

Quick Selection Guide, Asia Pacific

Circuit Protection & Control Products

EATON

Powering Business Worldwide

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Circuit Protection & Control Products Quick Selection Guide

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Circuit Protection &
Control Products



Eaton Circuit Protection & Control Product Family

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Low Voltage Circuit Protection

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Industrial Control

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Circuit Protection & Control Products Quick Selection Guide

Product Family Snapshot

Low Voltage Circuit Protection



IZMX Series Air Circuit Breakers



NZM Series Molded Case Circuit Breakers



LZM Series Molded Case Circuit Breakers

Industrial Control



Adjustable Frequency Drives



Control Relay EASY



EASY Safety Control Relay ES4P



Soft Start Controllers



SmartWire-DT®



XC PLC



M22 Pushbuttons and Indicating Lights



Position Switches LS

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Product Family Snapshot



BZM Series Molded Case Circuit Breakers



Miniature Circuit Breaker



Surge Protection Device



Automatic Transfer Switches



Touch Display/PLC



Motor Protective Circuit Breaker



XTCG Contactor



Foot and Palm Switches FAK



XION Remote I/O Module



Motor Control and Protection



T Cam Switches



Signal Towers SL



Relays



Electronic Timing Relay DIL ET



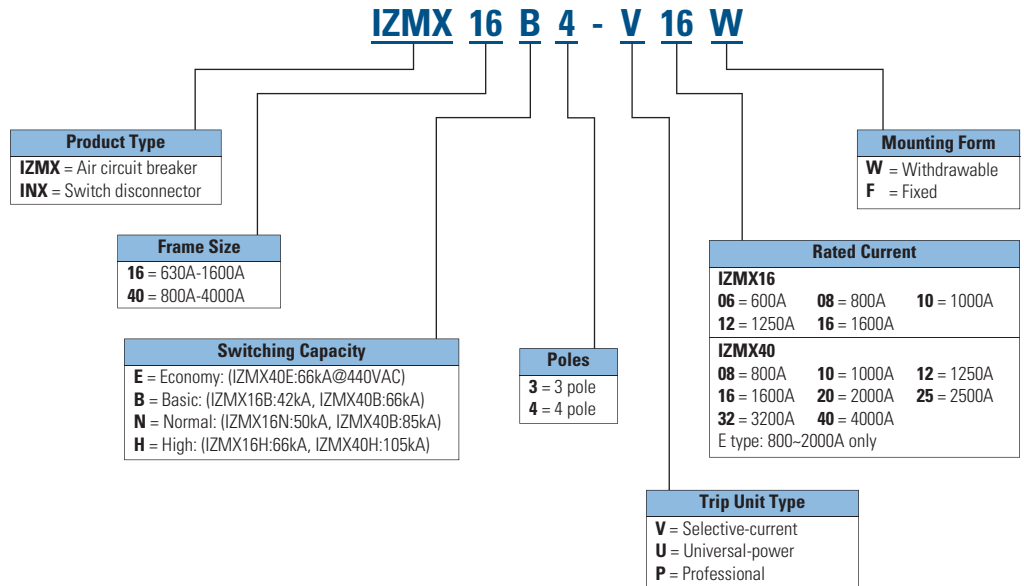
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Air Circuit Breaker

IZMX Series



IZMX Series



Recommended Selection Examples

IZMX16 fixed 220VAC motorized example:

IZMX16B3-V16F	Fixed breaker, including 2a2b Aux contact
+IZMX-M16-230AD	220-240 VAC/DC Charging motor
+IZMX-ST230AD	220-240 VAC/DC Shunt trip
+IZMX-SR230AD	220-240 VAC/DC Closing spring release
+IZMX-AS22	Additional 2a2b Aux contact (4a4b total)
+IZMX-OTS	Over current trip switch(OTS) 2CO
IZMX-THV163	Main terminal adapter - horizontal
EASY400-POW	External power module to converter 220VAC to 24VDC to power trip unit

IZMX16 withdrawable 220VAC motorized example:

IZMX16B3-U16W	Withdrawable parent breaker, including 2a2b Aux contact
+IZMX-M16-230AD	220-240 VAC/DC Charging motor
+IZMX-ST230AD	220-240 VAC/DC Shunt trip
+IZMX-SR230AD	220-240 VAC/DC Closing spring release
+IZMX-AS22	Additional 2a2b Aux contact (4a4b total)
+IZMX-OTS	Over current trip switch(OTS) 2CO
+IZMX-CAS163-1600	Cassette(including interphase barriers and handle)
+IZMX-SH163	Safety shutters
IZMX-THV163	Main terminal adapter - horizontal
EASY400-POW	External power module to converter 220VAC to 24VDC to power trip unit

IZMX40 fixed 220VAC motorized example:

IZMX40B3-V16F	Fixed parent breaker, including 2a2b Aux contact
+IZMX-M40-230AD	220-240 VAC/DC Charging motor
+IZMX-ST230AD	220-240 VAC/DC Shunt trip
+IZMX-SR230AD	220-240 VAC/DC Closing spring release
+IZMX-AS22	Additional 2a2b Aux contact (4a4b total)
+IZMX-OTS	Over current trip switch(OTS) 2CO
IZMX-THV403-3200	Main terminal adapter – horizontal (3200A and below)
EASY400-POW	External power module to converter 220VAC to 24VDC to power trip unit

IZMX40 withdrawable 220VAC motorized example:

IZMX40B3-U16W	Withdrawable parent breaker, including 2a2b Aux contact
+IZMX-M40-230AD	220-240 VAC/DC Charging motor
+IZMX-ST230AD	220-240 VAC/DC Shunt trip
+IZMX-SR230AD	220-240 VAC/DC Closing spring release
+IZMX-AS22	Additional 2a2b Aux contact (4a4b total)
+IZMX-OTS	Over current trip switch(OTS) 2CO
+IZMX-CAS403-2000	Cassette(2000A and below)
+IZMX-SH403	Safety shutters
IZMX-THV403-3200	Main terminal adapter – horizontal (3200A and below)
EASY400-POW	External power module to converter 220VAC to 24VDC to power trip unit

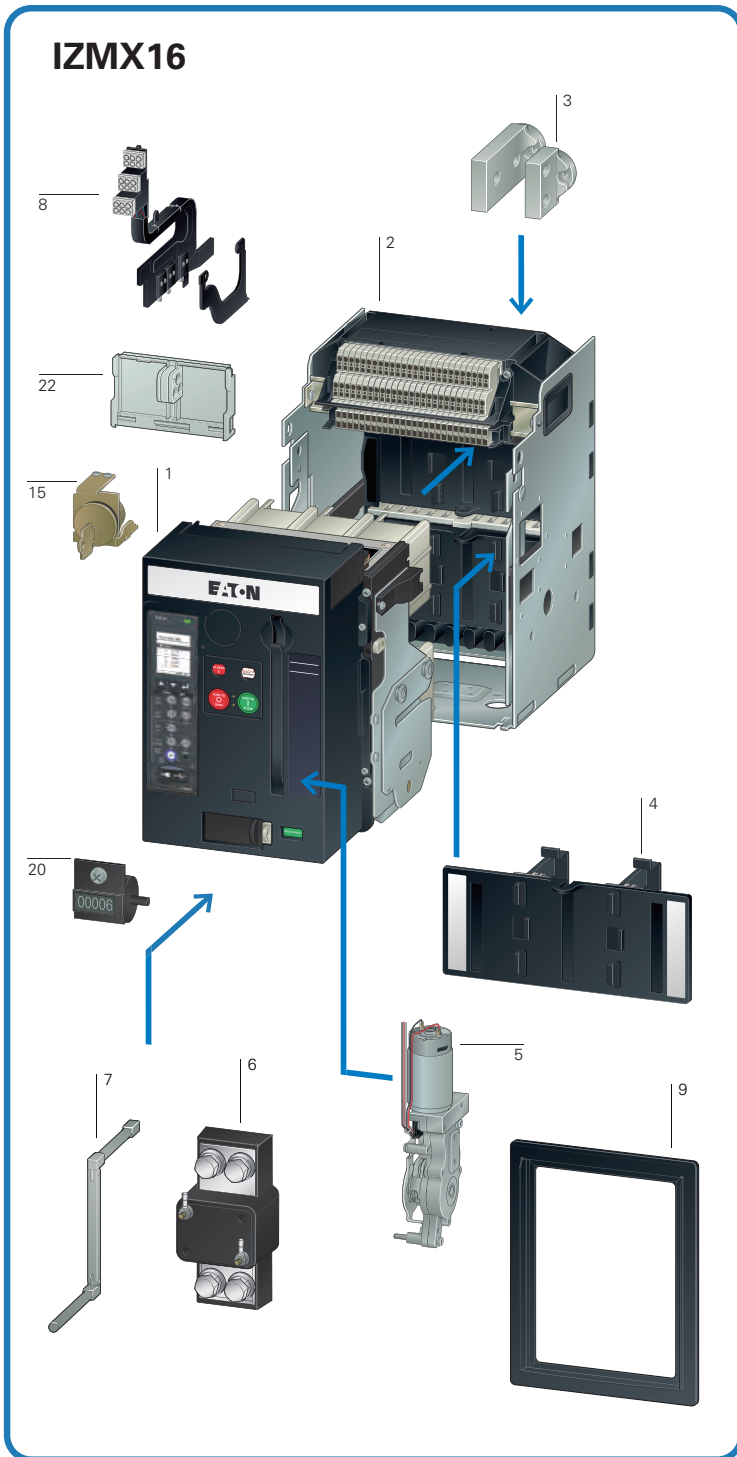
Option for ground fault protection:

- Add +IZMX-PXRV-G (V type trip unit) or +IZMX-PXRU-G(U type trip unit) for ground fault protection
- For 3-pole ACB, external neutral sensor is recommended for ground fault protection. Order IZMX-CT16-N(IZMX16) or IZMX-CT40-N(IZMX40)

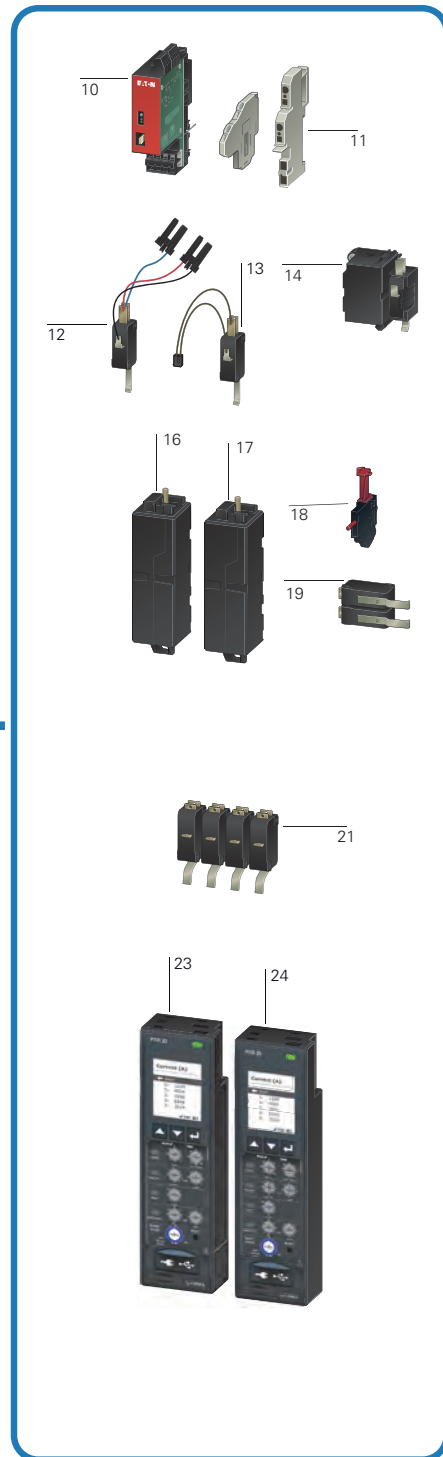
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Air Circuit Breaker

IZMX system overview



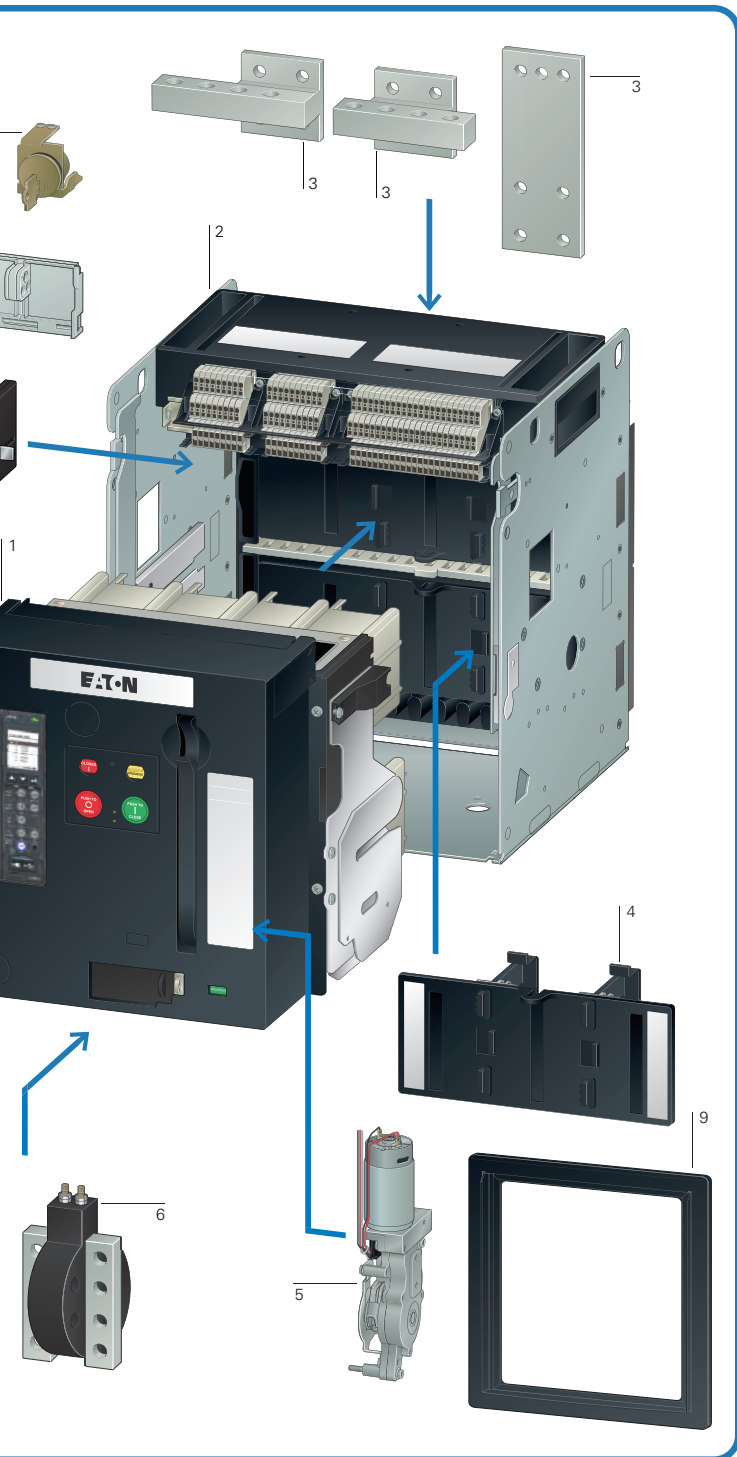
Unique parts and accessories for -IZMX16



Interchangeable accessories between IZMX16 and IZMX40



IZMX16, INX16, IZMX40, INX40



Unique parts and accessories for IZMX40

1 IZMX Circuit-breaker

IZMX16: 630 - 1600A
IZMX40: 800 - 4000A

2 Cassette for withdrawable units

+IZMX-CAS163-1600 X16, 1600A, 3P
+IZMX-CAS164-1600 X16, 1600A, 4P
+IZMX-CAS403-2000 X40, 2000A, 3P
+IZMX-CAS404-2000 X40, 2000A, 4P
+IZMX-CAS403-2500 X40, 2500A, 3P
+IZMX-CAS404-2500 X40, 2500A, 4P
+IZMX-CAS403-3200 X40, 3200A, 3P
+IZMX-CAS404-3200 X40, 3200A, 4P
+IZMX-CAS403-4000 X40, 4000A, 3P
+IZMX-CAS404-4000 X40, 4000A, 4P

3 Main terminal kits

Universal terminals, 3- and 4-pole
horizontal/vertical
IZMX-THV163 X16, 3P
IZMX-THV164 X16, 4P
IZMX-THV403-3200 X40, 3P, 3200A
IZMX-THV404-3200 X40, 4P, 3200A
IZMX-TV403 X40, 3P, 4000A, horizontal
IZMX-TV404 X40, 4P, 4000A, horizontal
IZMX-TV403 X40, 3P, 4000A, vertical
IZMX-TV404 X40, 4P, 4000A, vertical

4 Safety Shutter

+IZMX-SH163 X16, 3P
+IZMX-SH164 X16, 4P
+IZMX-SH403 X40, 3P
+IZMX-SH404 X40, 4P

5 Motor operator

Automatic charging of the spring force
storage for remote or local operations
+IZMX-M16-24DC X16, 24VDC
+IZMX-M16-110AD X16, 110VAC/DC
+IZMX-M16-230AD X16, 220VAC/DC
+IZMX-M40-24DC X40, 24VDC
+IZMX-M40-110AD X40, 110VAC/DC
+IZMX-M40-230AD X40, 110VAC/DC

6 Current sensor for neutral conductor

Current sensor for sensing the
neutral-conductor current.
IZMX-CT16-N X16
IZMX-CT40-N X40

7 Levering tool

Convenient collapsible lev-in tool for
lev-in and out operation of the Breaker
in and out of the Cassette. The lev-in
tool is stored inside the breaker.
Included in D/O breaker order

8 Position cell switches

Cell switch signals the position of the
breaker inside of the cassette.
Connect, Test and Disconnect Position.
IZMX-CS16-1 X16
IZMX-CS40-L X40, left
IZMX-CS40-R X40, right

9 Door escutcheon

Closes the gap between Breaker and
Switchgear-door.
IP41 included in breaker
For IP55:
IZMX-DC16-W X16
IZMX-DC40-W X40

10 Communication modules

External modules
IZMX-MCAM Modbus
IZMX-ECAM Ethernet
IZMX-PCAM Profibus DP

11 Control circuit terminal units

Modular design

12 Latch check switch

For external application
Usage
+IZMX-LCS

13 Latch check switch

For use with closing release.
+IZMX-LCS-SR

14 Closing releases

Closes the breaker by an electrical
signal.
+IZMX-SR24DC 24VDC
+IZMX-SR110AD 110VAC/DC
+IZMX-SR230AD 220VAC/DC

15 Key locking

Locking of the breaker by a keylock.
IZMX-KLP-SO-CES
IZMX-KLP-SO-KIRK
IZMX-KLP-SO-RONIS
IZMX-KLP-SO-CASTELL

16 Shunt releases

Opens the breaker by an electrical
signal.
+IZMX-ST24DC 24VDC
+IZMX-ST110AD 110VAC/DC
+IZMX-ST230AD 220VAC/DC

17 Undervoltage releases

Opens the breaker by a voltage-drop
in the control circuit.
+IZMX-UVR24DC 24VDC
+IZMX-UVR110AD 110VAC/DC
+IZMX-UVR220AD 220VAC/DC
+IZMX-UVR400AC 380VAC

18 Red-pop trip indicator

Red-pop trip indicator signals a trip
by the trip unit
Included in breaker with trip unit

19 Trip indicator switches

Overcurrent trip switch (OTS) signals
a trip by the trip unit.
+IZMX-OTS

20 Switching operations counters

Counts the number of operations.
+IZMX-OC

21 Auxiliary contacts

Signaling switch ON-OFF.
2a2b standard. 4a4b maximum for
IZMX16 and 12a12b for IZMX40
+IZMX-AS22 X16/X40, add 2a2b
+IZMX-AS44 X40, add 4a4b
+IZMX-AS66 X40, add 6a6b
+IZMX-AS88 X40, add 8a8b
+IZMX-AS1010 X40, add 10a10b

22 Locking facilities

Plastic or metal
IZMX-PLPC16-P X16, plastic
IZMX-PLPC16-M X16, metal
IZMX-PLPC40-P X40, plastic
IZMX-PLPC40-M X40, metal

23 Trip unit

PXR20, V-type, current metering
C - Onboard Modbus
G - Ground fault protection
M - Arcflash Reduction Maintenance
System™
+IZMX-PXRV-C
+IZMX-PXRV-G
+IZMX-PXRV-GC
+IZMX-PXRV-GM
+IZMX-PXRV-GMC

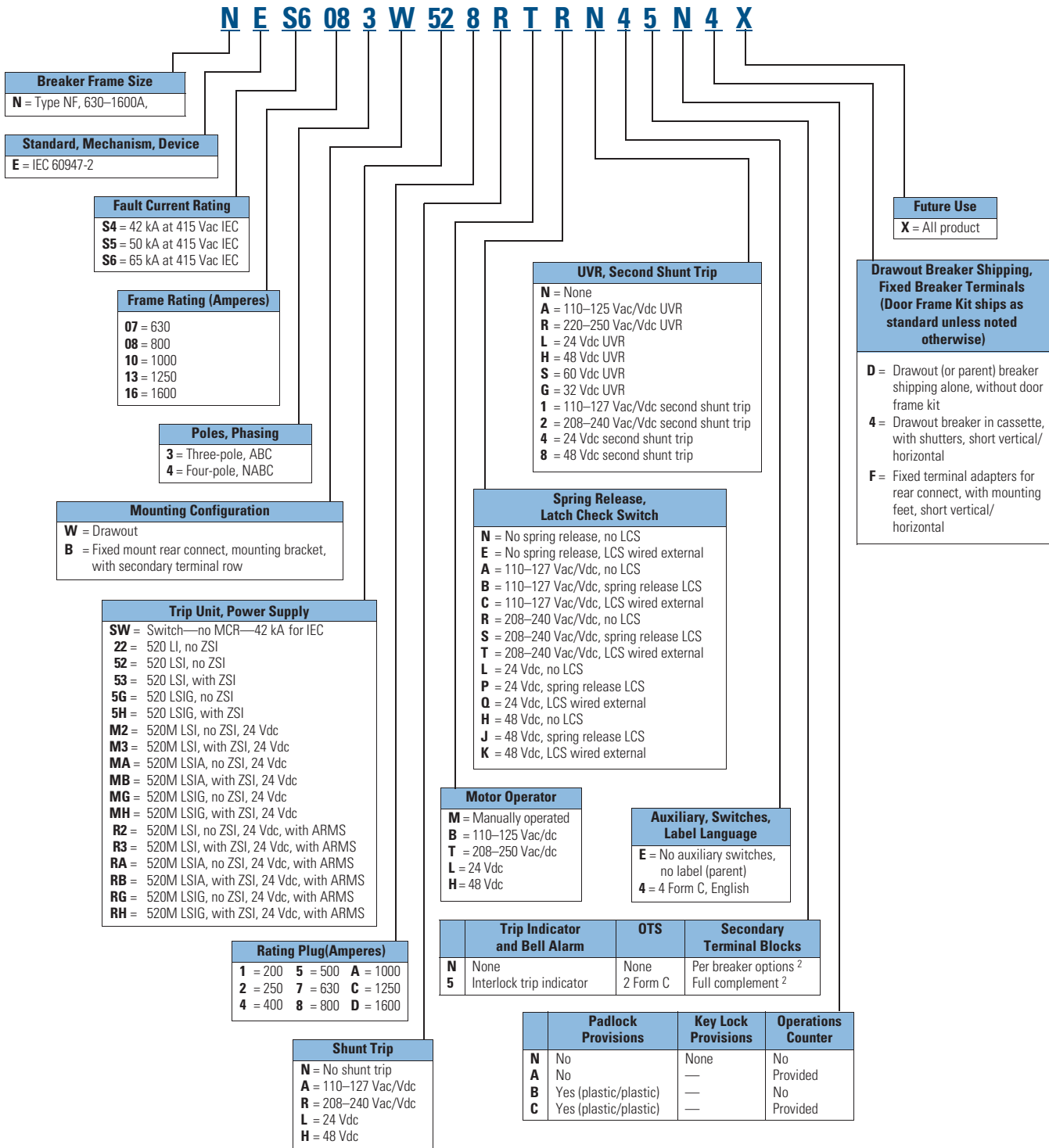
24 Trip unit

PXR25, U-type, power metering
+IZMX-PXRU-G
+IZMX-PXRU-M
+IZMX-PXRU-GM

Circuit Protection & Control Products Quick Selection Guide

Air Circuit Breaker

IZM Series NES Type*



* IZM series NES type air circuit breaker will be phased-out by Dec 31st 2015 and be replaced by IZMX series*

Circuit Protection & Control Products Quick Selection Guide

Air Circuit Breaker

I ZM Series MWI Type*

MW I 8 12 4 L E A - 12 M T R P R N 4 L N N N W X

Breaker Frame
I = Standard or double

Interrupting Icu
6 = 65 kA
8 = 85 kA
C = 100 kA

Continuous Amperes and Phasing (Facing Front of Breaker)
08 = 800 ABC
10 = 1000 ABC
12 = 1250 ABC
16 = 1600 ABC
20 = 2000 ABC
25 = 2500 ABC
32 = 3200 ABC
41 = 4000 ABC (standard drawout only)
4N = 4000 AABCC
5N = 5000 AABCC
6N = 6300 AABCC

Poles and Neutral (Facing Front of Breaker)
3 = Three
4 = Four (neutral left)

Mounting Configuration and Load Terminals
H = Fixed horizontal
V = Fixed vertical
L = Drawout horizontal

Nameplate Language
E = English

Sensor and Rating Plug Rating

NN = None	16 = 1600
02 = 200	20 = 2000
05 = 250	25 = 2500
04 = 400	32 = 3200
07 = 630	40 = 4000
08 = 800	50 = 5000
10 = 1000	63 = 6300
13 = 1250	

Trip Unit and Protection, (and External Control Voltage When Required)

NN = Non-automatic (no trip unit)
22 = 520 LI
52 = 520 LSI
5W = 520i LSIG
MT = 520M LSI (24–48 Vdc)
MU = 520M LSI (120 Vac)
MV = 520M LSI (240 Vac)
MJ = 520Mi LSIG (24–48 Vdc)
MK = 520Mi LSIG (120 Vac)
ML = 520Mi LSIG (240 Vac)
ME = 520M LSI (24–48 Vdc)
MC = 520M LSI (120 Vac)
MF = 520M LSI (240 Vac)
CT = 520MC LSI (24–48 Vdc)
CU = 520MC LSI (120 Vac)
CV = 520MC LSI (240 Vac)
CE = 520MC LSI (24–48 Vdc)
CC = 520MC LSI (120 Vac)
CF = 520MC LSI (240 Vac)
CJ = 520MCi LSIG (24–48 Vdc)
CK = 520MCi LSIG (120 Vac)
CL = 520MCi LSIG (240 Vac)
C1 = 520MC ARMS LSI (24–48 Vdc)
C2 = 520MC ARMS LSI (120 Vac)
C3 = 520MC ARMS LSI (240 Vac)
C4 = 520MC ARMS LSI (24–48 Vdc)
C5 = 520MC ARMS LSI (120 Vac)
C6 = 520MC ARMS LSI (240 Vac)
C7 = 520MC ARMS LSI (24–48 Vdc)
C8 = 520MC ARMS LSI (120 Vac)
C9 = 520MC ARMS LSI (240 Vac)
1W = 1150i LSI (24–48 Vdc)
1N = 1150i LSI (120 Vac)
1P = 1150i LSI (240 Vac)
1R = 1150i LSI/A (24–48 Vdc)
1S = 1150i LSI/A (120 Vac)
1T = 1150i LSI/A (240 Vac)
12 = 1150i ARMS LSI (24–48 Vdc)
13 = 1150i ARMS LSI (120 Vac)
14 = 1150i ARMS LSI (240 Vac)
15 = 1150i ARMS LSI (125 Vdc)
16 = 1150i ARMS LSI/A (24–48 Vdc)
17 = 1150i ARMS LSI/A (120 Vac)
18 = 1150i ARMS LSI/A (240 Vac)
19 = 1150i ARMS LSI/A (125 Vdc)

Shunt Trip Attachment (STA)

N = None
A = 110–127 Vac/Vdc
R = 208–240 Vac/Vdc
C = 24 Vdc
H = 48 Vdc
B = 110–127 Vac/Vdc (100% duty)
S = 220–250 Vac/Vdc (100% duty)
D = 24 Vdc (100% duty)
K = 48 Vdc (100% duty)

Motor Operator

M = Manual operated
N = 110–125 Vac (5-sec)
W = 110–125 Vdc (5-sec)
T = 220–250 Vdc (5-sec)
P = 220–240 Vac (5-sec)
L = 24 Vdc (5-sec)
K = 48 Vdc (5-sec)

Spring Release Device (SRD)

N = None
A = 110–127 Vac/Vdc
R = 208–240 Vac/Vdc
C = 24 Vdc
H = 48 Vdc

Undervoltage Release (UVR) or 2nd Shunt Trip (ST)

N = None
A = UVR (110–127 Vac)
R = UVR (208–240 Vac)
C = UVR (24 Vdc)
H = UVR (48 Vdc)
E = UVR (110–125 Vdc)
F = UVR (220–250 Vdc)
G = UVR (32 Vdc)
X = UVR (380–415 Vac)
J = UVR (480 Vac)
K = UVR (600 Vac)
1 = 2nd ST (110–127 Vac/Vdc)
2 = 2nd ST (208–250 Vac/Vdc)
3 = 2nd ST (24 Vdc)
4 = 2nd ST (48 Vdc)
B = 2nd ST (110–127 Vac/Vdc 100% duty)
O = 2nd ST (220–250 Vac/Vdc 100% duty)
I = 2nd ST (24 Vdc 100% duty)
Q = 2nd ST (48 Vdc 100% duty)

Future Use
X = All ACBs

ACB Shipping Instructions

A = Fixed ACB with door kit
A = D/O ACB only without door kit
W = D/O ACB in cassette (pre-wired and shutters)
Double frame D/O ACBs ship without cassette

Latch Check Switch/Trip Unit Metering Voltage Connection for Digitrip 1150 Trip Unit

Latch Check Switch	1150 Voltage Connection
N = None	Upper terminals
L = LCS wired to SRD	Upper terminals
C = LCS wired external	Upper terminals

Operations Counter and/or Keylock Provisions

	Counter	Keylock Provisions
N =	No counter	No locks
K =	No counter	Kirk lock
C =	No counter	Castell lock
R =	No counter	Ronis lock
A =	Counter	No lock
Y =	Counter	Kirk lock
L =	Counter	Castell lock
H =	Counter	Ronis lock

Padlock Provisions for Blocking Close and/or Open ACB Manual Pushbuttons

N = None
P = Plastic (block close and open)

Bell Alarms Switch (OTS) with 2a/2b Contacts and/or Mechanical Trip Indicator

	OTS 2a/2b	Trip Indicator
E =	No OTS	No indicator ²
L =	With OTS	With interlocked indicator

Auxiliary Switch

N = None
4 = 4A/4B
6 = 6A/6B

* IZM series MWI type air circuit breaker will be phased-out by Dec 31st 2015 and be replaced by IZMX series*

Note

1 Exclusionary rules apply. Refer to price list. Confirm all final part numbers with Eaton. Format structure subject to modifications and additions without notice.
2 Position 20, ACB (with digitrip) must choose "L", switch-disconnector must choose "E".

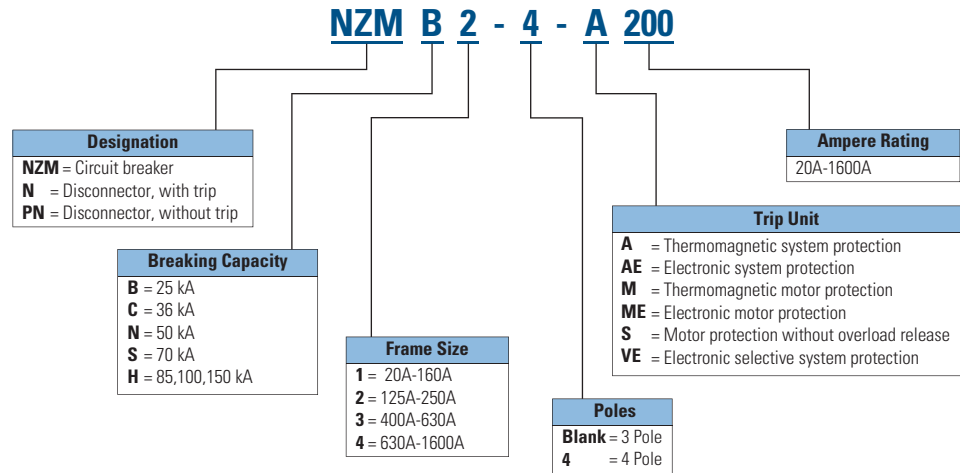
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Molded Case Circuit Breaker

NZM Series



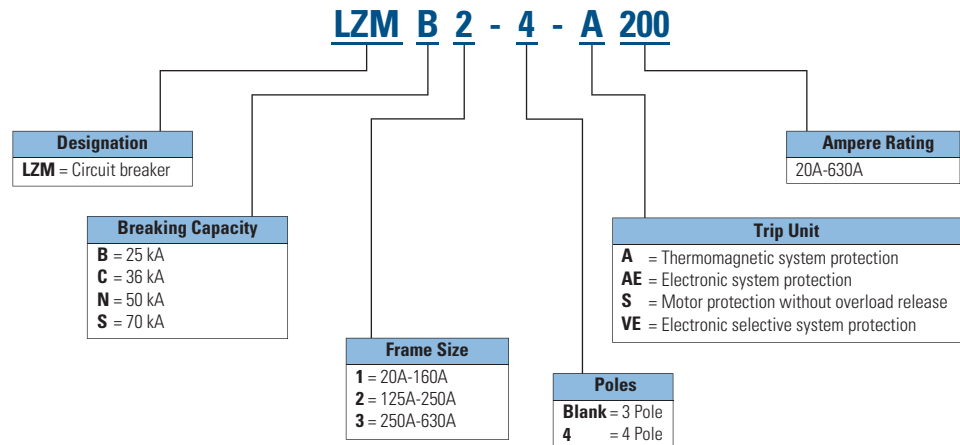
NZM Series Molded Case Circuit Breaker



LZM Series



LZM Series Molded Case Circuit Breaker



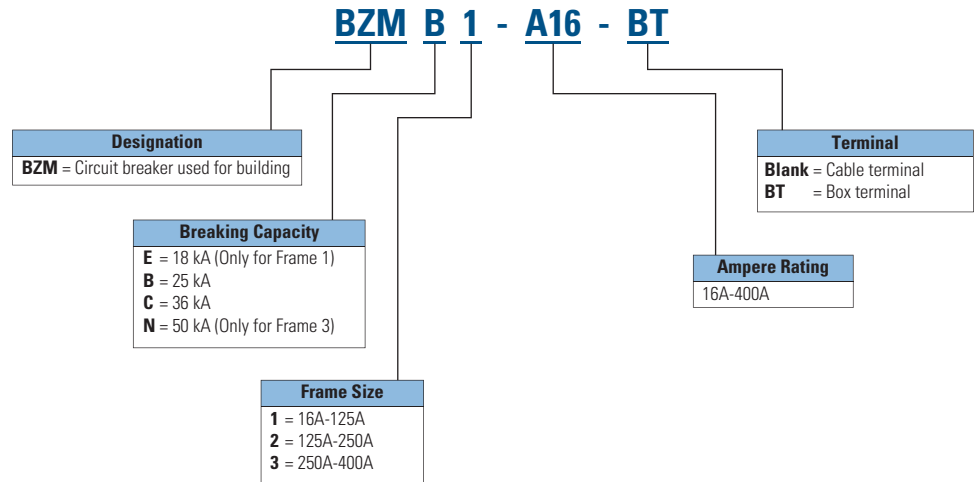
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Molded Case Circuit Breakers / Miniature Circuit Breakers

BZM Series



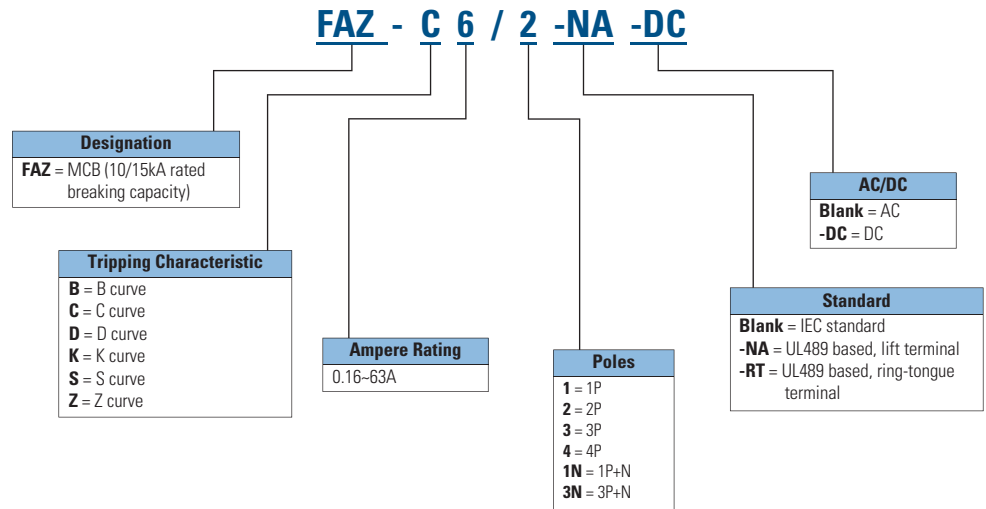
BZM Series Molded Case Circuit Breaker



FAZ Miniature Circuit Breaker



FAZ Miniature Circuit Breaker



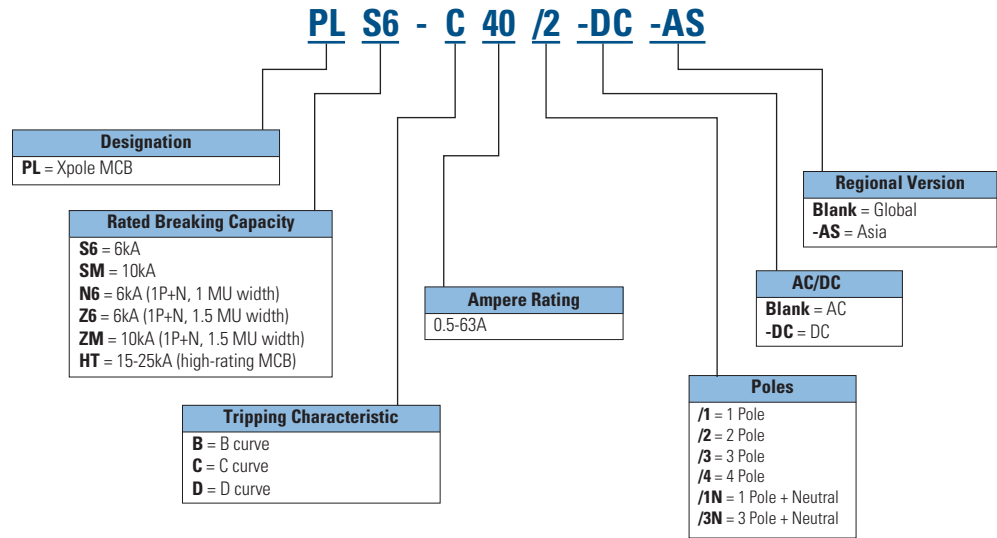
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Miniature Circuit Breakers

Xpole Miniature Circuit Breaker



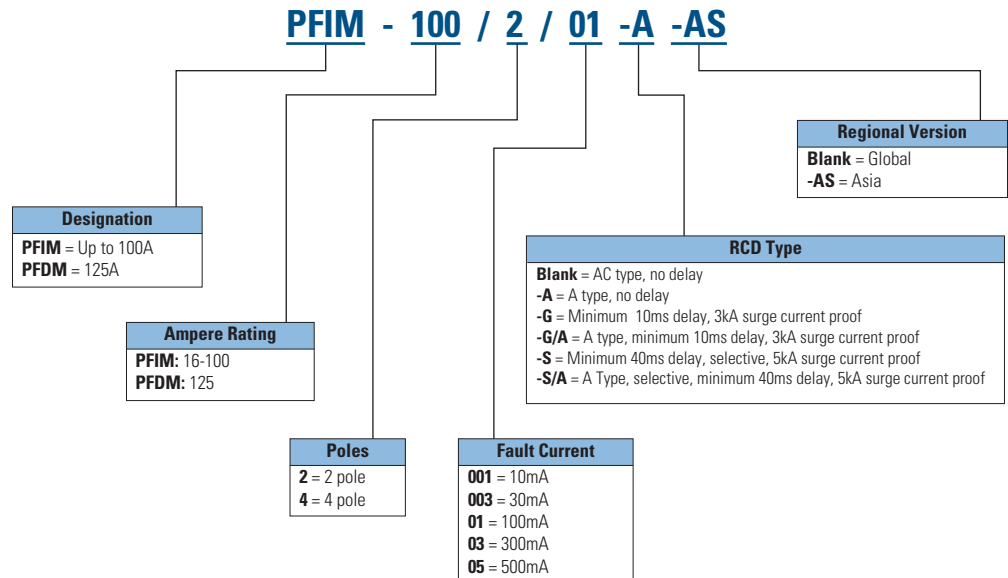
Xpole Miniature Circuit Breaker



Xpole Residual Current Device (RCCB)



Xpole Residual Current Device (RCCB)



Circuit Protection & Control Products Quick Selection Guide

Miniature Circuit Breakers

Xpole Residual Current Device (RCBO)



Xpole Residual Current Device (RCBO)

PKNM - 40 / 1N / C / 01 -A -AS

Designation
PFL10 = 10kA, 1P+N, ELM type
PFL9 = 6kA, 1P+N, ELM type
PLD10 = 10kA, 1P+N, ELN type
PLD9 = 6kA, 1P+N, ELN type
PKNM = 10kA, 1P+N, ELM type
eRB6 = 6kA, 1P+N(18mm width), ELN type
eRBM = 10kA, 1P+N(18mm width), ELN type
ED6 = 6kA, 1P+N, ELN type

Poles
1N = 1P+N

Regional Version
Blank = Global
-AS = Asia

RCD Type
Blank = AC type, no delay
-A = A type, no delay

Ampere Rating
2-45A

Tripping Characteristic
B = B curve
C = C curve
D = D curve

Fault Current
001 = 10mA
003 = 30mA
01 = 100mA
03 = 300mA

Xpole Residual Current Device (RCD)



Xpole Residual Current Device (RCD)

PBSM - 40 4 / 003 -A

Designation
PBSM = ELM type, 2/3/4 poles, 40/63A
PBHT = ELM type, 2/4 poles, 80/125A
PDB = ELN type, 2/3/4 poles, 40/63A
EDB = ELN type, 2/3/4 poles, 40/63A
EB6 = ELM type, 2/3/4 poles, 40/63A

Ampere Rating
40, 63, 80, 125

Poles
2 = 2 pole
3 = 3 pole
4 = 4 pole

RCD Type
Blank = AC type, no delay
-A = A type, no delay
-G = Minimum 10ms delay, 3kA surge current proof
-S = Minimum 40ms delay, selective, 5kA surge current proof
-S/A = A Type, selective, minimum 40ms delay, 5kA surge current proof

Fault Current
003 = 30mA
01 = 100mA
03 = 300mA
05 = 500mA
1 = 1000mA

Circuit Protection & Control Products Quick Selection Guide

Miniature Circuit Breakers

Xpole Main Load Disconnecter Switch (Isolator)



Xpole Main Load Disconnecter Switch (Isolator)

IS - 40 / 1

Designation
IS = Isolator

Ampere Rating
16, 20, 25, 32, 40, 63, 80, 100, 125A

Poles
1 = 1 pole
2 = 2 pole
3 = 3 pole
4 = 4 pole

Xpole Z-R Installation Relay



Xpole Z-R Installation Relay

Z - R230 / S

Designation
Z = Installation relay

Control Voltage	
AC	DC
R12 = 12 Vac	R11 = 12 Vdc
R24 = 24 Vac	R23 = 23 Vdc
R48 = 48 Vac	R109 = 110 Vdc
R110 = 110 Vac	
R230 = 230 Vac	

Auxiliary Contact	
S	= 1NO
O	= 1NC
SS	= 2NO
SO	= 2NC
OO	= 2NC
2S2O	= 2NO + 2NC
3S1O	= 3NO + 1NC

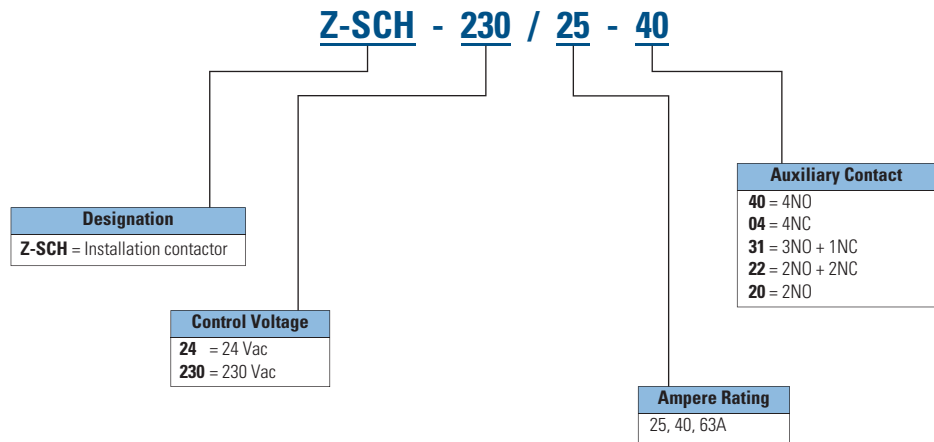
Circuit Protection & Control Products Quick Selection Guide

Miniature Circuit Breakers / Surge Protection Device

Xpole Z-SCH Installation Contactor



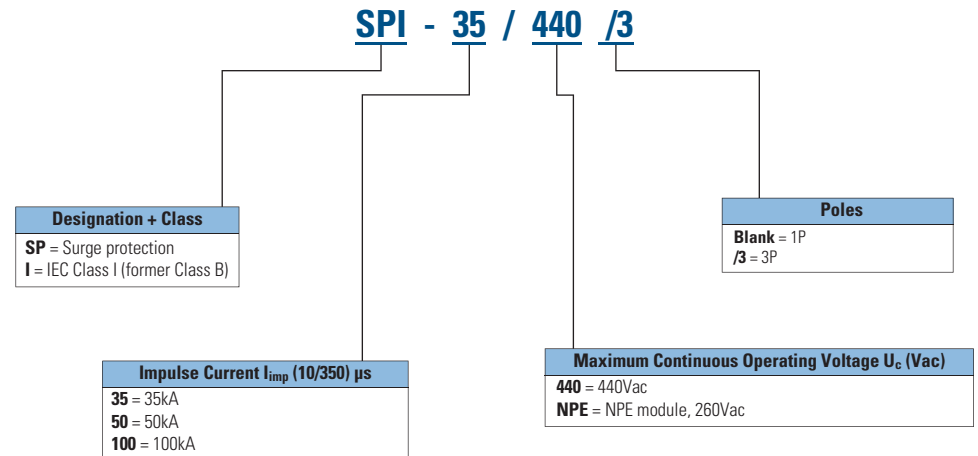
Xpole Z-SCH Installation Contactor



Surge Protection Device (SPD)—SPI



Surge Protection Device (SPD)—SPI



Circuit Protection & Control Products Quick Selection Guide

Surge Protection Device

Surge Protection Device (SPD)— SPB/SPC/SPD/SPE



Surge Protection Device (SPD)—SPB/SPC/SPD/SPE

SP BT12 - 280 -3+NPE /BB

Designation

SP = Surge protection

Class

BT12 = I+II combined type (12.5kA 10/350 μ s)
CT2 = Class II(20kA 8/20 μ s)
ET2 = Class II(10kA 8/20 μ s)
DT3 = Class III

Maximum Continuous Operating Voltage U_c (Vac)

BT12: 280
CT2: 75, 135, 175, 280, 335, 385, 460, 580
ET2: 280, 335
DT3: 280, 335

Whether Supplied With Busbar

Blank = No busbar
/BB = Supplied with busbar

Poles

Blank = Insert module
/1 = 1P
/2 = 2P
/3 = 3P
/4 = 4P
-1+NPE = 1P+N
-3+NPE = 3P+N

NSP Series SPD



NSP Series Surge Protection Device

NSP 30 M 4 385 TNS R

Designation

NSP = New surge protection device

Nominal Discharge Current (8/20) μ s I_n

20 = I_n :20kA, I_{max} : 40kA
30 = I_n :30kA, I_{max} : 60kA
40 = I_n :40kA, I_{max} : 80kA
60 = I_n :60kA, I_{max} : 120kA

Technology Type

M = MOV
S = Dual-MOV or Spark-gap
G = Gas discharge tube
H = Hybrid type

Module Number

Blank = Insert module
1 = 1P
2 = 2P or 1P+N
3 = 3P
4 = 4P or 3P+N

Remote Signaling

Blank = None
R = With remote signaling

System Power Type

IEC = Single module
TN = TN system (2P)
TNC = TNC system (3P)
TNS = TNS system (4P)
TT = TT system (1P+N or 3P+N)

Maximum Continuous Operating Voltage U_c (Vac)

385 = 385Vac

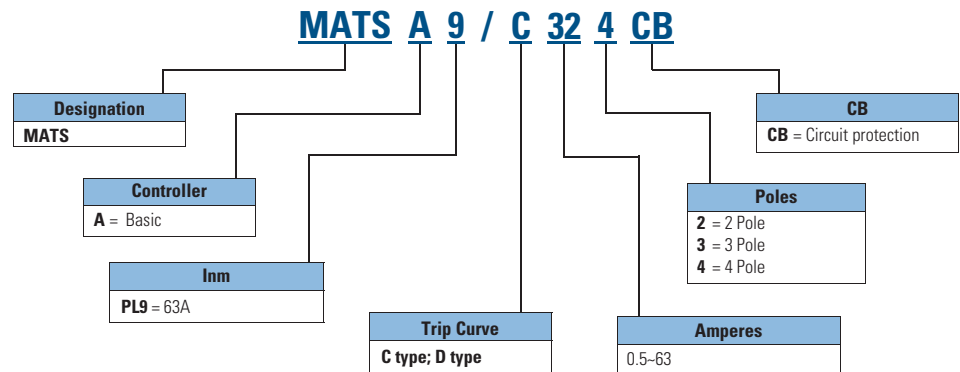
Circuit Protection & Control Products Quick Selection Guide

Automatic Transfer Switch

MATS Series ATS



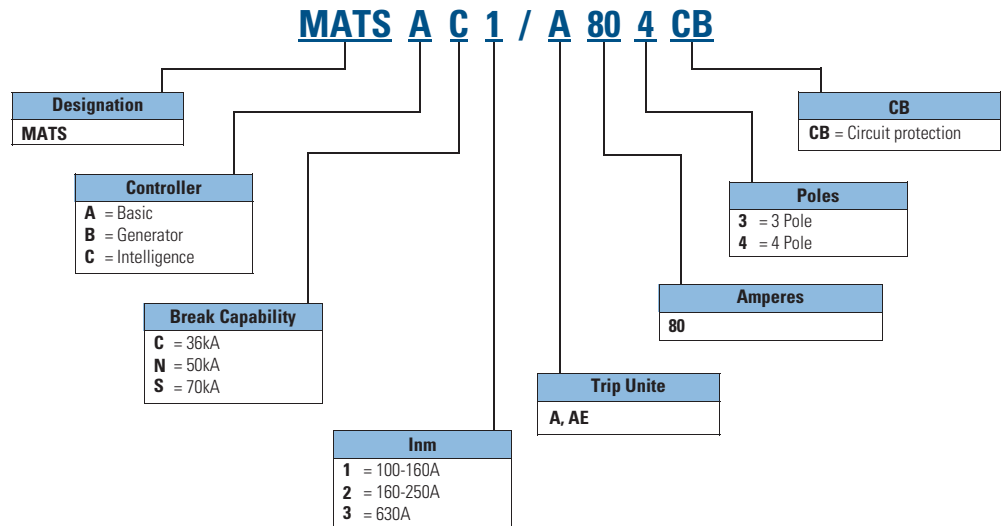
MATS Automatic Transfer Switch (MCB based)



MCB Selection Guide

- Breaker: PL9, 6kA;
- Trip curve: C type or D type;
- Amperes: 0.5, 1, 2, 3, 4, 6, 10, 13, 16, 20, 25, 32, 40, 50, 63A;
- Controller: A type only.

MATS Automatic Transfer Switch (MCCB based)



MCB Selection Guide

- Controller: A, B, C;
- Break: LZM;
- Inm: 1: 160A, 2: 250A, 3: 630A;
- Break capability: C-36kA, N-50kA, S-70kA;
- Protective unite: A: Thermomagnetic trip;
AE: Electronic tripping device;
- Amperes: 1: 20, 25, 32, 40, 50, 63, 80, 100, 125, 160A;
2: 160, 200, 250A;
3: 320, 400, 500, 630A.

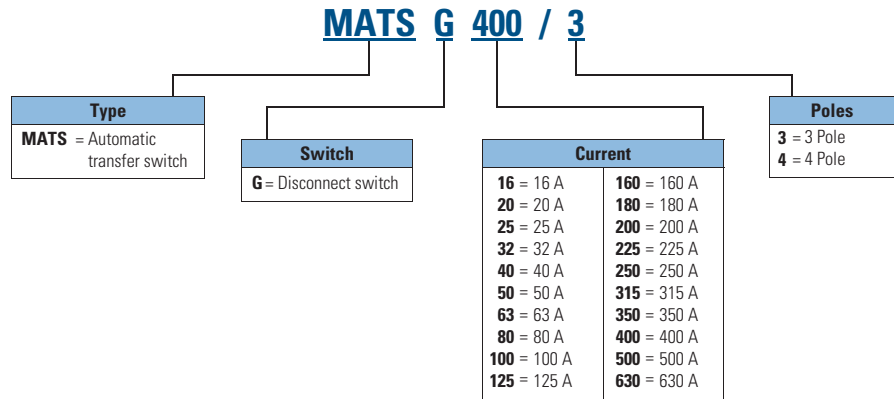
Circuit Protection & Control Products Quick Selection Guide

Automatic Transfer Switch

MATS Series Automatic Transfer Switch (Disconnect based)



MATS Series Automatic Transfer Switch (Disconnect based)



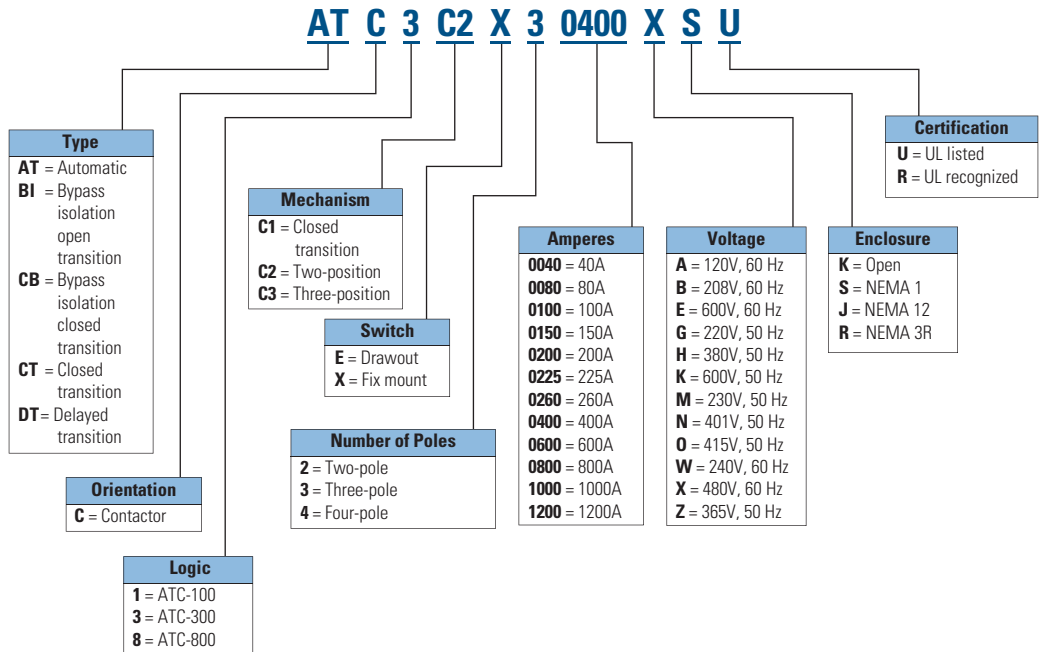
Circuit Protection & Control Products Quick Selection Guide

Automatic Transfer Switch

Contactor-based Automatic Transfer Switch



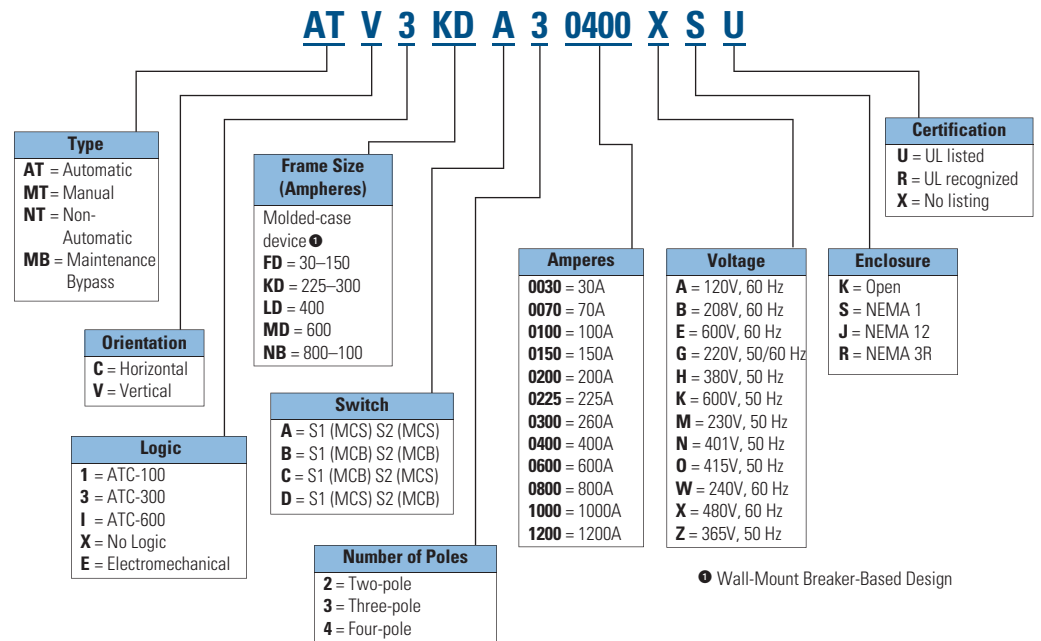
Contactor-based Automatic Transfer Switch



Industrial Molded-Case Transfer Switch



Industrial Molded-Case Transfer Switch



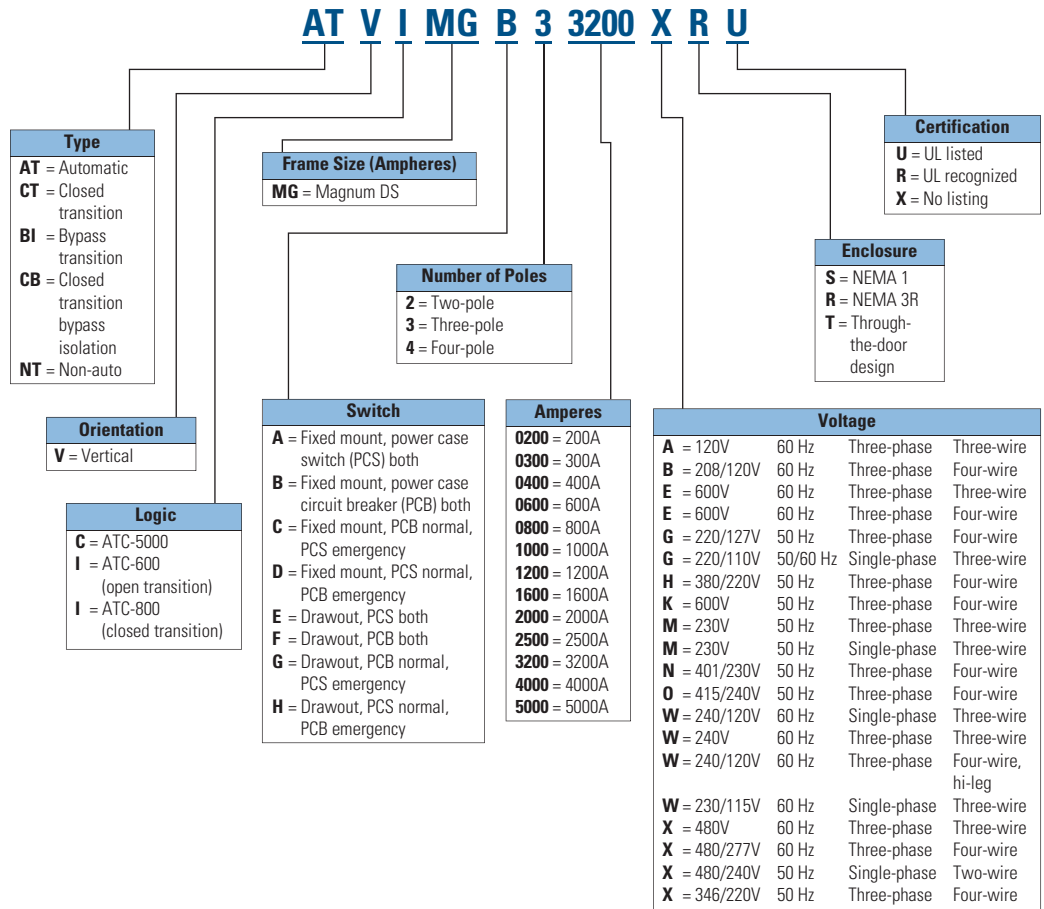
Circuit Protection & Control Products Quick Selection Guide

Automatic Transfer Switch

Magnum-based Transfer Switches



Magnum-based Transfer Switches



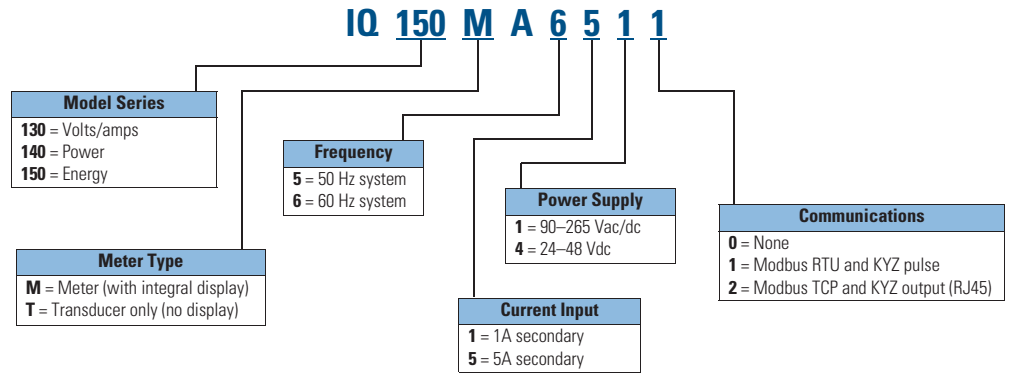
Circuit Protection & Control Products Quick Selection Guide

Metering Devices

IQ130/140/150 Meter



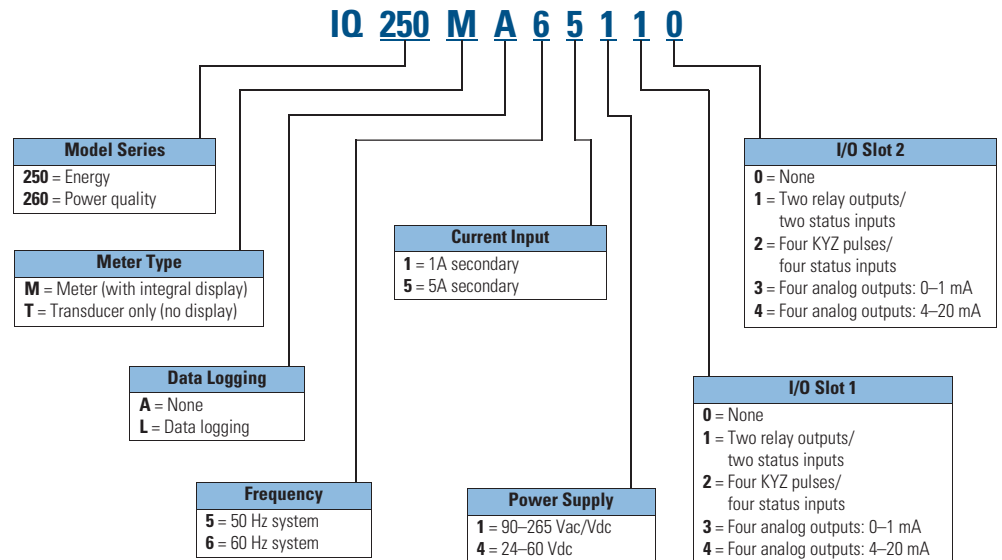
IQ130/140/150 Meter



IQ 250/260 Meter



IQ 250/260 Meter



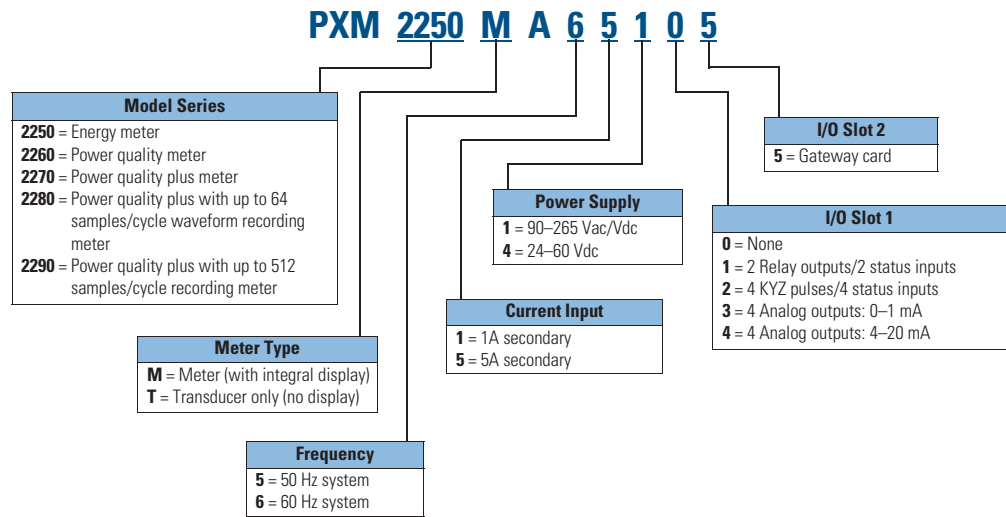
Circuit Protection & Control Products Quick Selection Guide

Metering Devices

Power Xpert Meter 2000



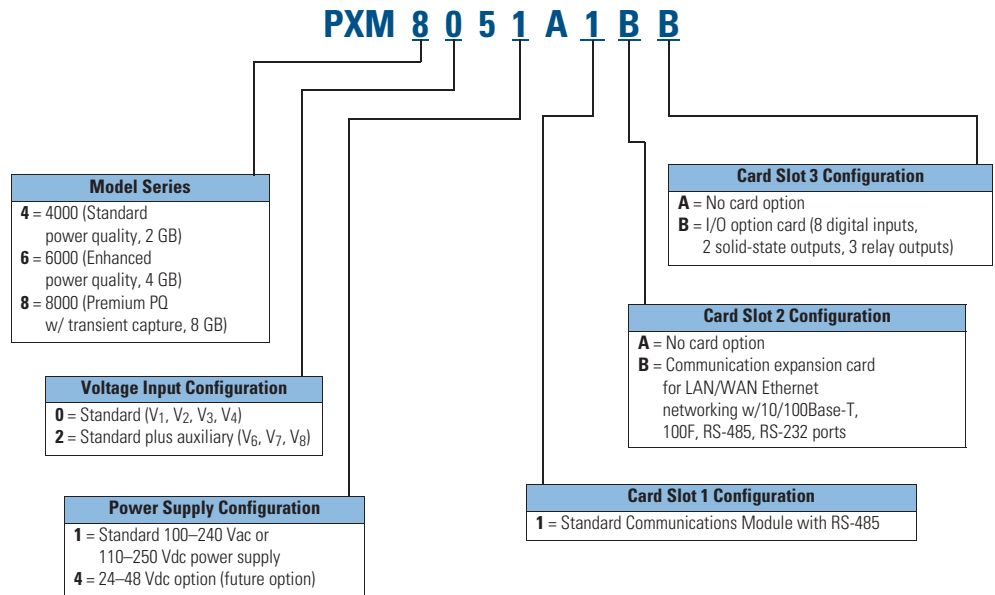
Power Xpert Meter 2000



Power Xpert Meter 4000/6000/8000



Power Xpert Meter 4000/6000/8000



Example 1: **PXM8251A5BB** (PXM 8000 meter, w/ VAUX, std. pwr., com. exp. and I/O cards)

Example 2: **PXM6251A6BA** (PXM 6000 meter, w/ VAUX, std. pwr., com. exp. card)

Circuit Protection & Control Products Quick Selection Guide

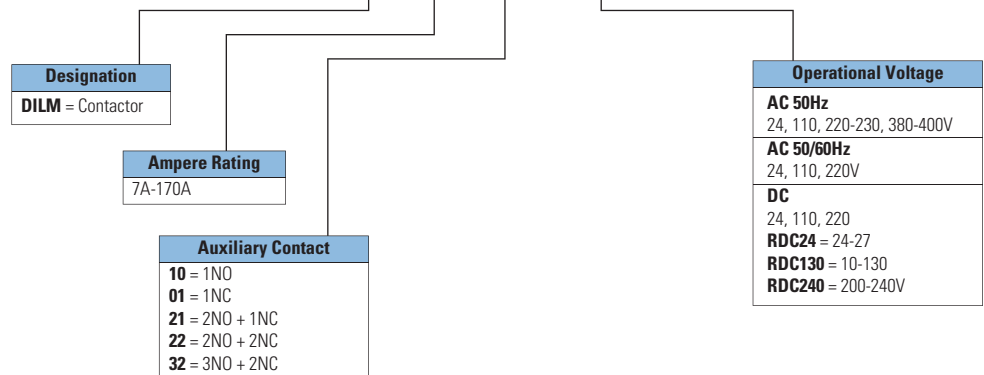
xStart Series Motor Control & Protection

DILM Contactor (up to 170A)



DILM Contactor (up to 170A)

DILM 7 - 10 (24 VDC)

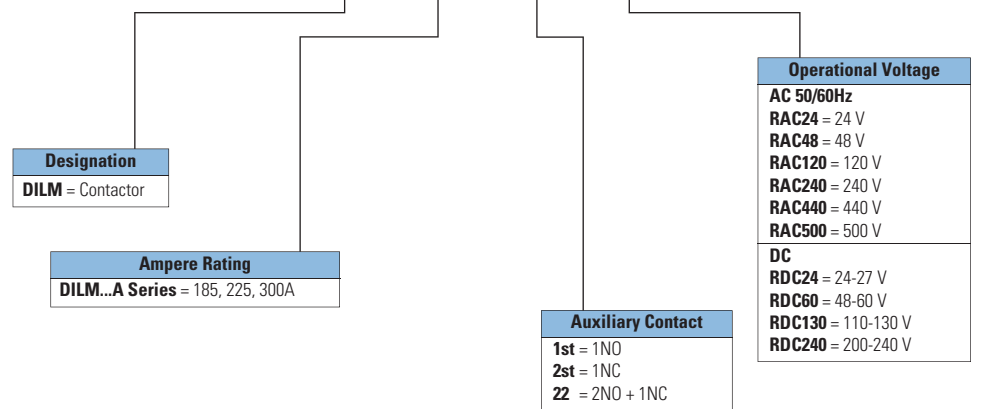


DILM Large Contactor (185~300A)



DILM Large Contactor (185~300A)

DILM 185A / 22 (RAC24)



Circuit Protection & Control Products Quick Selection Guide

xStart Series Motor Control & Protection

DILM/DILH Large Contactor



DILM/DILH Large Contactor

DILM 400 - S / 22 (110-120 V 50/60 Hz)

Designation
DILM, DILH = Large contactor

Ampere Rating
DILM Series = 400 to 820A
DILH Series = (AC-1)1400 to 2600A

Product Family
Blank = Advanced type
S = Standard type

Auxiliary Contact
1st = 1NO
2st = 1NC
22 = 2NO + 1NC

Operational Voltage	
AC 50/60Hz	110-120 V, 220-240 V
AC 40-60Hz	RAC500 = 250-500 V
DC	RDC48 = 24-48 V
AC/DC	RA110 = 48-110 V 40-60 Hz/ 48-110 DC
	RA250 = 110-250 V 40-60 Hz/ 110-250 DC
	RAW250 = 230-250 AC/DC

ZB Overload Relay



ZB Overload Relay

ZB 12 - 10

Designation
ZB = Overload relay

Frame Size
12: Frame I = 0.1-16A
32: Frame II = 0.1-38A
65: Frame III = 6-75A
150: Frame IV = 25-175A

Ampere Rating
0.1A-175A

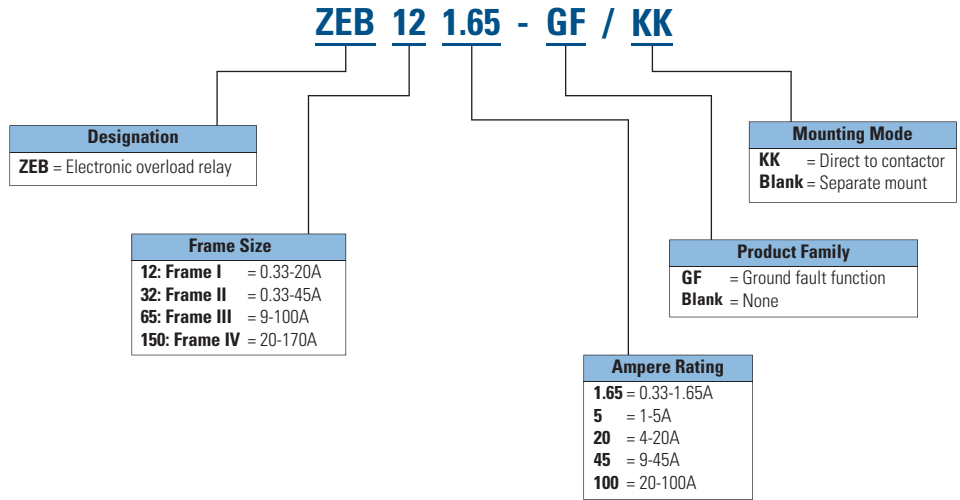
Circuit Protection & Control Products Quick Selection Guide

xStart Series Motor Control & Protection

ZEB Overload Relay



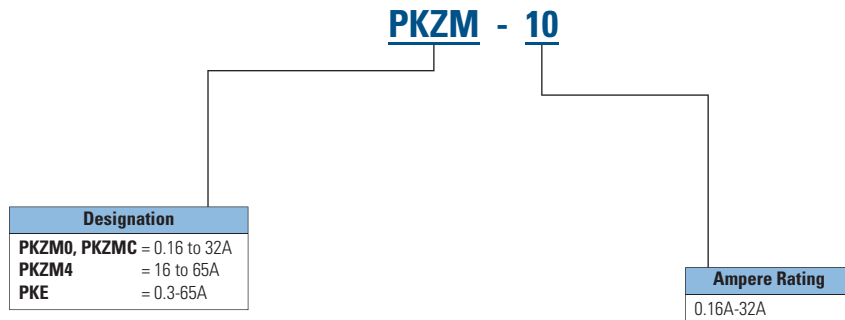
ZEB Overload Relay



PKZ Motor Protective Circuit Breaker



PKZ Motor Protective Circuit Breaker



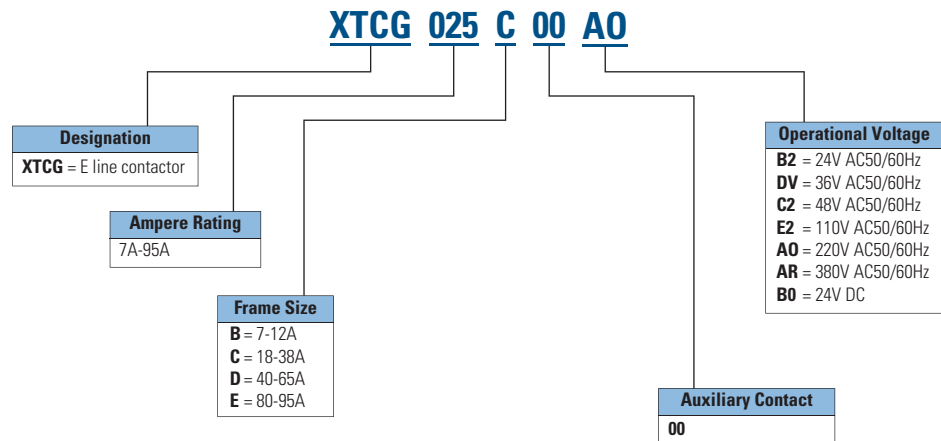
Circuit Protection & Control Products Quick Selection Guide

E Line Series Motor Control & Protection

XTCG Contactor



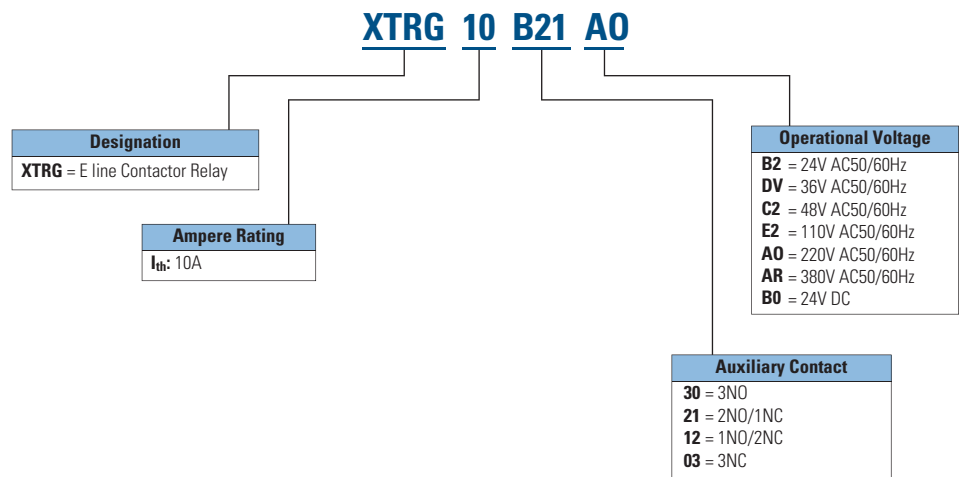
XTCG Contactor



XTRG Contactor Relay



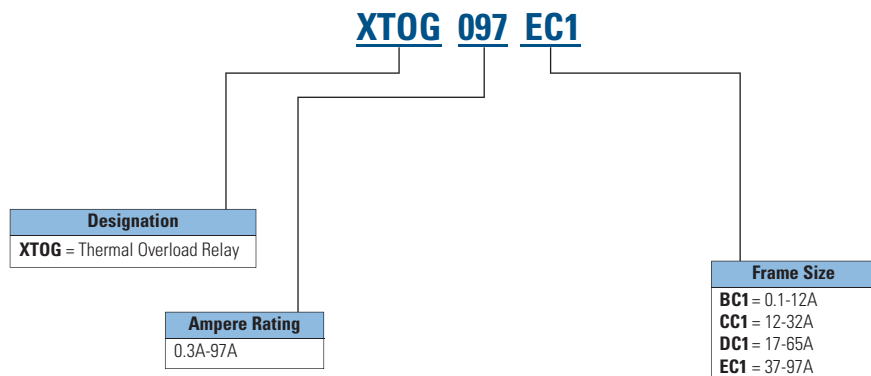
XTRG Contactor Relay



XTOG Overload Relay



XTOG Overload Relay



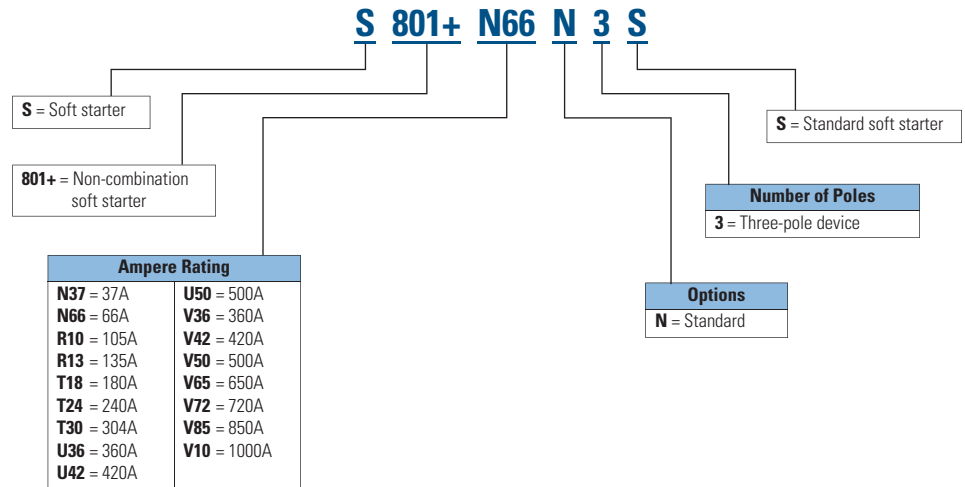
Circuit Protection & Control Products Quick Selection Guide

Soft Start Controllers

S801+ Open Soft Starters



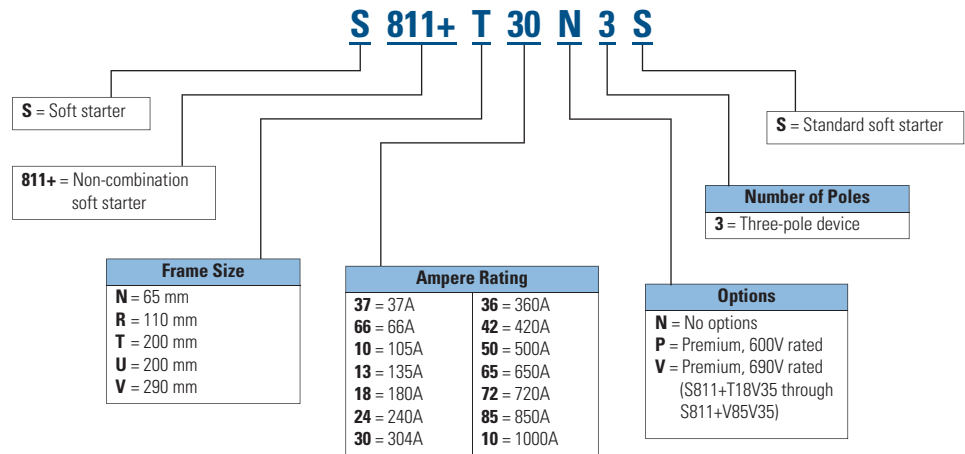
S801+ Open Soft Starters



S811+ Open Soft Starters



S811+ Open Soft Starters



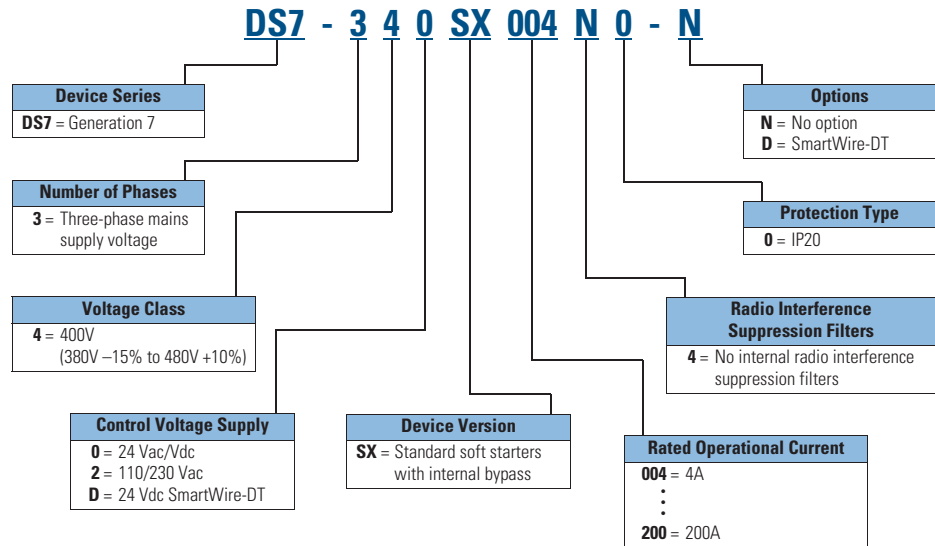
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Soft Start Controllers

DS7 Soft Start Controllers



DS7 Soft Start Controllers



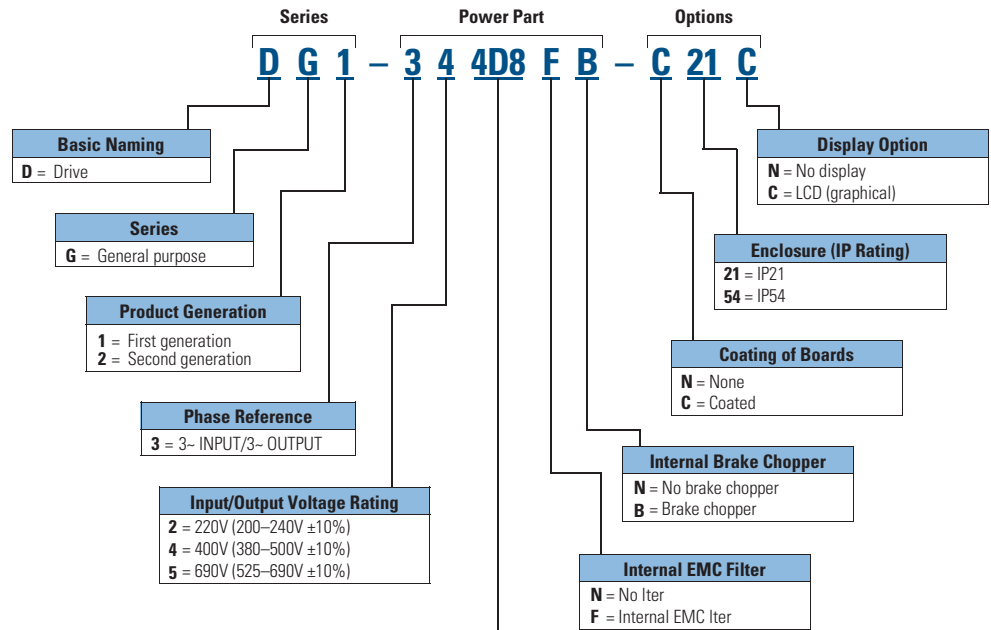
Circuit Protection & Control Products Quick Selection Guide

Adjustable Frequency Drives

DG1 General Purpose Drive



DG1 General Purpose Drive



Output Current Rating (CT)		
208–240V	380–500V	525–690V
3D7 = 3.7A, 0.55 kW, 0.75 hp	2D2 = 2.2A, 0.75 kW, 1 hp	3D3 = 3.3A, 1.5 kW, 2 hp
4D8 = 4.8A, 0.75 kW, 1 hp	3D3 = 3.3A, 1.1 kW, 1.5 hp	4D5 = 4.5A, 2.2 kW, 3 hp
6D6 = 6.6A, 1.1 kW, 1.5 hp	4D3 = 4.3A, 1.5 kW, 2 hp	7D5 = 7.5A, 3.7 kW, 5 hp
7D8 = 7.8A, 1.5 kW, 2 hp	5D6 = 5.6A, 2.2 kW, 3 hp	010 = 10A, 5.5 kW, 7.5 hp
011 = 11A, 2.2 kW, 3 hp	7D6 = 7.6A, 3 kW, 5 hp	013 = 13.5A, 7.5 kW, 10 hp
012 = 12.5A, 3 kW, 5 hp (VT)	9D0 = 9A, 4 kW, 7.5 hp (VT)	018 = 18A, 11 kW, 15 hp
017 = 17.5A, 3.7 kW, 5 hp	012 = 12A, 5.5 kW, 7.5 hp	022 = 22A, 15 kW, 20 hp
025 = 25A, 5.5 kW, 7.5 hp	016 = 16A, 7.5 kW, 10 hp	027 = 27A, 18 kW, 25 hp
031 = 31A, 7.5 kW, 10 hp	023 = 23A, 11 kW, 15 hp	034 = 34A, 22 kW, 30 hp
048 = 48A, 11 kW, 15 hp	031 = 31A, 15 kW, 20 hp	041 = 41A, 30 kW, 40 hp
061 = 61A, 15 kW, 20 hp	038 = 38A, 18 kW, 25 hp	052 = 52A, 37 kW, 50 hp
075 = 75A, 18.5 kW, 25 hp	046 = 46A, 22 kW, 30 hp	062 = 62A, 45 kW, 60 hp
088 = 88A, 22 kW, 30 hp	061 = 61A, 30 kW, 40 hp	080 = 80A, 55 kW, 75 hp
114 = 114A, 30 kW, 40 hp	072 = 72A, 37 kW, 50 hp	100 = 100A, 75 kW, 100 hp
143 = 143A, 37 kW, 50 hp	087 = 87A, 45 kW, 60 hp	125 = 125A, 90 kW, 125 hp
170 = 170A, 45 kW, 60 hp	105 = 105A, 55 kW, 75 hp	144 = 144A, 110 kW, 150 hp
211 = 211A, 55 kW, 75 hp	140 = 140A, 75 kW, 100 hp	208 = 208A, 160 kW, 200 hp
261 = 261A, 75 kW, 100 hp	170 = 170A, 90 kW, 125 hp	
	205 = 205A, 110 kW, 150 hp	
	261 = 261A, 150 kW, 200 hp	

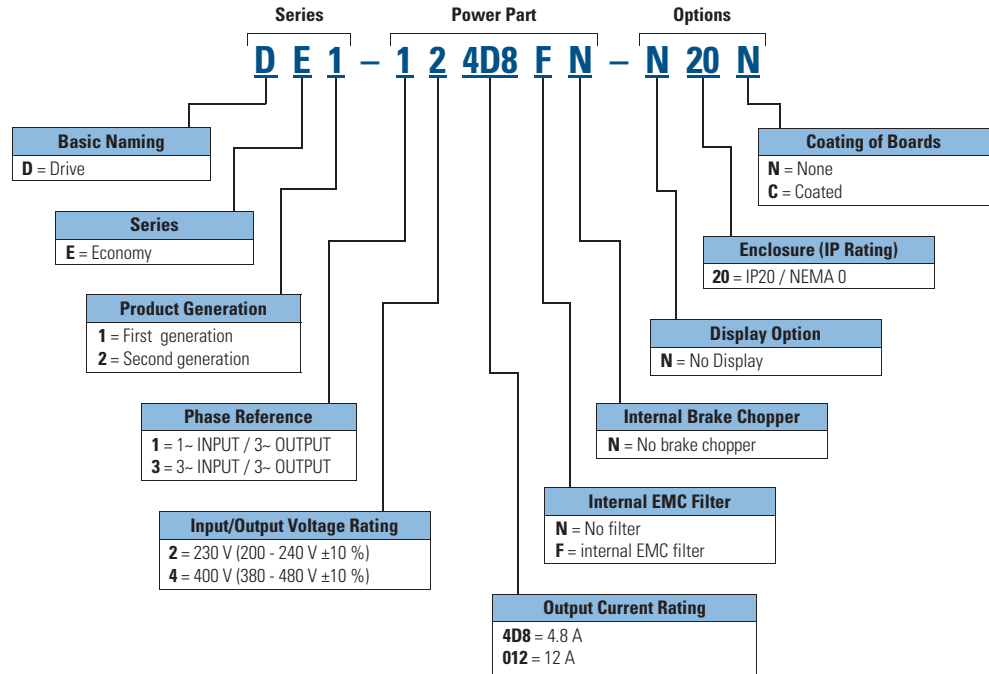
Circuit Protection & Control Products Quick Selection Guide

Adjustable Frequency Drives

DE1 Variable Speed Starter



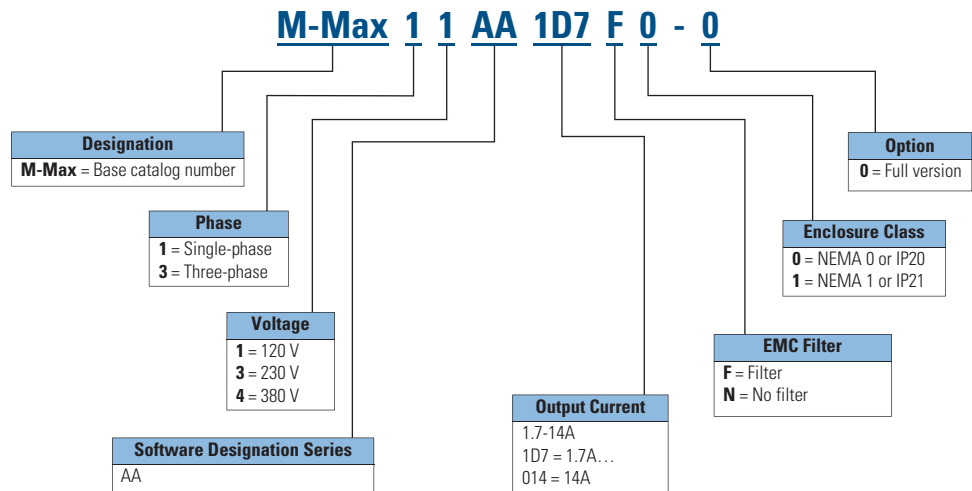
DE1 Variable Speed Starter



M-Max Series Adjustable Frequency AC Drives



M-Max Series Adjustable Frequency AC Drives



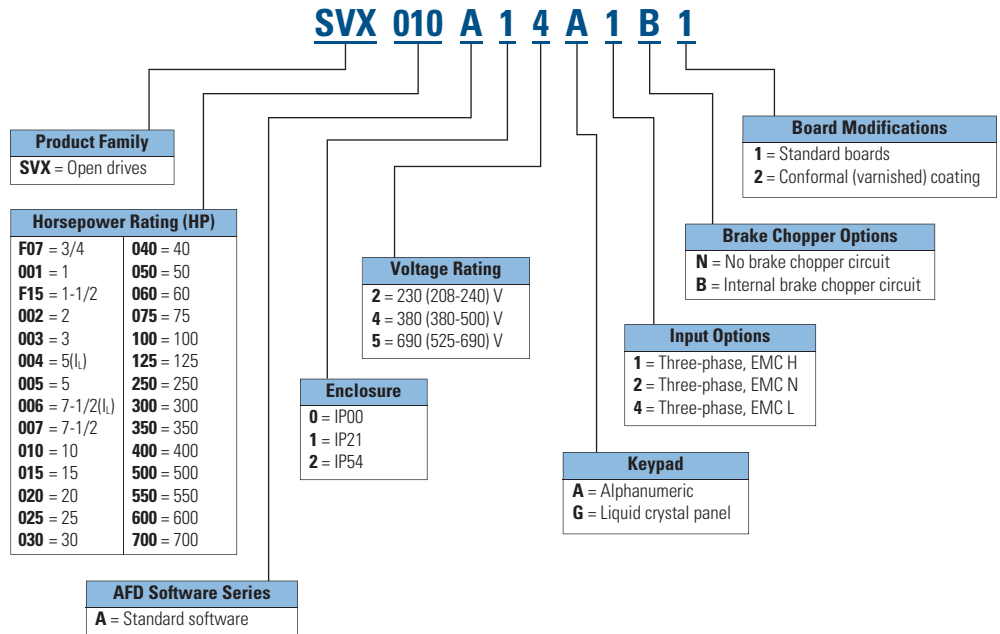
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Adjustable Frequency Drives

SVX9000 Adjustable Frequency Drives



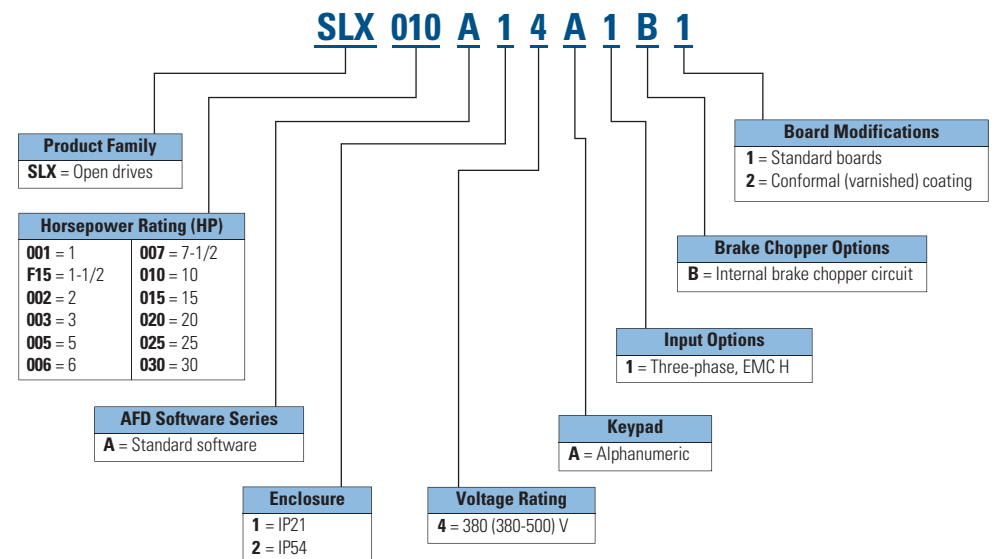
SVX9000 Adjustable Frequency Drives



SLX Adjustable Frequency Drives



SLX Adjustable Frequency Drives



Circuit Protection & Control Products Quick Selection Guide

Adjustable Frequency Drives

SPX9000 Adjustable Frequency Drives



SPX9000 Adjustable Frequency Drives

SPX 010 A 1 4 A 1 B 1

Product Family
SPX = Open drives

Horsepower Rating (HP)	
F07 = 3/4	100 = 100
001 = 1	125 = 125
F15 = 1-1/2	250 = 250
002 = 2	300 = 300
003 = 3	350 = 350
004 = 5(l)	400 = 400
005 = 5	500 = 500
006 = 7-1/2(l)	550 = 550
007 = 7-1/2	600 = 600
010 = 10	700 = 700
015 = 15	800 = 800
020 = 20	900 = 900
025 = 25	H10 = 1000
030 = 30	H12 = 1200
040 = 40	H13 = 1300
050 = 50	H15 = 1500
060 = 60	H16 = 1600
075 = 75	H20 = 2000

Voltage Rating
2 = 230 (208-240) V
4 = 380 (380-500) V
5 = 690 (525-690) V

Enclosure
0 = IP00
1 = IP21
2 = IP54

AFD Software Series
A = Standard software

Board Modifications
1 = Standard boards
2 = Conformal (varnished) coating

Brake Chopper Options
N = No brake chopper circuit
B = Internal brake chopper circuit

Input Options
1 = Three-phase, EMC H
2 = Three-phase, EMC N
4 = Three-phase, EMC L

Keypad
A = Alphanumeric
G = Liquid crystal panel

Circuit Protection & Control Products Quick Selection Guide

Pushbuttons and Indicating Lights

A22 Pushbuttons and Indicating Lights



A22 Pushbuttons and Indicating Lights

A22(M) (1) - (2) / (3) / (4)

A22 Series Pushbuttons
 22-mm pushbuttons
A22 = Front bright ring
A22M = Front dark ring

Lamp Socket Block
F = Bulb elements without resistor
FR = Bulb elements with resistor

Contact Blocks
K10 = 1NO
K01 = 1NC
K11 = 1NO + 1NC
KC/I = Control station
KC11 A/I = 1NO + 1NC/2 NC Control station

Operator Type
Flush Actuator RD = Flush actuator
Illuminated Pushbuttons R LT = Illuminated, flush, momentary RLTH = Illuminated extended momentary RLTR = Illuminated extended maintained
Illuminated Double Operator QDDL = Illuminated double operator
Mushroom Head Pushbuttons RP = Mushroom head pushbuttons RPSR = Key-release mushroom head operator
Non-Illuminated Emergency Stops RPV = Non-illuminated push-pull emergency stop E.STOP HEADER = Emergency stop operator (turn to reset)
Indicating Lights RL = Extended indicator light RLF = Flush indicating light LC = Compact indicating light
Selector Switch RWK1R = 2-position, maintained, 60° RWK1 = 2-position, momentary, 45° RWK1V = 2-position, maintained, 90° RWK3R = 3-position, maintained, 60° RWK3 = 3-position, momentary, 45°
Key-Operated Selector Switches RS = 2-position, maintained, 60° RS3 = 3-position, maintained RS3-KMS1-A4 = 3-position, momentary RS3-KMS1-A2 = 2-position, momentary
Palm Switches FAK-S = 1NO + 1NC FAK-R = 2NC

Button Plate Color
Non-Illuminated Pushbuttons, Flush, Maintained 01 = Black 02 = White 03 = Green 04 = Red 05 = Yellow 06 = Blue 10,11,12,13,14,19,20,32,37,38 = Actuator with symbol X = No plate
Illuminated Pushbuttons WS = White GN = Green RT = Red GE = Yellow WS11 = White with symbol
Double Actuator Pushbuttons With Indicator Light 11/10 = Green / Red
Mushroom Head Pushbuttons GN11 = Green with symbol RT10 = Red with symbol
Indicating Lights WS = White GN = Green RT = Red DE = Yellow BL = Blue
Compact Indicator W = White G = Green R = Red Y = Yellow

Note:

Contact block Catalog Number Selection
 A22-EK10(C) = 1 Normal open contact
 A22-EK10(C) = 1 Normal closed contact
 A22-EC11 = 1 Normal open contact, 1 Normal closed contact
 A22-EC20 = 2 Normal open contact
 A22-EC02 = 2 Normal closed contact

Circuit Protection & Control Products Quick Selection Guide

Pushbuttons and Indicating Lights

M22 Pushbuttons and Indicating Lights



M22 Pushbuttons and Indicating Lights

M 22 (S) - [] - [] / []

Designation
M = M series pushbuttons

Frame Size
22 = 22-mm pushbuttons

Product Family
Blank = Silver
S = Black

Contact Blocks
K10 = 1NO
K01 = 1NC
K11 = 1NO + 1NC
K20 = 2NO
KC02/IY = Emergency-stop button (1NO + 1NC)
KC02/IY = Emergency-stop button (2NC)

Button Plate Color

Flush, Extended, Mushroom Head Pushbuttons
S = Black
S-XO = ⊙ (Black)
W = White
W-XI = ⊙ (White)
R = Red
R-XO = ⊙ (Red)
G = Green
G-XI = ⊙ (Green)
Y = Yellow
B = Blue

Illuminated Selector Switches, Illuminated Pushbuttons, Illuminated Selector Switches
W = White
R = Red
G = Green
Y = Yellow
B = Blue

Operator Type
Non-Illuminated Pushbuttons, Flush, Maintained D = Flush momentary DR = Flush maintained
Non-Illuminated Pushbuttons, Extended, Maintained DH = Extended momentary DRH = Extended maintained
Mushroom Head Pushbuttons DP = Non-illuminated momentary mushroom head pushbutton DRP = Non-illuminated maintained mushroom head pushbutton
Non-Illuminated Emergency Stops PV = Non-illuminated push-pull emergency stop PVL = Illuminated push-pull emergency stop PVT = Non-illuminated twist-to-release emergency stop PVLT = Illuminated twist-to-release emergency stop PVS = Non-illuminated keyed release (red operator only)
Double Pushbuttons DDL = Extended buttons and light
Illuminated Pushbuttons DL = Illuminated, flush, momentary DRL = Illuminated, flush, maintained DLH = Illuminated extended momentary DRLH = Illuminated extended maintained
Illuminated Selector Switches WLK = Illuminated knob type momentary, two-position WRLK = Two-position, maintained WLK3 = Illuminated knob type momentary, three-position WRLK3 = Three-position, maintained
Indicating Lights L = Flush indicating light LH = Extended indicator light
Non-Illuminated Selector Switches W = Momentary rotary WR = Maintained rotary WK = Momentary knob WRK = Maintained knob WKV = Maintained V-position knob W3 = 3-position, momentary WR3 = 3-position, maintained WK3 = 3-position, momentary WRK3 = 3-position, maintained WR4 = 4-position, maintained WRK4 = 4-position, maintained D4 = Four-way pushbutton, momentary, non-interlocked WJ = Joystick, momentary WRJ = Joystick, maintained
Key-Operated Selector Switches WS = Two-position, momentary WRS = Two-position, maintained WS3 = Three-position, momentary WRS3 = Three-position, maintained

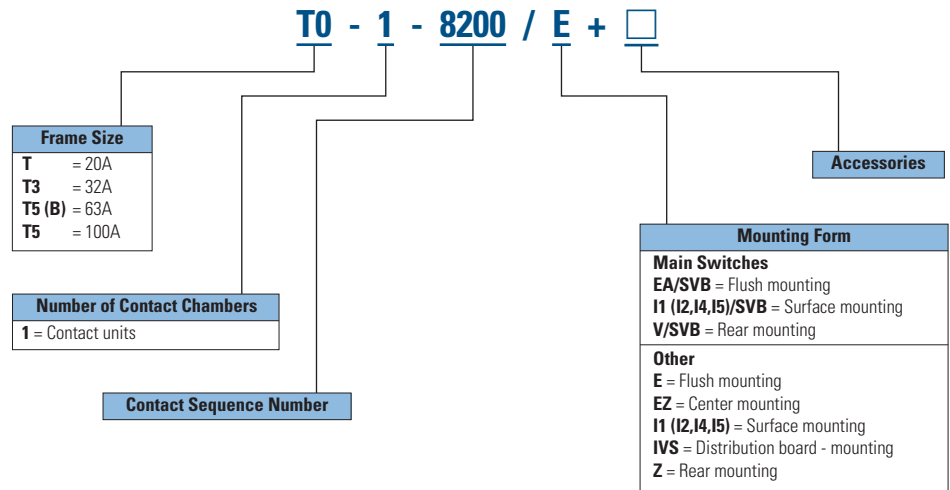
Circuit Protection & Control Products Quick Selection Guide

Cam Switches / Switch-disconnectors

T Cam Switches



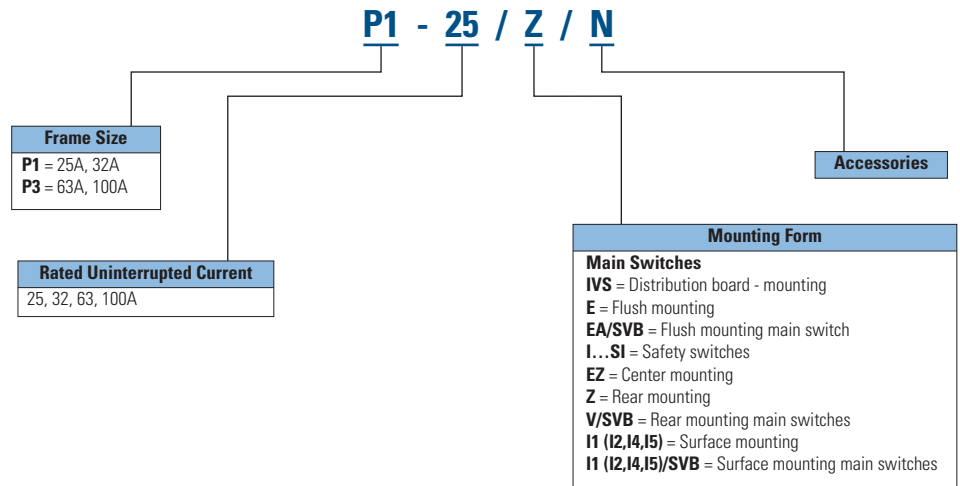
T Cam Switches



P Switch-disconnectors



P Switch-disconnectors



Circuit Protection & Control Products Quick Selection Guide

Position Switches

LSE-Titan Plastic Electronic Safety Position Switches



LSE-Titan Plastic Electronic Safety Position Switches

LSE - 11

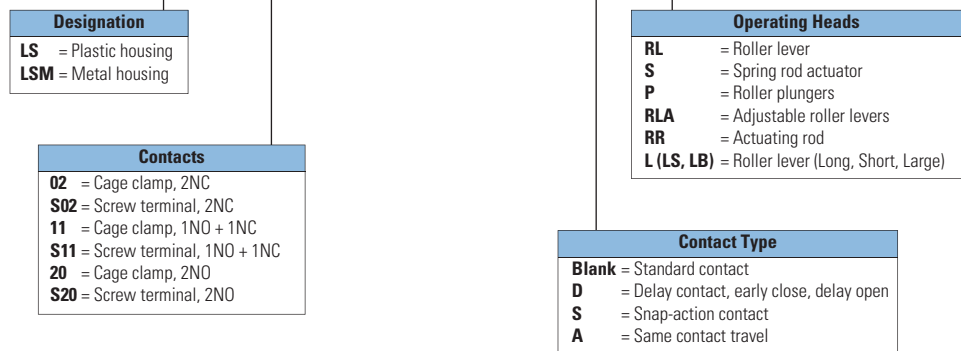


LS-Titan Metal Safety Switches



LS-Titan Metal Safety Switches

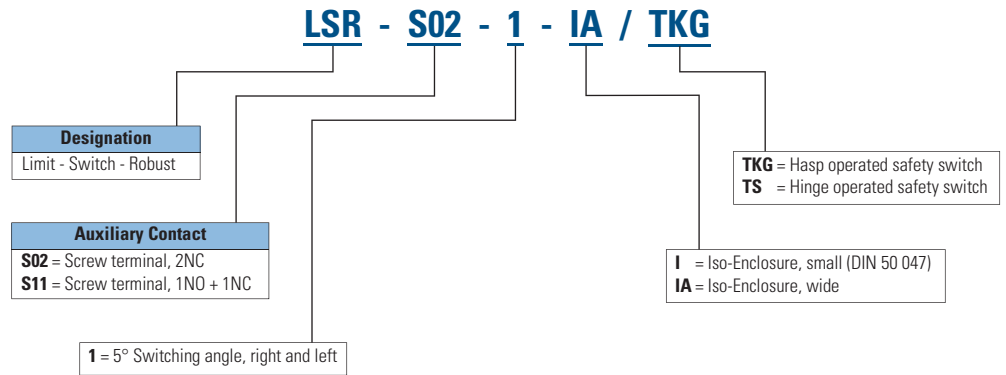
LS - 11 S / RL



LSR-TKG/TS Hasp/Hinge Operated Safety Switch



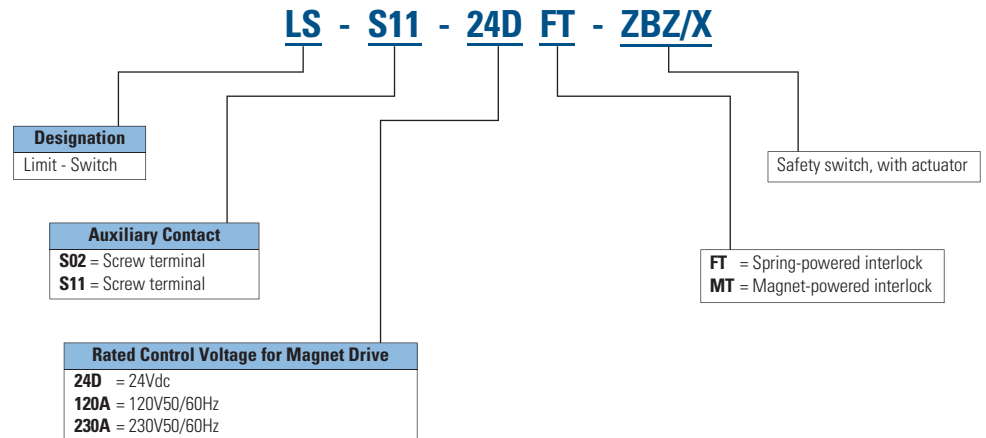
LSR-TKG/TS Hasp/Hinge Operated Safety Switch



LS...ZBZ Solenoid Safety Interlock Switches



LS...ZBZ Solenoid Safety Interlock Switches



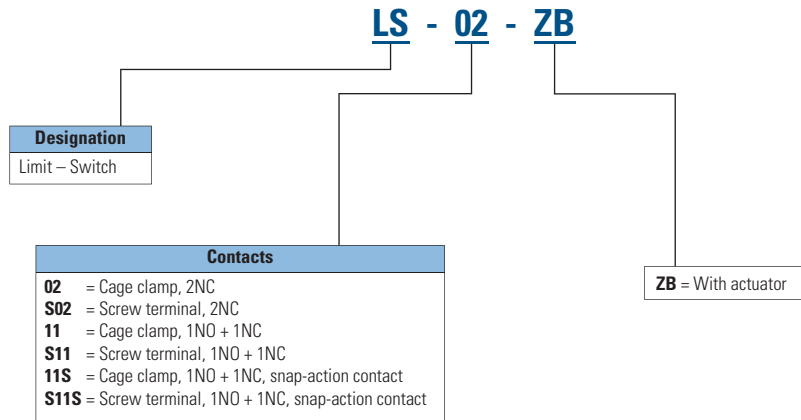
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Position Switches

LS-ZB Safety Position Switches



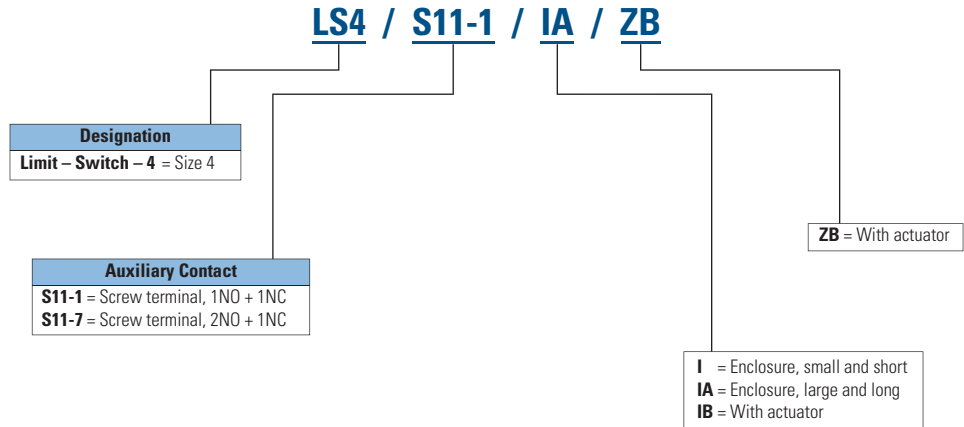
LS-ZB Safety Position Switches



LS4-ZB Safety Position Switches



LS4-ZB Safety Position Switches



XC PLC



XC PLC

XC - CPU101 - C128K - 8DI-6DO

Designation
C = CPU module
IOC = I/O module
V = Text display
T = Accessories

Model Number
101 = 100 series
201 = 200 series
121 = All-in-one 100 series

Memory Capacity
64K, 128K, 256K, 512K, 4M

Function
8 Digital inputs, 6 Digital outputs

XION Remote I/O Module



XION Remote I/O Module

XN-GWBR - PBDP

Designation
GW = Gateway
BR = Power
PF = Power
*DI = I/O Module
P/S = Base
KO/QV = Accessories

Module Type
PBDP = Profibus DP Field bus
CANOPEN = Canopen Field bus
DNET = Device net Field bus
MODBUS-TCP = Modbus TCP Gateway
24VDC = 24V DC
R = Relay Output
I = Current
U = Voltage
SB = Wiring Base

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Electrical Sector Asia Pacific

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