# MINIATURE CIRCUIT BREAKERS

# **PRODUCT PROFILE**

ATC Diversified offers a comprehensive line of Miniature Circuit Breakers designed and manufactured to meet the needs of the machine builder. We promise durable products at a price that gives you an edge, and we guarantee same-day shipping. Check out all the features of our UL489 & UL 1077 Miniature Circuit Breakers below!

### **DELIVERING SUPERIOR PRODUCT QUALITY AND** MANUFACTURING EXCELLENCE

<b>√</b> Proven	Our Miniature Circuit Breakers are UL Listed and Recognized, and CE marked to meet global standards requirements and are compliant to the RoHS directives.
√ Compact Design	17.5mm wide per pole construction for reduced panel size, allowing for smaller control panels.
✓ Easy to Install	35mm DIN rail mounting for fast and easy installation and removal.
✓ Visible Markings	High visibility labels and markings; product part number, amperage, and UL & IEC short circuit ratings can be seen from the front and side of the device for easy identification.
√ Added Safety	Line and load side IP20 guarded finger-safe terminals prevent accidental contact with live parts, while allowing ring, fork, and bare wire connections.

MCB					1
Operating Current					
2.0 Amp	2				
3.0 Amp	3				
5.0 Amp	5				
10 Amp	10				
15 Amp	15				
20 Amp	20				
Device Type					
UL 489 Miniature Circuit Breaker		CB			
UL 1077 Miniature Supplementary Protect	or*	SP			
Number of Poles					
Single Pole			1		
Two Pole **			2		
Three Pole **			3		
Trip Characteristics					
Trip Curve C ***				C	
Trip Curve D ****				D	
Frame.Size					
17.5mm Frame per Pole					1

- \* 3 Amp [3], 5 Apm [5], and 10 Amp [10] only
- \*\* 10 Amp [10], 15 Amp [15], 20 Amp [20], and UL 489 Miniature Circuit Breaker [CB] only \*\*\* 2 Amp [2], 3 Amp [3], 5 Amp [5], 10 Amp [10], and Single Pole [1] only
- \*\*\*\* 10 Amp [10], 15 Amp [15], 20 Amp [20], and UL 489 Miniature Circuit Breaker [CB] only



#### **UNIQUE FEATURES**

#### **Full Range Circuit Protection**

· Available in single pole, two pole, and three pole constructions and includes both thermal and magnetic trip elements for overload and short circuit protection.

#### **Industry-Leading Short Circuit Rating**

• 10kA @ 480Y/277V short circuit current rating on all multipole constructions – the highest interruption rating available in the market.

#### **Trip-Free Design**

• Holding the operating handle in the ON position will not prevent the miniature circuit breaker from tripping.

#### **Easy Wiring**

• Captive screws make it impossible to lose screws when wiring and our box lug design terminals will accept a widerange of copper wire sizes. Line/load wiring is reversible for ease of use.

#### **Visible Markings & Status Indication**

• High visibility labels and markings can be seen from the front and side of the device for easy installation. Color-coded status window for clear visual of the breaker status.



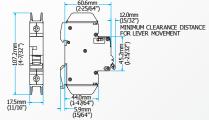
## MINIATURE CIRCUIT BREAKERS

## **SPECIFICATIONS**

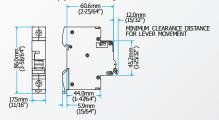
	UL 489 E	BRANCH CIRCUIT B	KEAKEKS		
	UNITS	1 POLE	2 POLE	3 POLE	
ELECTRICAL GENERAL					
Rated Operating Current	Α		0.5 ~ 63		
Operating Frequency	Hz		50/60		
Electrical Life	Ops.	6,000			
Line/Load Wiring	υрз.	Suitable for reverse feed			
<u> </u>	DDI ICAT	TIONS	Suitable for reverse ree	<u> </u>	
ELECTRICAL UL/CSA A	PPLICA				
Conformity to Standards			Lus, UL 489, CSA C22.2 N		
AC Rated Operating Voltage	V	277	4	80Y/277	
DC Rated Operating Voltage (wired in series)	V	48	96	_	
MAXIMUM SHORT CIRCUIT RATING					
@ 120 VAC	kA		10		
@ 240 VAC	kA		10		
@ 277 VAC	kA		10		
@ 480Y/277 VAC	kA		10		
@ 48 VDC	kA	10	10		
<u> </u>	kA	10		_	
@ 96 VDC (wired in series)		_	10		
ELECTRICAL IEC APPLI	CATION	S			
Conformity to Standards			IEC 60947-2, IEC 60898		
ULTIMATE SHORT CIRCUIT					
BREAKING CAPACITY (Icu)	1.				
@ 240 VAC	kA		10		
@ 415 VAC	kA		10		
RATED SERVICE SHORT CIRCUIT Breaking Capacity (ICS)					
@ 240 VAC	kA		10		
@ 415 VAC	kA		10		
-		D CIZE	10		
CONSTRUCTION - CON		K SIZE			
UL/CSA	AWG		1 x #14 ~ #3		
Solid, Stranded, Fine Stranded	mm²		1 x 2.08 ~ 26.7		
ROHS COMPLIANCE	mm²		1 x 2.08 ~ 26.7		
ROHS COMPLIANCE		UPPLEMENTARY PI			
ROHS COMPLIANCE		UPPLEMENTARY PI		3 POLE	
ROHS COMPLIANCE	JL 1077 SI UNITS		ROTECTORS	3 POLE	
ROHS COMPLIANCE  LECTRICAL GENERAL	JL 1077 SI UNITS		ROTECTORS 2 POLE	3 POLE	
ROHS COMPLIANCE  L  ELECTRICAL GENERAL  Rated Operating Current	JL 1077 SUUNITS		2 POLE 0.5 ~ 63	3 POLE	
ROHS COMPLIANCE  LECTRICAL GENERAL Rated Operating Current Operating Frequency	JL 1077 SUUNITS  A  Hz		0.5 ~ 63 50/60	3 POLE	
ROHS COMPLIANCE  LECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life	JL 1077 SUUNITS		0.5 ~ 63 50/60 6,000		
ROHS COMPLIANCE  ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring	JL 1077 S UNITS A Hz Ops.	1 POLE	0.5 ~ 63 50/60		
ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A	JL 1077 S UNITS A Hz Ops.	1 POLE	0.5 ~ 63 50/60 6,000  Suitable for reverse feed	d	
ROHS COMPLIANCE  ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards	JL 1077 SUUNITS  A Hz Ops.	1 POLE	0.5 ~ 63 50/60 6,000  Suitable for reverse fee	d o. 235	
ROHS COMPLIANCE  ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage	JL 1077 S UNITS A Hz Ops.	1 POLE	0.5 ~ 63 50/60 6,000  Suitable for reverse fee	d	
ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage	JL 1077 SUUNITS  A Hz Ops.	1 POLE	0.5 ~ 63 50/60 6,000  Suitable for reverse fee	d o. 235	
ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series)	JL 1077 SI UNITS  A  Hz  Ops.  PPLICAT	1 POLE  FIONS  CURL 277	0.5 ~ 63 50/60 6,000 Suitable for reverse feed 15, UL 1077, CSA C22.2 N	d o. 235	
ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING	A Hz Ops.  PPLICAT  V	1 POLE  FIONS  CURL 277	0.5 ~ 63 50/60 6,000 Suitable for reverse feed 15, UL 1077, CSA C22.2 N 4	d o. 235	
ROHS COMPLIANCE  ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series) MAKIMUM SHORT CIRCUIT RATING @ 120 VAC	JL 1077 SI UNITS  A Hz Ops.  PPLICAT	1 POLE  FIONS  CURL 277	0.5 ~ 63 50/60 6,000 Suitable for reverse feel us, UL 1077, CSA C22.2 N 96	d o. 235	
ROHS COMPLIANCE  ELECTRICAL GENERAL  Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring  ELECTRICAL UL/CSA A  Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series)  MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC	JL 1077 SI UNITS  A Hz Ops.  PPLICAT  V V kA kA	1 POLE  FIONS  CURL 277	0.5 ~ 63 50/60 6,000 Suitable for reverse feel is, UL 1077, CSA C22.2 N 96	d o. 235	
ROHS COMPLIANCE  ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC	JL 1077 SI UNITS  A Hz Ops.  PPLICAT  V V  kA kA kA	1 POLE  FIONS  CURL 277	0.5 ~ 63 50/60 6,000 Suitable for reverse fee- us, UL 1077, CSA C22.2 N 4 96	d o. 235	
ROHS COMPLIANCE  ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 480Y/277 VAC	JL 1077 SI UNITS  A Hz Ops.  PPLICAT  V V  kA kA kA	1 POLE  FIONS  CURC 277  48	0.5 ~ 63 50/60 6,000 Suitable for reverse feeds 15, UL 1077, CSA C22.2 N 96	d o. 235	
ROHS COMPLIANCE  ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 480Y/277 VAC @ 48 VDC	JL 1077 SI UNITS  A Hz Ops.  PPLICAT  V V  kA kA kA kA	1 POLE  FIONS  CURL 277	0.5 ~ 63 50/60 6,000 Suitable for reverse feed 15, UL 1077, CSA C22.2 N 4 96	d o. 235	
ROHS COMPLIANCE  ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series) MAKIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 480Y/277 VAC @ 480 VDC @ 96 VDC (wired in series)	JL 1077 SI UNITS  A Hz Ops.  PPLICAT  V V  kA kA kA kA kA	1 POLE  TIONS  CURC 277  48	0.5 ~ 63 50/60 6,000 Suitable for reverse feeds 15, UL 1077, CSA C22.2 N 96	d o. 235	
ROHS COMPLIANCE  ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 480Y/277 VAC @ 48 VDC	JL 1077 SI UNITS  A Hz Ops.  PPLICAT  V V  kA kA kA kA kA	1 POLE  TIONS  CURC 277  48	0.5 ~ 63 50/60 6,000 Suitable for reverse feed 15, UL 1077, CSA C22.2 N 4 96	d o. 235	
ROHS COMPLIANCE  ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series) MAKIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 480Y/277 VAC @ 480 VDC @ 96 VDC (wired in series)	JL 1077 SI UNITS  A Hz Ops.  PPLICAT  V V  kA kA kA kA kA	1 POLE  TIONS  CURC 277  48	0.5 ~ 63 50/60 6,000 Suitable for reverse feed 15, UL 1077, CSA C22.2 N 4 96	d 0, 235 80Y/277 — — — — —	
ROHS COMPLIANCE  ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 240 VAC @ 480Y/277 VAC @ 480Y/277 VAC @ 96 VDC (wired in series) ELECTRICAL IEC APPLI Conformity to Standards ULTIMATE SHORT CIRCUIT	JL 1077 SI UNITS  A Hz Ops.  PPLICAT  V V  kA kA kA kA kA	1 POLE  TIONS  CURC 277  48	0.5 ~ 63 50/60 6,000 Suitable for reverse feed 15, UL 1077, CSA C22.2 N 4 96 10 10 10 10 10	d 0, 235 80Y/277 — — — — —	
ROHS COMPLIANCE  ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring  ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 247 VAC @ 480Y/277 VAC @ 480Y/277 VAC @ 48 VDC @ 96 VDC (wired in series) ELECTRICAL IEC APPLI Conformity to Standards	JL 1077 SI UNITS  A Hz Ops.  PPLICAT  V V  kA kA kA kA kA	1 POLE  TIONS  CURC 277  48	0.5 ~ 63 50/60 6,000 Suitable for reverse feed 15, UL 1077, CSA C22.2 N 4 96 10 10 10 10 10	d 0, 235 80Y/277 — — — — —	
ROHS COMPLIANCE  ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 480Y/277 VAC @ 480Y/277 VAC @ 48 VDC @ 96 VDC (wired in series) ELECTRICAL IEC APPLI Conformity to Standards ULTIMATE SHORT CIRCUIT BREAKING CAPACITY (Icu) @ 240 VAC	JL 1077 SI UNITS  A Hz Ops.  PPLICAT  V V  kA	1 POLE  TIONS  CURC 277  48	0.5 ~ 63 50/60 6,000 Suitable for reverse feed 15, UL 1077, CSA C22.2 N 4 96 10 10 10 10 10	d 0, 235 80Y/277 — — — — —	
ROHS COMPLIANCE  ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring  ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 480Y/277 VAC @ 480Y/277 VAC @ 480Y/277 VAC @ 96 VDC (wired in series) ELECTRICAL IEC APPLI Conformity to Standards ULTIMATE SHORT CIRCUIT BREAKING CAPACITY (Icu) @ 240 VAC @ 415 VAC	JL 1077 SI UNITS  A Hz Ops.  PPLICAT  V  V  kA kA kA kA kA CATION	1 POLE  TIONS  CURC 277  48	0.5 ~ 63 50/60 6,000 Suitable for reverse feeds 15, UL 1077, CSA C22.2 N 96 10 10 10 10 10 10 10 10	d 0, 235 80Y/277 — — — — —	
ROHS COMPLIANCE  ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 480Y/277 VAC @ 480Y/277 VAC @ 48 VDC @ 96 VDC (wired in series) ELECTRICAL IEC APPLI Conformity to Standards ULTIMATE SHORT CIRCUIT BREAKING CAPACITY (Icu) @ 240 VAC	JL 1077 SI UNITS  A Hz Ops.  PPLICAT  V V  kA	1 POLE  TIONS  CURC 277  48	0.5 ~ 63 50/60 6,000 Suitable for reverse feed  15, UL 1077, CSA C22.2 N 96  10 10 10 10 10 10 10 10 10	d 0, 235 80Y/277 — — — — —	
ROHS COMPLIANCE  ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 240 VAC @ 48 VDC @ 96 VDC (wired in series) ELECTRICAL IEC APPLI Conformity to Standards ULTIMATE SHORT CIRCUIT BREAKING CAPACITY (Icu) @ 240 VAC @ 240 VAC @ 240 VAC	JL 1077 SI UNITS  A Hz Ops.  PPLICAT  V V  kA	1 POLE  TIONS  CURC 277  48	0.5 ~ 63 50/60 6,000 Suitable for reverse feed  15, UL 1077, CSA C22.2 N 96  10 10 10 10 10 10 10 10 10	d 0, 235 80Y/277 — — — — —	
ROHS COMPLIANCE  ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 480Y/277 VAC @ 480Y/277 VAC @ 96 VDC (wired in series) ELECTRICAL IEC APPLI Conformity to Standards ULTIMATE SHORT CIRCUIT BREAKING CAPACITY (Icu) @ 240 VAC @ 415 VAC RATED SERVICE SHORT CIRCUIT BREAKING CAPACITY (Ics)	JL 1077 SI UNITS  A Hz Ops.  PPLICAT  V  V  kA kA kA kA kA kA kA kA	1 POLE  TIONS  CURC 277  48	96  10 10 10 10 10 10 10 10 10 10 10 10 10	d 0, 235 80Y/277 — — — — —	
ROHS COMPLIANCE  ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 247 VAC @ 480 VJC (wired in series) ELECTRICAL IEC APPLI Conformity to Standards ULTIMATE SHORT CIRCUIT BREAKING CAPACITY (Icu) @ 240 VAC @ 415 VAC RATED SERVICE SHORT CIRCUIT BREAKING CAPACITY (Ics) @ 240 VAC @ 415 VAC RATED SERVICE SHORT CIRCUIT BREAKING CAPACITY (Ics) @ 240 VAC	JL 1077 SI UNITS  A Hz Ops.  PPLICAT  V V  KA	1 POLE  TIONS  CURL 277  48	96  10  10  10  10  10  10  10  10  10  1	d 0, 235 80Y/277 — — — — —	
ROHS COMPLIANCE  ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring  ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series)  MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 480Y/277 VAC @ 48 VDC @ 96 VDC (wired in series)  ELECTRICAL IEC APPLI Conformity to Standards ULTIMATE SHORT CIRCUIT BREAKING CAPACITY (Icu) @ 240 VAC @ 415 VAC RATED SERVICE SHORT CIRCUIT BREAKING CAPACITY (Ics) @ 240 VAC @ 240 VAC	JL 1077 SI UNITS  A Hz Ops.  PPLICAT  V V  KA	1 POLE  TIONS  CURL 277  48	96  10  10  10  10  10  10  10  10  10  1	d 0, 235 80Y/277 — — — — —	
ROHS COMPLIANCE  ELECTRICAL GENERAL Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring  ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series)  MAKIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 480Y/277 VAC @ 480Y/277 VAC @ 480Y/277 VAC @ 96 VDC (wired in series)  ELECTRICAL IEC APPLI Conformity to Standards ULTIMATE SHORT CIRCUIT BREAKING CAPACITY (Icu) @ 240 VAC @ 415 VAC RATED SERVICE SHORT CIRCUIT BREAKING CAPACITY (Ics) @ 240 VAC @ 415 VAC CONSTRUCTION - CON	JL 1077 SI UNITS  A Hz Ops.  PPLICAT  V V V  kA	1 POLE  TIONS  CURL 277  48	0.5 ~ 63 50/60 6,000 Suitable for reverse feed  15, UL 1077, CSA C22.2 N  4  96  10 10 10 10 10 10 10 10 10 10 10 10 10	d 0, 235 80Y/277 — — — — —	

### **DIMENSIONS**

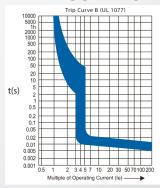
UL 489 Branch Circuit Breaker - 1 Pole

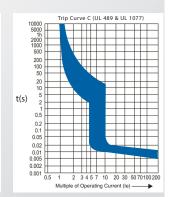


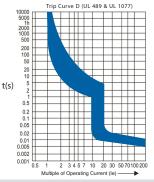
UL 1077 Supplementary Protector - 1 Pole



## TRIP CURVES







## **CERTIFICATIONS**

**Conformity to Standards:** UL 489

UL 1077

UL 508

CSA C22.2 No. 5, No. 235 IEC 60947-2, IEC 60898

#### Certifications:

UL File#: E496118 UL File#: E496119 UL File#: E508090

CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)



