

Standard Features on 12 Volt and 24 Volt Transformers



- Compact size
- Outdoor rated NEMA 3R (Indoor or Outdoor Rated)
- Available in black powder coat
- Whisper quiet operations
- Dimmable
- Standard re-settable primary breaker
- Easy installation and accessible maintenance
- Highest degree of efficiency
- Available only in alternating current (AC) for standard lamps
- ETL and UL listed
- Consult factory for other input voltages

Transformer (Indoor or Outdoor Rated NEMA 3R) - Primary Fusing Included

	Product Code	Max. Watts	Input	Output	Input Current No Load-Full Load	Power Factor	Width (W)	Height (H)	Depth (D)
TRA5	TRA5-120V-12VDC OR 24VDC	5	120V	12VDC or 24VDC	.4 - 1.4 Amps	0.961	1.975"	6"	1.43"
	TRA5-277V-12VDC OR 24VDC	5	277V	12VDC or 24VDC	0.2 - 0.6 Amps	0.961	1.975"	6"	1.43"
TRA10	TRA10-120V-12VDC OR 24VDC	10	120V	12VDC or 24VDC	0.3 - 2.2 Amps	0.964	1.975"	6"	1.43"
	TRA10-277V-12VDC OR 24VDC	10	277V	12VDC or 24VDC	0.12 - 0.8 Amps	0.964	1.975"	6"	1.43"
TRA20	TRA20-120V-12VDC OR 24VDC	20	120V	12VDC or 24VDC	0.3 - 2.6 Amps	0.979	1.975"	6"	1.43"
	TRA20-277V-12VDC OR 24VDC	20	277V	12VDC or 24VDC	0.12 - 1.2 Amps	0.979	1.975"	6"	1.43"
TRA35	TRA35-120V-12VDC OR 24VDC	35	120V	12VDC or 24VDC	0.4 - 4.3 Amps	0.973	1.975"	6"	1.43"
	TRA35-277V-12VDC OR 24VDC	35	277V	12VDC or 24VDC	0.15 - 1.8 Amps	0.973	1.975"	6"	1.43"
TRA40	TRA40-120V-12VDC OR 24VDC	40	120V	12VDC or 24VDC	0.8 - 5.3 Amps	0.978	1.975"	6"	1.43"
	TRA40-277V-12VDC OR 24VDC	40	277V	12VDC or 24VDC	0.3 - 2.3 Amps	0.978	1.975"	6"	1.43"
TRA50	TRA50-120V-12VDC OR 24VDC	50	120V	12VDC or 24VDC	0.8 - 5.3 Amps	0.978	1.975"	6"	1.43"
	TRA50-277V-12VDC OR 24VDC	50	277V	12VDC or 24VDC	0.3 - 2.3 Amps	0.978	1.975"	6"	1.43"
TRA60	TRA60-120V-12VDC OR 24VDC	60	120V	12VDC or 24VDC	.4 - 1.4 Amps	0.961	3.00"	7.50"	2.75"
	TRA60-277V-12VDC OR 24VDC	60	277V	12VDC or 24VDC	0.2 - 0.6 Amps	0.961	3.00"	7.50"	2.75"
TRA75	TRA75-120V-12VDC OR 24VDC	75	120V	12VDC or 24VDC	.4 - 1.4 Amps	0.961	3.00"	7.50"	2.75"
	TRA75-277V-12VDC OR 24VDC	75	277V	12VDC or 24VDC	0.2 - 0.6 Amps	0.961	3.00"	7.50"	2.75"
TRA90	TRA75-120V-12VDC OR 24VDC	75	120V	12VDC or 24VDC	.4 - 1.4 Amps	0.961	4.1875"	8"	3.25"
	TRA75-277V-12VDC OR 24VDC	75	277V	12VDC or 24VDC	0.2 - 0.6 Amps	0.961	4.1875"	8"	3.25"
TRA150	TRA150-120V-12VDC OR 24VDC	150	120V	12VDC or 24VDC	.4 - 1.4 Amps	0.961	4.1875"	8"	3.25"
	TRA150-277V-12VDC OR 24VDC	150	277V	12VDC or 24VDC	0.2 - 0.6 Amps	0.961	4.1875"	8"	3.25"
TRA200	TRA200-120V-12VDC OR 24VDC	200	120V	12VDC or 24VDC	.4 - 1.4 Amps	0.961	4.1875"	8"	3.25"
	TRA200-277V-12VDC OR 24VDC	200	277V	12VDC or 24VDC	0.2 - 0.6 Amps	0.961	4.1875"	8"	3.25"
TRA250	TRA250-120V-12VDC OR 24VDC	250	120V	12VDC or 24VDC	0.3 - 2.2 Amps	0.964	4.1875"	8"	3.25"
	TRA250-277V-12VDC OR 24VDC	250	277V	12VDC or 24VDC	0.12 - 0.8 Amps	0.964	4.1875"	8"	3.25"
TRA300	TRA300-120V-12VDC OR 24VDC	300	120V	12VDC or 24VDC	0.3 - 2.6 Amps	0.979	4.1875"	8"	3.25"
	TRA300-277V-12VDC OR 24VDC	300	277V	12VDC or 24VDC	0.12 - 1.2 Amps	0.979	4.1875"	8"	3.25"

* Class II 12VDC TRA-5, TRA-10, TRA-20, TRA-35, TRA-40, TRA-50, TRA-60

** Class II 24VDC TRA-5, TRA-10, TRA-20, TRA-35, TRA-40, TRA-50, TRA-60, TRA-75, TRA-90

NOTE: DC Part Numbers are only for LEDs.

Class II 12 Volt Transformer (Indoor Rated) - Primary and Secondary Fusing Included



Features:

- 300VA maximum load
- Six inch lead wire
- 97.9% power factor
- 120 volts or 277 volts at 60 Hertz
- Six 4 - amp circuits in secondary
- Dimensions: 7" W x 7" H x 3 3/16" D
- 0.3 open circuit current (amps) and 2.6 input current (amps)

Transformer (Indoor or Outdoor Rated NEMA 3R) - Primary Fusing Included

Product Code	Max. Watts	Input	Output	Input Current No Load/Full Load	Power Factor	Width (W)	Height (H)	Depth (D)
TRA300-6F	300	120V	12VDC	0.3 / 2.6 Amps	0.979	7"	7"	3.1875"
TRA300-6F-277V-12VDC	300	277V	12VDC	0.3 / 2.6 Amps	0.979	7"	7"	3.1875"
TRA300-6F-120V-24VDC	300	120V	24VDC	6 / 2 Amps	0.979	7"	7"	3.1875"
TRA300-6F-277V-24VDC	300	277V	24VDC	6 / 2 Amps	0.979	7"	7"	3.1875"

DIMMING PROTOCOL (FORWARD PHASE DIMMING) | TRA Compatible Dimmers

Technical Requirements For Control Equipment

- Magnetic Low Voltage (MLV) - Magnetic (core and coil, toroidal) transformer-supplied low voltage lighting
- Electrical Characteristics - Inductive
- Special Requirements - Symmetric cycles (VDC \leq 2), smooth turn off (positive and negative periods are equal for safe MLV transformer operation)

PREVENTING VOLTAGE DROP

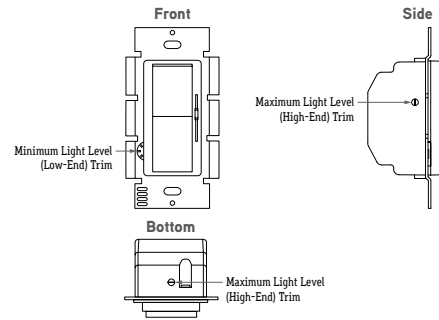
The maximum wire length to prevent voltage drop refers to the wire that is used between the transformer and 1st LED of the lighting fixture. If the gauge wire is too small, the fixture will not receive correct voltage.

Example: LED luminaire requires 24VDC to operate effectively. If the wire gauge is too small to carry the 24VDC current from the transformer, the voltage can shrink to 16VDC, which is insufficient to power the lighting.



DIMMER TRIM VALUES

- Set dimmer trim value as needed to prevent flickering and irregular dimming
- **Note:** Review dimmer specs for trim value adjustment



WATTS (VA) PER CIRCUIT (Maximum wire length to prevent voltage drop)

WIRE SIZE	VOLTAGE	5 VA	10 VA	20 VA	35 VA	40 VA	50 VA	60 VA	75 VA	90 VA	150 VA	200 VA	250 VA	300 VA
14GA	12V	51'	49'	44'	39'	37'	35'	32'	30'	25'	18'	14'	9'	7'
14GA	24V	103'	98'	89'	80'	75'	70'	66'	61'	51'	37'	28'	18'	14'
12GA	12V	81'	76'	70'	63'	59'	55'	52'	48'	40'	29'	22'	14'	11'
12GA	24V	162'	155'	140'	125'	118'	111'	103'	96'	81'	59'	44'	29'	22'
10GA	12V	129'	123'	112'	100'	94'	88'	82'	76'	65'	47'	35'	24'	18'
10GA	24V	258'	247'	223'	200'	188'	176'	165'	153'	129'	94'	71'	48'	36'
8GA	12V	205'	196'	177'	158'	149'	140'	130'	121'	102'	74'	55'	37'	27'
8GA	24V	411'	392'	355'	318'	299'	280'	262'	243'	205'	149'	112'	75'	55'

FORWARD PHASE WIRING DIAGRAMS

