DIN-Rail Power Supplies/Receptacles and Low Voltage Lighting Transformers

Section 7

DM Series Mounted Power Supplies NEW

Duplex Receptacles NEW

Low Voltage Lighting Transformers

DM SERIES 0.6 TO 20 AMPS

Acme's new flagship line of DM Series DC power supplies are an innovative solution to a vast array of control applications. Designed to provide optimal performance with a minimal impact on installation time and space.

Currently available in single phase and three phase models from 0.6 to 20 Amps (15-480 watts) these new power supplies provide the convenience of DIN-rail mounting for a toolless installation and the versatility of a standard auto-ranging input to cover the most applications with the fewest models. The slim profile greatly reduces the amount of space taken up on the DIN-rail and within the overall control cabinet. The fully enclosed design is touch proof and CE compliant to meet international specifications. All units are UL 508 listed and can be used at full-rated power.

Solution Ease

The DM families auto-ranging input feature provides you the versatility of using one power supply to address input voltages from 90-264 volts for single phase applications and 340-575 on three phase applications automatically–no adjustments required during installation.

Space Saving

All the Acme Electric "DM Series" power supplies have been designed in a compact, slim profile package compatible with other modules mounted in the control panel.

Installation Made Easy

All housings conveniently snap onto standard 35 mm DIN-rail assuring permanent mounting without the use of any tools.

Features

- Fully enclosed, low profile design
- Touchsafe
- Reduced installation time
- Pluggable connections
- Fast, easy wiring connections
- Simplifies troubleshooting effort
- DIN-rail Mounted
- Mounts on standard DIN-rail
- No tools required
- Local output indication
- Primary switching technology
- Up to Three-year limited warranty

Industries

- Automotive
- Machine tool
- Material handling
- Packaging
- Food processing
- Panel builders
- Automation

Applications

- Industrial/Machine control
- Process control
- Conveying equipment
- Material handling
- Packaging
- Robotics
- Welding

DM SERIES FEATURES

DC power now comes in a smaller package. Our slimline single phase models measure as small as 32 mm wide to conserve valuable space on the DIN Rail and in the overall control cabinet!

SINGLE PHASE

Catalog Number	Output Power (Watts Max)	Amp Rating	Voltage Range AC	Voltage Range DC	Output Voltage	Efficiency (1)	Operating Temperature	Height (Inches)(Cm.)	Width (Inches)(Cm.)	Depth (Inches)(Cm.)	Weight (Lbs.)(Kg.)
DM112045	54 W	4.5–3.4	90–254 VAC	—	12 VDC (10–16 adj)	86%	-10°C to +60°C	4.88 (124)	1.97 (50)	4.13 (105)	1.08 (0.49)
DM124025	60 W	2.5–2.1	90–254 VAC	—	24 VDC (22–28 adj)	87%	-10°C to +60°C	4.88 (124)	1.97 (50)	4.13 (105)	1.08 (0.49)
DM12420	480 W	20.0–17.1	90–254 VAC	—	24 VDC (22–28 adj)	90%	-10°C to +60°C	5.12 (130)	6.14 (156)	4.96 (126)	4.96 (2.25)
DM13613	480 W	13.3–12.0	90–254 VAC	—	36 VDC (34–40 adj)	90%	-10°C to +60°C	5.12 (130)	6.14 (156)	4.96 (126)	4.96 (2.25)
DM1480125	60 W	1.25–1.15	90–254 VAC	—	48 VDC (46–52 adj)	89%	-10°C to +60°C	4.88 (124)	1.97 (50)	4.13 (105)	1.08 (0.49)
DM14810	480 W	10.0–9.2	90–254 VAC	—	48 VDC (46–52 adj)	90%	-10°C to +60°C	5.12 (130)	6.14 (156)	4.96 (126)	4.96 (2.25)

Frequency: 47-63 Hz for all models

1. Depends upon specific model selection, output voltage and/or upon 120 or 240 VAC operation.

SLIMLINE SINGLE PHASE

Catalog Number	Output Power (Watts Max)	Amp Rating	Voltage Range AC	Output Voltage	Efficiency (1)	Operating Temperature	Height (Inches)(Cm.)	Width (Inches)(Cm.)	Depth (Inches)(Cm.)	Weight (Lbs.)(Kg.)
DM11206S	72 W	6.0 - 4.8	90-264 VAC	12 VDC (12-15 adj)	87%	-20°C to +60°C	4.88 (124)	1.26 (32)	4.02 (102)	0.92 (0.42)
DM11208S	96 W	8.0 - 6.4	90-264 VAC	12 VDC (12-15 adj)	89%	-20°C to +60°C	4.88 (124)	1.57 (40)	4.45 (113)	1.37 (0.62)
DM11215S	180 W	15.0	90-264 VAC	12 VDC (12-15 adj)	88%	-20°C to +60°C (1)	4.88 (124)	2.36 (60)	4.45 (113)	1.98 (0.9)
DM124033S	80 W	3.4 - 2.8	90-264 VAC	24 VDC (24-28 adj)	90%	-20°C to +60°C	4.88 (124)	1.26 (32)	4.02 (102)	0.92 (0.42)
DM12405S	120 W	5.0 - 4.3	90-264 VAC	24 VDC (24-28 adj)	91%	-20°C to +60°C	4.88 (124)	1.57 (40)	4.45 (113)	1.37 (0.62)
DM12410S	240 W	10.0	90-264 VAC	24 VDC (24-28 adj)	92%	-20°C to +60°C (1)	4.88 (124)	2.36 (60)	4.45 (113)	1.98 (0.9)
DM148017S	80 W	1.7 - 1.4	90-264 VAC	48 VDC (48-56 adj)	90%	-20°C to +60°C	4.88 (124)	1.26 (32)	4.02 (102)	0.92 (0.42)
DM148025S	120 W	2.5 - 2.1	90-264 VAC	48 VDC (48-56 adj)	91%	-20°C to +60°C	4.88 (124)	1.57 (40)	4.45 (113)	1.37 (0.62)
DM14805S	240 W	5.0	90-264 VAC	48 VDC (48-56 adj)	92%	-20°C to +60°C (1)	4.88 (124)	2.36 (60)	4.45 (113)	1.98 (0.9)

Frequency: 47-63 Hz for all models

1. Depends upon specific model selection, output voltage and/or upon 120 or 240 VAC operation.

THREE PHASE

Catalog Number	Output Power (Watts Max)	Amp Rating	Voltage Range AC	Voltage Range DC	Output Voltage	Efficiency (1)	Operating Temperature	Height (Inches)(Cm.)	Width (Inches)(Cm.)	Depth (Inches)(Cm.)	Weight (Lbs.)(Kg.)
DM32405	120 W	5.0 - 4.3	340-575 VAC	450-820 VDC	24 VDC (24-28 adj)	89%	-10°C to +60°C	4.96 (126)	2.56 (65)	4.65 (118)	1.65 (0.75)
DM32410	240 W	10.0 - 8.6	340-575 VAC	450-820 VDC	24 VDC (24-28 adj)	89%	-10°C to +60°C	5.12 (130)	3.43 (87)	4.96 (126)	2.76 (1.25)
DM32420	480 W	20.0 - 17.1	340-575 VAC	450-820 VDC	24 VDC (24-28 adj)	90%	-10°C to +60°C	5.12 (130)	6.14 (156)	4.96 (126)	4.85 (2.20)

Frequency: 47-63 Hz for all models

1. Depends upon specific model selection, output voltage and/or upon 120 or 240 VAC operation.

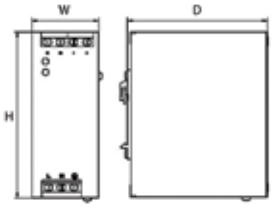
PLASTIC

Catalog Number	Output Power (Watts Max)	Amp Rating	Voltage Range AC	Output Voltage	Efficiency (1)	Operating Temperature	Height (Inches)(Cm.)	Width (Inches)(Cm.)	Depth (Inches)(Cm.)	Weight (Lbs.)(Kg.)
DMP1504	20 W	4.4 - 3.64	90-264 VAC	5 VDC (4.5-5.5 adj)	75%	-10°C to +50°C	3.54 (90)	0.90 (22.8)	4.02 (102)	0.35 (0.16)
DMP1120125	15 W	1.25 - 1.07	90-264 VAC	12 VDC (10-14 adj)	78%	-10°C to +50°C	3.54 (90)	0.90 (22.8)	4.02 (102)	0.29 (0.13)
DMP112025	30 W	3.0 - 2.14	90-264 VAC	12 VDC (10-14 adj)	84%	-10°C to +50°C	3.54 (90)	0.90 (22.8)	4.02 (102)	0.35 (0.16)
DMP11204	50 W	5.0 - 3.57	90-264 VAC	12 VDC (10-14 adj)	83%	-10°C to +50°C	3.54 (90)	1.26 (32)	4.02 (102)	0.51 (0.23)
DMP11502	30 W	2.14 - 1.67	90-264 VAC	15 VDC (14-18 adj)	84%	-10°C to +50°C	3.54 (90)	0.90 (22.8)	4.02 (102)	0.35 (0.16)
DMP124006	15 W	0.68 - 0.54	90-264 VAC	24 VDC (22-28 adj)	81%	-10°C to +50°C	3.54 (90)	0.90 (22.8)	4.02 (102)	0.29 (0.13)
DMP1240125	30 W	1.36 - 1.07	90-264 VAC	24 VDC (22-28 adj)	85%	-10°C to +50°C	33.54 (90)	0.90 (22.8)	4.02 (102)	0.35 (0.16)
DMP12402	50 W	2.27 - 1.79	90-264 VAC	24 VDC (22-28 adj)	85%	-10°C to +50°C	3.54 (90)	1.26 (32)	4.02 (102)	0.51 (0.23)
DMP14801	50 W	1.09 - 0.96	90-264 VAC	48 VDC (46-52 adj)	85%	-10°C to +50°C	3.54 (90)	1.26 (32)	4.02 (102)	0.51 (0.23)

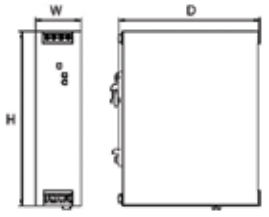
Frequency: 47-63 Hz for all models

1. Depends upon specific model selection, output voltage and/or upon 120 or 240 VAC operation.

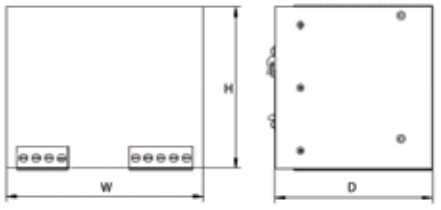
DM SERIES DIMENSIONAL DRAWINGS



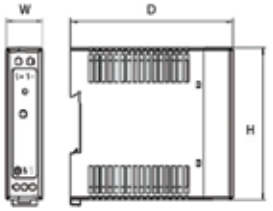
Single Phase



Slim Line



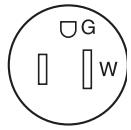
Three Phase



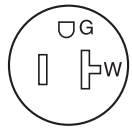
Plastic

DIN RAIL UTILITY BOX
15 and 20 Ampere

Hubbell's DIN Rail Utility Box offers a labor saving way to provide utility power to any control cabinet. Installing the DIN Rail Utility Box is as easy as snapping the box onto a 35mm DIN Rail and connecting the line, neutral and ground wires to the terminal block. Utility power for fans, lights, laptop computers, testers or any other power requirement. All Hubbell DIN Rail Utility Boxes may be mounted either vertically or horizontally on the DIN Rail.



15A 125V
NEMA 5-15F
UL CSA
0.5H P



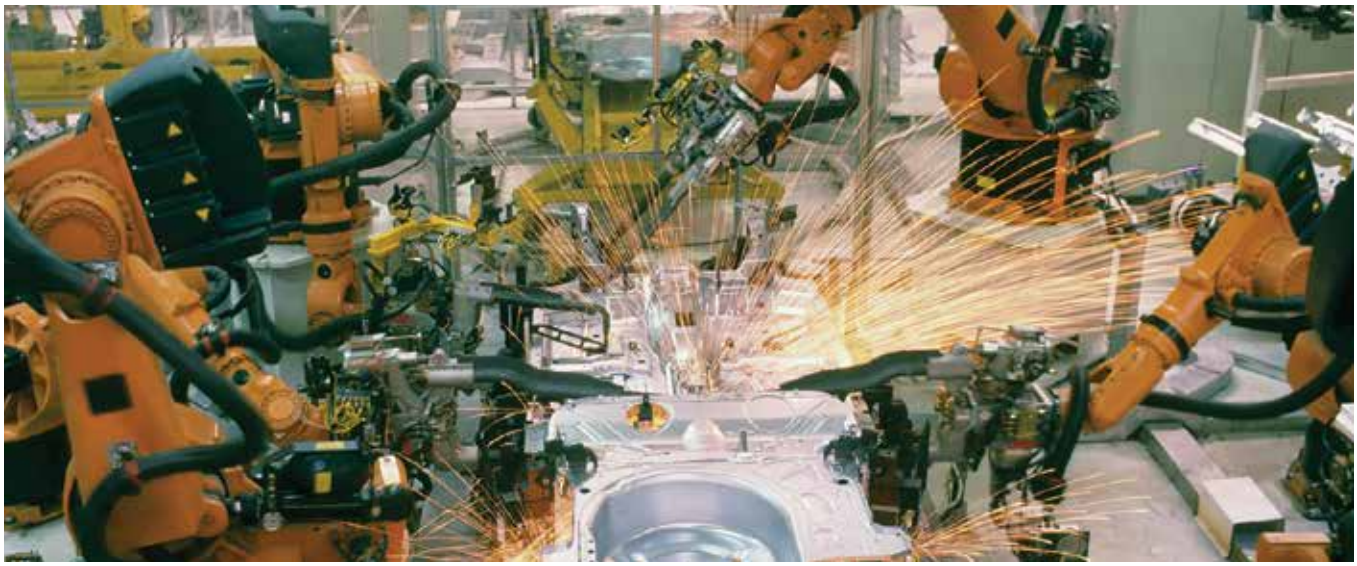
20A 125V
NEMA 5-20R
UL CSA
1 HP

DUPLEX RECEPTACLES

Catalog Number		Color	Description
15A 125V NEMA 5-15R UL CSA 0.5 HP	20A 125V NEMA 5-20R UL CSA 1 HP		
DRUB15	DRUB20	Gray	DIN-Rail mounted duplex receptacles.

GFCI DUPLEX RECEPTACLES

Catalog Number		Color	Description
15A 125V NEMA 5-15R UL CSA 0.5 HP	20A 125V NEMA 5-20RUL CSA 1 HP		
DRUBGFI15	DRUBGFI20	Gray	DIN-Rail mounted GFCI duplex receptacles.
DRUBGFI15AC	DRUBGFI20AC	Gray	DIN-Rail mounted duplex receptacles with aux GFCI contacts.



WHY LOW VOLTAGE LIGHTING?

Acme's Low Voltage Lighting products provide a safe, long lasting, highly reliable power source; a perfect selection for landscape applications as well as interior use.

Low voltage lighting is a creative medium with unlimited application possibilities. Low voltage lighting benefits include:

- Precision beam control
- More light intensity per watt
- Less radiated heat
- Greater efficiency
- Longer life
- Safer to use
- Easy installation
- A high return on end-user investment

Acme low voltage transformers are available in a wide range of options and models that are all UL listed for use indoors or outdoors. See inside back cover for warranty details.

Transformers in ratings of 100 through 1000 W; Buck–Boost in .05 through 10 kVA.

Transformers have copper lead wires for hardwiring. Circuit breakers for instant reset (except pool and spa and Buck–Boost). No fumbling with fuses. Generous wiring compartment, too!

A full fault current carrying Faraday Shield (except Buck–Boost) prevents 120 volts from reaching the 12 volt side, as required by UL-1571 and UL-1838.

The convenient "Selection Guide" below provides you with the data you need to select the product that best meets your requirement. Complete product selection data, dimensions and wiring diagrams are contained on the following pages. If you need help in your selection, or if you have questions, just call technical services at 1-800-334-5214.

			Transformers	
	Features/Options		'T1' Catalog Number	Buck-Boost 'T1' and 'T2' Catalog Number
1	Ratings (Watts, VA, kVA)		100 through 1000 VA	.05 through 10 kVA
2	Primary Input		120 Volts or 240 Volts	120 x 240 Volts
3	Secondary Output		12V or 24V	12V or 24V
4	Hardwired Primary		Yes	Yes
5	Overload Protection:	Primary	Auto Thermal Reset	No
		Secondary	Circuit Breakers	No
6	Output Wiring		Copper	Copper
7	UL Listed		Yes	Yes
8	CSA Certified		Yes	Yes
9	Faraday Shield		Yes	No
10	Product Warranty		10 Years	10 Years
11	UL-3R Indoor/Outdoor Enclosure		No	Yes

LOW VOLTAGE GENERAL PURPOSE TRANSFORMERS

Features

- UL Listed , CSA Certified.
- 100, 150, 300, 600, 750, 1000 VA.
- 1 Phase, 60 Hz, 120 or 240 volt input.
- 12 or 24 volt output.
- Input Auto-Thermal reset switch.
- Output circuit breaker.
- Fully encapsulated core and coil.
- Full fault current carrying Faraday Shield.
- Flexible copper leadwire terminations.
- UL class 180°C insulation system 115°C rise.
- UL Type 2 enclosure.
- Keyhole slotted wall mounting brackets.
- Black finish.
- Bottom access.
- Two 0.875 (2.2 cm) single knockouts each side.
- Two dual 0.875 (2.2 cm) and 1.125 (2.9 cm) knockouts on bottom cover.

120 PRIMARY VOLTS — 12 SECONDARY VOLTS — TWO WINDINGS — 1Ø, 60 Hz

VA	Catalog Number	Height (Inches)(Cm.)	Width (Inches)(Cm.)	Depth (Inches)(Cm.)	Weight (Lbs.)(Kg.)	CB Rating	CB Style	Dimensional Drawings
100	T179600S	9.01 (22.9)	4.08 (10.4)	3.88 (9.9)	7 (3.2)	15 AMP	Push To Reset Thermal Breaker	A
150	T179620S	9.01 (22.9)	4.08 (10.4)	3.88 (9.9)	7 (3.2)	20 AMP	Push To Reset Thermal Breaker	A
300	T179621S	11.68 (29.7)	4.66 (11.8)	4.57 (11.6)	11 (5.0)	40 AMP	Push To Reset Thermal Breaker	A
600	T179622S	11.68 (29.7)	4.66 (11.8)	4.57 (11.6)	15 (6.8)	60 AMP	Magnetic Toggle On/Off Breaker	A
750	T179603S	11.68 (29.7)	4.66 (11.8)	4.57 (11.6)	18 (8.2)	75 AMP	Magnetic Toggle On/Off Breaker	A
1000	T179604S	11.93 (30.3)	5.41 (13.7)	5.20 (13.2)	26 (11.8)	100 AMP	Magnetic Toggle On/Off Breaker	A

120 PRIMARY VOLTS — 24 SECONDARY VOLTS — TWO WINDINGS — 1Ø, 60 Hz

VA	Catalog Number	Height (Inches)(Cm.)	Width (Inches)(Cm.)	Depth (Inches)(Cm.)	Weight (Lbs.)(Kg.)	CB Rating	CB Style	Dimensional Drawings
100	T179605S	9.01 (22.9)	4.08 (10.4)	3.88 (9.9)	7 (3.2)	7 AMP	Push To Reset Thermal Breaker	A
150	T179623S	9.01 (22.9)	4.08 (10.4)	3.88 (9.9)	7 (3.2)	10 AMP	Push To Reset Thermal Breaker	A
300	T179624S	11.68 (29.7)	4.66 (11.8)	4.57 (11.6)	11 (5.0)	20 AMP	Push To Reset Thermal Breaker	A
600	T179625S	11.68 (29.7)	4.66 (11.8)	4.57 (11.6)	15 (6.8)	40 AMP	Push To Reset Thermal Breaker	A
750	T179608S	11.68 (29.7)	4.66 (11.8)	4.57 (11.6)	18 (8.2)	50 AMP	Push To Reset Thermal Breaker	A
1000	T179609S	11.93 (30.3)	5.41 (13.7)	5.20 (13.2)	26 (11.8)	50 AMP	Magnetic Toggle On/Off Breaker	A

240 PRIMARY VOLTS — 24 SECONDARY VOLTS — TWO WINDINGS — 1Ø, 60 Hz

VA	Catalog Number	Height (Inches)(Cm.)	Width (Inches)(Cm.)	Depth (Inches)(Cm.)	Weight (Lbs.)(Kg.)	CB Rating	CB Style	Dimensional Drawings
100	T179615S	9.01 (22.9)	4.08 (10.4)	3.88 (9.9)	7 (3.2)	7 AMP	Push To Reset Thermal Breaker	A
150	T179629S	9.01 (22.9)	4.08 (10.4)	3.88 (9.9)	7 (3.2)	10 AMP	Push To Reset Thermal Breaker	A
300	T179630S	11.68 (29.7)	4.66 (11.8)	4.57 (11.6)	11 (5.0)	20 AMP	Push To Reset Thermal Breaker	A
600	T179631S	11.68 (29.7)	4.66 (11.8)	4.57 (11.6)	15 (6.8)	40 AMP	Push To Reset Thermal Breaker	A
750	T179618S	11.68 (29.7)	4.66 (11.8)	4.57 (11.6)	18 (8.2)	50 AMP	Push To Reset Thermal Breaker	A
1000	T179619S	11.93 (30.3)	5.41 (13.7)	5.20 (13.2)	26 (11.8)	50 AMP	Magnetic Toggle On/Off Breaker	A

BUCK-BOOST TRANSFORMERS

Buck-Boost Transformers offer a no-frills approach to low voltage lighting. (See Chart Below) A typical Buck-Boost application is 120 volts in and 12 volts out for low voltage lighting or control circuitry. In most applications, this low voltage isolation transformer is field connected as an autotransformer. For more information on Buck-Boost Transformers, refer to the next section in this catalog.

120 X 240 VOLT INPUT — 12/24 VOLT OUTPUT — 1Ø, 60 Hz

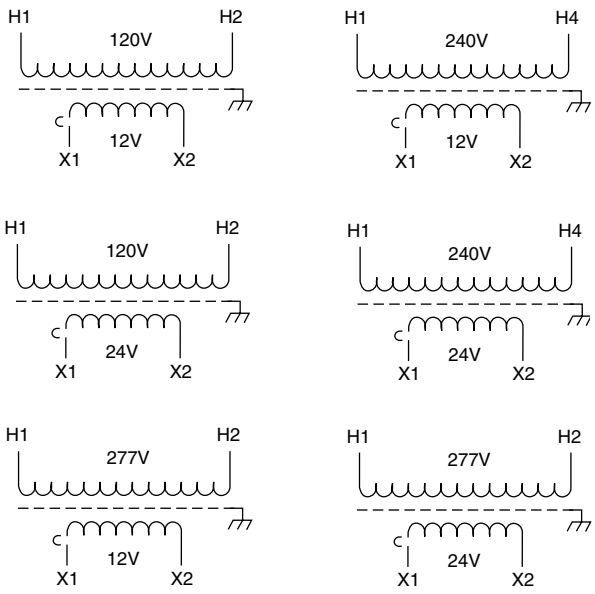
Catalog Number	Insulating Transformer Rating	Secondary Maximum Current Output 12V	Secondary Maximum Current Output 24V	Height (Inches)(Cm.)	Width (Inches)(Cm.)	Depth (Inches)(Cm.)	Weight (Lbs.)(Kg.)
T181047	0.05 kVA	4.16	2.08	6.38 (16.2)	3.19 (8.1)	3.00 (7.6)	4 (1.8)
T181048	0.10 kVA	8.32	4.16	6.62 (16.8)	3.75 (9.5)	3.62 (9.2)	5 (2.3)
T181049	0.15 kVA	12.52	6.25	7.12 (18.1)	3.75 (9.5)	3.62 (9.2)	7 (3.2)
T181050	0.25 kVA	20.80	10.40	8.68 (22.0)	4.08 (10.4)	3.88 (9.9)	10 (4.5)
T181051	0.50 kVA	41.60	20.80	9.06 (23.0)	4.37 (11.1)	4.20 (10.7)	15 (6.8)
T181052	0.75 kVA	62.50	31.25	9.68 (24.6)	4.75 (12.1)	4.51 (11.5)	19 (8.6)
T111683	1.00 kVA	83.20	41.60	10.50 (26.7)	5.50 (14.0)	5.13 (13.0)	24 (10.9)
T111684	1.50 kVA	125.00	62.50	11.62 (29.5)	5.50 (14.0)	5.13 (13.0)	30 (13.6)
T111685	2.00 kVA	166.00	83.20	13.00 (33.0)	5.50 (14.0)	5.13 (13.0)	38 (17.2)
T111686	3.00 kVA	250.00	125.00	11.50 (29.2)	10.31 (26.2)	7.13 (18.1)	55 (24.9)
T111687	5.00 kVA	416.00	208.00	14.38 (36.5)	10.31 (26.2)	7.13 (18.1)	75 (34.0)
T211688	7.50 kVA	625.00	312.50	21.19 (53.8)	13.50 (34.3)	10.84 (27.5)	125 (56.7)
T211689	10.00 kVA	833.00	416.60	21.19 (53.8)	13.50 (34.3)	10.84 (27.5)	160 (72.6)

277 VOLT INPUT — 12/24 VOLT OUTPUT — 1Ø, 60 Hz

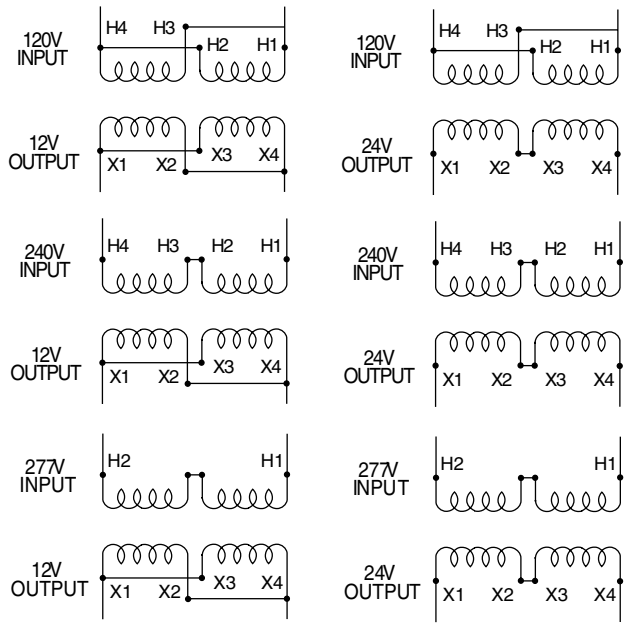
NEW

Catalog Number	Insulating Transformer Rating	Secondary Maximum Current Output 12V	Secondary Maximum Current Output 24V	Height (Inches)(Cm.)	Width (Inches)(Cm.)	Depth (Inches)(Cm.)	Weight (Lbs.)(Kg.)
T1100V0370BC	0.10 kVA	8.32	4.16	6.62 (16.8)	3.75 (9.5)	3.62 (9.2)	5 (2.3)
T1150V0370BC	0.15 kVA	12.52	6.25	7.12 (18.1)	3.75 (9.5)	3.62 (9.2)	7 (3.2)
T1250V0370BC	0.25 kVA	20.80	10.40	8.68 (22.0)	4.08 (10.4)	3.88 (9.9)	10 (4.5)
T1500V0370BC	0.50 kVA	41.60	20.80	9.06 (23.0)	4.37 (11.1)	4.20 (10.7)	15 (6.8)
T1001K0370BC	1.00 kVA	83.20	41.60	10.50 (26.7)	5.50 (14.0)	5.13 (13.0)	24 (10.9)
T1150K0370BC	1.50 kVA	125.00	62.50	11.62 (29.5)	5.50 (14.0)	5.13 (13.0)	30 (13.6)

LOW VOLTAGE GENERAL PURPOSE TRANSFORMER



BUCK BOOST WIRING DIAGRAMS



Voltage Drop Chart		
Voltage at Lamp	Life Expectancy of Lamp	% of Rated Candlepower
13.2	2/3 Rated Life	350
12.6	3/4 Rated Life	180
12.0	As Rated	100
11.5	2X Rated Life	80
11.0	3X Rated Life	74
10.5	5X Rated Life	65
10.0	9X Rated Life	50

Cable Size Constant Chart	
Cable Size	Cable Size Constant
#18	1380
#16	2200
#14	3500
#12	7500
#10	11,920
#8	18,960
#6	30,150

Voltage Drop Formula

$$\frac{\text{Total Watts on Cable x Length of Run}}{\text{Cable Size Constant}} = \text{Voltage Drop}$$