

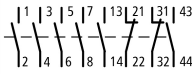
Contactor, 4p+2N/O+2N/C, 250A/AC1



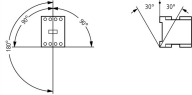
Powering Business Worldwide™

Part no. DILP250/22(220-230V50HZ)
Article no. 207457
Catalog No. XTCFA250L22F

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
Rated operational current			
AC-1			
Conventional free air thermal current, 3 pole, 50 - 60 Hz			
Open			
at 40 °C	$I_{th} = I_e$	A	250
at 55 °C	$I_{th} = I_e$	A	230
at 60 °C	$I_{th} = I_e$	A	200
Conventional free air thermal current, 1 pole			
open	I_{th}	A	700
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	$\times 10^6$	10
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 ²	35 - 120
Stranded		mm ²	35 - 120
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)	U_p to 690 V	A	1800 According to IEC/EN 60947
Breaking capacity			
220 V 230 V		A	1500
380 V 400 V		A	1500
500 V		A	1200
660 V 690 V		A	1200
Short-circuit rating			
Short-circuit protection maximum fuse			
Type "2" coordination			
400 V	gG/gL 500 V	A	200
Type "1" coordination			
400 V	gG/gL 500 V	A	250

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	250
at 55 °C	$I_{th} = I_e$	A	230
at 60 °C	$I_{th} = I_e$	A	200
Conventional free air thermal current, 1 pole			
open	I_{th}	A	700
AC-3			
Rated operational current			
Open, 3-pole: 50 – 60 Hz			
220 V 230 V	I_e	A	145
240 V	I_e	A	145
415 V	I_e	A	145
440V	I_e	A	145
500 V	I_e	A	120
660 V 690 V	I_e	A	120
1000 V	I_e	A	80
Motor rating	P	kWh	
220 V 230 V	P	kW	45
240V	P	kW	45
380 V 400 V	P	kW	75
415 V	P	kW	75
440 V	P	kW	75

660 V 690 V	P	kW	110
1000 V	P	kW	110

DC

Rated operational current, open			
DC-1			
60 V	I_e	A	200
110 V	I_e	A	200
220 V	I_e	A	200
440 V	I_e	A	200
DC-3			
60 V	I_e	A	145
110 V	I_e	A	135
220 V	I_e	A	135
440 V	I_e	A	135
DC-5			
60 V	I_e	A	135
110 V	I_e	A	135
220 V	I_e	A	135
440 V	I_e	A	135

Current heat loss

4 pole, at I_{th}		W	52
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Magnet systems

Voltage tolerance			
AC operated 50 Hz	Pick-up	$x U_c$	0.85 - 1.1
Power consumption of the coil in a cold state and $1.0 \times U_c$			
AC operated 50/60 Hz	Pick-up	VA	800
AC operated 50/60 Hz	Sealing	VA	52
AC operated 50/60 Hz	Sealing	W	18
Duty factor		% DF	100
Changeover time at 100 % U_c (recommended value)			
Main contacts			
AC operated			
Closing delay		ms	20 - 40
Opening delay		ms	7 - 15

Design verification as per IEC/EN 61439

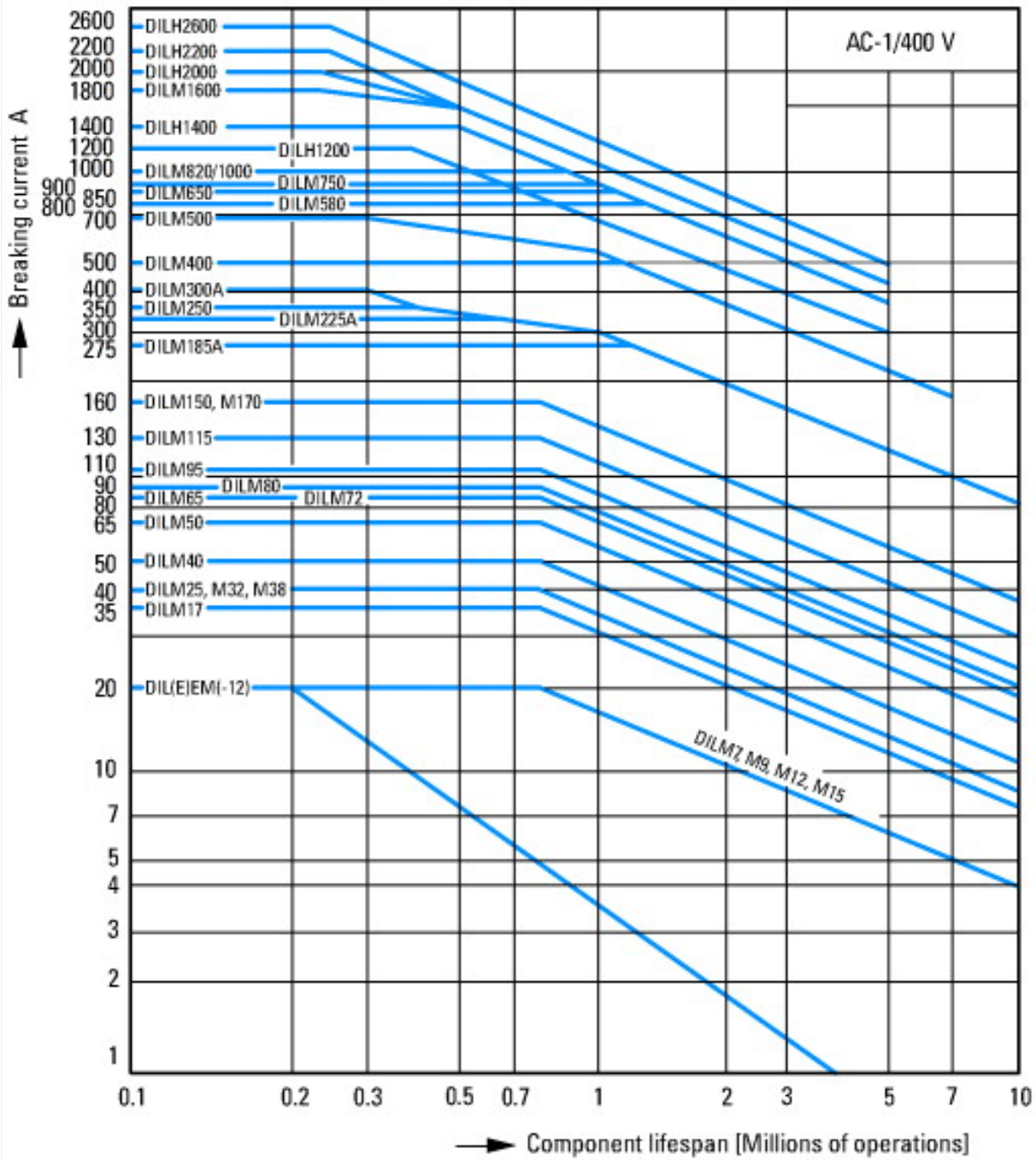
Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	250
Heat dissipation per pole, current-dependent	P_{vid}	W	13
Equipment heat dissipation, current-dependent	P_{vid}	W	0
Static heat dissipation, non-current-dependent	P_{vs}	W	18
Heat dissipation 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			
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 6.0

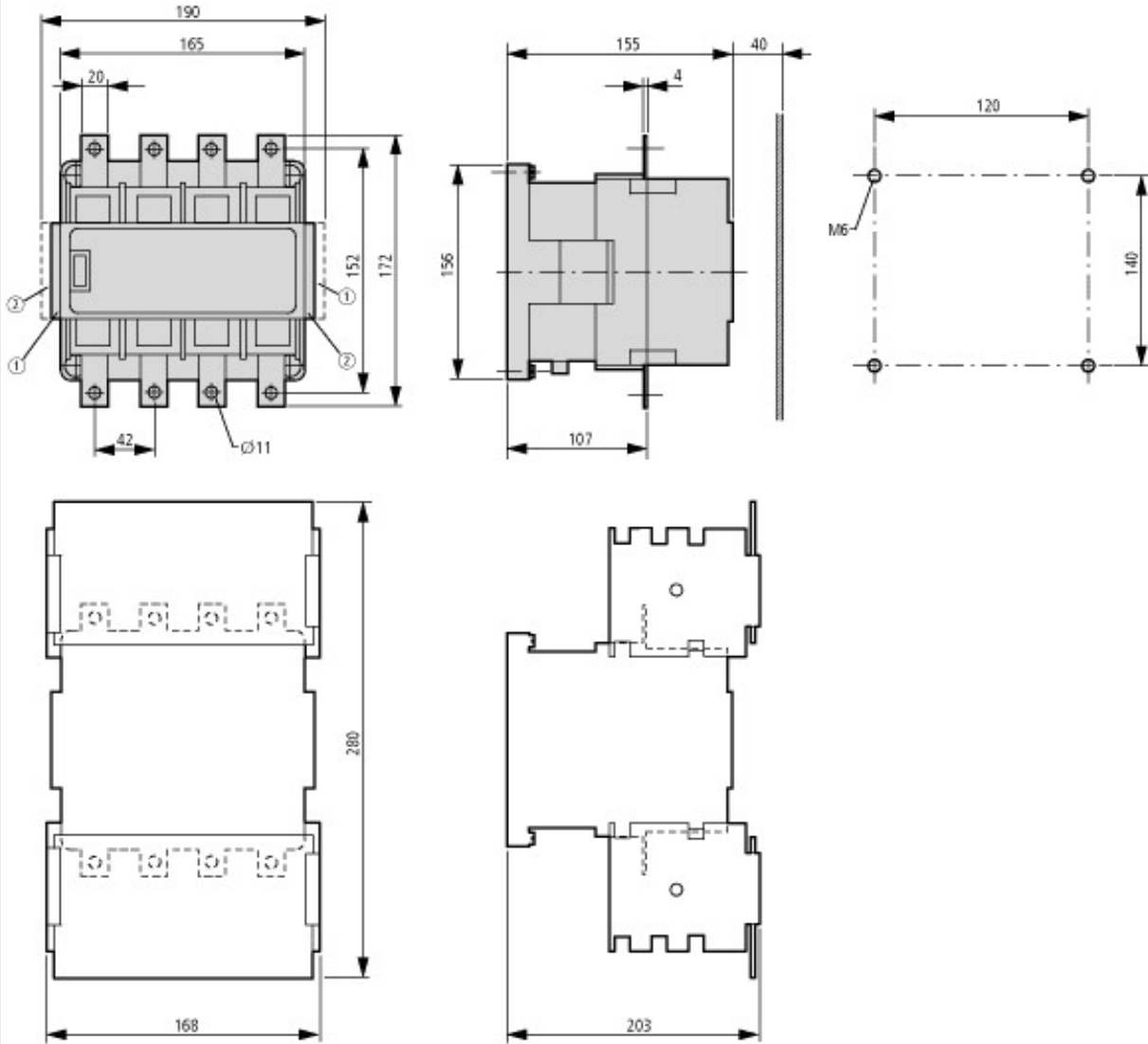
Low-voltage industrial components (EG000017) / Power contactor, AC switching (EC000066)		
Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Power contactor, AC switching (ecl@ss8.1-27-37-10-03 [AAB718012])		
Rated control supply voltage U_s at AC 50HZ	V	220 - 230
Rated control supply voltage U_s at AC 60HZ	V	0 - 0
Rated control supply voltage U_s at DC	V	0 - 0
Voltage type for actuating		AC
Rated operation current I_e at AC-1, 400 V	A	250
Rated operation current I_e at AC-3, 400 V	A	145
Rated operation power at AC-3, 400 V	kW	75
Rated operation current I_e at AC-4, 400 V	A	0
Rated operation power I_e 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
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

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

DILP250 + DILP250-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/IL03407021Z2015_04.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 Cable 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