

# PowerSafe® DDm/mSeries & Flooded Batteries

D.C. POWERPLANT DISCONNECT/BREAKER

The EnerSys PowerSafe® Battery Disconnect/Breaker System is an ideal solution for telecommunications offices that require a safe single and convenient means to quickly isolate a battery string of Flooded or Valve Regulated Lead Acid (VRLA) batteries from DC power or from other battery strings. The disconnect/breaker systems have been designed so they can be directly “bolted on” to PowerSafe DDm and mSeries battery systems allowing for simple installation eliminating the need for cumbersome lengthy cabling. Flooded batteries would use remote mounting. Options include overcurrent protection, various size shunts, multiple ways to mount disconnect/breaker to walls, ladders and/or 23 inch relay racks.

The battery disconnects/breakers allow for safer routine maintenance to be performed without having to manually disconnect the battery from the main bus or cabling, thus reducing overall maintenance time. In addition, these battery disconnects/breakers can be configured to comply with local fire codes that require an at the door remote “power off” for the battery system, in the event of an emergency.

## Features & Benefits

- Available in 24 Vdc, 48 Vdc, 120 Vdc and 240 Vdc size systems
- Available protection from 100A to 2400A DC
- Disconnect/breaker can be available with or without overcurrent protection
- Can be mounted to top of PowerSafe DDm/mSeries battery vertically or horizontally
- Remote operation available
- Shunts are available with 50mv or 100mv accuracy ranging from 100 to 3000A
- Load Side = Tin-plated copper connector can accommodate up to 4 two hole lug cables
- Line Side = Custom tin-plated copper connector connecting directly to the battery post



## Part Numbers & Configuration

The PowerSafe® DDm and mSeries battery systems can be configured with a disconnect/breaker remotely mounted or directly mounted to the battery and stand. In addition, PowerSafe and DataSafe® Flooded batteries can have a disconnect/breaker remotely mounted.

**B 1 120 02 1 1 A 09 4 2B**

**Breaker System**

**Disconnect Frame Size**

- 1: 200 Amp Frame (for less than 200A overcurrent protection)
- 2: 400 Amp Frame (for OC protection greater than 200A, up to 400A)
- 3: 600 Amp Frame (for OC protection greater than 400A, up to 600A)
- 7: 750 Amp Frame (for OC protection greater than 600A, up to 750A)
- 4: 1200 Amp Frame (for OC protection greater than 750A, up to 1200A)
- 5: 1800 Amp Frame (for OC protection greater than 1200A, up to 1800A)
- 6: 2400 Amp Frame (for OC protection greater than 1800A)

**Battery Voltage**

- 24: 24 Volt Battery
- 48: 48 Volt Battery
- 120: 120 Volt Battery
- 240: 240 Volt Battery

**Measuring Shunt**

1: None	2A: 100A, 50mV	3A: 100A, 100mV
	2B: 200A, 50mV	3B: 200A, 100mV
	2C: 300A, 50mV	3C: 300A, 100mV
	2D: 400A, 50mV	3D: 400A, 100mV
	2E: 500A, 50mV	3E: 500A, 100mV
	2F: 600A, 50mV	3F: 600A, 100mV
	2G: 750A, 50mV	3G: 750A, 100mV
	2H: 800A, 50mV	3H: 800A, 100mV
	2J: 1000A, 50mV	3J: 1000A, 100mV
	2K: 1200A, 50mV	3K: 1200A, 100mV
	2L: 1500A, 50mV	3L: 1500A, 100mV
	2M: 2000A, 50mV	3M: 2000A, 100mV
	2N: 2500A, 50mV	3N: 2500A, 100mV
	2P: 3000A, 50mV	3P: 3000A, 100mV

Note: Continuous DC Shunt operation should not exceed 2/3 the amp rating on the shunt. To estimate the minimum standard shunt current rating, divide the continuous amp rating by 0.67.

**Rack Width**

- Z: Not on a DDm or mSeries Battery
- 2: 2-wide\* 3: 3-wide\*\* 4: 4-wide 6: 6-wide

\* Note: Top-of-rack breakers may not fit a 2-wide system. Contact an EnerSys® representative for additional information if ordering a breaker for a 2-wide system.

\*\* Note: Not Available for Cell Models beginning with a '2'.

**Overload (Overcurrent) Trip Rating\***

00: No Overcurrent Trip	15: 675A	750 Amp Frame
01: 100A	16: 750A	
02: 125A	17: 800A	
03: 150A	18: 900A	1200 Amp Frame
04: 175A	19: 1050A	
05: 200A	20: 1200A	
06: 250A	21: 1350A	
07: 300A	22: 1500A	1800 Amp Frame
08: 350A	23: 1800A	
09: 375A	24: 2400A	2400 Amp Frame
10: 400A		
11: 450A		
12: 500A		
13: 525A		
14: 600A		

\* Note: Overcurrent rating must match the disconnect frame size specified.

**Cell Model**

ZZZ: Mounted remotely for a Flooded or other type of battery than DDm or mSeries

A07: 2DDm35-07	C25: DDm100-25	F21: m85-21
A09: 2DDm50-09	C27: DDm100-27	F25: m85-25
A13: 2DDm50-13	C33: DDm100-33	F27: m85-27
A17: DDm50-17	D25: DDm125-25	F33: m85-33
B13: 2DDm85-13	D27: DDm125-27	G21: m100-21
B15: 2DDm85-15	D33: DDm125-33	G25: m100-25
B21: DDm85-21	E09: 2m50-09	G27: m100-27
B25: DDm85-25	E13: 2m50-13	G33: m100-33
B27: DDm85-27	E17: m50-17	H25: m125-25
B33: DDm85-33	F13: 2m85-13	H27: m125-27
C21: DDm100-21	F15: 2m85-15	H33: m125-33

**Disconnect Operation**

- 1: Manual operation
- 2: Remote Open / Manual Close Ready (shunt trip coil w/ no pushbutton station)
- 3: Remote Open / Manual Close (shunt trip coil w/ pushbutton station)
- 4: Keyed Remote Open / Manual Close (shunt trip w/ keyed pushbutton EPO)
- 5: Shielded Remote Open / Manual Close (shunt trip and shielded EPO)
- 6: Remote Open / Remote Close\* (motor operations w/ 2-position selector)

\* Remote operation only available on 1200A & 1800A Breaker Frame Sizes.

**Mounting Options**

- 1: PowerSafe DDm and mSeries Battery Rack Mounted, Top - Vertical Breaker Orientation\*
- 2: PowerSafe DDm and mSeries Battery Rack Mounted, Top Right Negative - Horizontal Breaker Orientation\*
- 3: Wall-Mounted NEMA 1 Enclosure
- 4: Wall-Mounted with Unistrut
- 5: 23" Relay Rack Mounting (note: not available for 2400A Disconnect)
- 6: Ladder Rack Mount for 200A to 1800A Breaker Frame Size
- 7: PowerSafe DDm and mSeries Battery Rack Mounted, Top Left Negative - Horizontal Breaker Orientation\*

\*Note: Rack-mounted breakers require top termination.  
Note: Mounting a disconnect directly onto a DDm or mSeries battery and stand will eliminate the stands seismic rating.

Part Number Example; **B 1 120 02 1 1 A09 4 2B** is defined as; 200A frame, 120 Vdc, 125A Overcurrent trip, Manual open/close operation, Top Mount to battery, for a 2DDm50-09 Battery, 4 Wide, 200A/50mV shunt



**EnerSys World Headquarters**  
 2366 Bernville Road  
 Reading, PA 19605  
 USA  
 Tel: +1-610-208-1991  
 +1-800-538-3627  
 Fax: +1-610-372-8698

**EnerSys EMEA**  
 EH Europe GmbH  
 Lowenstrasse 32  
 Zurich, Switzerland 8001  
 Tel: +41 (0) 44 215 74 10

**EnerSys Asia**  
 152 Beach Road  
 Gateway East Building #11-03  
 Singapore 189721  
 Tel: +65 6508 1780

www.enersys.com

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