DATASHEET - NZMN3-PMX450-NA

NZM3 PXR25 circuit breaker, 450A, 3p, Screw terminal, UL/CSA



NZMN3-PMX450-NA 193352

Product name	Ea	ton Moeller series NZM molded case circuit breaker electronic
Part no.	NZ	ZMN3-PMX450-NA
EAN	90	10238016972
Product Length/Depth	16	6 millimetre
Product height	27	5 millimetre
Product width	14	0 millimetre
Product weight	7.0	054 kilogram
Compliances	Ro	oHS conform
Certifications	UL CS UL CS IE(CE CS CS UL UL UL Sp IE(UL	C/EN 60947 L/CSA SA (File No. 22086) L (File No. E31593) SA (Class No. 1432-01) C 60947-2 E marking SA-C22.2 No. 5-09 SA certified L (Category Control Number DIVQ) L 489 Decially designed for North America C L508 L listed
Product Tradename	NZ	ZM
Product Type	M	olded case circuit breaker
Product Sub Type	Ele	ectronic
Globally Marketable	Ye	IS
Application	Br	ranch circuits, feeder circuits Use in unearthed supply systems at 690 V
Туре		rcuit breaker
Circuit breaker frame type	NZ	ZM3
Number of poles	Th	iree-pole
Amperage Rating	45	i0 A
Release system	Ele	ectronic release
Special features	loc bri de mu fui eq int IE(aximum back-up fuse, if the expected short-circuit currents at the installation cation exceed the switching capacity of the circuit breaker (Rated short-circuit eaking capacity Icn) Motor protection - overload- and short-circuit protective evice LI Motor Class 1 energy measurement, phase loss protection, r.m.s. value easurement, and "thermal memory" USB interface for configuration and test nction with Power Xpert Protection Manager software Interface module in uppment supplied. Optionally communication-capable with interface module and ternal Modbus RTU module or CAM Switches conform to UL/CSA as well as the C regulations. IEC switching performance values are contained on the rating ate. Rated current = rated uninterrupted current: 450 A
Fitted with:	Th	nermal protection
Voltage rating	69	10 V - 690 V
Rated operating voltage Ue (UL) - max	60	10 V
Rated insulation voltage (Ui)	69	10 V
Rated impulse withstand voltage (Uimp) at auxiliary contacts	60	100 V
Rated impulse withstand voltage (Uimp) at main contacts	80	100 V
Rated operational current	63 45 50	10 A (400 V AC-1, making and breaking capacity) 10 A (690 V AC-1, making and breaking capacity) 10 A (660-690 V AC-3, making and breaking capacity) 10 A (415 V AC-1, making and breaking capacity)
Rated short-time withstand current (t = $0.3 s$)	3.3	3 kA
Rated short-time withstand current $(t = 1 s)$	3.3	3 kA
Instantaneous current setting (li) - min	90	0 A
Instantaneous current setting (li) - max	54	00 A

breaking capacity Icn) Motor protection - overload- and short-circuit protective device LI Motor Class 1 energy measurement, phase loss protection, r.m.s. value measurement, and "thermal memory" USB interface for configuration and test function with Power Xpert Protection Manager software Interface module in equipment supplied. Optionally communication-capable with interface module ar			
Box circuit release un-delayed setting - min Box d Box circuit release un-delayed setting - mix Box d Box dena circuit release quarkity est (CDN 1997) rel 20 19, 200 N/ Box d Bate duri circuit release quarkity est (CDN 1997) rel 20 19, 200 N/ Box d Bate duri circuit release quarkity est (CDN 1997) rel 20 19, 200 N/ Box d Bate duri circuit release quarkity est (CDN 1997) rel 20 19, 200 N/ Box d Bate duri circuit release quarkity est (CDN 1997) rel 20 19, 200 N/ Box d Bate duri circuit release quarkity est (CDN 1997) rel 20 19, 200 N/ Box d Bate duri circuit release quarkity est (CDN 1997) rel 20 19, 200 N/ Box d Bate duri circuit release quarkity est (CDN 1997) rel 20 19, 200 N/ Box d Bate duri circuit release quarkity est (CDN 1997) rel 20 19, 200 N/ Box d Bate duri circuit release quarkity est (CDN 1997) rel 20 19, 200 N/ Box d Bate duri circuit release quarkity est (CDN 1997) rel 20 19, 200 N/ Box d Bate duri circuit release quarkity est (CDN 1997) rel 20 19, 200 N/ Box d Bate duri circuit release quarkity est (CDN 1997) rel 20 19, 200 N/ Box d Bate duri circuit release quarkity est (CDN 1997) rel 20 19, 200 N/ Box d Bate duri circuit release quarkity est (CDN 1997) rel 20 19, 200 N/ Box d Bate duri circuit release quarkity est (CDN 1997) rel 20 19, 200 N/ Box d Bate d	Overload current setting (Ir) - min		225 A
Shart circuit relating search and eleged series on an elegend sector of the sector	Overload current setting (Ir) - max		450 A
Noted and circuit circuit reaking capacity for IECEN 00071 at 237 V3008 ht 8 bÅ Reted and circuit circuit reaking capacity for IECEN 00071 at 023 V3008 ht 3 bÅ Band durit circuit reaking capacity for IECEN 00071 at 023 V3008 ht 3 bÅ Band durit circuit reaking capacity for IECEN 00071 at 023 V3008 ht 3 bÅ Band durit circuit reaking capacity for IECEN 00071 at 023 V3008 ht 3 bÅ Band durit circuit reaking capacity for IECEN 00071 at 023 V3008 ht 10 bÅ Band durit circuit reaking capacity for IECEN 00071 at 023 V3008 ht 10 bÅ Band durit circuit reaking capacity for IECEN 00071 at 023 V3008 ht 10 bÅ Band durit circuit reaking capacity for IECEN 00071 at 023 V3008 ht 10 bÅ Band durit circuit reaking capacity for IECEN 00071 at 023 V3008 ht 10 bÅ Band durit circuit reaking capacity for IECEN 00071 at 023 V3008 ht 10 bÅ Band durit circuit reaking capacity for IECEN 00071 at 023 V3008 ht 10 bÅ Band durit circuit reaking capacity for IECEN 00071 at 023 V3008 ht 10 bÅ Band durit circuit reaking capacity for IECEN 00071 at 023 V3008 ht 10 bÅ Band durit circuit reaking capacity for IECEN 00071 at 023 V3008 ht 10 bÅ Band durit circuit reaking capacity for IECEN 00071 at 023 V3008 ht 10 bÅ Band durit circuit reaking capacity for IECEN 00071 at 023 VA 10 bÅ Band durit circuit reaking capacity for IECEN 00071 at 023 VA	Short-circuit release non-delayed setting - min		900 A
Reted short-circuit breaking capacity ics (ECEN 6687) at 400, 5000 its 35 Å Bated short-circuit breaking capacity ics (ECEN 6697) at 20, 5000 its 35 Å Bated short-circuit breaking capacity ics (ECEN 6697) at 20, 5000 its 36 Å Bated short-circuit breaking capacity ics (ECEN 6697) at 20, 5000 its 36 Å Bated short-circuit breaking capacity ics (ECEN 6697) at 20, 5000 its 36 Å Bated short-circuit breaking capacity ics (ECEN 6697) at 20, 5000 its 36 Å Bated short-circuit breaking capacity ics (ECEN 6697) at 20, 5000 its 36 Å Bated short-circuit breaking capacity ics (ECEN 6697) at 20, 5000 its 36 Å Bated short-circuit breaking capacity ics (ECEN 6697) at 20, 5000 its 36 Å Bated short-circuit breaking capacity ics (ECEN 6697) at 20, 5000 its 36 Å Bated short-circuit breaking capacity ics (ECEN 6697) at 20, 5000 its 36 Å Bated short-circuit breaking capacity ics (ECEN 6697) at 20, 5000 its 36 Å Bated short-circuit breaking capacity ics (ECEN 6697) at 20, 5000 its 36 Å Bated short-circuit breaking capacity ics (ECEN 6697) at 20, 5000 its 36 Å Bated short-circuit breaking capacity ics (ECEN 6697) at 20, 5000 its 36 Å Bated short-circuit breaking capacity ics (ECEN 6697) at 20, 5000 its 36 Å Bated short-circuit breaking capacity ics (ECEN 6697) at 20, 5000 its 36 Å Bated short-circuit breaking capacity ics (ECEN 6697) at	Short-circuit release non-delayed setting - max	!	5400 A
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Interd short circuit hrashing appachy los (IECEM 0690) at 525 V. 3000 hr. 54 A Bated short circuit hrashing appachy los (IECEM 0690) at 520 V. 3000 hr. 54 A Bated short circuit hrashing cappachy los (IECEM 0690) ht. 150 A Bated short circuit hrashing cappachy los (IECEM 0690) ht. 150 A Bated short circuit hrashing cappachy los (IECEM 0690 hr. 150 A Bated short circuit hrashing cappachy los (IECEM 0690 hr. 150 A Bated short circuit hrashing cappachy los (IECEM 0690 hr. 150 A Bated short circuit hrashing cappachy los (IECEM 0690 hr. 150 A Bated short circuit hrashing cappachy los (IECEM 0690 hr. 150 A Bated correcting owner AA (C. 320 V) 150 A Bated correcting owner AA (C. 320 V) 150 A Bated correcting owner AA (C. 300 V) 150 A Bated correcting owner AA (C. 300 V) 150 A Bated correcting owner AA (C. 300 V) 160 A Handle type 160 A Pownerstage category 161 A	Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 400/415 V, 50/60 Hz $$		35 kA
Read abort circuit breaking capacity ics IRBU 5000 its SIA Based abort circuit making capacity ics IRAU 5000 its ISIA Read abort circuit making capacity ics IRAU 5000 its ISIA Read abort circuit making capacity ics IRAU 5000 its ISIA Based abort circuit making capacity ics IRAU 5000 its ISIA Based abort circuit making capacity ics IRAU 5000 its ISIA Based abort circuit making capacity ics IRAU 5000 its ISIA Based abort circuit making capacity ics IRAU 5000 its ISIA Based capacity ics IRAU 5000 its	Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 440 V, 50/60 Hz		35 kA
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Rated short-circuit making capacity fom at 440 V, 5000 hr: PA AA Bated dort-circuit making capacity fom at 250 V, 5000 hr: S1A Bated dort-circuit making capacity fom at 250 V, 5000 hr: S1A Bated dort-circuit making capacity fom at 250 V, 5000 hr: S1A Bated dort-circuit making capacity fom at 250 V, 5000 hr: S1A Bated dort-circuit making capacity fom at 250 V, 5000 hr: S1A Bated dort-circuit making capacity fom at 520 V, 5000 hr: S1A Bated dort-circuit making capacity fom at 520 V, 5000 hr: S1A Bated dort-circuit making capacity for at 520 V, 5000 hr: S1A Bated dort-circuit making capacity for at 520 V, 5000 hr: S1A Bated dort-circuit making capacity for at 520 V, 5000 hr: S1A Bated dort-circuit making capacity for at 520 V, 5000 hr: S1A Bated dort-circuit making capacity for at 520 V, 5000 hr: S1A Bated dort-circuit making capacity for at 520 V, 5000 hr: S1A Bated dort-circuit making capacity for at 520 V, 5000 hr: S10 V, AC (factorean statisty contacts and main cortacts) Bated dort-circuit making capacity for at 520 V, 5000 hr: S100 V, AC (factorean statisty contacts and main cortacts) Bated dort-circuit making capacity for at 520 V, 5000 hr: S10 V, AC (factorean statisty contacts and main cortacts) Bated dort-circuit making capacity for at 520 V, 5000 hr: S1000 operations at 400 V, 50 S </td <td>Rated short-circuit making capacity Icm at 240 V, 50/60 Hz</td> <td></td> <td>187 kA</td>	Rated short-circuit making capacity Icm at 240 V, 50/60 Hz		187 kA
Rated short-circuit making capacity (am at ES3 V, 5040 Hz S3 M. Rated short-circuit making capacity (am at ES3 V, 5040 Hz 40 A. Rated oraning power at AC.3 20 V 122 W Short-circuit total broakline 20 W Short-circuit total broakline 50 Core contexction Short-circuit total broakline 50 WA (Cheveen sublishy contacts) Short-circuit total broakline 60 Handle type 60 Handle type 60 Handle type 80 A. Handle type 80 A. <td>Rated short-circuit making capacity Icm at 400/415 V, 50/60 Hz</td> <td></td> <td>105 kA</td>	Rated short-circuit making capacity Icm at 400/415 V, 50/60 Hz		105 kA
Rated short-circuit making capacity form at 880 V,500 Hz 40 k4 Rated generating power at AC-3, 400 V 250 WV Based generating power at AC-3, 400 V 250 WV Bott-circuit at long hearbing 200 VAC (botween the auxiliery contracts) Number of appendion performs perform - max 0 Handle type ALEC/FN MSPF-7a Oervoltage category 11 Pulticion digrae 3 Ublastion category 11 Pulticion digrae 3 Ublastion category 11 Particion digrae 3 Ublastion category 41 Particion digrae 410 k2 - 3 Degrae of protocion 12 Particion digrae 12 Degrae of protocion (IPI, front sale) <td>Rated short-circuit making capacity Icm at 440 V, 50/60 Hz</td> <td></td> <td>74 kA</td>	Rated short-circuit making capacity Icm at 440 V, 50/60 Hz		74 kA
Rated operating power at AC 3, 20 V 121 W Rated operating power at AC 3, 00 V 250 W Shert circuit contarbayed main circuit 250 W Bettriad concentration hap of main circuit 250 W Isolation 250 W Number of operations per hour - max 60 Handle spa 60 Ublication 250 W/O (between the sublicity contacts) and main contacts) Ownords category 60 Ublication category 100 W/C (between the sublicity contacts) and main contacts) Point of incoming supply 100 W/C (between the sublicity contacts) and main contacts) Ownords category 100 W/C (between the sublicity contacts) and main contacts) Direction of incoming supply 100 W/C (between the sublicity contacts) and main contacts) Direction of incoming supply 200 operations at 400 W/C - 1 Darge of protection (IP), front side 200 operations at 400 W/C - 1 Darge of protection (IP), front side 200 operations at 400 W/C - 1 Darge of protection (IP), front side 200 operations at 400 W/C - 1 Darge of protection (IP), front side 200 operations at 400 W/C - 1 Darge of protection (IP), front side 200 operations at 400 W/C - 1 Darge of protection (IP), front side 200 operations at 400 W/C - 1 Shock resistance 200 operations at 400 W/C - 1	Rated short-circuit making capacity Icm at 525 V, 50/60 Hz		53 kA
Rated operating power at AC-3, 400 V Production that breaktive Store connection Store-conclust that breaktive Store connection Store connection Besterical connection type of main circuit Store connection Store connection Number of operations per hour - max Go Go Number of operations per hour - max AIECEN BR04-72) Go Utitation category AIECEN BR04-72) III Developing category III Store developing Utitation category IIII Store developing Developing category IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII			
Short circuit tail breaktine Image: Stream connection Bestricial connection type of main circuit Stream connection Isolation Stream connection Number of operations per hour - max Stream connection Handle type Stream connection Ultration category Stream connection Overvoltage category Image: Stream connection Ultration category Image: Stream connection Deveroltage category Image: Stream connection Ultraspan electrical Stream connection at 95 VAC3 Divercition of incoming supply Image: Stream connection at 95 VAC3 Divercition of incoming supply Image: Stream connection at 95 VAC3 Divercition of incoming supply Image: Stream connection at 95 VAC3 Divercition of incoming supply Image: Stream connection in the operating controls area) Divercition of incoming supply Image: Stream connection in the operating controls area) Divercition against direct contact Image: Stream connection in the operating controls area) Stream contact Image: Stream connection in the operating controls area) Prescrition against direct contact Image: Stream connection in the operating controls area) Stream contact Image: Stream connec			
Instruction determination pay of main circuit Serve connection Isolation Source connection Number of operations per hour - max 60 Handle yoe Rocker lever Utilization category A (BEC) ROB+7-20 Overvolups category III Palation dargere 3 Lifespon, electrical 2000 operations at 415 VAC-3 State of protection of incoming supply Server and server a			
Isolation 300 VAC (between the subliary contacts) Number of operations per hour - max 60 Handle type 60 Ubitation category 60 Deverbage category 110 Pathon degree 200 operations at 415 VAC.3 Lifespan, electrical 200 operations at 40 VAC.3 South off free degree 200 operations at 40 VAC.3 Direction of incoming supply 200 operations at 40 VAC.3 Direction of incoming supply 200 operations at 40 VAC.3 Mounting Method 200 operations at 80 VAC.3 Degree of protection (IP), front side 200 operations at 80 VAC.3 Degree of protection (IP), front side 200 operations at 80 VAC.3 Degree of protection (IP), front side 200 operations per handle) Protection against direct contact 200 operations, phase lactor and strip terminal) Protection against direct contact 200 operations, phase lactor and strip terminal) Switch off technique 200 operations, phase lactor and strip terminal) Switch off technique 200 operations, phase lactor and strip terminal) Protection against direct contact 200 operations, phase lactor and strip terminal) Switch off technique 200 folder sinuadd sh			
Number of operations per hour - max Image of operations per hour - max Image of operations per hour - max Number of operations per hour - max Image of operations per hour - max Image of operations per hour - max Handle type Rocker inser Rocker inser Utitation category Image of the period operations at 400 VAC (Between audilary contacts and main contacts) Polation degree Image of the period operations at 400 VAC (Between audilary contacts and main contacts) It is pan, electrical Image of the period operations at 400 VAC (Between audilary contacts and main contacts) Direction of incoming supply Image of the period operations at 400 VAC (Between audilary contacts and main contacts) Mounting Method Image of protection (IP), front side Image of protection (IP), front side Degree of protection leminations) Image of protection (IP), front side Image of protection (IP), front side Protection spaint direct contact Finder and beside of protection (IP), front side Image of protection to the per time per hourd) Shock resistance Image of protection (IP), front side Image of protection (IP), front side Image of protection (IP), front side Shock resistance Image of protection (IP), front side Image of protection (IP), front side Image of protection (IP), front side Shock			
Number of operations per hour - max 60 Handle type Rockar lower Ublization category A (EC/K 80947-2) Overvoltage category 10 Pollution degrap 3 Lifespan, electrical 2000 operations at 40 V AC-3 2000 operations at 400 V AC-3 2000 operations at 400 V AC-3 2000 operations at 800 V AC-1 2000 operations at 800 V AC-3 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2000 operations at 800 V AC-1 2	Isolation		
Handle type Focker lever Utilization category A LEC/EN 6097-2) Overvoltage category III Pollution degree 3 Lifespan, electrical 200 operations at 400 VAC-3 2000 operations at 400 VAC-3 2000 operations at 400 VAC-3 2000 operations at 400 VAC-1 2000 operations at 800 VAC-3 2000 operations at 800 V	Number of operations per hour - max		
Overvoltage atagory III Pollution degree 3 Lifespan, electrical 2000 operations at 45 V AC-3 2000 operations at 45 V AC-3 2000 operations at 400 V AC-1 2000 operations at 400 V AC-3 2000 operations at 800 V AC-3 2000 operations at 900 operations at 900 operations 2000 operations 2000 operations at 900 operations 2000 operations at 900 operations 2000 operations at 900 operations 2000 operations at 900 operations 2000 operations 2000 operations 2000 operations at 900 operations 2000 operations 2000 ope	Handle type		Rocker lever
Pollution degree 3 Lifespan, electrical 2000 operations at 415 V AC-3 2000 operations at 400 V AC-3 2000 operations at 40	Utilization category		A (IEC/EN 60947-2)
Lifespan, electrical 2000 operations at 415 VAC-3 Lifespan, electrical 2000 operations at 400 VAC-3 Direction of incoming supply As required Mounting Method Built-in device dual-in technique Perce of protection Filed operations at 800 VAC-1 Degree of protection P20 (basic degree of protection, in the operating controls area) Perce of protection (IP), front side P20 (basic degree of protection, in the operating controls area) Pogree of protection (IP), front side P20 (basic degree of protection, in the operating controls area) Pogree of protection (IP), front side P20 (basic degree of protection, in the operating controls area) Protection against direct contact P100 (terminations, phase isolator and strip terminal) Protection against direct contact P100 (terminations, phase isolator and strip terminal) Soutch off technique Damp heat, cyclic, to IEC 60068-2:78 Soutch off technique Damp heat, cyclic, to IEC 60068-2:78 Special features Maximu back-adr huse, control, to UEC 60068-2:78 Damp heat, cyclic, to IEC 60068-2:78 Damp heat, cyclic, to IEC 60068-2:78 Special features Maximu back off huse contony of the deray there circuit tracker frace and bach circuit protection and a strip terminal memory USB intefrace of conticing and and there circuit prot	Overvoltage category		III
Image: Standard terminals Standard terminals Image: Standard terminals Standard terminals	Pollution degree		3
Mounting Method Built- in device fixed built- in technique Fixed Degree of protection P20 (basic degree of protection, in the operating controls area). P20 (basic degree of protection, in the operating controls area). P20 (basic degree of protection, in the operating controls area). P20 (basic degree of protection, in the operating controls area). P20 (basic degree of protection, in the operating controls area). P20 (basic degree of protection (IP), front side PP66 (with door coupling rotary handle) P20 (basic degree of protection, in the operating controls area). P20 (basic degree of protection (IP), front side P20 (basic degree of protection, in the operating controls area). P20 (basic degree of protection (IP), front side Degree of protection (IP), front side P20 (basic degree of protection, in the operating controls area). P20 (basic degree of protection). P20 (basic degree of protection, in the operating controls area). P20 (basic degree of protection). Pagree of protection (IP), front side P20 (basic degree of protection). P20 (basic degree of protection). Pagree of protection (IP), front side P20 (basic degree of protection). P20 (basic degree of protection). Systech off technique Finger and back-of-hand proof to VDE 0106 part 100 P20 (basic degree of protection). Climatic proofing Damp heat, constant, to IEC 60068-2-738 Pamp heat, constant, to IEC 60068-2-738 Systech off technique Electronic Pamp heat, constant, to IEC 60068-2-738	Lifespan, electrical		2000 operations at 400 V AC-3 5000 operations at 400 V AC-1 2000 operations at 690 V AC-3
Image: Protection Fixed Degree of protection IP20 (basic degree of protection, in the operating controls area) Degree of protection (IP), front side IP66 (with door coupling rotary handle) IP20 IP40 (with insulating surround) Degree of protection (Irminations) IP10 (turnel terminal) IP20 (terminations, phase isolator and strip terminal) IP10 (turnel terminal) Protection against direct contact Engre and back-of-hand proof to VDE 0106 part 100 Shock resistance 20 g (half-sinusoidal shock 20 ms) Switch off technique Electronic Climatic proofing Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-78 Special features Maximum back-up fuse, if the expected short-circuit breaker (Bated short-circuit	Direction of incoming supply		As required
Pegree of protection P20 (basic degree of protection, in the operating controls area) Pegree of protection (IP), front side P20 (basic degree of protection, in the operating controls area) Pegree of protection (IP), front side P66 (with door coupling rotary handle) Pegree of protection (Irminations) P10 (turnel terminal) Protection against direct contact Finger and back-of-hand proof to VDE 0106 part 100 Shock resistance 20 g (half-sinusoidal shock 20 ms) Switch off technique Electronic Climatic proofing Damp heat, constant, to IEC 60068-2-78 Special features Maximum back-up fuse, if the expected short-circuit urrents at the installation location exceed the switching capacity of the circuit breaker (Bated short-circuit breaker (
Degree of protection P20 (basic degree of protection, in the operating controls area) Degree of protection (IP), front side P66 (with door coupling rotary handle) Degree of protection (terminations) PP66 (with door coupling rotary handle) Protection against direct contact PP60 (basic degree of protection, in the operating controls area) Shock resistance 20 g (half-sinusoidal shock 20 ms) Olimatic proofing Electronic Special features Damp heat, constant, to IEC 60068-2-78 Damp heat, constant, to IEC 60068-2-78 Damp heat, constant, to IEC 60068-2-78 Damp heat, constant, to IEC 60068-2-78 Damp heat, constant, to IEC 60068-2-78 Damp heat, constant, to IEC 60068-2-78 Damp heat, constant, to IEC 60068-2-78 Damp heat, constant, to IEC 60068-2-78 Damp heat, constant, to IEC 60068-2-78 Damp heat, constant, to IEC 60068-2-78 Damp heat, constant, to IEC 60068-2-78 Damp heat, constant, to IEC 60068-2-78 Damp heat, constant, to IEC 60068-2-78 Damp heat, constant, to IEC 60068-2-78 Damp heat, constant, to IEC 60068-2-78 Damp heat, constant, to IEC 60068-2-78 Damp heat, constant, to IEC 60068-2-78 Damp heat, constant, to IEC 60068-2-78 Damp heat, constant, to IEC 60068-2-78 Damp heat, constant, to IEC 60068-2-78 <td< td=""><td>Mounting Method</td><td></td><td></td></td<>	Mounting Method		
Degree of protection (IP), front side IP20 IP20 IP20 Degree of protection (terminations) IP66 (with door coupling rotary handle) IP40 (with insulating surround) Portection against direct contact IP00 (terminations, phase isolator and strip terminal) IP10 (terminations, phase isolator and strip terminal) Shock resistance 20 g (half-sinusoidal shock 20 ms) Electronic Climatic proofing Damp heat, constant, to IEC 60068-2-78 Special features Maximum back-up fuse, if the expected short-circuit breaker (Rated short-circuit protection) Special features Maximum back-up fuse, if the expected short-circuit protection threads on the rating again thermal memory USB interface for configuration and test function with Power Xpert Protection and sets or thermal Modbus RFM Subjection and test function with Power Xpert Protection measure mont, and the set of configuration and test function with Power Xpert Protection measure mont, and the set of configuration and test function with Power Xpert Protection Manager software Interface module an equipment supplied. Optionally communication-capable with interface module an equipment supplied. Optionally communication-c	Desire of anti-star		
Pegree of protection (terminations) IP40 (with insulating surround) Protection against direct contact IP10 (turnel terminal) Protection against direct contact Finger and back-of-hand proof to VDE 0106 part 100 Shock resistance 20 g (half-sinusoidal shock 20 ms) Switch off technique Electronic Climatic proofing Damp heat, constant, to IEC 60068-2-78 Special features Damp heat, constant, to IEC 60068-2-30 Special features Maximum back-up fuse, if the expected short-circuit protection - runs, value are configuration and test function with Power Xpert Protection Managers oftware Interface module in internal Module are Managers oftware Interface module are internal Module ATU module or CAM Switches configuration and test function with Power Xpert Protection Managers oftware Interface module are internal Module ATU module or CAM Switches configuration and test function with Power Xpert Protection Managers oftware Interface module are internal Module ATU module or CAM Switches configuration and set internal Module ATU module or CAM Switches configuration and test function with Power Xpert Protection Managers oftware Interface module are internal Module ATU module or CAM Switches configuration and test function with Power Xpert Protection Managers oftware Interface module are internal Module ATU module or CAM Switches configuration and test function with Power Xpert Protection Managers oftware Interface module are internal Module ATU module or CAM Switches configuration and set internal Module ATU module or CAM Switches configuration and set internal Module ATU module or CAM Switches configuration and set internal Module ATU module or CA	Degree of protection		
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Shock resistance 20 g (half-sinusoidal shock 20 ms) Switch off technique 20 g (half-sinusoidal shock 20 ms) Climatic proofing Electronic Special features Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30 Special features 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) Motor protection - overload- and short-circuit protective device LI Motor Class 1 energy measurement, phase loss protection, r.m.s. value measurement, and "thermal memory" USB interface for configuration and test internal Modbus RTU module or CAM Switches conform to UL/CSA as well as the internal Modbus RTU module or CAM Switches conform to UL/CSA as well as the internal Modbus RTU module or CAM Switches conform to UL/CSA as well as the internal Modbus RTU module or CAM Switches conform to UL/CSA as well as the internal Modbus RTU module or CAM Switches conform to UL/CSA as well as the internal Modbus RTU module or CAM Switches conform to UL/CSA as well as the internal Modbus RTU module or CAM Switches conform to UL/CSA as well as the internal Modbus RTU module or CAM Switches conform to UL/CSA as well as the internal Modbus RTU module or CAM Switches conform to UL/CSA as well as the internal Modbus RTU module or CAM Switches conform to UL/CSA as well as the internal Modbus RTU module or CAM Switches conform to UL/CSA as well as the internal Modbus RTU module or CAM Switches conform to UL/CSA as well as the internal Modbus RTU module or CAM Switches conform to UL/CSA as well as the internal Modbus RTU module or CAM Switches conform to UL/CSA as well as the internal Modbus RTU module or CAM Switches conform to UL/CSA as well as the internal Modbus R	Degree of protection (terminations)		
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Climatic proofing Damp heat, constant, to IEC 60068-2-78 Special features 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) Motor protection - overload- and short-circuit protective device LI Motor Class 1 energy measurement, phase loss protection, r.m.s. value measurement, and "thermal memory" USB interface for configuration and test function with Power Xpert Protection Manager software Interface module an equipment supplied. Optionally communication-capable with interface module an internal Modbus RTU module or CAM Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. Rated current = rated uninterrupted current 450 A Standard terminals Screw terminal	Shock resistance		20 g (half-sinusoidal shock 20 ms)
Special features Damp heat, cyclic, to IEC 60068-2-30 Special features 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 lcn) Motor protection - overload- and short-circuit protective device LI Motor Class 1 energy measurement, phase loss protection, r.m.s. value measurement, and "thermal memory" USB interface for configuration and test function with Power Xpert Protection Manager software Interface module and internal Modbus RTU module or CAM Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. Rated current = rated uninterrupted current: 450 A Lifespan, mechanical 15000 operations Standard terminals Screw terminal			
Lifespan, mechanicalIocation exceed the switching capacity of the circuit breaker (Rated short-circuit breaking capacity Icn) Motor protection - overload- and short-circuit protective device LI Motor Class 1 energy measurement, phase loss protection, r.m.s. value measurement, and "thermal memory" USB interface for configuration and test function with Power Xpert Protection Manager software Interface module an internal Modbus RTU module or CAM Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. Rated current = rated uninterrupted current: 450 ALifespan, mechanical15000 operationsStandard terminalsScrew terminal			Damp heat, cyclic, to IEC 60068-2-30
Standard terminals Standard terminal	Special features		location exceed the switching capacity of the circuit breaker (Rated short-circuit breaking capacity Icn) Motor protection - overload- and short-circuit protective device LI Motor Class 1 energy measurement, phase loss protection, r.m.s. value measurement, and "thermal memory" USB interface for configuration and test function with Power Xpert Protection Manager software Interface module in equipment supplied. Optionally communication-capable with interface module and internal Modbus RTU module or CAM Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating
	Lifespan, mechanical		15000 operations
Terminal capacity (copper busbar) M10 at rear-side screw connection	Standard terminals		Screw terminal
	Terminal capacity (copper busbar)		M10 at rear-side screw connection
Rated operational current for specified heat dissipation (In) 450 A			
Equipment heat dissipation, current-dependent 60.75 W	Rated operational current for specified heat dissipation (In)		450 A
Ambient operating temperature - min -25 °C			

Ambient energeting temperature may	70 °C
Ambient operating temperature - max	
Ambient storage temperature - min	40 °C
Ambient storage temperature - max	70 °C
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.
Functions	Current limiting circuit breaker Phase failure sensitive Motor protection

Technical data ETIM 8.0

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@ss10.0.1-27-37-04-01 [AGZ529016])

[A02323010])		
Overload release current setting	А	225 - 450
Adjustment range undelayed short-circuit release	А	900 - 5,400
With thermal protection		Yes
Phase failure sensitive		Yes
Switch off technique		Electronic
Rated operating voltage	V	690 - 690
Rated permanent current lu	А	450
Rated operation power at AC-3, 230 V	kW	132
Rated operation power at AC-3, 400 V	kW	250
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 Icu at 400 V, AC	kA	35
Degree of protection (IP)		IP20
Height	mm	275
Width	mm	140
Depth	mm	166