## **DATASHEET - NZMN2-VE160**



## Circuit-breaker, 3p, 160A

Part no. NZMN2-VE160

259123

EL Number

4315541

Eaton Moeller series NZM molded case circuit breaker electronic
NZMN2-VE160
4015082591236
149 millimetre
184 millimetre
105 millimetre
2.452 kilogram
RoHS conform
IEC IEC/EN 60947
NZM
Molded case circuit breaker
Electronic
Use in unearthed supply systems at 690 V
Circuit breaker
NZM2
Three-pole
160 A
Electronic release
Motor drive optional Protection unit
Rated current = rated uninterrupted current: 160 A i't constant function: fixed OFF Adjustable delay time tsd Adjustable time delay setting to overcome current peaks tr at 6 x Ir also infinity (without overload releases) R.m.s. value measurement and "thermal memory" Maximum back-up fuse, if the expected short-circuit currents at the installation location exceed the switching capacity of the circuit breaker (Rated short-circuit breaking capacity Icn)
690 V - 690 V
1000 V AC
6000 V
8000 V
1.9 kA
1.9 kA
1920 A
1920 A
80 A
160 A
160 A
1600 A
160 A
1600 A
1920 A
1920 A
85 kA
85 kA 50 kA

Beated shorts creat forwarding capacity (see an 280 Y 2500 fee	Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 525 V, 50/60 Hz	25 kA
Residuct shorts record making capacity (ram of 90 X 500 M to 1 M	Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 690 V, 50/60 Hz	5 kA
Retine de dom circuit making capacity (em at 940 % 5000 p  Bette de dom circuit making capacity (em at 9500 % 5000 p  Bette de dom circuit capacity (em at 950 % 5000 p  Bette de dom circuit capacity (em at 950 % 5000 p  Bette de dom circuit capacity (em at 9500 % 5000 p  Bette de dom circuit capacity (em at 9500 % 5000 p  Bette de dom circuit capacity (em at 9500 % 5000 p  Bette de dom circuit capacity (em at 9500 % 5000 p  Bette de dom circuit capacity (em at 9500 % 5000 p  Bette de dom circuit capacity (em at 9500 % 5000 p  Bette de dom circuit capacity (em at 9500 % 5000 p  Bette de dom circuit capacity (em at 9500 % 5000 p  Bette de dom circuit capacity (em at 9500 % 5000 p  Bette de dom circuit capacity (em at 9500 % 5000 p  Bette de dom circuit capacity (em at 9500 % 5000 p  Bette de dom circuit capacity (em at	Rated short-circuit making capacity Icm at 240 V, 50/60 Hz	187 kA
Reted direct existant making capeatry (in an ESS X, 500 M E2 Reted direct existant making capeatry (in an ESS X, 500 M E2 Reted direct existant making capeatry (in an ESS X, 500 M E2 Reter direct making capeatry (in an ESS X, 500 M E2 Reter direct making capeatry (in an ESS X, 500 M E2 Reter direct making capeatry (in an ESS X, 500 M E2 Reter direct making capeatry (in an ESS X, 500 M E2 Reter capeatry (in an	Rated short-circuit making capacity Icm at 400/415 V, 50/60 Hz	105 kA
Retard short-crount making capacity from at DRV 1,9000 Hz Short-critarian formations by an afficial circula  Control and manageria spel flour-mass  Anaber of corentians per hour-mass  Listeding type  Uniforming category  Uniforming category	Rated short-circuit making capacity Icm at 440 V, 50/60 Hz	74 kA
Busine circuit tend breakins   Busined consection type of main circuit   Server connection   300 V AC between coultury contacts and main contects)   Number of operations per hour - max   120	Rated short-circuit making capacity Icm at 525 V, 50/60 Hz	53 kA
Electrical cananction type of main circuit   Isolation   Section Connection   Section Connection C	Rated short-circuit making capacity Icm at 690 V, 50/60 Hz	40 kA
Leadaium	Short-circuit total breaktime	< 10 ms
Market of operations per hour - max   100   10	Electrical connection type of main circuit	Screw connection
Pandle type	Isolation	
Derivation category   11   11   11   11   11   11   11	Number of operations per hour - max	120
Descripting caregory  Publishes degree  Lifespan, electrical  Description of incaming supply  Technical Data - Mechanical  Description of incaming supply  Technical Data - Mechanical  Mounting Method  Degree of protection of protection of protection of incaming supply  Technical Data - Mechanical  Degree of protection of protection of protection of incaming supply  Degree of protection of pr	Handle type	Rocker lever
Pollution degree  Lifespan, electrical  Lifespan, electrical  Lifespan, electrical  Discontinuo degree of the second of the seco	Utilization category	A (IEC/EN 60947-2)
Lifespan, electrical    Proposerations at 400 V AC-1   Second operations at 400 V AC-3   100000 operations at 400 V AC-3   1000000 operations at 400 V AC-3   100000 operations at 400 V AC-3   1000000 operations at 400 V AC-3   100000 operations at 400 V AC-3   100000 operations at 400000 operations at 4000000 operations at 400000 operations at 40	Overvoltage category	III
S000 operations at 150 V AC-3   1000 operations at 150 V AC-1   8000 operations at 150 V AC-	Pollution degree	3
Personal Data - Mechanical   Prised		5000 operations at 690 V AC-3 10000 operations at 400 V AC-1 6500 operations at 415 V AC-3 6500 operations at 400 V AC-3 10000 operations at 415 V AC-1
Pixed   District   D	•	As required
P20		
Pegree of protection (IP), front side   IP40 (with insulating surround)   Pegree of protection (terminations)   Pegree of protection (terminations)   Pegree of protection (terminations)   Pegree of protection against direct contact   Pegree of protection against direct pegree of protection against pe	Degree of protection	IP20
Protection against direct contact   Protection (terminations)   Protection against direct contact   Finger and back-of-hand proof to DIN EN 50274/VDE 0106 part 110	Degree of protection (IP), front side	IP40 (with insulating surround)
Protection against direct contact  Shock resistance  Number of auxiliary contacts (change-over contacts)  Number of auxiliary contacts (change-over contacts)  Number of auxiliary contacts (normally closed contacts)  Number of auxiliary contacts (normally open contacts)  Damp heat, cyclic, to IEC 60068-2-30 Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-30 Damp heat, collect desveloped on IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-30 Damp heat, collect at switch rear-side connection Heat for IEC 60068-2-30 Damp heat, collect at switch rear-side connection M8 at rear-side screw connection M8 at rear-side screw connection	Degree of protection (terminations)	IP10 (tunnel terminal)
Number of auxiliary contacts (change-over contacts)   0     Number of auxiliary contacts (normally closed contacts)   0     Number of auxiliary contacts (normally open contacts)   0     Position of connection for main current circuit   Front side     Climatic proofing   Damp heat, cyclic, to IEC 60088-2-30     Damp heat, constant, to IEC 60088-2-78     Special features   Rated current = rated uninterrupted current 180 A reconstruction fixed OFF     Adjustable delay interesting to overcome current peaks tr at 6 x Ir also infinity (without overload crieases)     R.m.s. value measurement and dremail memory     Maximum back-up luse, if the expected short-circuit currents at the installation location exceed the switching capacity of the circuit breaker (flated short-circuit breaker (flated short-circuit breaker)     Standard terminals   Screw terminal     Screw terminal   Box terminals   Screw terminal     Terminal capacity (control cable)   0.75 mm² - 1.5 mm² (2x)     O.75 mm² - 1.5 mm² (2x)     O	Protection against direct contact	, ,
Number of auxiliary contacts (change-over contacts)  Number of auxiliary contacts (normally closed contacts)  Position of connection for main current circuit  Climatic proofing  Damp heat, constant, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-38  Special features  Rated current = rated uninterrupted current 160 A 't' constant function: fixed OFF Adjustable time delay setting to overcome current peaks tr at 6 x Ir also infinity (without our body intents) Adjustable time delay setting to overcome current peaks tr at 6 x Ir also infinity (without our body intents) Adjustable time delay setting to overcome current peaks tr at 6 x Ir also infinity (without our body intents)  Lifespan, mechanical  Lifespan, mechanical  Technical Data - Mechanical - Terminals  Standard terminals  Optional terminals  Optional terminals  Optional terminals  Optional terminals  Terminal capacity (control cable)  Terminal capacity (aluminum solid conductor/cable)  Terminal capacity (aluminum stranded conductor/cable)  Terminal capacity (aluminum stranded conductor/cable)  Terminal capacity (aluminum stranded conductor/cable)  Terminal capacity (copper busbar)  Min. Is mm x 5 mm direct at switch rear-side connection M8 at rear-side screw connection		
Number of auxiliary contacts (normally open contacts)  Position of connection for main current circuit  Climatic proofing  Special features  Special features  Rated current act but interrupted current: 160 A 't' constant function: fixed OFF Adjustable delay time and adjustable time delay setting to overcome current peaks tr at 6 x Ir also infinity (without overload releases)  R.m.s. value measurement and "thermal memory" Maximum back-up fuse, if the expected short-circuit currents at the installation location excell the switching capacity of the circuit breaker (Rated short-circuit breaking capacity (en)  Lifespan, mechanical  Technical Data - Mechanical - Terminals  Standard terminals  Optional terminals  Optional terminals  Terminal capacity (control cable)  Terminal capacity (control cable)  Terminal capacity (aluminum solid conductor/cable)  Terminal capacity (aluminum stranded conductor/cable)  Terminal capacity (aluminum stranded conductor/cable)  Terminal capacity (copper busbar)  Min. 16 mm x 5 mm (1xx) direct at switch rear-side connection 15 mm² 15 mm² (1xx) direct at switch rear-side connection Max 2 mm² x 5 mm² (1xx) direct at switch rear-side connection Max 2 mm² x 5 mm² (1xx) direct at switch rear-side connection Max 2 mm² x 5 mm² (1xx) direct at switch rear-side connection Max 2 mm² x 6 mm² direct at switch rear-side connection Max 2 mm² x 6 mm² direct at switch rear-side connection Max 2 mm x 6 mm² direct at switch rear-side connection Max 2 mm x 6 mm² direct at switch rear-side connection Max 2 mm x 6 mm² direct at switch rear-side connection Max 2 mm x 6 mm² direct at switch rear-side connection Max 2 mm x 6 mm² direct at switch rear-side connection Max 2 mm x 6 mm² direct at switch rear-side connection Max 2 mm x 6 mm² direct at switch rear-side connection Max 2 mm x 6 mm² direct at switch rear-side connection Max 2 mm x 6 mm² direct at switch rear-side connection Max 2 mm² x 6 mm² direct at switch rear-side connection Max 2 mm² x 6 mm²	Number of auxiliary contacts (change-over contacts)	0
Position of connection for main current circuit  Climatic proofing  Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78  Special features  Rated current = rated uninterrupted current: 160 A reconstant function fixed OFF Adjustable delay time tsd Adjustab	Number of auxiliary contacts (normally closed contacts)	0
Position of connection for main current circuit  Climatic proofing  Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78  Rated current = rated uninterrupted current: 160 A recommendation from the standard current in the proofing and the standard current in the specified short-circuit currents at the installation location exceed the switching capacity of the circuit breaker (Rated short-circuit breaker) and in the specified short-circuit currents at the installation location exceed the switching capacity of the circuit breaker (Rated short-circuit breaker) against the switching capacity of the circuit breaker (Rated short-circuit breaker) against the switching capacity of the circuit breaker (Rated short-circuit breaker) against the switching capacity of the circuit breaker (Rated short-circuit breaker) against the switching capacity of the circuit breaker (Rated short-circuit breaker) against the switching capacity of the circuit breaker (Rated short-circuit breaker) against the switching capacity of the circuit breaker (Rated short-circuit breaker) against the switching capacity of the circuit breaker (Rated short-circuit breaker) against the switching capacity of the circuit breaker (Rated short-circuit breaker) against the switching capacity of the circuit breaker (Rated short-circuit breaker) against the switching capacity of the circuit breaker (Rated short-circuit breaker) and the circuit breaker (Rated short-circuit breaker) against the switching capacity of the circuit breaker (Rated short-circuit breaker) and the circuit breaker (Rated short-circuit break	Number of auxiliary contacts (normally open contacts)	0
Damp heat, constant, to IEC 60068-2-78  Special features  Special features  Rated current = rated uninterrupted current: 160 A radjustable function: fixed OFF Adjustable time teld system to the delay setting to overcome current peaks tr at 6 x Ir also infinity (without overload releases)  R.m.s. value measurement and "thermal memory" Maximum back-up fixes, if the expected short-circuit currents at the installation location exceed the switching capacity of the circuit breaker (Rated short-circuit breaker (Rated short-circuit breaking capacity (en))  Etiespan, mechanical  Technical Data - Mechanical - Terminals  Standard terminals  Optional terminals  Optional terminals  Optional terminals  Terminal capacity (control cable)  Terminal capacity (aluminum solid conductor/cable)  Terminal capacity (aluminum solid conductor/cable)  Terminal capacity (aluminum stranded conductor/cable)  Terminal capacity (aluminum stranded conductor/cable)  Terminal capacity (aluminum stranded conductor/cable)  Terminal capacity (copper busbar)  Min. 16 mm² (1x) at tunnel terminal 25 mm² - 185 mm² (1x) at tunnel terminal 25 mm² - 50 mm² (1x) direct at switch rear-side connection 25 mm² - 50 mm² (1x) direct at switch rear-side connection Max. 24 mm x 8 mm direct at switch rear-side connection Max. 24 mm x 8 mm direct at switch rear-side connection Max. 24 mm x 8 mm direct at switch rear-side connection Max. 24 mm x 8 mm direct at switch rear-side connection Max. 24 mm x 8 mm direct at switch rear-side connection and max. 24 mm x 8 mm direct at switch rear-side connection and max. 24 mm x 8 mm direct at switch rear-side connection and max. 24 mm x 8 mm direct at switch rear-side connection and max. 24 mm x 8 mm direct at switch rear-side connection and max. 24 mm x 8 mm direct at switch rear-side connection and max. 24 mm x 8 mm direct at switch rear-side connection and max. 24 mm x 8 mm direct at switch rear-side connection and max. 24 mm x 8 mm direct at switch rear-side connection and max. 24 mm x 8 mm direct at switch rear-side conne		Front side
Damp heat, constant, to IEC 60088-2-78     Special features   Rated current = rated uninterrupted current: 160 A reductions fixed OFF Adjustable time to delay setting to overcome current peaks tr at 6 x Ir also infinity (without overload releases)   R.m.s. value measurement and "thermal memory"   Maximum back-up fleases   R.m.s. value measurement and "thermal memory"   Maximum back-up fleases   R.m.s. value measurement and "thermal memory"   Maximum back-up fleases   R.m.s. value measurement and "thermal memory"   Maximum back-up fleases   R.m.s. value measurement and "thermal memory"   Maximum back-up fleases   R.m.s. value measurement and "thermal memory"   Maximum back-up fleases   R.m.s. value measurement and "thermal memory"   Maximum back-up fleases   R.m.s. value measurement and "thermal memory"   Maximum back-up fleases   R.m.s. value measurement and "thermal memory"   Maximum back-up fleases   R.m.s. value measurement and "thermal memory"   Maximum back-up fleases   R.m.s. value measurement and "thermal memory"   Maximum back-up fleases   R.m.s. value measurement and "thermal memory"   Maximum back-up fleases   R.m.s. value memory   Maximum back-up fleases   R.m.s. value memory   Maximum back-up fleases   R.m.s. value memory   Maximum back-up fleases   R.m.s. value measurement and "thermal fleases   R.m.s. value fleases   R		
Processing Control Cable   Processing Control Cable	, ,	Damp heat, constant, to IEC 60068-2-78
Standard terminals  Optional terminals  Screw terminal  Optional terminals  Box terminal. Connection on rear. Tunnel terminal  Terminal capacity (control cable)  O.75 mm² - 1.5 mm² (2x)  O.75 mm² - 2.5 mm² (1x)  Terminal capacity (aluminum solid conductor/cable)  10 mm² - 16 mm² (2x) direct at switch rear-side connection 10 mm² - 16 mm² (1x) direct at switch rear-side connection 16 mm² (1x) at tunnel terminal  25 mm² - 50 mm² (2x) direct at switch rear-side connection 25 mm² - 50 mm² (1x) direct at switch rear-side connection Min. 16 mm x 5 mm direct at switch rear-side connection Max. 24 mm x 8 mm direct at switch rear-side connection M8 at rear-side screw connection	Special features	i <sup>2</sup> t constant function: fixed OFF Adjustable delay time tsd Adjustable time delay setting to overcome current peaks tr at 6 x Ir also infinity (without overload releases) R.m.s. value measurement and "thermal memory" Maximum back-up fuse, if the expected short-circuit currents at the installation location exceed the switching capacity of the circuit breaker (Rated short-circuit
Standard terminals  Optional terminals  Box terminal. Connection on rear. Tunnel terminal  Terminal capacity (control cable)  0.75 mm² - 1.5 mm² (2x) 0.75 mm² - 2.5 mm² (1x)  Terminal capacity (aluminum solid conductor/cable)  10 mm² - 16 mm² (2x) direct at switch rear-side connection 10 mm² - 16 mm² (1x) direct at switch rear-side connection 16 mm² (1x) at tunnel terminal  Terminal capacity (aluminum stranded conductor/cable)  25 mm² - 185 mm² (1x) at tunnel terminal 25 mm² - 50 mm² (2x) direct at switch rear-side connection 25 mm² - 50 mm² (1x) direct at switch rear-side connection  Min. 16 mm x 5 mm direct at switch rear-side connection Max. 24 mm x 8 mm direct at switch rear-side connection Max at rear-side screw connection	Lifespan, mechanical	20000 operations
Optional terminals  Box terminal. Connection on rear. Tunnel terminal  1.5 mm² (2x) 1.5 mm² - 1.5 mm² (2x) 1.75 mm² - 2.5 mm² (1x)  1.0 mm² - 16 mm² (2x) direct at switch rear-side connection 1.0 mm² - 16 mm² (1x) direct at switch rear-side connection 1.0 mm² - 185 mm² (1x) at tunnel terminal  1.5 mm² - 185 mm² (1x) at tunnel terminal 1.5 mm² - 50 mm² (2x) direct at switch rear-side connection 1.5 mm² - 50 mm² (1x) direct at switch rear-side connection 1.5 mm² - 50 mm² (1x) direct at switch rear-side connection 1.5 mm² - 50 mm² (1x) direct at switch rear-side connection 1.5 mm² - 50 mm² (1x) direct at switch rear-side connection 1.5 mm² - 50 mm² (1x) direct at switch rear-side connection 1.5 mm² - 50 mm² (1x) direct at switch rear-side connection 1.5 mm² - 50 mm² (1x) direct at switch rear-side connection 1.5 mm² - 50 mm² (1x) direct at switch rear-side connection 1.5 mm² - 50 mm² (1x) direct at switch rear-side connection 1.5 mm² - 50 mm² (1x) direct at switch rear-side connection 1.5 mm² - 50 mm² (1x) direct at switch rear-side connection 1.5 mm² - 50 mm² (1x) direct at switch rear-side connection 1.5 mm² - 50 mm² (1x) direct at switch rear-side connection 1.5 mm² - 50 mm² (1x) direct at switch rear-side connection 1.5 mm² - 50 mm² (1x) direct at switch rear-side connection	Technical Data - Mechanical - Terminals	
Terminal capacity (control cable)  0.75 mm² - 1.5 mm² (2x) 0.75 mm² - 2.5 mm² (1x)  10 mm² - 16 mm² (1x) direct at switch rear-side connection 10 mm² - 16 mm² (1x) direct at switch rear-side connection 16 mm² (1x) at tunnel terminal  25 mm² - 50 mm² (2x) direct at switch rear-side connection 25 mm² - 50 mm² (1x) direct at switch rear-side connection  Terminal capacity (copper busbar)  Min. 16 mm x 5 mm direct at switch rear-side connection Max. 24 mm x 8 mm direct at switch rear-side connection M8 at rear-side screw connection	Standard terminals	Screw terminal
Terminal capacity (aluminum solid conductor/cable)  10 mm² - 16 mm² (2x) direct at switch rear-side connection 10 mm² - 16 mm² (1x) direct at switch rear-side connection 16 mm² (1x) at tunnel terminal  25 mm² - 185 mm² (2x) direct at switch rear-side connection 25 mm² - 50 mm² (2x) direct at switch rear-side connection 25 mm² - 50 mm² (1x) direct at switch rear-side connection 25 mm² - 50 mm² (1x) direct at switch rear-side connection Min. 16 mm x 5 mm direct at switch rear-side connection Max. 24 mm x 8 mm direct at switch rear-side connection M8 at rear-side screw connection	Optional terminals	Box terminal. Connection on rear. Tunnel terminal
Terminal capacity (aluminum stranded conductor/cable)  25 mm² - 185 mm² (1x) at tunnel terminal  25 mm² - 185 mm² (2x) direct at switch rear-side connection 25 mm² - 50 mm² (2x) direct at switch rear-side connection 25 mm² - 50 mm² (1x) direct at switch rear-side connection  Min. 16 mm x 5 mm direct at switch rear-side connection Max. 24 mm x 8 mm direct at switch rear-side connection M8 at rear-side screw connection		0.75 mm <sup>2</sup> - 2.5 mm <sup>2</sup> (1x)
25 mm² - 50 mm² (2x) direct at switch rear-side connection 25 mm² - 50 mm² (1x) direct at switch rear-side connection  Terminal capacity (copper busbar)  Min. 16 mm x 5 mm direct at switch rear-side connection  Max. 24 mm x 8 mm direct at switch rear-side connection  M8 at rear-side screw connection	Terminal capacity (aluminum solid conductor/cable)	10 mm <sup>2</sup> - 16 mm <sup>2</sup> (1x) direct at switch rear-side connection
Max. 24 mm x 8 mm direct at switch rear-side connection  M8 at rear-side screw connection	Terminal capacity (aluminum stranded conductor/cable)	25 mm <sup>2</sup> - 50 mm <sup>2</sup> (2x) direct at switch rear-side connection
Terminal capacity (copper solid conductor/cable)  10 mm² - 16 mm² (1x) at box terminal	Terminal capacity (copper busbar)	Max. 24 mm x 8 mm direct at switch rear-side connection
10 mm <sup>2</sup> - 16 mm <sup>2</sup> (1x) direct at switch rear-side connection	Terminal capacity (copper solid conductor/cable)	

	16 mm² (1x) at tunnel terminal
	6 mm <sup>2</sup> - 16 mm <sup>2</sup> (2x) direct at switch rear-side connection 6 mm <sup>2</sup> - 16 mm <sup>2</sup> (2x) at box terminal
Terminal capacity (copper stranded conductor/cable)	$25~mm^2$ - $70~mm^2$ (2x) at box terminal $25~mm^2$ - $70~mm^2$ (2x) direct at switch rear-side connection $25~mm^2$ - $185~mm^2$ (1x) at 1-hole tunnel terminal $25~mm^2$ - $185~mm^2$ (1x) at box terminal $25~mm^2$ - $185~mm^2$ (1x) direct at switch rear-side connection
Terminal capacity (copper strip)	Min. 2 segments of 9 mm x 0.8 mm at box terminal Min. 2 segements of 16 mm x 0.8 mm at rear-side connection (punched) Max. 10 segments of 24 mm x 0.8 mm at rear-side connection (punched) Max. 10 segments of 16 mm x 0.8 mm at box terminal Max. 8 segments of 24 mm x 1 mm (2x) at box terminal
Design verification as per IEC/EN 61439 - technical data	
Rated operational current for specified heat dissipation (In)	160 A
Equipment heat dissipation, current-dependent	21.12 W
Ambient operating temperature - min	-25 °C
Ambient operating temperature - max	70 °C
Ambient storage temperature - min	40 °C
Ambient storage temperature - max	70 °C
Design verification as per IEC/EN 61439	
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 Resist. of insul. mat. to abnormal heat/fire by internal elect. 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.
10.9.2 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.
Additional information	

## **Technical data ETIM 9.0**

**Functions** 

Low-voltage industrial components (EG000017) / Power circuit-breaker for trafo/generator/installation protection (EC000228)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Circuit breaker for power transformer, generator and system protection (ecl@ss13-27-37-04-09 [AJZ716018])

Systems, cable, selectivity and generator protection

Rated permanent current lu	Α	160
Rated voltage	V	690 - 690
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	kA	50
Overload release current setting	Α	80 - 160
Adjustment range short-term delayed short-circuit release	Α	160 - 1600
Adjustment range undelayed short-circuit release	Α	1920 - 1920
Power loss	W	21.12
Device construction		Built-in device fixed built-in technique

Integrated earth fault protection	No
Type of electrical connection of main circuit	Screw connection
Suitable for DIN rail (top hat rail) mounting	No
DIN rail (top hat rail) mounting optional	Yes
Number of auxiliary contacts as normally closed contact	0
Number of auxiliary contacts as normally open contact	0
Number of auxiliary contacts as change-over contact	0
With switched-off indicator	No
With integrated under voltage release	No
Number of poles	3
Position of connection for main current circuit	Front side
Type of control element	Rocker lever
Complete device with protection unit	Yes
Motor drive integrated	No
Motor drive optional	Yes
Degree of protection (IP)	IP20