

Section



True-Power® Constant Voltage Regulators .250–15.0 kVA

General Description and Features	150-151
Selection Charts	151
Wiring Diagrams and Dimensions	152

Acme True-Power® products consist of speciality designed ferroresonant transformers. Although ferroresonant transformers have been an economical solution to power problems for many years, it took the skills of Acme's highly regarded engineering staff to refine it to meet today's exacting requirements.

For example, typical ferroresonant transformers have an input limited to 100-130 V. Acme's True-Power® units have an input range of +10/-20% around input voltage nominals of 120/208/240 and 480 volts. At 120 volt input, this relates to 95-130 volts.

The typical ferroresonant transformer has limited electrical noise suppression capability. True-Power® power line conditioners have the following noise attenuation capability:

- Common Mode: 120 db
- Transverse Mode: 60 db

The typical ferroresonant transformer has an audible hum that can be objectionable in most offices. Acme's True-Power® power line conditioners are encapsulated in epoxy to lower sound levels below ANSI standard C 89.2.

The typical ferroresonant transformer has on output regulation of $\pm 3\%$ for input line changes only. Acme's True-Power® power line conditioners have an output regulation of $\pm 3\%$ for input line and load changes, making them suitable for operation at any load condition.

Features

- Reliable, regulated output voltage when input voltage varies, even to brownout levels.
- Extended operation to 65% of nominal when operated at 60% of full load.
- Noise rejection—effectively suppressing transient spikes and surges—120 db common mode and 60 db transverse mode.
- Rapid response to line and load changes—5% variation in 8m sec, 10% variation in 16m sec.
- Hold up time of 3m sec for complete loss of input power.
- Inherent overload and short circuit protection, without thermo protectors, fuses or circuit breakers, for immediate recovery when the overload is removed.
- Sinusoidal output features, less than 3% harmonic distortion, improves input wave forms which have total harmonic distortions of greater than 5%.
- Available in 250 through 15,000 VA in hardwired models.
- Handle multiple primary input voltages.
- Illuminated ON/OFF switch, multiple output receptacles and six foot input power cord on portable units.
- UL Listed.
- CSA Certified

Applications

- Industrial Automation and Control Equipment
- Electronic Test Equipment
- Robotics
- X-Ray Equipment
- Communications Equipment

Specifications

Input (Primary) 95-132 VAC (Hardwired) ②

166-228 VAC

192-264 VAC

384-528 VAC

Phase: 1 Phase

② All hardwired models will accommodate these primary input voltages.

Specifications

Output (Secondary) 120/208/240 VAC (Hardwire)

Load Range 0-100%

Regulation $\pm 3\%$ for line/load changes

Attenuation 120 db Common Mode Noise

60 db Transverse Mode Noise

Audible Noise Below ANSI std. C 89.2



Product Selection Guide

Problem Encountered	Shielded Isolation Transformer	True-Power	SPS	UPS
Power Failure	—	—	X	X
Widely Varying Source Voltage	—	X	—	X
Brown Outs	—	X	X	X
Switching Of Power Factor Correction Capacitors	X	X	X	X
Distorted Wave Shape Due To Harmonic Content	—	X	—	X
Common-Mode Transients	X	X	—	X
Transverse-Mode Transients	—	X	X	X
Voltage Spikes Due To Proximity Of Welding Equipment Or Certain Medical Diagnostic Equipment	X	X	X	X
Line Distortion Due To Noise Generated From Occasional Lightning Strikes	X	X	X	X
Operation Of Computer Storage Devices Such As Floppy Disks Or Winchester Drives Generates Transients	X	X	X	X

HARDWIRED MODELS — CONSTANT VOLTAGE REGULATORS

95-132 X 166-228 X 192-264 X 384-528 VOLT PRIMARY — 120/208/240 VOLT SECONDARY — 1Ø, 60 Hz

kVA Size	Catalog Number	APPROXIMATE DIMENSIONS (Inches)(Cm.) ③									Mounting Type (Wall)(Floor)	Weight (Lbs.)(Kg.)	Figure	Wiring Diagrams
		A	B	C	D	E	F	G	H	J				
0.25	T169430	15.50	6.30	5.80	5.63	8.13	9.30	1.2	.41 x .81	5.00	F&W	37	II	16
		(39.4)	(16.0)	(14.7)	(14.3)	(20.7)	(23.6)	(3.0)	(1.0 x 2.1)	(12.7)				
0.35	T169431	17.00	7.00	7.30	5.63	8.13	9.40	2.3	.41 x .81	6.50	F&W	51	II	16
		(43.2)	(17.8)	(18.5)	(14.3)	(20.7)	(23.9)	(5.8)	(1.0 x 2.1)	(16.5)				
0.50	T169432	17.00	7.00	7.30	5.63	8.13	9.40	2.3	.41 x .81	6.50	F&W	53	II	16
		(43.2)	(17.8)	(18.5)	(14.3)	(20.7)	(23.9)	(5.8)	(1.0 x 2.1)	(16.5)				
0.75	T169433	17.00	7.00	7.30	5.63	8.13	9.40	2.3	.41 x .81	6.50	F&W	65	II	16
		(43.2)	(17.8)	(18.5)	(14.3)	(20.7)	(23.9)	(5.8)	(1.0 x 2.1)	(16.5)				
1.00	T169434	18.50	6.50	8.55	5.63	8.13	9.50	2.3	.41 x .81	7.75	F&W	82	II	16
		(47.0)	(16.5)	(21.7)	(14.3)	(20.7)	(24.1)	(5.8)	(1.0 x 2.1)	(19.7)				
2.00	T169435	19.00	10.50	10.20	6.00	12.00	13.25	2.3	.44 x .63	9.40	F&W	142	III	16
		(48.3)	(26.7)	(25.9)	(15.2)	(30.5)	(33.7)	(5.8)	(1.1 x 1.6)	(23.9)				
3.00	T169436	19.00	10.50	10.20	6.00	12.00	13.25	2.3	.44 x .63	9.40	F&W	176	III	16
		(48.3)	(26.7)	(25.9)	(15.2)	(30.5)	(33.7)	(5.8)	(1.1 x 1.6)	(23.9)				
5.00	T169437	22.00	12.54	12.20	6.00	14.00	15.25	2.3	.44 x .63	11.40	F&W	295	III	16
		(55.9)	(31.9)	(31.0)	(15.2)	(35.6)	(38.7)	(5.8)	(1.1 x 1.6)	(29.0)				
10.00	T169438	23.06	27.31	24.06	18.00	25.50	—	—	.56	—	F&W ①	605	IV	16
		(58.6)	(69.4)	(61.1)	(45.7)	(64.8)			(1.4)					
15.00	T169439	23.06	40.13	24.06	18.00	38.31	—	—	.56	—	F	880	IV	16
		(58.6)	(101.9)	(61.1)	(45.7)	(97.3)			(1.4)					

① Wall mounting brackets required for this size. Refer to Page 207.

③ Dimensions not suitable for construction. Contact factory.

All Wiring Diagrams begin on page 197

CONSTANT VOLTAGE REGULATORS DIMENSIONAL DRAWINGS

Figure II and III

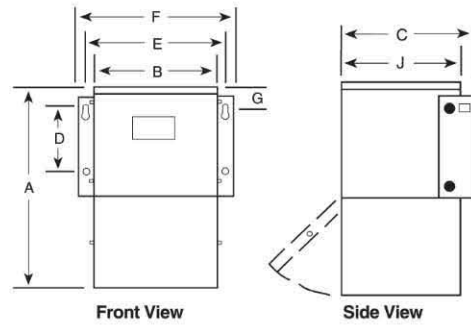
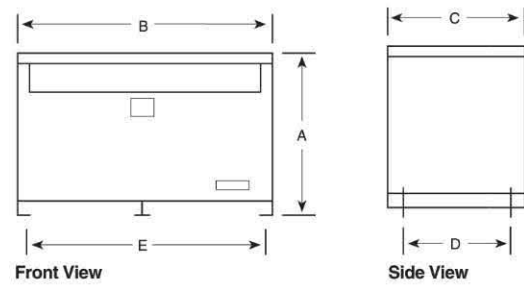
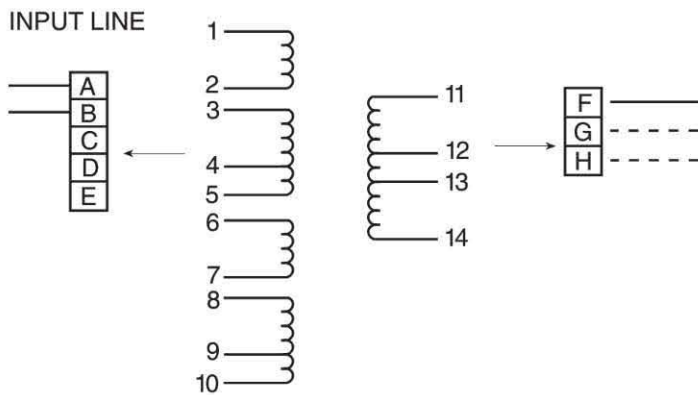


Figure IV



Power Line Conditioner



Input Connections Insulate

Volts	Connect	Isolate
120	1, 3, 6, 8 to A 2, 5, 7, 10 to B	4, 9
208	1, 6 to A 4, 9 to B 2, 3 to C 7, 8 to D	5, 10
240	1, 6 to A 5, 10 to B 2, 3 to C 7, 8 to D	4, 9
480	1 to A 10 to B 2, 3 to C 5, 6 to D 7, 8 to E	4, 9

Output Connections

Volts	Connect	Output Lines To
120	11 to F 12 to G 14 to H	F, G
208	11 to F 12 to G 14 to H	F, G, H
240	11 to F 12 to G 13 to H	F, H
480	11 to F 12 to G 14 to H	F, H

NOTE: To prevent externally shorting, all leads marked "INSULATE" must be individually capped with wire nuts or equivalent. Insulate leads individually!