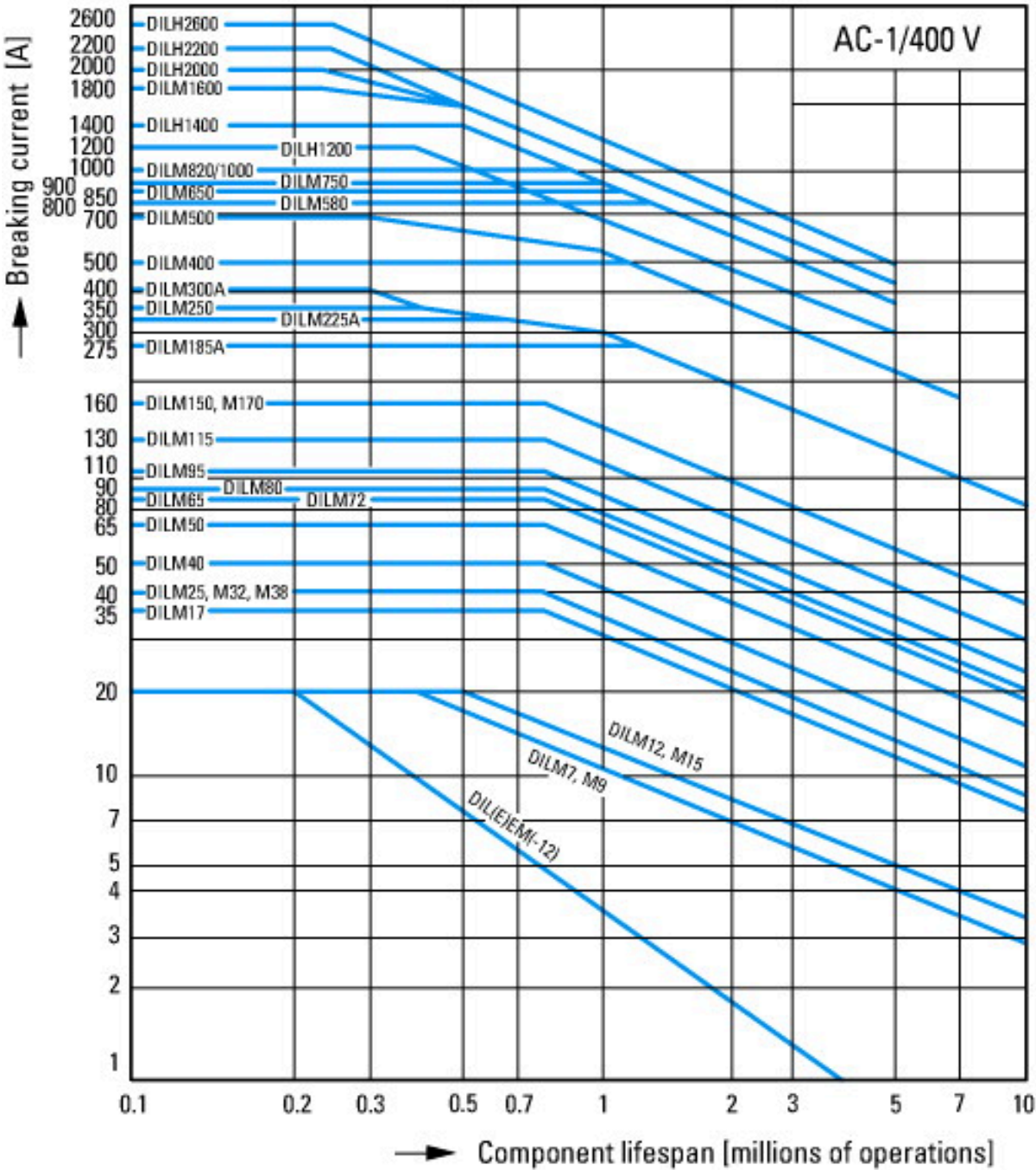
## Technical data ETIM 7.0

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		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		800
Rated operation current Ie at AC-3, 400 V	A		550
Rated operation power at AC-3, 400 V	kW		280
Rated operation current Ie at AC-4, 400 V	A		0
Rated operation power at AC-4, 400 V	kW		0
Rated operation power NEMA	kW		0
Modular version			No
Number of auxiliary contacts as normally open contact			2
Number of auxiliary contacts as normally closed contact			2
Type of electrical connection of main circuit			Rail connection
Number of normally closed contacts as main contact			0
Number of main contacts as normally open contact			4

## Approvals

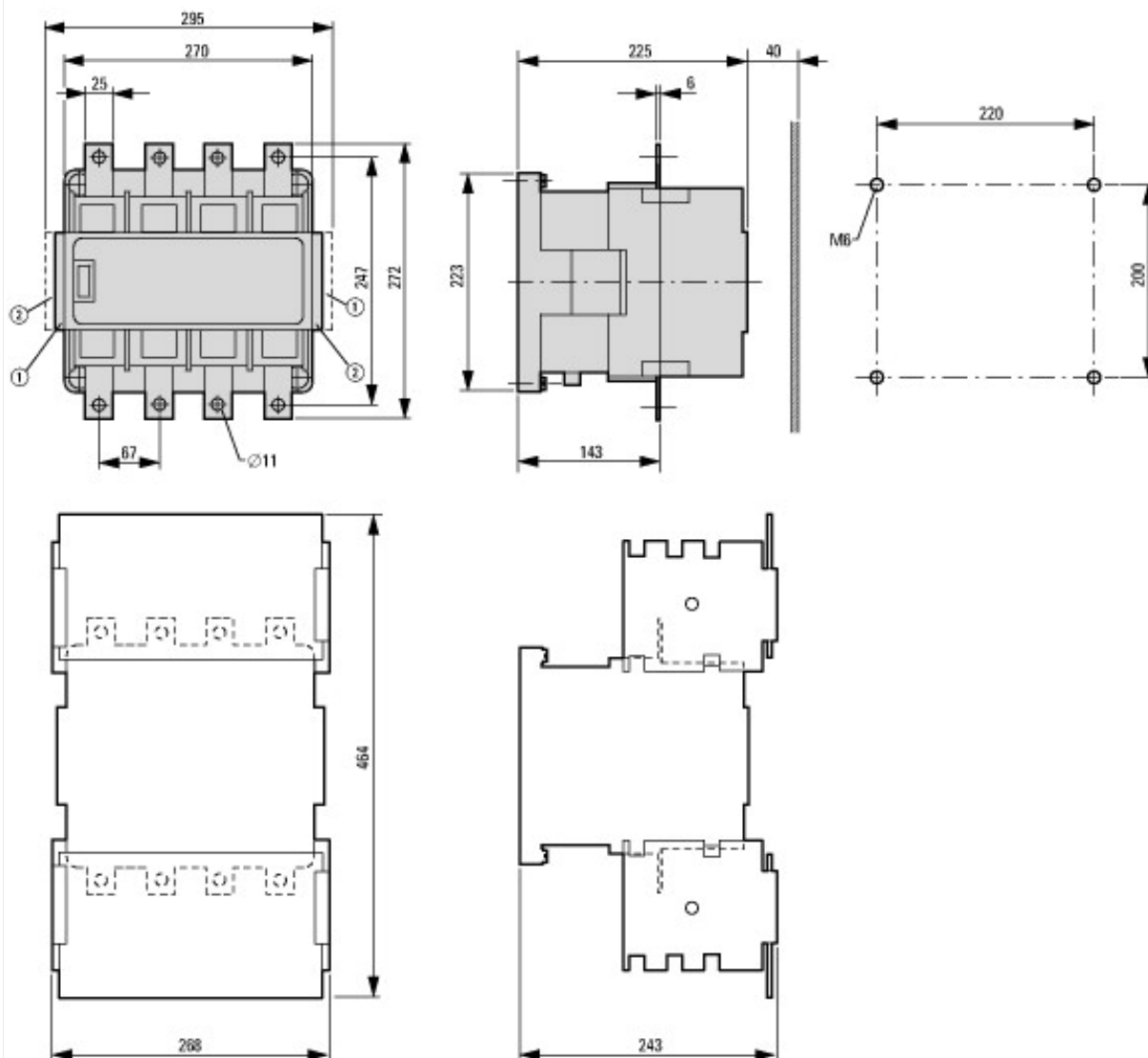
Product Standards			IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.			E29096
UL Category Control No.			NLDX
CSA File No.			LR72236
North America Certification			UL listed, CSA certified

Characteristics



Switching conditions for 4 pole, non-motor loads  
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



- ① DILP800-XHI-SI
- ② DILP800-XHI11-SA

DILP800 + DILP800-XHB

## Additional product information (links)

### IL03407021Z (AWA2100-1679) 4 pole contactors > 160 A

IL03407021Z (AWA2100-1679) 4 pole contactors > 160 A	<a href="https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407021Z2018_05.pdf">https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407021Z2018_05.pdf</a>
Motor starters and "Special Purpose Ratings" for the North American market	<a href="http://www.eaton.eu/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_3258146.pdf">http://www.eaton.eu/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_3258146.pdf</a>
Switchgear of Power Factor Correction Systems	<a href="http://www.moeller.net/binary/ver_techpapers/ver934en.pdf">http://www.moeller.net/binary/ver_techpapers/ver934en.pdf</a>
X-Start - Modern Switching Installations Efficiently Fitted and Wired Securely	<a href="http://www.moeller.net/binary/ver_techpapers/ver938en.pdf">http://www.moeller.net/binary/ver_techpapers/ver938en.pdf</a>
Mirror Contacts for Highly-Reliable Information Relating to Safety-Related Control Functions	<a href="http://www.moeller.net/binary/ver_techpapers/ver944en.pdf">http://www.moeller.net/binary/ver_techpapers/ver944en.pdf</a>
Effect of the Cable Capacitance of Long Control Cables on the Actuation of Contactors	<a href="http://www.moeller.net/binary/ver_techpapers/ver949en.pdf">http://www.moeller.net/binary/ver_techpapers/ver949en.pdf</a>
Switchgear for Luminaires	<a href="http://www.moeller.net/binary/ver_techpapers/ver955en.pdf">http://www.moeller.net/binary/ver_techpapers/ver955en.pdf</a>
Standard Compliant and Functionally Safe Engineering Design with Mechanical Auxiliary Contacts	<a href="http://www.moeller.net/binary/ver_techpapers/ver956en.pdf">http://www.moeller.net/binary/ver_techpapers/ver956en.pdf</a>
The Interaction of Contactors with PLCs	<a href="http://www.moeller.net/binary/ver_techpapers/ver957en.pdf">http://www.moeller.net/binary/ver_techpapers/ver957en.pdf</a>
Busbar Component Adapters for modern Industrial control panels	<a href="http://www.moeller.net/binary/ver_techpapers/ver960en.pdf">http://www.moeller.net/binary/ver_techpapers/ver960en.pdf</a>