

# 3.1

## Power Breakers, Contactors and Fuses

### Power Circuit Breakers

#### CROSS REFERENCE TO ROCKWELL PART NUMBER PP7853

#### Magnum DS, MDSX and MDSL Circuit Breakers



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### Magnum DS Low Voltage Power Circuit Breakers

#### Product Description

Magnum DS is a true UL 1066 listed low voltage power circuit breaker family, designed for the highest performance requirements of switchgear and specialty enclosure applications.

- Magnum DS Low Voltage Power Circuit Breakers have interrupting ratings up to 200 kA at 480 Vac, and short-time withstand ratings up to 100 kA at 635 Vac with continuous current ratings up to 6000A to maximize system coordination and selectivity
- Magnum MDSX Current Limiting Power Circuit Breakers have 200 kA interrupting ratings at 480 Vac with continuous current ratings up to 5000A
- Magnum MDSL Current Limiting Power Circuit Breakers have 200 kA interrupting ratings at 600 Vac with continuous current ratings up to 2000A



*The Magnum MDSL Current Limiting Power Circuit Breakers have integral current limiters to provide interrupting ratings of 200 kA at 600 Vac.*



*The Magnum MDSX Current Limiting Power Circuit Breakers have fast opening contacts to provide interrupting ratings up to 200 kA at 480 Vac without fuses.*

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#### Standards and Certifications

##### UL and ANSI Test Certifications

Magnum DS meets or exceeds the applicable ANSI, NEMA®, UL and CSA® standards, including:

- ANSI C37.13 (Low Voltage AC Power Circuit Breakers Used in Enclosures)
- ANSI C37.16 (Preferred Ratings, Related Requirements, and Application Recommendations for Low Voltage Power Circuit Breakers and AC Power Circuit Breakers)
- ANSI C37.17 (Trip Devices for AC and General Purpose DC Low Voltage Power Circuit Breakers)
- ANSI C37.50 (Test Procedures for Low Voltage AC Power Circuit Breakers Used in Enclosures)
- UL 1066 (Standard for Low Voltage AC and DC Power Circuit Breakers Used in Enclosures)
- NEMA SG3 (This standard adopts ANSI C37.16 in its entirety)

and switchboards with the following test certifications:

- UL 1558 (Certified Magnum DS Low Voltage Metal-Enclosed Switchgear)
- UL 891 (Certified Pow-R-Line C™ Low Voltage Switchboards)
- UL 1008 Standard for Transfer Switch Equipment
- UL, CSA 22.2.31 Low Voltage Assemblies

##### Approvals and Marks

- UL listed: Magnum DS Breaker UL File No. E52096 and Cassette UL File No. E204565
- ABS (American Bureau of Shipping) Type Listed Certificate Number 04-HS422844A-DUB
- Additional Magnum DS approvals and certificates can be found on [www.eaton.com](http://www.eaton.com)



##### Product Selection

Contact Eaton for pricing.

##### Comprehensive Enclosure Solutions

Magnum DS has proven performance in Eaton manufactured switchgear

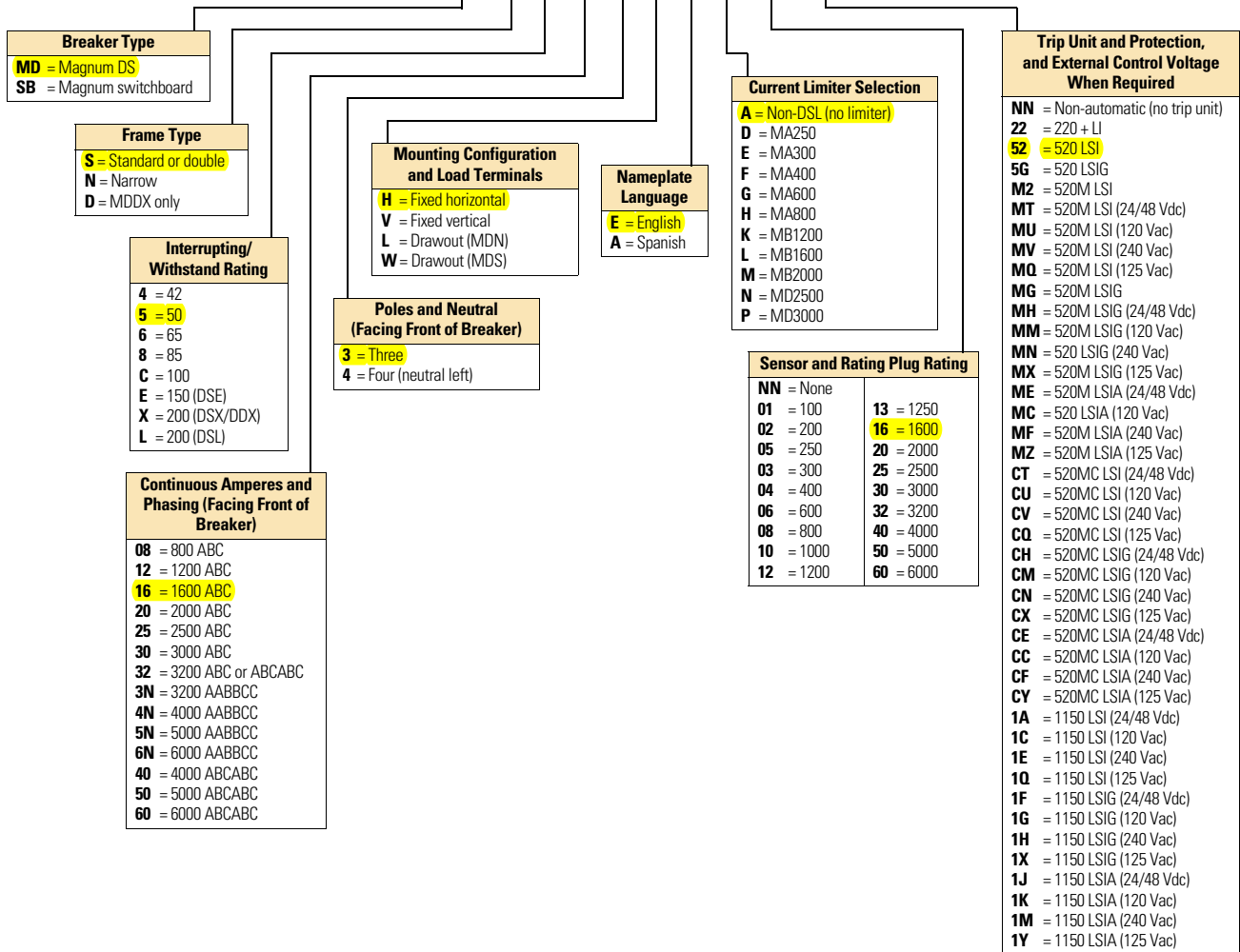
**CROSS REFERENCE TO  
ROCKWELL PART  
NUMBER PP7853**

Catalog Number Selection

Magnum DS ANSI Breaker Product Family

**MD S 5 16 3 H E A-16 52**

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# 3.1

## Power Breakers, Contactors and Fuses

### Power Circuit Breakers

#### Magnum DS ANSI Breaker Product Family, continued

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**N M N N N N K N A X**

**Shunt Trip (ST)**

**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)  
**J** = 60 Vdc (100% duty)  
**6** = 60 Vdc

**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)  
**S** = 60 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  
**S** = 60 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)  
**D** = UVR (60 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)  
**6** = 2nd ST (60 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)  
**9** = 2nd ST (60 Vdc 100% duty)

**Auxiliary Switch**

**N = None**  
**2** = 2A/2B  
**4** = 4A/4B  
**6** = 6A/6B

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

OTS 2a/2b	Trip Indicator
<b>E</b> = No OTS	No indicator
<b>N</b> = No OTS	With indicator
<b>Y</b> = With OTS	With indicator
<b>M</b> = No OTS	With interlocked indicator
<b>L</b> = With OTS	With interlocked indicator

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

**N = None**  
**M** = Metal (block close and open)  
**P** = Plastic (block close and open)  
**C** = Metal (block close only)  
**H** = Plastic (block close only)  
**S** = Metal swbd lock-off (block close, depress open)

**Operations Counter and/or Keylock Provisions**

	Counter	Keylock Provisions
<b>N</b> =	No counter	No locks
<b>K</b> =	No counter	Kirk lock
<b>C</b> =	No counter	Castell lock
<b>R</b> =	No counter	Ronis lock
<b>S</b> =	No counter	CES lock
<b>A</b> =	Counter	No lock
<b>Y</b> =	Counter	Kirk lock
<b>L</b> =	Counter	Castell lock
<b>H</b> =	Counter	Ronis lock indicator
<b>E</b> =	Counter	CES lock

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

	Latch Check Switch	1150 Voltage Connection
<b>N</b> =	None	Upper terminals
<b>M</b> =	None	Lower terminals
<b>L</b> =	LCS wired to SRD	Upper terminals
<b>Y</b> =	LCS Wired to SRD	Lower terminals
<b>C</b> =	LCS Wired External	Upper terminals
<b>D</b> =	LCS Wired External	Lower terminals

**Breaker Shipping Options and Instructions**

**A** = Fixed breaker alone with door kit  
**F** = Fixed breaker alone without door kit  
**A** = Drawout breaker alone without door frame kit  
**C** = Drawout breaker in cassette (un-wired)  
**P** = Drawout breaker in cassette (shutters)  
**S** = Drawout breaker in cassette (shutters)  
**W** = Drawout breaker in cassette (pre-wired and shutters)  
 Double frame drawout breakers ship without cassette drawout. ACBs ship in narrow and universal cassettes only.

**Frame Use**

**X** = All breakers