

# Frame Information

## AMR Series



Standard Style (AMR)



Illuminated Style (AML)



Rocker Style (ACR)

The Heinemann AMR Series is the logical choice for applications requiring greater interrupting performance coupled with the sensitivity of hydraulic-magnetic protection. The precisely tailored time delays and ability to interrupt high currents make them ideal for critical applications.

### UL 489 Listed

The AMR Series is UL 489 Listed and CSA certified for branch circuit applications. It is also UL 1077 recognized for use in panels where branch circuit protection is already provided. Available in a wide variety of configurations, the AMR Series is rated as high as 100 amperes at 240Vac or 80Vdc. It is the solution for demanding applications requiring up to 50,000 amperes interrupting capacity. The 50,000 amperes interrupting capacity is at 65 Vdc UL 489A, telecom applications.

All UL 489 listed configurations are suitable for normal and reverse feed connection, for easy installation.

### UL 489 Ratings

POLES	CURRENT	VOLTAGE	KA
1	0.02 – 100 A	65 Vdc	50
1, 2	0.02 – 50 A	120/240 Vac	10
3	0.02 – 30 A	240 Vac	10
1	0.02 – 20 A	277 Vac	10

### Global Design

The AMR Series is designed for global applications, meeting a variety of international standards. It combines the proven high quality and reliability of the former AM Series with the spacing, dielectric and interrupt requirements of the IEC Standard 60947-2. The AMR Series carries the CE Mark, VDE and TUV approvals, and is available with metric hardware for OEMs exporting their equipment overseas.

### Features

- Current range up to 100 A 50/60 Hz ac/125 Vdc, 60 A 400 Hz ac.
- 100% rated.
- Plug-in, screw or stud terminals.
- Handles knurled for positive grip.
- Operating temperature -40°C to +85°C.
- Available with internal auxiliary or alarm switch, relay trip function and shunt tap.
- Shock-tested for shock in accordance with MIL-STD-202.
- Vibration-tested in accordance with MIL-STD-202.
- Dielectric strength tested in accordance with MIL-STD-202.
- Insulation resistance of 100 megaohms minimum at 500 Vdc, per MIL-STD-202.
- Flammability specifications of UL 94-VO case, UL 94-HB handle.
- Available with UL 1500 Ignition Protected for Marine Applications. Refer to the special applications section for more information.
- Direct replacement for discontinued AM and NAM/S models.

### Approvals

- UL 1077 recognized.
- UL 489 listed.
- UL 489A listed for telecom applications.
- IEC 60947-2.
- VDE.
- TUV.

### Handle Configurations

#### Standard Black Toggle

For industrial and commercial applications, where economical design and construction is a concern. Order Prefix "AMR."

#### Illuminated Toggle

Provides indication of breaker status via the integral multicolored LED. Can be custom configured for indication of ON, OFF, Tripped or Ready status. Order Prefix "AML."

#### Rocker Style

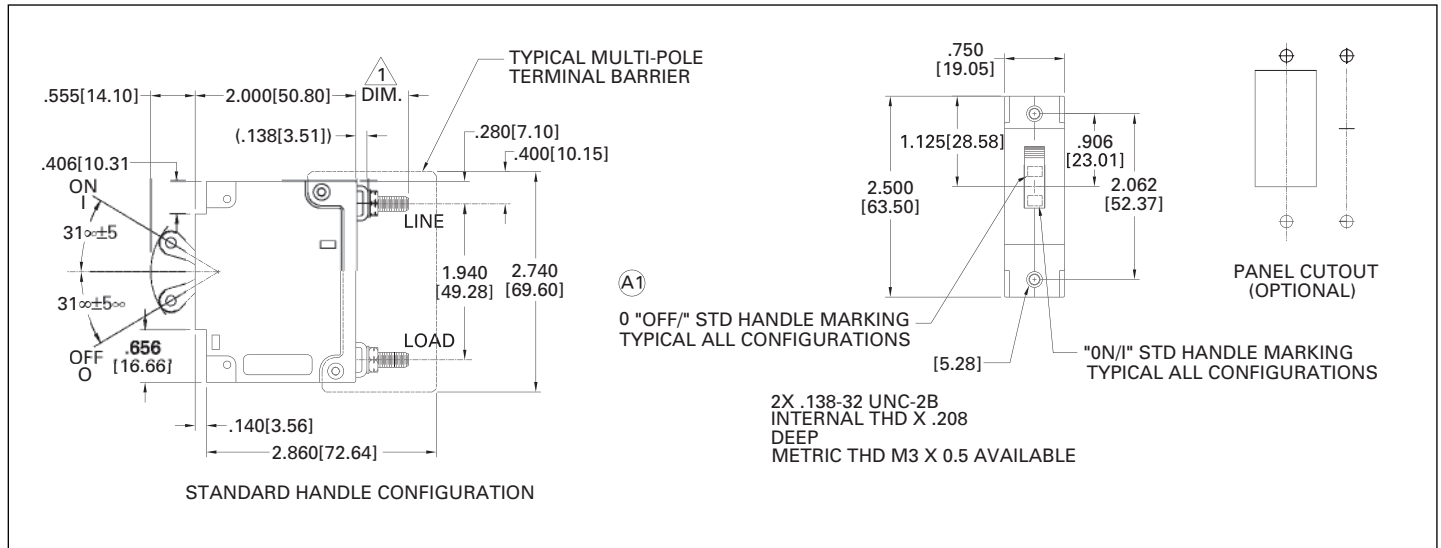
Used where style and performance is required. The rocker style handle delivers the performance of the AMR Series with European styling. Order Prefix "ACR."

### Standard Product Offering

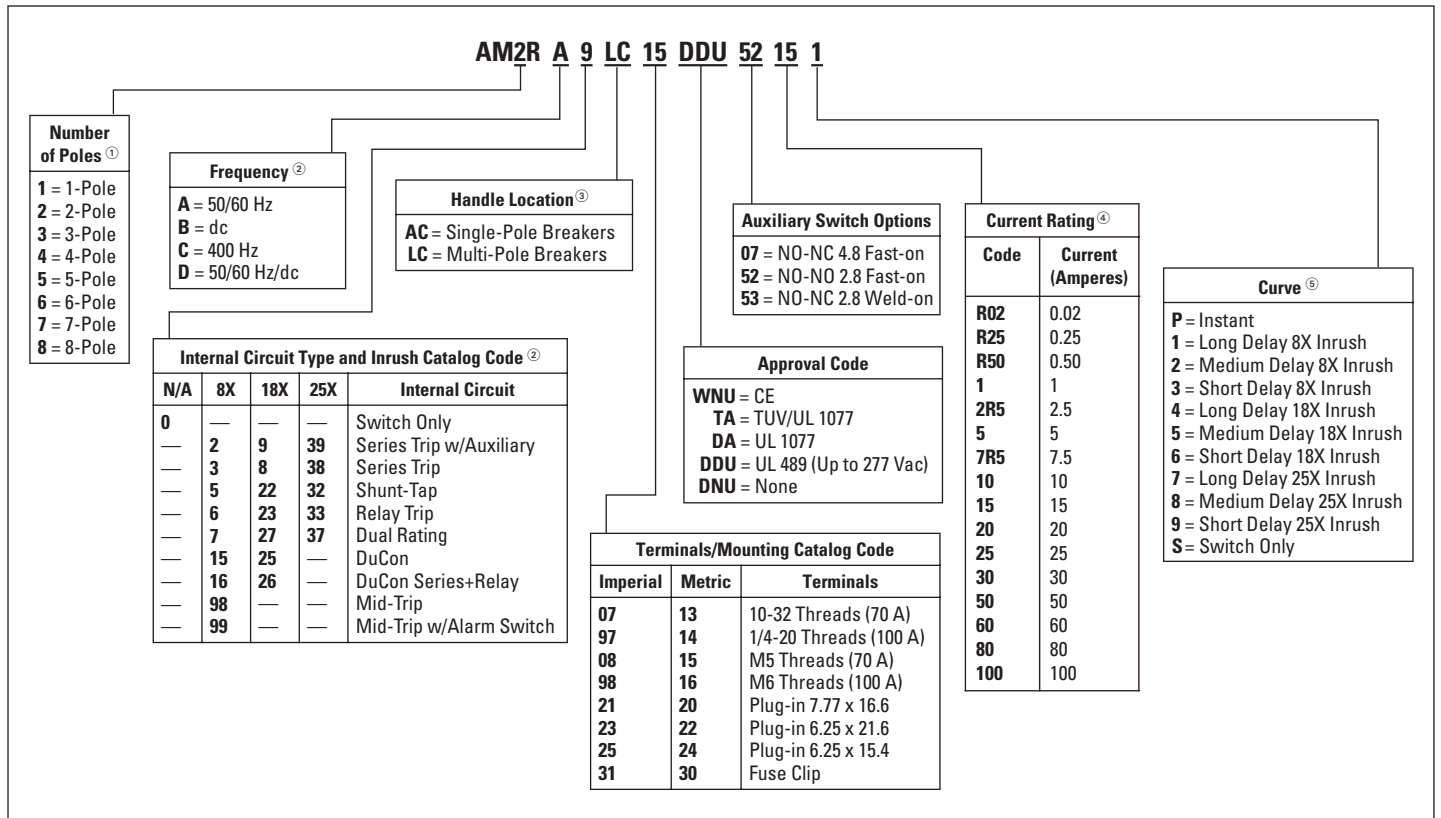
The following catalog numbers can be ordered from stock.

AMR STANDARD BLACK TOGGLE				
CURRENT	CURVE	1-POLE	2-POLE	3-POLE
1.00 A	2	AM1RA3AC07DA12	AM2RA3AC07DA12	AM3RA3AC07DA12
2.50 A	2	AM1RA3AC07DA2R52	AM2RA3AC07DA2R52	AM3RA3AC07DA2R52
5.00 A	2	AM1RA3AC07DA52	AM2RA3AC07DA52	AM3RA3AC07DA52
7.50 A	2	AM1RA3AC07DA7R52	AM2RA3AC07DA7R52	AM3RA3AC07DA7R52
10.0 A	2	AM1RA3AC07DA102	AM2RA3AC07DA102	AM3RA3AC07DA102
15.0 A	2	AM1RA3AC07DA152	AM2RA3AC07DA152	AM3RA3AC07DA152
20.0 A	2	AM1RA3AC07DA202	AM2RA3AC07DA202	AM3RA3AC07DA202
30.0 A	2	AM1RA3AC07DA302	AM2RA3AC07DA302	AM3RA3AC07DA302
50.0 A	2	AM1RA3AC07DA502	AM2RA3AC07DA502	AM3RA3AC07DA502
80.0 A	2	AM1RA3AC97DA802	AM2RA3AC97DA802	AM3RA3AC97DA802

**TYPICAL DIMENSIONS**



**AMR CATALOG NUMBERING SYSTEM**



① Select from 1 to 8 poles, and enter the number in position 3 of the catalog number. For example, an AM3L would identify a 3-pole AML breaker.

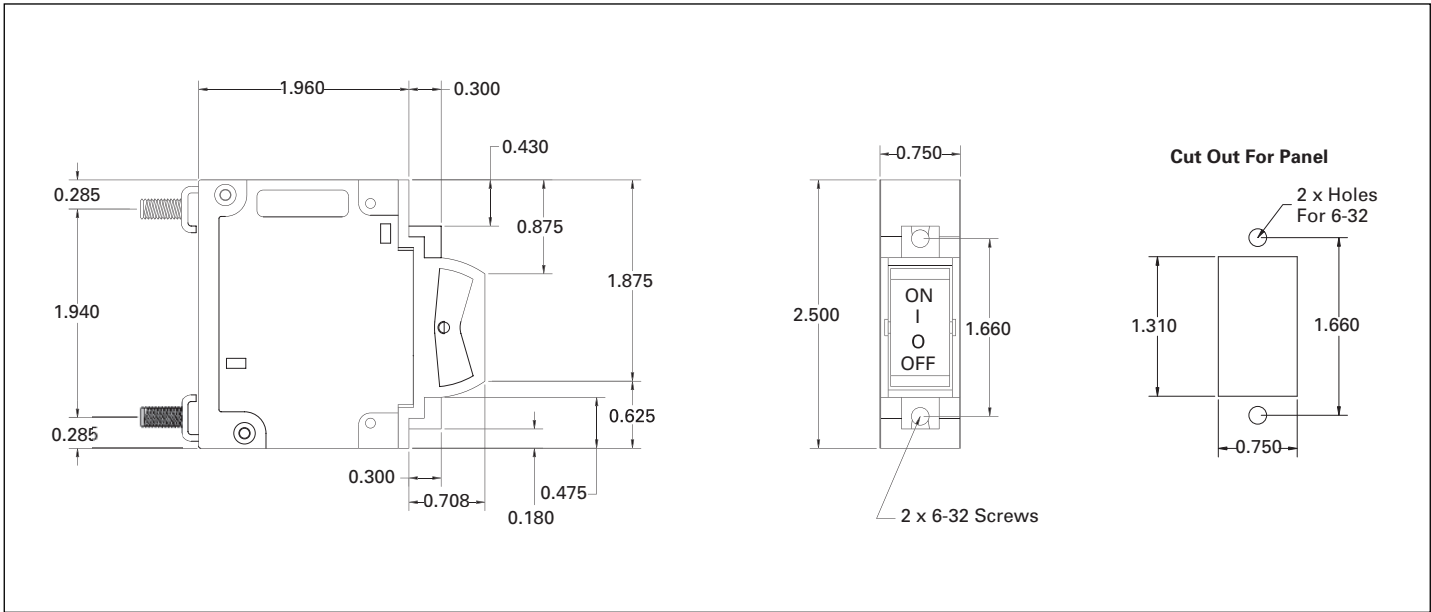
② On multi-pole breakers, Steps 2 and 3 can be repeated if subsequent poles are different than the first. Identification starts from left-hand side when viewing the front of the breaker.

③ These will provide standard handle locations. For additional options, contact the Technical Resource Center.

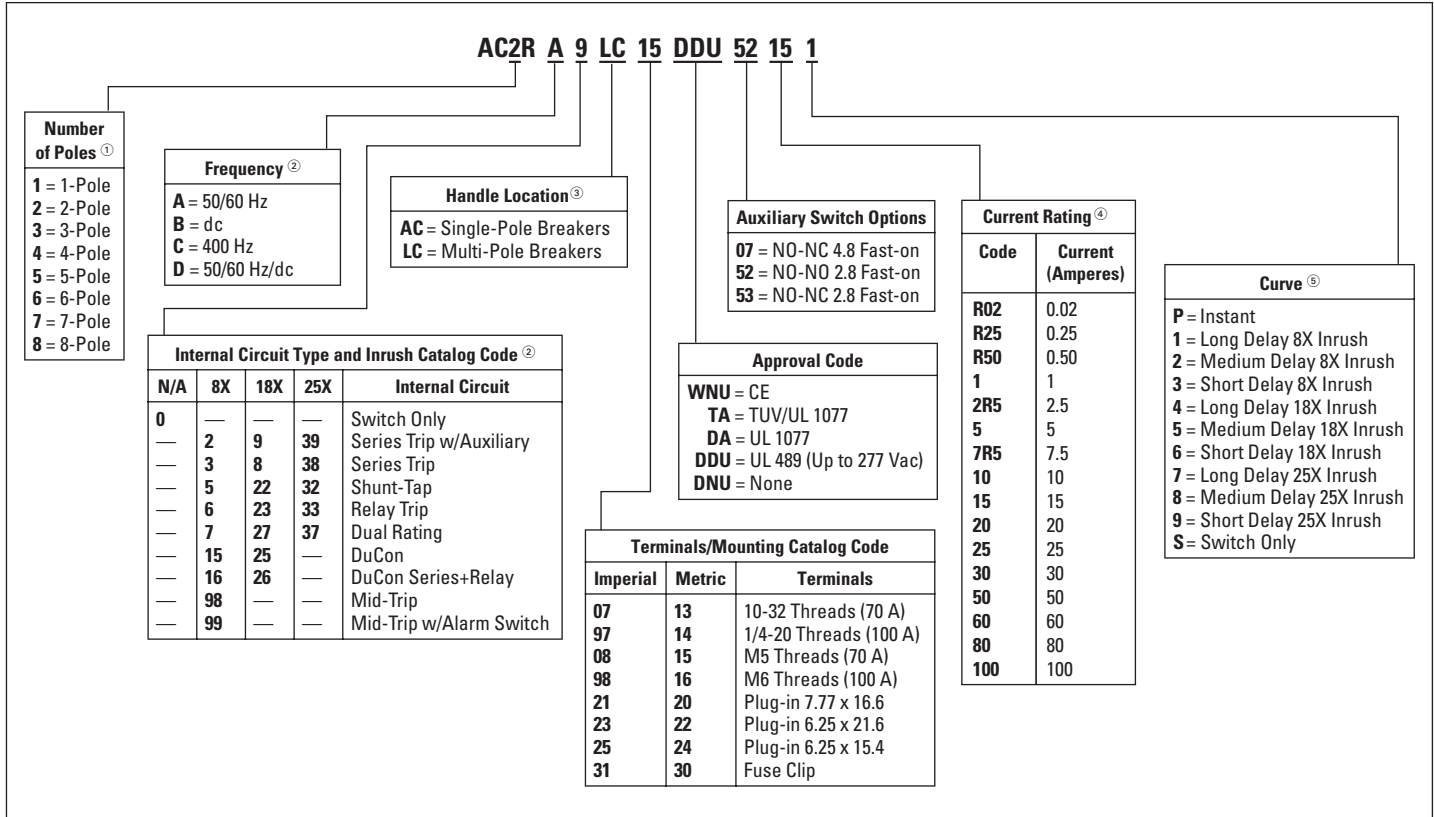
④ Enter the whole number current rating. For example, use code "15" for a 15 A current rating. For fractional amperages, use an "R" to designate the decimal point. For 0.10 A, enter the code "R10." Current range up to 100 amperes 50/60 Hz, 60 amperes 400 Hz, 100 Adc.

⑤ Specific data on trip curves can be found on the Web at [www.EatonElectrical.com/heinemann](http://www.EatonElectrical.com/heinemann).

**TYPICAL DIMENSIONS**

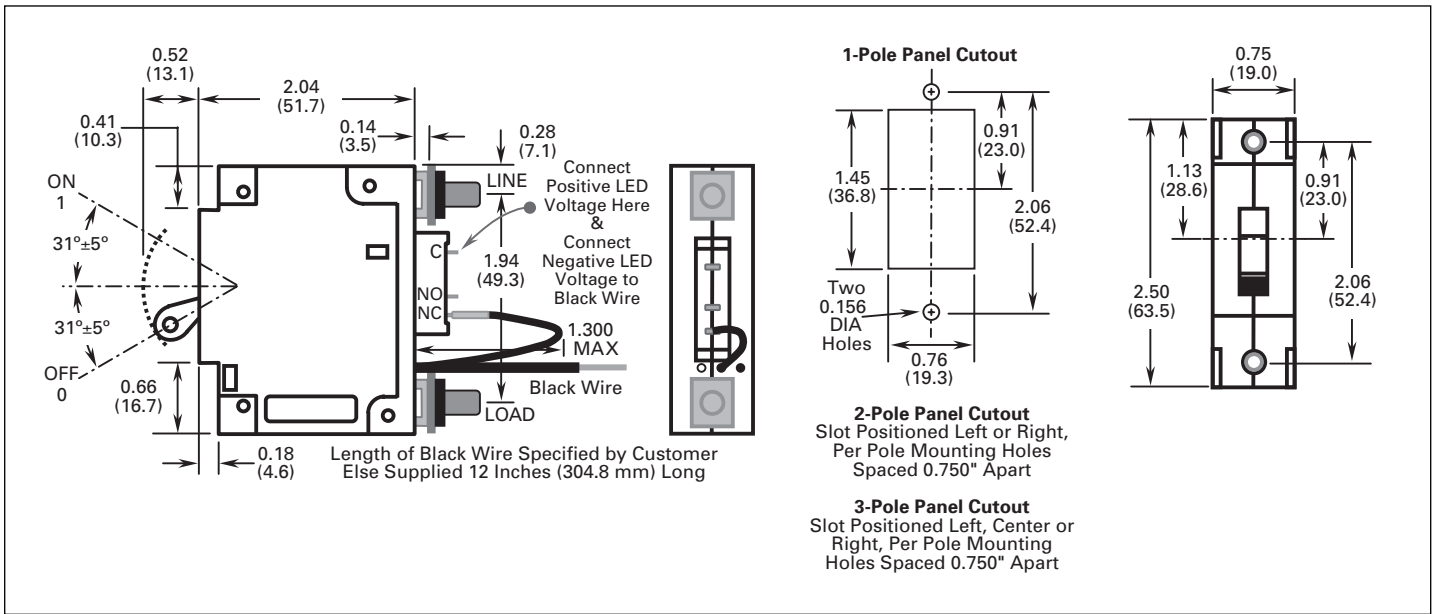


**ACR CATALOG NUMBERING SYSTEM**



- ① Select from 1 to 8 poles, and enter the number in position 3 of the catalog number. For example, an AM3L would identify a 3-pole AML breaker.
- ② On multi-pole breakers, Steps 2 and 3 can be repeated if subsequent poles are different than the first. Identification starts from left-hand side when viewing the front of the breaker.
- ③ These will provide standard handle locations. For additional options, contact the Technical Resource Center.
- ④ Enter the whole number current rating. For example, use code "15" for a 15 A current rating. For fractional amperages, use an "R" to designate the decimal point. For 0.10 A, enter the code "R10." Current range up to 100 amperes 50/60 Hz, 60 amperes 400 Hz, 100 Adc.
- ⑤ Specific data on trip curves can be found on the Web at [www.EatonElectrical.com/heinemann](http://www.EatonElectrical.com/heinemann).

**TYPICAL DIMENSIONS**



**AML CATALOG NUMBERING SYSTEM**

**AM3L A 2 AE 050 07 DDU 07 15 1**

**Number of Poles**<sup>①</sup>

1 = 1-Pole  
2 = 2-Pole  
3 = 3-Pole  
4 = 4-Pole  
5 = 5-Pole  
6 = 6-Pole  
7 = 7-Pole  
8 = 8-Pole

**Frequency**<sup>②</sup>

A = 50/60 Hz  
B = dc  
C = 400 Hz  
D = 50/60 Hz/dc

**Handle Location**<sup>③</sup>

AE = Single-Pole Breakers  
DE = Multi-Pole Breakers

**Approval Code**

WNU = CE  
TA = TUV/UL 1077  
DA = UL 1077  
DDU = UL 489  
DNU = None

**Current Rating**<sup>④</sup>

Code	Current (Amperes)
R02	0.02
R25	0.25
R50	0.50
1	1
2R5	2.5
5	5
7R5	7.5
10	10
15	15
20	20
25	25
30	30
50	50
60	60
80	80
100	100

**Curve**<sup>⑤</sup>

P = Instant  
1 = Long Delay 8X Inrush  
2 = Medium Delay 8X Inrush  
3 = Short Delay 8X Inrush  
4 = Long Delay 18X Inrush  
5 = Medium Delay 18X Inrush  
6 = Short Delay 18X Inrush  
7 = Long Delay 25X Inrush  
8 = Medium Delay 25X Inrush  
9 = Short Delay 25X Inrush  
S = Switch Only

**Internal Circuit Type and Inrush Catalog Code**<sup>②</sup>

N/A	8X	18X	25X	Internal Circuit
0	—	—	—	Switch Only
—	2	9	39	Series Trip w/Auxiliary
—	3	8	38	Series Trip
—	5	22	32	Shunt-Tap
—	6	23	33	Relay Trip
—	7	27	37	Dual Rating
—	15	25	—	DuCon
—	16	26	—	DuCon Series+Relay
—	98	—	—	Mid-Trip
—	99	—	—	Mid-Trip w/Alarm Switch

**Illumination Catalog Code**

One-Position				
Red	Green	Yellow	Blue	Position
050	051	052	053	OFF
054	055	056	057	ON
058	059	060	061	Mid Trip

Two-Position				
Green/Red	Red/Green	Yellow/Blue	Blue/Yellow	Position
062	063	064	065	ON/OFF

Two-Position				
Yellow/Green	Green/Yellow	Red/Yellow	Yellow/Red	Position
066	067	068	069	ON/OFF

**Terminals/Mounting Catalog Code**

Imperial	Metric	Terminals
07	13	10-32 Threads (70 A)
97	14	1/4-20 Threads (100 A)
08	15	M5 Threads (70 A)
98	16	M6 Threads (100 A)
21	20	Plug-in 7.77 x 16.6
23	22	Plug-in 6.25 x 21.6
25	24	Plug-in 6.25 x 15.4
31	30	Fuse Clip

**Auxiliary Switch Options**

07 = NO-NC 4.8 Fast-on  
52 = NO-NO 2.8 Fast-on  
53 = NO-NC 2.8 Fast-on

① Select from 1 to 8 poles, and enter the number in position 3 of the catalog number. For example, an AM3L would identify a 3-pole AML breaker.  
 ② On multi-pole breakers, Steps 2 and 3 can be repeated if subsequent poles are different than the first. Identification starts from left-hand side when viewing the front of the breaker.  
 ③ These will provide standard handle locations. For additional options, contact the Technical Resource Center.  
 ④ Enter the whole number current rating. For example, use code "15" for a 15 A current rating. For fractional amperages, use an "R" to designate the decimal point. For 0.10 A, enter the code " R10."  
 ⑤ Specific data on trip curves can be found on the Web at [www.EatonElectrical.com/heinemann](http://www.EatonElectrical.com/heinemann).  
 ⑥ Up to 277 Vac.