



Current Switches and Transducers



Models CT-800, -805, -810, -815, -820, -825, -830
and CU-850, -855, -860, -865, -870, -875, -880, and -885



Current Switches (CTs)

Easy to install ...

- Small size, built-in mounting flanges, and top-mounted terminals

Intelligent design ...

- Self-powered
- Solid-core and split-core models
- LED indication for CT-810, -815, -820, and -825
- Reverse polarity protection for CU-870, -875, -880, and -885

Certified and compatible ...

- UL listed and CSA certified
- Compatible with EMS, SCADA, and automation systems

Broad application ...

- CTs monitor all types of fans, pumps, heating elements, motors, lamps, and relays
- CUs measure power and monitor filling and pumping operations as well as monitoring changing process variables like viscosity



Current Transducers (CUs)

The CT and CU 800 Series provides a wide selection of current switching and transducing options in small and durable solid-core and split-core designs. These self-powered switches and transducers can be easily hung or tied directly to cables or wires, and split-core models can be installed without removing power or disconnecting cables. All models are UL listed and CSA certified and are compatible with EMS, SCADA, and automation systems.

The CT current switches monitor all types of fans, pumps, heating elements, motors, lamps and relays. The CU current transducers are ideal for measuring power and monitoring filling and pumping operations as well as monitoring changing process variables like viscosity.



7400 Flying Cloud Drive Minneapolis, MN 55344-3720 • USA
800/843-5116 • 952/835-1626 • Fax 952/829-5331
sales@mamacsys.com • www.mamacsys.com

Baird House, Units 6&7
Pensnett Estate • Kingswinford
West Midlands • DY6 7YA • United Kingdom
01384-271113 • Fax 01384-271114

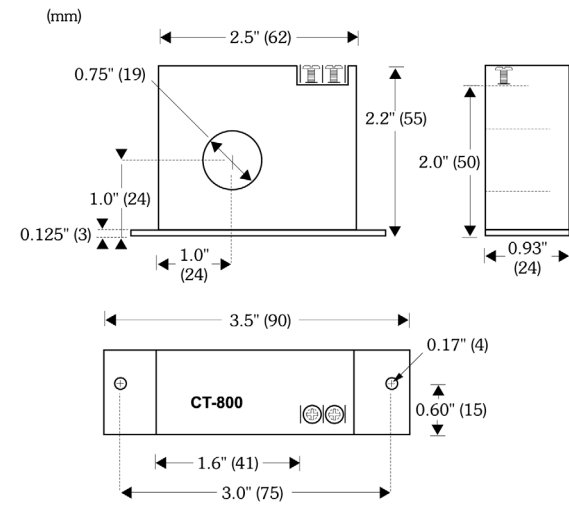
4 Armiger Court, Unit 2
Holden Hill • S.A. 5088 • Australia
08-8395-4333 • Fax 08-8395-4433

155 McIntosh Drive, Units 5&6 • Markham
Ontario • L3R 0N6 • Canada
905-474-9215 • Fax 905-474-0876

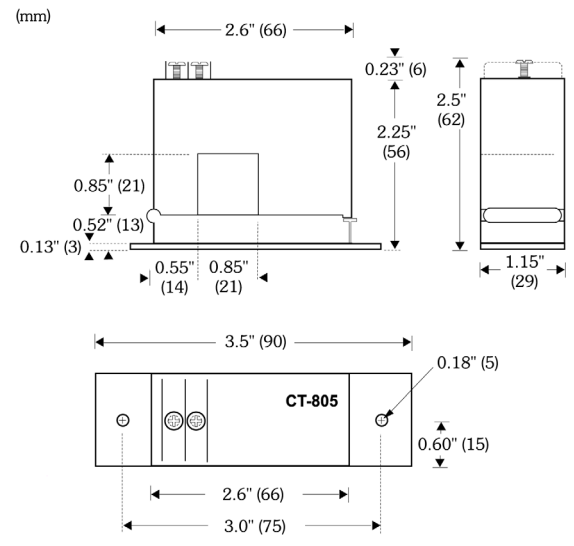
No. 22 Lorong 21A Geylang
#11-02 Chin Hin Hang Building
Singapore • 388431
65-6392-7273 • Fax 65-6392-7276

Dimensional Drawings

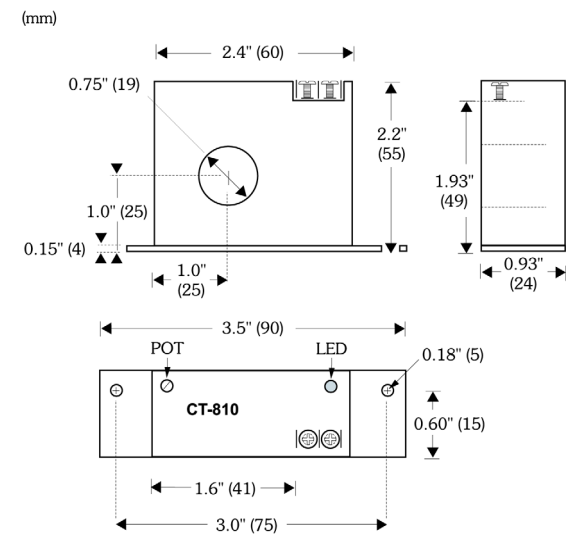
CT-800



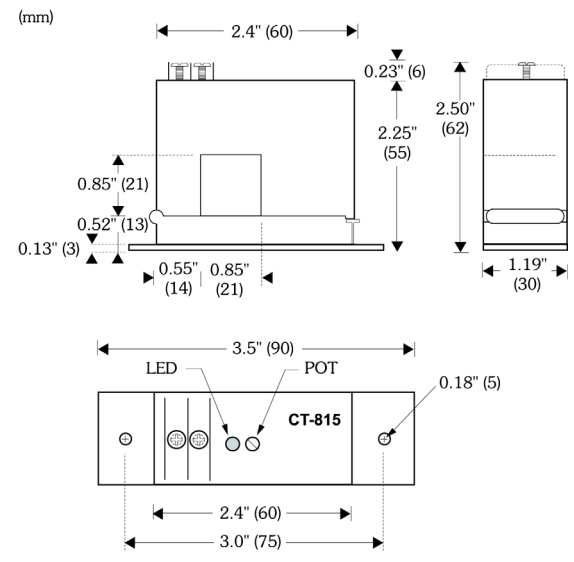
CT-805



CT-810

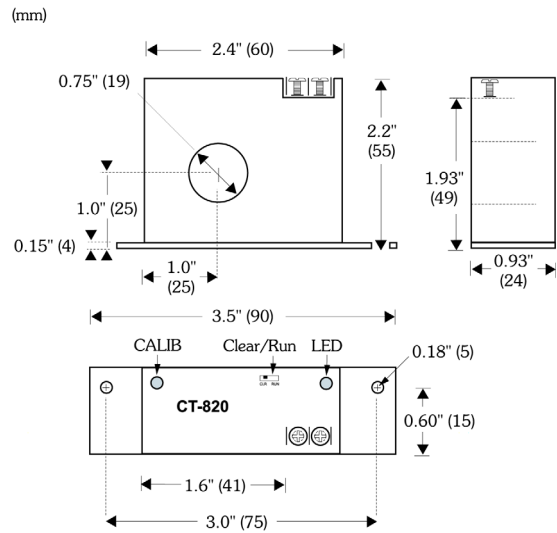


CT-815

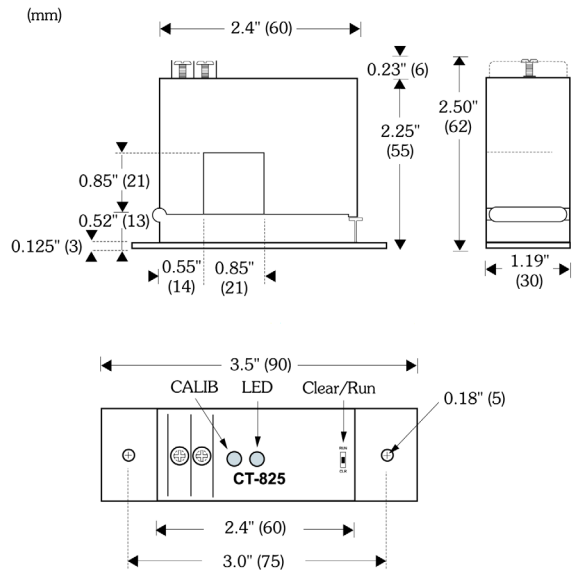


Dimensional Drawings

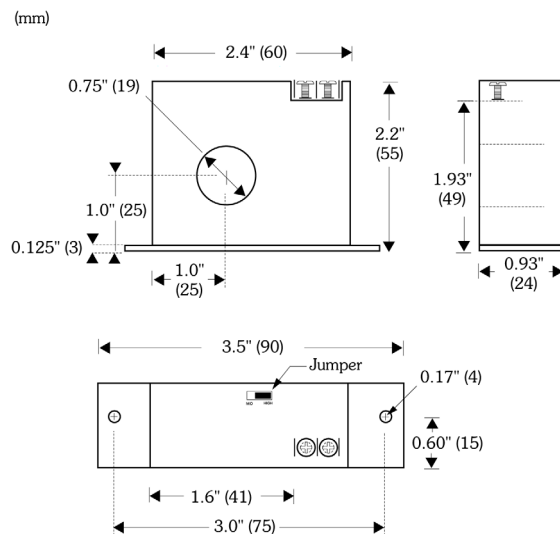
CU-820



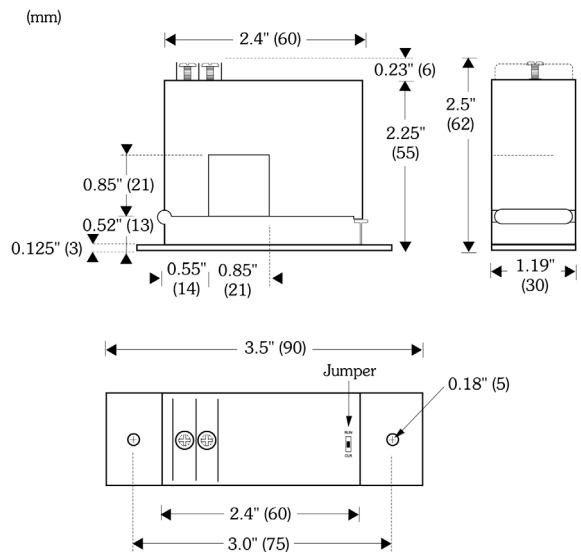
CT-825



CU-850, -860, -870, -880

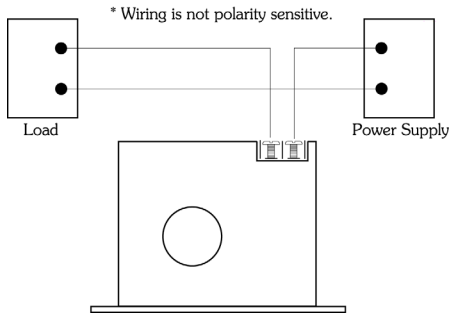


CU-855, -865, -875, -885

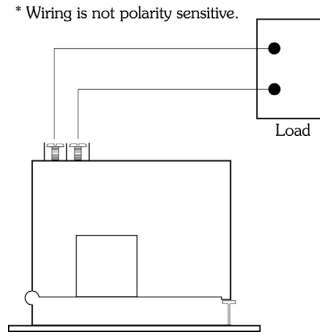


Wiring Diagrams

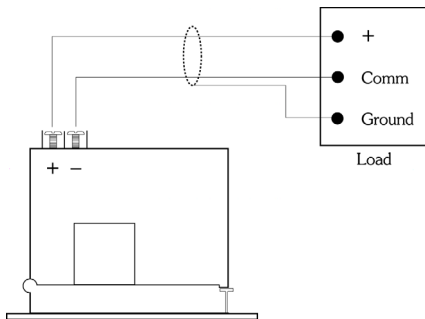
CT-800, -810, 815, -820, -825



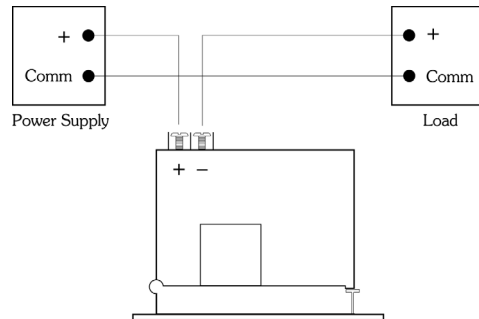
CT-805, -810



CU-850, -855, -860, -865



CU-870, -875, -880, -885



Specifications

CT-800 and CT-805:

Monitored AC Current:	CT-800: 1 to 250 amps CT-805: 1.5 to 250 amps
Maximum Currents:	250 amps maximum continuous 500 amps maximum for 6 seconds 1000 amps maximum for 1 second
Switching Characteristics:	CT-800: sensor trips at 1 amp CT-805: sensor trips at 1.5 amp Switches up to 0.3 amp continuous, 120 VAC or 120 VDC with zero off-state leakage Contact is not polarity-sensitive. Switch can be used for both AC and DC circuits
Response Time:	Depends on how much greater the load is than the setpoint. Motor-starting surges up to 6 times FLA can be as low as 0.2 seconds. If the setpoint is very close to the load, response time will be longer.
Isolation Voltage:	UL/CSA approved for a withstand voltage of 1240 VAC
Temperature Range:	-50°C to 65°C (58°F to 149°F)

CT-810 and CT-815:

Monitored AC Current:	CT-810: 1 to 150 amps CT-815: 1.5 to 150 amps
Maximum Currents:	150 amps maximum continuous 500 amps maximum for 6 seconds 1000 amps maximum for 1 second
Switching Characteristics:	Up to 0.3 amps continuous, 120 VAC or 120 VDC with zero off-state leakage Maximum 135 VRMS for no leakage 200-volt surge protection
Response Time:	Depends on how much greater the load is than the set point. Motor starting surges up to six times FLA result in as low as 0.2 seconds.
Isolation Voltage:	Meets UL requirements of 1000 volts
Temperature Range:	-50°C to 65°C (58°F to 149°F)
Hysteresis (Deadband):	1 amp setting: 50 mA 50 amp setting: 2.5 amps 150 amp setting: 7.5 amps

CT-820 and CT-825:

Monitored AC Current:	CT-820: 1.5 to 150 amps CT-825: 2.5 to 150 amps
Maximum Currents:	150 amps maximum continuous 500 amps maximum for 6 seconds 1000 amps maximum for 1 second
Switching Characteristics:	Switch may be used for both AC and DC circuits Up to 0.3 amps continuous, 135 VAC or 135 VDC with zero off-state leakage Internal protection against line surges
Operating Window:	Sensor automatically sets upper and lower trip points that are +15% of the monitored current in order to provide an adequate operating window and to prevent false tripping
Isolation Voltage:	1270 VAC at 60 hertz
Temperature Range:	0°C to 70°C (32°F to 158°F)

CU-850, CU-855, CU-860, and CU-865:

Monitored AC Current: CU-850 and CU-855: 10, 20, and 50 amps full scale
CU-860 and CU-865: 100, 150, and 200 amps full scale

Maximum Currents CU-850 and CU-855:	Range	Max. cont. amps	Max. for 6 seconds on and 15 seconds off	Max. for 1 second on and 15 seconds off
	1-10 amps	80 amps	125 amps	250 amps
	2-20 amps	110 amps	150 amps	300 amps
	5-50 amps	175 amps	215 amps	400 amps

Maximum Currents CU-860 and CU-865:	Range	Max. cont. amps	Max. for 6 seconds on and 15 seconds off	Max. for 1 second on and 15 seconds off
	10-100 amps	200 amps	300 amps	600 amps
	15-150 amps	300 amps	450 amps	800 amps
	20-200 amps	400 amps	500 amps	1000 amps

Accuracy / Loading Error: + 1% of full scale when loaded with 1 megohm; add 0.25% error maximum for a 10-megohm load; add 1.3% error for 100,000-ohm load

Repeatability / Linearity: Within + 1% of full scale over time, temperature, and unit to unit

Frequency: 50-60 hertz, + 2% accuracy between 20 to 100 hertz

Response Time: 100 milliseconds maximum (10-90%)

Isolation Voltage: Meets UL requirements of 1000 volts

Ripple: Less than 10 mV at maximum current

Over-Range Capability: Up to 8 volts output before internal protection clamp starts to cut in

Temperature Range: -50°C to 65°C (58°F to 149°F)

CU-870, CU-875, CU-880, and CU-885:

Monitored AC Current:	CU-870 and CU-875: 10, 20, and 50 amps full scale CU-880 and CU-885: 100, 150, and 200 amps full scale
Maximum Currents:	200 amps continuous current on any range. Maximum current for 15 seconds is 1200 amps on any range.
Supply Voltage:	10 to 40 VDC. Minimum voltage is 5 volts for the transducer plus voltage developed across total load resistance when the transducer is at 20 mA.
Accuracy:	+ 0.5% of full scale
Repeatability / Linearity:	+ 0.1% of full scale
Frequency:	Flat from 20 to 100 hertz
Response Time:	300 milliseconds to 99% of final value
Isolation Voltage:	Meets UL requirements of 1000 volts
Ripple and Noise:	8 mV Peak-to-Peak
Over-Range Capability:	25 mA output current minimum; 50 mA maximum
Internal Protection:	Reverse voltage protection
Temperature Range:	-10°C to 70°C (14°F to 158°F)
Temperature Coefficient:	.02% FS / °C

Ordering Information

Description	
-------------	--

CT-800	Solid-core current switch, 1-amp setpoint, 1 - 250 amps
CT-805	Split-core current switch, 1.5-amp setpoint, 1.5 - 250 amps
CT-810	Solid-core current switch, 1-amp setpoint, 1 - 150 amps, LED
CT-815	Split-core current switch, adjustable setpoint, 1.5 - 150 amps, LED
CT-820	Solid-core, automatic high / low, 1 - 150 amps, LED
CT-825	Split-core, automatic high / low, 1.5 - 150 amps, LED
CT-830	Solid-core, adjustable setpoint, LED
CU-850	Solid-core current transducer, 10 / 20 / 50 amps, 0 - 5 VDC output
CU-855	Split-core current transducer, 10 / 20 / 50 amps, 0 - 5 VDC output
CU-860	Solid-core current transducer, 100 / 150 / 200 amps, 0 - 5 VDC output
CU-865	Split-core current transducer, 100 / 150 / 200 amps, 0 - 5 VDC output
CU-870	Solid-core current transducer, 10 / 20 / 50 amps, 4 - 20 mA output
CU-875	Split-core current transducer, 10 / 20 / 50 amps, 4 - 20 mA output
CU-880	Solid-core current transducer, 100 / 150 / 200 amps, 4 - 20 mA output
CU-885	Split-core current transducer, 100 / 150 / 200 amps, 4 - 20 mA output



7400 Flying Cloud Drive Minneapolis, MN 55344-3720 • USA
800/843-5116 • 952/835-1626 • Fax 952/829-5331
sales@mamacsys.com • www.mamacsys.com

Baird House, Units 6&7
Pensnett Estate • Kingswinford
West Midlands • DY6 7YA • United Kingdom
01384-271113 • Fax 01384-271114

4 Armiger Court, Unit 2
Holden Hill • S.A. 5088 • Australia
08-8395-4333 • Fax 08-8395-4433

155 McIntosh Drive, Units 5&6 • Markham
Ontario • L3R 0N6 • Canada
905-474-9215 • Fax 905-474-0876

No. 22 Lorong 21A Geylang
#11-02 Chin Hin Hang Building
Singapore • 388431
65-6392-7273 • Fax 65-6392-7276