



Circuit-breaker, 3p, 90A

Part no. **NZML2-ME90**
 Article no. **265794**
 Catalog No. **NZML2-ME90**

Similar to illustration

Delivery program

Product range				Circuit-breaker
Protective function				Motor protection
Standard/Approval				IEC
Installation type				Fixed
Release system				Electronic release
Description				IEC/EN 60947-4-1, IEC/EN 60947-2 The circuit-breaker fulfills all requirements for AC-3 switching category. R.m.s. value measurement and "thermal memory" adjustable time delay setting to overcome current peaks $t_r: 2 - 20$ s at $6 \times I_r$ also infinity (without overload releases) All AC-3 rating data applies to direct switching by the circuit-breaker under normal operating conditions. If, for example, a contactor takes over AC-3 switching under normal operating conditions, the full rated uninterrupted current applies to the circuit-breaker, $I_n = I_u$.
Number of poles				3 pole
Standard equipment				Screw connection
Switching capacity				
400/415 V 50 Hz	I_{cu}	kA		150
Rated current = rated uninterrupted current	$I_n = I_u$	A		90
Setting range				
Overload trip				
	I_r	A		45 - 90
Short-circuit releases				
Non-delayed	$I_i = I_n \times \dots$			2 - 14
Motor rating AC-3 50/60 Hz				
380 V 400 V	P	kW		45
660 V 690 V	P	kW		75
Motor rating AC-3 50/60 Hz				
400 V	P	kW		45
660 V 690 V	P	kW		75
Rated operational current AC-3 50/60 Hz				
400 V	I_e	A		81
690 V		A		78

Technical data

General

Ambient temperature				
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Ambient temperature, storage	°C	- 40 - + 70
Operation	°C	-25 - +70

Circuit-breakers

Rated current = rated uninterrupted current	$I_n = I_u$	A	90
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Switching capacity

Rated short-circuit breaking capacity I_{cn}	I_{cn}		
I_{cu} to IEC/EN 60947 test cycle O-t-CO	I_{cu}	kA	
400/415 V 50/60 Hz	I_{cu}	kA	150
690 V 50/60 Hz	I_{cu}	kA	80
Utilization category to IEC/EN 60947-2			A

Terminal capacity

Standard equipment			Screw connection
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Design verification as per IEC/EN 61439

Technical data for design verification			
Equipment heat dissipation, current-dependent	P_{vid}	W	6.68
Operating ambient temperature min.		°C	-25
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 6.0

Low-voltage industrial components (EG000017) / Motor protection circuit-breaker (EC000074)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Motor protection circuit-breaker (ecl@ss8.1-27-37-04-01 [AGZ529013])			
Overload release current setting		A	45 - 90
Adjustment range undelayed short-circuit release		A	180 - 1260
Thermal protection			No
Phase failure sensitive			Yes
Switch off technique			Electronic
Rated operating voltage		V	690 - 690

Rated permanent current I _u	A	90
Rated operation power at AC-3, 230 V	kW	90
Rated operation power at AC-3, 400 V	kW	45
Type of electrical connection of main circuit		Screw connection
Type of control element		Rocker lever
Device construction		Built-in device fixed built-in technique
With integrated auxiliary switch		No
With integrated under voltage release		No
Number of poles		3
Rated short-circuit breaking capacity I _{cu} at 400 V, AC	kA	150
Degree of protection (IP)		IP20
Height	mm	184
Width	mm	105
Depth	mm	149