

# Specifications



Photo is representative

## Eaton 266005

Eaton Moeller series NZM - Molded Case Circuit Breaker. Switch-disconnector 3p, 160A, 2

### General specifications

PRODUCT NAME	Eaton Moeller series NZM switch-disconnector
CATALOG NUMBER	266005
EAN	4015082660055
PRODUCT LENGTH/DEPTH	142 mm
PRODUCT HEIGHT	185 mm
PRODUCT WIDTH	105 mm
PRODUCT WEIGHT	1.895 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC/EN 60947 IEC
MODEL CODE	PN2-160



Powering Business Worldwide

## Product specifications

<b>AMPERAGE RATING</b>	160 A
<b>VOLTAGE RATING</b>	690 V - 690 V
<b>CIRCUIT BREAKER FRAME TYPE</b>	PN2
<b>FEATURES</b>	Version as maintenance-/service switch Version as emergency stop installation Version as main switch
<b>10.10 TEMPERATURE RISE</b>	The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
<b>10.11 SHORT-CIRCUIT RATING</b>	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
<b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
<b>10.13 MECHANICAL FUNCTION</b>	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.
<b>10.2.2 CORROSION RESISTANCE</b>	Meets the product standard's requirements.
<b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>	Meets the product standard's requirements.
<b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>	Meets the product standard's requirements.
<b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b>	Meets the product standard's requirements.
<b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>	Meets the product standard's requirements.
<b>10.2.5 LIFTING</b>	Does not apply, since the entire switchgear needs to

## Resources

<b>BROCHURES</b>	<a href="#">eaton-feerum-the-whole-grain-solution-success-story-en-us.pdf</a> <a href="#">eaton-digital-nzm-brochure-br013003en-en-us.pdf</a>
<b>CATALOGUES</b>	<a href="#">eaton-digital-nzm-catalog-ca013003en-en-us.pdf</a>
<b>DECLARATIONS OF CONFORMITY</b>	<a href="#">DA-DC-03_N2</a> <a href="#">DA-DC-03_PN2</a>
<b>DRAWINGS</b>	<a href="#">eaton-circuit-breaker-nzm-mccb-dimensions-019.eps</a> <a href="#">eaton-circuit-breaker-switch-nzm-mccb-dimensions-017.eps</a>
<b>ECAD MODEL</b>	<a href="#">DA-CE-ETN.PN2-160</a>
<b>INSTALLATION INSTRUCTIONS</b>	<a href="#">eaton-circuit-breakers-basic-device-nzm2-il01206006z.pdf</a>
<b>INSTALLATION VIDEOS</b>	<a href="#">Introduction of the new digital circuit breaker NZM</a> <a href="#">The new digital NZM Range</a>
<b>MCAD MODEL</b>	<a href="#">DA-CS-nzm2_3p</a> <a href="#">DA-CD-nzm2_3p</a>
<b>TECHNICAL DATA SHEETS</b>	<a href="#">eaton-nzm-technical-information-sheet</a>

	be evaluated.
<b>10.2.6 MECHANICAL IMPACT</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.2.7 INSCRIPTIONS</b>	Meets the product standard's requirements.
<b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>	Meets the product standard's requirements.
<b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>	Is the panel builder's responsibility.
<b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>	Is the panel builder's responsibility.
<b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>	Is the panel builder's responsibility.
<b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>	Is the panel builder's responsibility.
<b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b>	Is the panel builder's responsibility.
<b>POLLUTION DEGREE</b>	3
<b>MOUNTING METHOD</b>	Fixed Built-in device fixed built-in technique Distribution board installation Intermediate mounting Ground mounting
<b>CLIMATIC PROOFING</b>	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT</b>	19.66 W
<b>ISOLATION</b>	300 V AC (between the auxiliary contacts) 500 V AC (between auxiliary contacts and main contacts)

<b>RATED SHORT-TIME WITHSTAND CURRENT (ICW)</b>	3.5 kA
<b>DEGREE OF PROTECTION</b>	IP20 (basic protection type, in the area of the HMI devices) Other
<b>DIRECTION OF INCOMING SUPPLY</b>	As required
<b>ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT</b>	Screw connection
<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	70 °C
<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-25 °C
<b>AMBIENT STORAGE TEMPERATURE - MAX</b>	70 °C
<b>AMBIENT STORAGE TEMPERATURE - MIN</b>	40 °C
<b>NUMBER OF AUXILIARY CONTACTS (CHANGE- OVER CONTACTS)</b>	0
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)</b>	0
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)</b>	0
<b>PROTECTION AGAINST DIRECT CONTACT</b>	Finger and back-of-hand proof to DIN EN 50274/VDE 0106 part 110
<b>RATED INSULATION VOLTAGE (UI)</b>	690 V
<b>RATED OPERATING FREQUENCY</b>	50 Hz
<b>RATED OPERATING POWER AT AC-23, 400 V</b>	90 kW
<b>RATED OPERATING POWER AT AC-3, 400 V</b>	0 kW
<b>SWITCH POSITIONS</b>	I, 0
<b>LIFESPAN, MECHANICAL</b>	20000 operations
<b>OVERVOLTAGE CATEGORY</b>	III
<b>RATED OPERATIONAL CURRENT</b>	160 A (415 V AC-22/23A, making and breaking capacity) 160 A (690 V AC-22/23A, making and breaking

	capacity)
<b>DEGREE OF PROTECTION (IP), FRONT SIDE</b>	IP20 IP66 (with door coupling rotary handle) IP40 (with insulating surround)
<b>DEGREE OF PROTECTION (TERMINATIONS)</b>	IP10 (tunnel terminal) IP00 (terminations, phase isolator and band terminal)
<b>NUMBER OF POLES</b>	Three-pole
<b>TERMINAL CAPACITY (COPPER STRIP)</b>	Min. 2 segments of 9 mm x 0.8 mm at box terminal Max. 8 segments of 15.5 mm x 0.8 mm (2x) at box terminal Max. 10 segments of 16 mm x 0.8 mm at box terminal Min. 2 segments 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)
<b>HANDLE COLOR</b>	Black
<b>LIFESPAN, ELECTRICAL</b>	7500 operations at 690 V AC-1 10000 operations at 415 V AC-1 5000 operations at 690 V AC-3 10000 operations at 400 V AC-1 7500 operations at 400 V AC-3 7500 operations at 415 V AC-3
<b>FUNCTIONS</b>	Interlockable Disconnectors/main switches
<b>TYPE</b>	Switch-disconnector

#### SPECIAL FEATURES

- Main switch characteristics including positive drive to IEC/EN 60204 and VDE 0113.
- Isolating characteristics to IEC/EN 60947-3 and VDE 0660.

- Busbar tag shroud to VDE 0160 Part 100.
- Rated current = rated uninterrupted current: 160 A
- The rated short-time withstand current for PN2/N2 in conjunction with earth-fault release NZM2-4-XFl...Icw = 1.5 kA

<b>APPLICATION</b>	Use in unearthed supply systems at 690 V
<b>SHOCK RESISTANCE</b>	20 g (half-sinusoidal shock 20 ms)
<b>NUMBER OF SWITCHES</b>	1
<b>RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ)</b>	0 kA
<b>RATED CONDITIONAL SHORT-CIRCUIT CURRENT WITH BACK-UP FUSE</b>	80 kA at 690 V PN2(N2)-160...250: 250 AgGgL 100 kA at 400/415 V
<b>RATED CONDITIONAL SHORT-CIRCUIT CURRENT WITH DOWNSTREAM FUSE</b>	80 kA at 690 V 100 kA at 400/415 V PN2(N2)-160...250: 250 AgGgL
<b>RATED OPERATING VOLTAGE (UE) AT AC - MAX</b>	690 V
<b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	160 A
<b>RATED PERMANENT CURRENT AT AC-21, 400 V</b>	0 A
<b>RATED PERMANENT CURRENT AT AC-23, 400 V</b>	0 A
<b>RATED SHORT-TIME WITHSTAND CURRENT (T = 0.3 S)</b>	3.5 kA
<b>RATED SHORT-TIME WITHSTAND CURRENT (T = 1 S)</b>	3.5 kA
<b>SWITCHING POWER AT 400 V</b>	0 kW
<b>HANDLE TYPE</b>	Rocker lever

<b>NUMBER OF OPERATIONS PER HOUR - MAX</b>	120
<b>RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 690 V, 50/60 HZ</b>	5.5 kA
<b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT AUXILIARY CONTACTS</b>	6000 V
<b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT MAIN CONTACTS</b>	8000 V
<b>STANDARD TERMINALS</b>	Screw terminal
<b>OPTIONAL TERMINALS</b>	Box terminal. Connection on rear. Tunnel terminal
<b>SHORT-CIRCUIT PROTECTIVE DEVICE FUSES - MAX</b>	250 A gL
<b>TERMINAL CAPACITY (COPPER BUSBAR)</b>	Min. 16 mm x 5 mm direct at switch rear-side connection M8 at rear-side screw connection Max. 24 mm x 8 mm direct at switch rear-side connection
<b>TERMINAL CAPACITY (COPPER SOLID CONDUCTOR/CABLE)</b>	16 mm <sup>2</sup> (1x) at tunnel terminal 10 mm <sup>2</sup> - 16 mm <sup>2</sup> (1x) at box terminal 6 mm <sup>2</sup> - 16 mm <sup>2</sup> (2x) direct at switch rear-side connection 10 mm <sup>2</sup> - 16 mm <sup>2</sup> (1x) direct at switch rear-side connection 6 mm <sup>2</sup> - 16 mm <sup>2</sup> (2x) at box terminal
<b>TERMINAL CAPACITY (ALUMINUM SOLID CONDUCTOR/CABLE)</b>	10 mm <sup>2</sup> - 16 mm <sup>2</sup> (1x) direct at switch rear-side connection 10 mm <sup>2</sup> - 16 mm <sup>2</sup> (2x) direct at switch rear-side connection 16 mm <sup>2</sup> (1x) at tunnel terminal
<b>TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE)</b>	25 mm <sup>2</sup> - 70 mm <sup>2</sup> (2x) at box terminal 25 mm <sup>2</sup> - 185 mm <sup>2</sup> (1x) at box terminal 25 mm <sup>2</sup> - 70 mm <sup>2</sup> (2x)

	direct at switch rear-side connection 25 mm <sup>2</sup> - 185 mm <sup>2</sup> (1x) at 1-hole tunnel terminal 25 mm <sup>2</sup> - 185 mm <sup>2</sup> (1x) direct at switch rear-side connection
<b>TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)</b>	25 mm <sup>2</sup> - 185 mm <sup>2</sup> (1x) at 1-hole tunnel terminal

<b>PROJECT NAME:</b>
<b>PROJECT NUMBER:</b>
<b>PREPARED BY:</b>
<b>DATE:</b>



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