

ACUAMP[®] ACT Series AC Current Transducers



ACT current transducers combine a current transformer and signal conditioner into a single package. The ACT series is available with with sensed current ranges from 2A to 2000A with some models offering selectable sensing ranges and industry standard 4-20 mA or 0-10 VDC outputs. The ACT series is designed for application on 'linear' or sinusoidal AC loads and is compatible with most PLCs, data loggers and SCADA systems. This series is available in split-core or fixed core models.

Applications

Automation Systems

- Analog current reading for remote monitoring and software alarms

Data Loggers

- Self-powered 0-10VDC output transducer helps conserve data logger batteries
- Split-core enclosures make using portable data loggers easy

Panel Meters

- Simple connection displays power consumption or other motor status

Features

- 4-20 mA or 0-10 VDC outputs
- Factory matched and calibrated single piece transducer is more accurate than traditional two-piece field installed products.
- Average responding algorithm gives an RMS output on pure sine waves; perfect for constant speed (linear) loads or ON/OFF loads.
- Models with selectable sensing ranges.
- Output is magnetically isolated from the input for safety and to eliminate voltage drop.
- Built-in mounting feet with optional DRA-2B 35mm DIN rail adapter available.
- Five-year warranty



ACT Series AC Current Transducers				
Part Number	Description	Pcs/Pkg	Wt (lb)	Price
ACT050-10-F	AcuAMP AC current transducer, fixed core, 0-10, 0-20, or 0-50A selectable sensing range, 0-10 VDC output.	1	0.29	\$91.00
ACT050-10-S	AcuAMP AC current transducer, split core, 0-10, 0-20, or 0-50A selectable sensing range, 0-10 VDC output.	1	0.35	\$101.00
ACT200-10-F	AcuAMP AC current transducer, fixed core, 0-100, 0-150, or 0-200A selectable sensing range, 0-10 VDC output.	1	0.29	\$96.00
ACT200-10-S	AcuAMP AC current transducer, split core, 0-100, 0-150, or 0-200A selectable sensing range, 0-10 VDC output.	1	0.36	\$105.00
ACT005-42L-F	AcuAMP AC current transducer, fixed core, 0-2 or 0-5A selectable sensing range, 4-20mA output.	1	0.29	\$78.00
ACT005-42L-S	AcuAMP AC current transducer, split core, 0-2 or 0-5A selectable sensing range, 4-20mA output.	1	0.35	\$104.00
ACT050-42L-F	AcuAMP AC current transducer, fixed core, 0-10, 0-20, or 0-50A selectable sensing range, 4-20mA output.	1	0.29	\$80.00
ACT050-42L-S	AcuAMP AC current transducer, split core, 0-10, 0-20, or 0-50A selectable sensing range, 4-20mA output.	1	0.35	\$112.00
ACT200-42L-F	AcuAMP AC current transducer, fixed core, 0-100, 0-150, or 0-200A selectable sensing range, 4-20mA output.	1	0.29	\$115.00
ACT200-42L-S	AcuAMP AC current transducer, split core, 0-100, 0-150, or 0-200A selectable sensing range, 4-20mA output.	1	0.36	\$122.00
ACT400-42L-S	AcuAMP AC current transducer, split core, 0-400A sensing range, 4-20mA output.	1	1.22	\$199.00
ACT600-42L-S	AcuAMP AC current transducer, split core, 0-600A sensing range, 4-20mA output.	1	1.36	\$199.00
ACT750-42L-F	AcuAMP AC current transducer, fixed core, 0-375, 0-500, or 0-750A selectable sensing range, 4-20mA output.	1	1.51	\$190.00
ACT800-42L-S	AcuAMP AC current transducer, split core, 0-800A sensing range, 4-20mA output.	1	1.37	\$199.00
ACT1200-42L-S	AcuAMP AC current transducer, split core, 0-1200A sensing range, 4-20mA output.	1	2.59	\$259.00
ACT2000-42L-F	AcuAMP AC current transducer, fixed core, 0-1000, 0-1333, or 0-2000A selectable sensing range, 4-20mA output.	1	1.17	\$250.00
Accessories				
DRA-2B	35mm DIN rail adapters, 1.70"x0.45"x0.83" [43.7x11.4x21.0 mm]	2	0.40	\$3.75

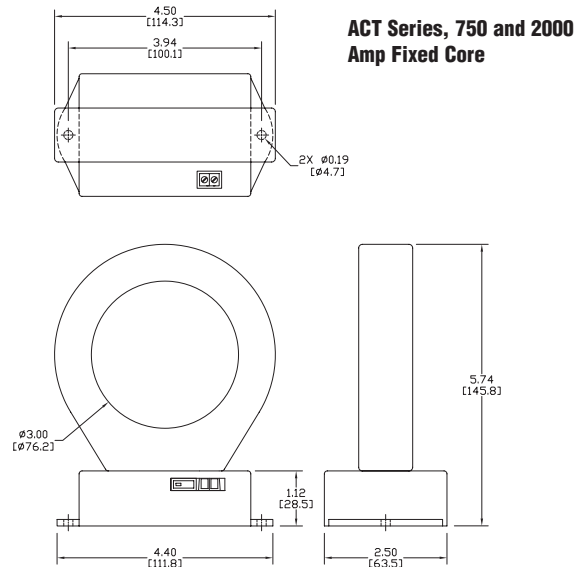
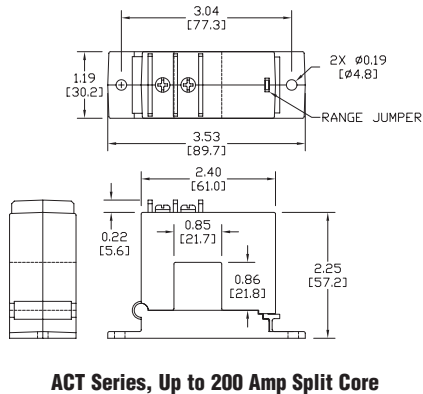
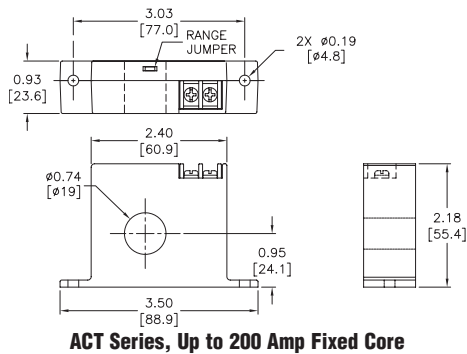
Sensed Current Limits				
Model	Range	Amps		
		Continuous	6 Sec	1 Sec
ACT005	0 to 2A	80	125	250
	0 to 5A	100	125	250
ACT050	0 to 10A	80	125	250
	0 to 20A	110	150	300
	0 to 50A	175	215	400
ACT200	0 to 100A	200	300	600
	0 to 150A	300	450	800
	0 to 200A	400	500	1000
ACT400	0 to 400A	1600	1920	6400
ACT600	0 to 600A	1600	1920	6400
ACT750	0 to 375A	750	1500	3750
	0 to 500A	750	1500	3750
	0 to 750A	750	1500	3750
ACT800	0 to 800A	1600	1920	6400
ACT1200	0 to 1200A	1600	1920	6400
ACT2000	0 to 1000A	2000	4000	10k
	0 to 1333A	2000	4000	10k
	0 to 2000A	2000	4000	10k

ACUAMP® ACT Series AC Current Transducers

ACT Series Specifications				
Specifications	-10- Models up to 200A	-42L- Models up to 200A	-42L- Models 750A and 2000A	-42- Models 400 600, 800, 1200A
Power Supply	Self-powered	24VDC nominal, 5 to 40VDC max	24VDC nominal, 5 to 40VDC max	24VDC nominal, 12 to 32VDC max
Output Signal	0 to 10 VDC	4 - 20 mA, Loop powered	4 - 20 mA, Loop powered	4 - 20 mA, Loop powered
Output Limit	15VDC	32mA	23mA	23mA
Output Impedance	1M Ω minimum 100k Ω (add 1.3% to accuracy)	600 Ω maximum @ 24VDC	600 Ω maximum @ 24VDC	600 Ω maximum @ 24VDC
Accuracy	1% full scale			
Response Time (10-90% step change)	100ms	300ms	600ms	600ms
Sensing Range	Selectable from 2 to 200A based on part number		Selectable from 375 to 2000A based on part number	Selectable from 400 to 1200A based on part number
Sensing Aperture	Fixed core: 0.74" [19mm] diameter; Split core: 0.85" [21.6 mm] sq.		3.0" [76.2 mm] diameter	2.22 X 1.19 in [56.3 X 30.2 mm] ACT1200: 3.44 x 2.31 in [87.3 x 58.8 mm]
Isolation Voltage	UL listed to 1,270VAC. Tested to 5,000VAC (1 minute max)		600VAC	UL tested to 2200VAC
Frequency Range (for sinusoidal waveforms)	50 to 60 Hz	20 to 100 Hz	50 to 60 Hz	50 to 60 Hz
Case	UL 94V-0 flammability rated thermoplastic			
Environmental	Operating Temperature: -4 to 122°F [-20 to 50°C]			
	Relative Humidity: 0-95% RH, Non-condensing			
	Pollution Degree 2			
	Altitude to 2000 meters			
Certifications	cULus listed (E222847), CE			

Dimensions

Inches [mm]

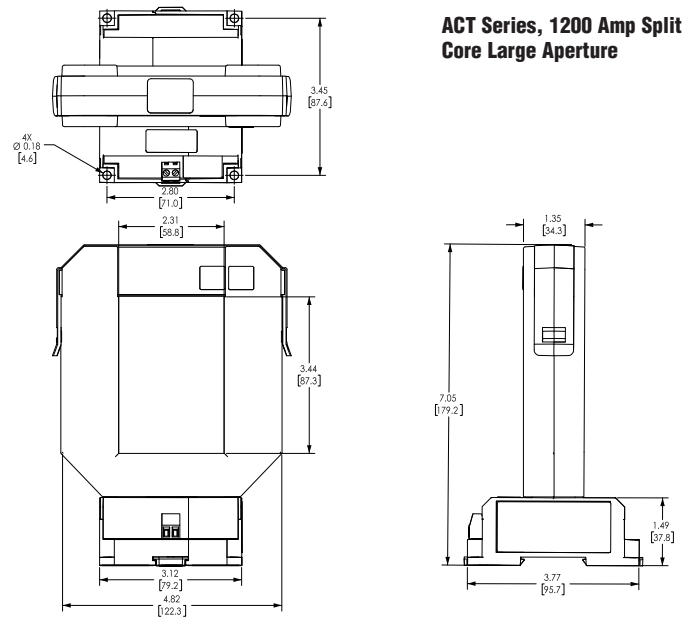
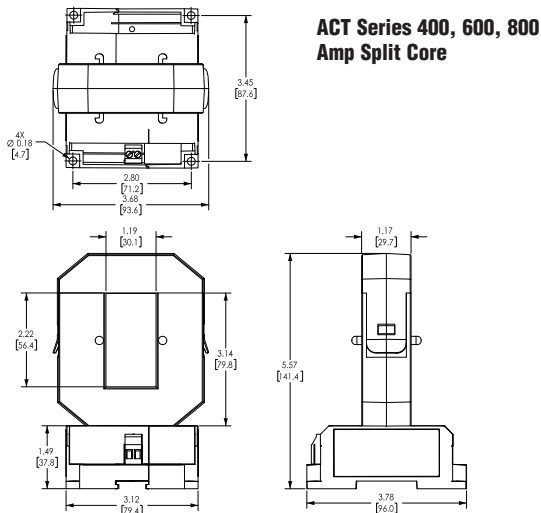


See our website www.AutomationDirect.com for complete Engineering drawings.

ACUAMP[®] ACT Series AC Current Transducers

Dimensions

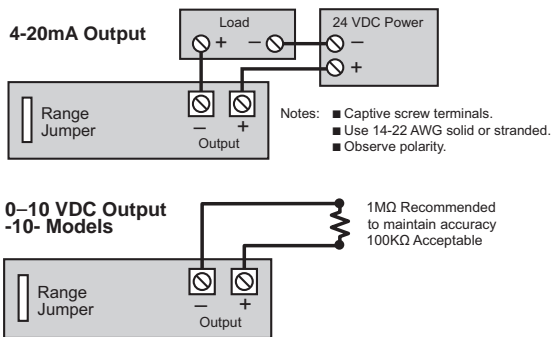
Inches [mm]



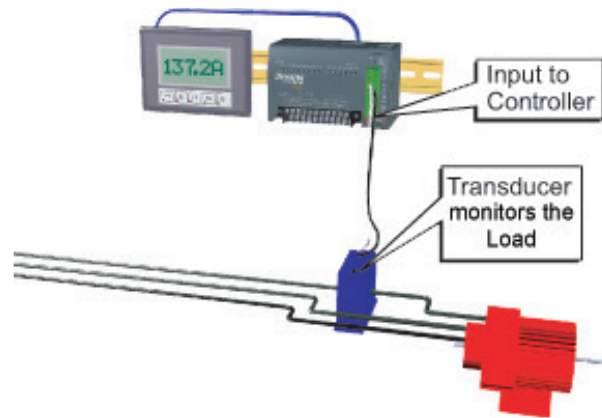
See our website www.AutomationDirect.com for complete Engineering drawings.

Wiring

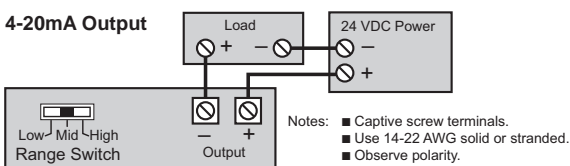
ACT Series, Up to 200 Amp



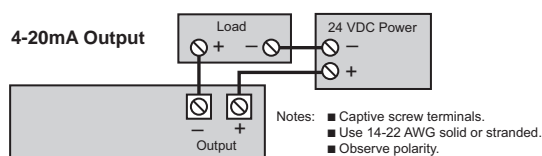
Terminals are #6 screws.



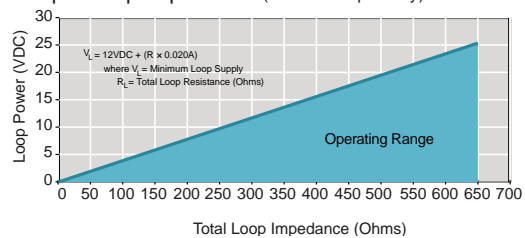
ACT Series, 750 and 2000 Amp



ACT Series, 400, 600, 800, 1200 Amp



Output Loop Impedance (4-20mA output only)



ACUAMP® AC Current Switches, Transducers and Indicators

Overview

The AcuAMP series of AC current sensors is a family of high-performance current sensors offering outstanding features, flexibility, and durability at an incredible Price. Choose from a wide selection of current transducers, switches and indicators, all designed in a rugged industry-standard feed-through package, including both fixed core and split core models.

AcuAMP current sensors are available with a broad selection of input sensing ranges

for maximum flexibility across many current ratings. The current transducer output choices include 4-20 mA, 24VDC loop-powered, and 0 to 10 volt self-powered analog outputs. The Current Switch outputs include isolated solid state switches available in Normally Open and Normally Closed configurations or SPDT relays.

Models with output time delay are also offered in the Current Switch series. The ACL1 Current Indicator senses AC current

ranging from 0.5 to 100A and requires no power for the indicating LED.

These current sensors can be mounted in a panel or attached to the monitored conductor with a wire tie. Use the Selection Guide below to find the best sensor for your requirements.



AcuAMP AC Current Transducer Selection Guide				
Specifications	Single-Phase Transducer	Single-Phase Transducer (True RMS)	3-Phase Transducer	3-Phase Transducer (True RMS)
Series	ACT	ACTR	3ACT	3ACTR
Sensing Range	Selectable: ACT005: 0 to 2A 0 to 5A ACT050: 0 to 10A 0 to 20A 0 to 50A ACT200: 0 to 100A 0 to 150A 0 to 200A ACT750: 0 to 375A 0 to 500A 0 to 750A ACT2000: 0 to 1000A 0 to 1333A 0 to 2000A Fixed range: ACT400 0 to 400A ACT600 0 to 600A ACT800 0 to 800A ACT1200 0 to 1200A	Selectable: ACTR005: 0 to 2A 0 to 5A ACTR050: 0 to 10A 0 to 20A 0 to 50A ACTR200: 0 to 100A 0 to 150A 0 to 200A ACTR750: 0 to 375A 0 to 500A 0 to 750A ACTR2000: 0 to 1000A 0 to 1333A 0 to 2000A Fixed range: ACTR400: 0 to 400A ACTR500: 0 to 500A ACTR600: 0 to 600A ACTR800: 0 to 800A ACTR1000: 0 to 1000A ACTR1200: 0 to 1200A ACTR2000: 0 to 2000A	Selectable: 3ACT030: 0 to 10A 0 to 15A 0 to 30A 3ACT100: 0 to 30A 0 to 50A 0 to 100A 3ACT200: 0 to 100A 0 to 150A 0 to 200A	Selectable: 3ACTR030: 0 to 10A 0 to 15A 0 to 30A 3ACTR100: 0 to 30A 0 to 50A 0 to 100A 3ACTR200: 0 to 100A 0 to 150A 0 to 200A
Output	-10 models: 0-10 VDC, self-powered -42L models: 4-20 mA, loop-powered	4-20 mA, loop-powered True RMS	4-20 mA, loop-powered	4-20 mA, loop-powered True RMS
Frequency Range	-10 models: 50 to 60 Hz -42L models up to 200A: 20 to 100 Hz -42L models 400, 600, 800, 1200A: 50 to 60 Hz sinusoidal waveforms only	20 to 400 Hz; (40 to 400 Hz flexible split core models) sinusoidal and non-sinusoidal waveforms	50 to 60 Hz sinusoidal waveforms only	30 to 100 Hz sinusoidal and non-sinusoidal waveforms
Sensing Aperture	ACT005, ACT050, ACT200: Fixed core: 0.75 in [19mm] dia. Split core: 0.85 in [21.6 mm] sq. ACT750, ACT2000: Fixed core: 3.0 in [76.2 mm] dia. ACT400, ACT600, ACT800: Split core: 2.22 X 1.19 in [56.3 X 30.2 mm] ACT1200 Split core: 3.44 X 2.31 in [87.3 X 58.8 mm]	ACTR005, ACTR050, ACTR200: Fixed core: 0.75 in [19mm] dia. Split core: 0.85 in [21.6 mm] sq. ACTR750, ACTR2000: Fixed core: 3.0 in [76.2 mm] dia. ACTR500, ACTR1000, ACTR2000: Flexible split core: 4.5 in [114.3 mm] dia. ACTR400, ACTR600, ACTR800: Split core: 2.22 X 1.19 in [56.3 X 30.2 mm] ACTR1200 Split core: 3.44 X 2.31 in [87.3 X 58.8 mm]	3x - Fixed core: 0.86 in [21.8 mm] dia.	3x - Fixed core: 0.86 in [21.8 mm] dia.



AC Current Switches, Transducers and Indicator

AcuAMP AC Current Switch Selection Guide								
Specifications	AC Current Switches							
Series	ACSN100	ACSN250	ACS150	ACSL	ACS200	ACS050/ ACS200	ACS035/ACS400	ACSX
Sensing Range	0 to 100A	0 to 250A	Fixed core: 1 to 150A Split core: 1.75 to 150A	0 to 50A	Jumper Selectable: Fixed core: 1 to 6A 6 to 40A 40 to 175A Split core: 1.75 to 6A 6 to 40A 40 to 200A	1 to 200A	2 to 400A	Jumper Selectable: Fixed core: 1.5 to 12A 12 to 55A 55 to 175A Split core: 2 to 12A 12 to 55A 55 to 200A
Setpoint (Trip Point)	Non-adjustable: 0.5 A	Non-adjustable: Fixed core: 0.75A Split core: 1.25A	Adjustable: Fixed core: 1-150 A (15-turn potentiometer) Split core: 1.75-150 A (4-turn potentiometer) Monitored load current required to adjust setpoint	Adjustable (3/4-turn potentiometer): ACSL010: 1-10A ACSL020: 2-20A ACSL050: 10-50A Monitored load current not required to adjust setpoint	Adjustable: (4-turn or 15-turn potentiometer) Fixed core: 1-175A Split core: 1.75-200A Monitored load current required to adjust setpoint	Adjustable: (Single turn potentiometer): ACS050: 1-50A ACS200: 4-200A	Adjustable: (3/4-turn potentiometer): ACS035: 2-35A ACS400: 25-400A	Adjustable: Fixed core: 1.5-175A (15-turn potentiometer) Split core: 2-200A (4-turn potentiometer) Monitored load current required to adjust setpoint
Output	Isolated solid state: Normally Open 0.15 A @ 120VAC or VDC	Isolated solid state: Normally Open 0.15 A @ 240VAC or VDC	Isolated solid state: Normally Open 0.15 A @ 240VAC or VDC Normally Closed 0.2 A @ 135VAC or VDC	Isolated solid state: Normally Open AC: 0.15 A @ 240VAC	Isolated solid state: Normally Open AC model: 1A @ 240VAC Normally Open AC model: 3A @ 120VAC Normally Open or Normally Closed DC model: 0.15 A @ 30VDC	Isolated solid state: Normally Open 1A @ 240VAC	Two Independent Single Pole, Double Throw electro-mechanical relays AC: 1A @ 120VAC DC: 2A @ 30VDC	Isolated solid state: Normally Open or Normally Closed AC model: 1A @ 240VAC Normally Open AC/DC model: 0.15 A @ 240 VAC/ VDC Normally Closed AC/DC model: 0.2 A @ 135 VAC/ VDC
Frequency Range	50 to 400 Hz	6 to 100 Hz	6 to 100 Hz	10 to 100 Hz	6 to 100 Hz	40 to 100 Hz	40 to 65 Hz	50 to 100 Hz
Response Time	N/A	120ms	120ms	100ms & 2s inrush delay	40 to 250 ms	0.50 sec. 5% over set point 0.20 sec. 50% over set point 0.15 sec. 100% over set point	40 - 120ms	Field adjustable time delay: 0.12 to 15 seconds
Sensing Aperture	0.30 in [8.13 mm] dia.	Fixed core: 0.75 in [19mm] dia. Split core: 0.85 in [21.7 mm] sq.	Fixed core: 0.75 in [19mm] dia. Split core: 0.85 in [21.7 mm] sq.	Fixed core: 0.55 in [13.97 mm] dia. Split core: 0.85 in [21.7 mm] sq.	Fixed core: 0.55 in [13.97 mm] dia. Split core: 0.85 in [21.7 mm] sq.	0.75 in [19mm] dia.	1.31 in [33.3 mm] dia.	Fixed core: 0.75 in [19mm] dia. Split core: 0.85 in [21.7 mm] sq.

ACUAMP® AC Current Switches, Transducers and Indicator

AcuAMP AC Current Transducer/Switch and Indicator Selection Guide			
Specifications	AC Current Transducer	AC Current Transducer/ Switch	Indicator
Series	ACTH	ACTS	ACL1
Sensing Range	0 to 50A	1 to 200A	0 to 100A
Setpoint (Trip Point)	Not Applicable	Adjustable: (Single turn potentiometer): ACTS050: 1-50A ACTS200: 4-200A	Non-adjustable: 0.5 A
Output	4 -20 mA, loop-powered adaptive True RMS	4-20mA analog output and isolated solid state: Normally Open 1A @ 240VAC	LED Only (flashing, red)
Frequency Range	40 to 400 Hz	40 to 400 Hz	50 to 400 Hz
Response Time	400ms at 100% duty cycle, or duty cycle period plus 40ms	Switch: 0.50 sec. 5% over set point 0.20 sec. 50% over set point 0.15 sec. 100% over set point Analog: < 0.30 sec. 90% step change < 0.40 sec. 100% step change	N/A
Sensing Aperture	0.86 in [21.9 mm] sq.	0.75 in [19mm] dia.	0.30 in [7.6 mm] dia.



Click on the thumbnail or go to
<https://www.automationdirect.com/VID-CT-0001>
 for a short introductory video on the AcuAmp Current
 Switches, Transducers and Indicators

ACUAMP® AC Current Sensors, Switches and Transducers Application Guide

Application Guide

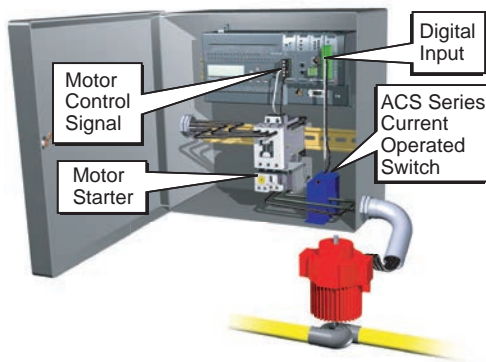
ACUAMP current sensors are a great fit for many applications including material handling, fan and pump applications, and heating systems. With current

transducers, current switches and current indicators, this sensor family gives you valuable data for processes ranging from monitoring loads to preventive maintenance. Models with the ability to read True RMS non-sinusoidal waveforms make it

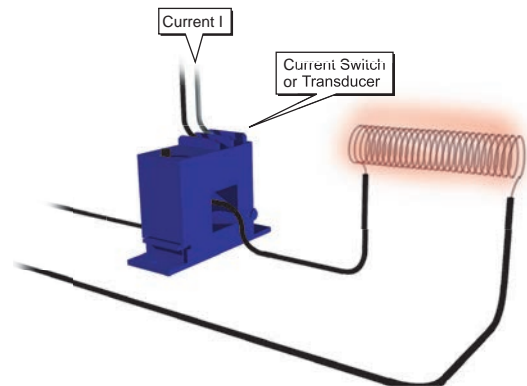
easy to monitor applications using variable frequency drives.

Use the application examples to help choose the best sensor model for your application.

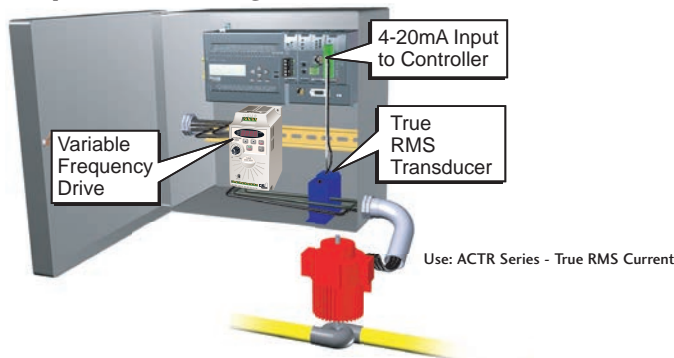
Pump Jam & Suction Loss Protection



Heater Life Prediction



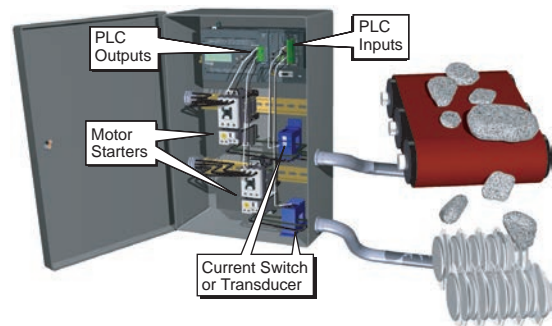
Pump Load Monitoring



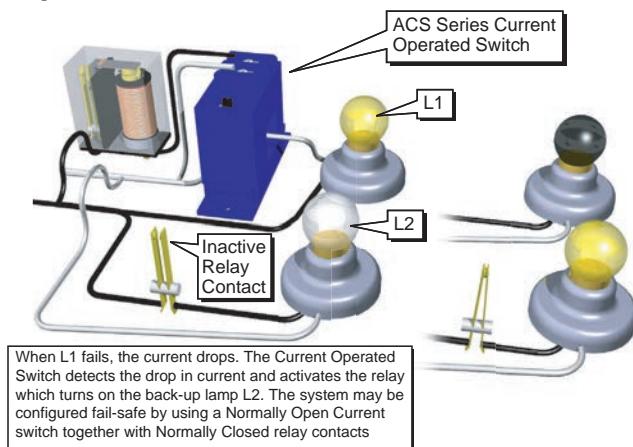
Crusher/Grinder/Shredder Motor Interlocks

The performance of size reduction equipment like crushers or grinders can be optimized by controlling the in-feed in order to:

- Help prevent jamming
- Improve the uniformity of the resultant product
- Enhance overall production efficiency



Lamp Failure Detection



Electric Motor Load Status

