

Type APT-646/733

Indoor voltage transformer

Product features

- 600 volt, 10 kV BIL, 60 Hz
- Single, dual, and multi ratios
- Approximate weight:
 - APT-646: 20 lbs. (9 kg)
 - APT-733: 40-60 lbs (18-27 kg)

Application

The APT-646/733 indoor, auxiliary voltage transformer is a 600 volt rated unit for use in secondary circuits. This unit is used to change the effective voltage for operating watt-hour meters, relays, and other control and metering devices, and for secondary circuit isolation. Due to superior saturation characteristics, this transformer generally does not saturate under extreme high fault currents.

Mechanical description

The core is made of grain-oriented silicon steel laminations. Primary and secondary coils are of wound-type construction from high temperature resistant magnet wire. After assembly, core and coils are impregnated with an insulating varnish to prevent moisture penetration, control vibration, and increase dielectric strength. The primary and secondary terminals are 10-32 brass washer-head screws for #22 - #10 AWG conductors. The 600 V/30 A rated terminal block is conveniently located on top of the transformer. For multi tap units, two terminal blocks or 12" primary/secondary #12 AWG TEFZEL leads may be supplied.

Accuracy performance

The APT will operate with 0.6 class accuracy for voltage correction and circuit isolation applications with burdens of 0, W, X, and M. The transformer is accurate from 90% to 110% of rated secondary voltage.



Mounting

The APT is designed for mounting in an upright, underhung, or cantilever position using the angled mounting feet.

Testing

This unit can be tested to all applicable IEEE, CSA, or IEC standards as requested.

Options

The APT is available in virtually any combination of ratio and accuracy with a thermal burden rating of up to 2000 VA. Contact the factory for other needs.

Unit dimensions

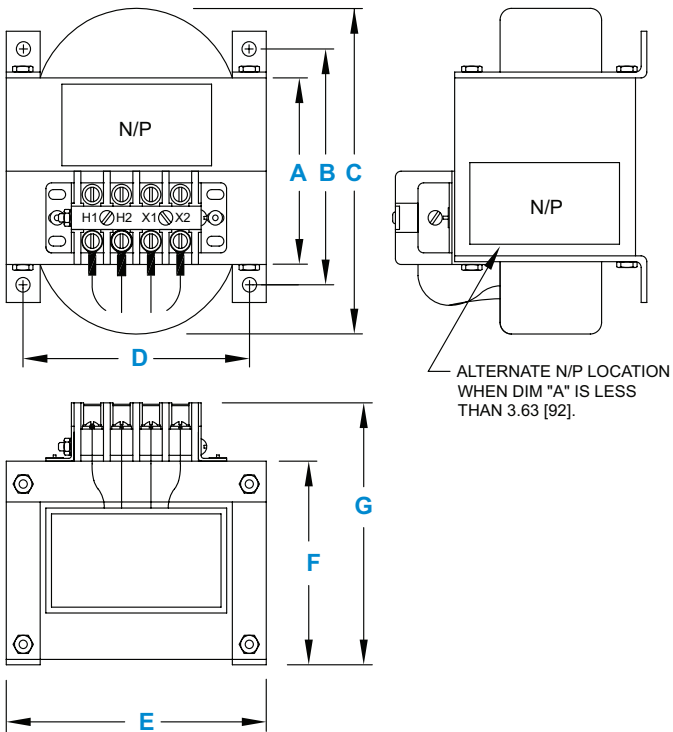
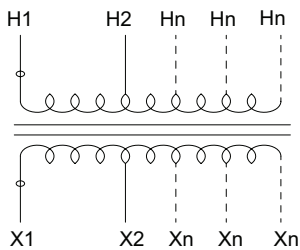


Figure 1 (standard configuration for single ratio units)

Note: metric dimensions are displayed in [mm].

Four (4) mounting legs are 0.13 [3.3] mild steel with Ø0.31 [Ø8] holes

Dimensions (in.)	APT-646	APT-733
A	refer to tables	refer to tables
B	A + 1.25	A + 2.0
C	refer to tables	refer to tables
D	5.0	6.50
E	5.75	7.50
F	4.38	6.38
G	5.63	7.75



Wiring diagram

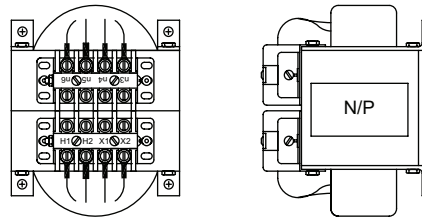


Figure 2 (sometimes necessary when multiple taps are used)

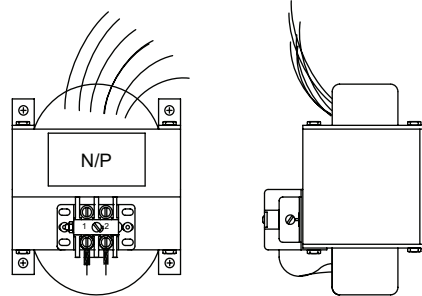


Figure 3 (sometimes necessary when multiple taps are used)

Selection guide for APT-646

Style number	Pri volts	Sec volts	Acc @ 60 Hz	Thermal VA	Dim A	Dim C	Wgt (lbs)
A2900480-570	34.7/69.3	: 120	0.6X	75	2.5	5.2	16
A2900650-570	40	: 120	0.6X	200	2.5	5.4	14
A2900400-570	40/60/ 80/100/120	: 2/4/6/8/10	5 @ 120:10	6	2	4.8	11
A2900460-570	63.5	: 118	0.6M	75	2.5	5.2	14
A2900740-570	63.9/115	: 115	0.6M	150	2.5	4.88	14
A2900751-570	65,67,69,71,73	: 100	0.6X	150	2.5	5	14
A2900030-570	66.6	: 113.8	0.6X	150	2.5	5.7	15
A2900610-570	67	: 115	0.6X	150	2.5	5.2	14
A2900750-570	69.3	: 120	0.6X	200	2.5	4.82	14
A2900830-570	69.3	: 120	0.6X	250	3	5.5	17
A2900905-570	69.3	: 120Tp	0.5% @ 12.5 VA	150	2.5	4.7	14
A2900040-570	69.4	: 120	0.6X	150	2.63	5.8	16
A2900150-570	69.6	: 120	0.6X	150	2.5	5.6	15
A2900620-570	69.6/120	: 120	0.6X	150	2.63	5.2	16
A2900180-570	72	: 125	0.6X	25	2.5	5.7	15
A2900550-570	100	: 120	0.6M	150	2.5	5.8	15
A2900727-570	107.87/ 110.71/113.54/ 116.38/119.32	: 120	0.6X	150	2.5	5.3	15
A2900130-570	110.5	: 115	0.6X	150	2.5	5.7	15
A2900140-570	110.7	: 120	0.6X	150	2.5	5.7	14
A2900470-570	112.5/ 115/117.5	: 110/120	0.6X	150	4	6.2	22
A2900590-570	113.4	: 120	0.6M	150	2.5	5.2	15
A2900901-570	113.8	: 100	0.6X	150	2.5	4.9	18
A2900810-570	113.8	: 115	1.6X	150	2.5	5.2	15
A2900729-570	114	: 120	0.6X	300	2.5	5.5	14
A2900090-570	115	: 115	0.6X	150	2.5	5.7	15
A2900723-570	115	: 115	0.6X	250	2.5	5.5	15
A2900280-570	115	: 119	0.6X	25	2.5	5.3	14
A2900721-570	115	: 120	0.6X	150	2.5	5.2	15
A2900450-570	115	: 200	0.6X	250	2.63	5.2	16
A2900420-570	115 : 112.1/115/ 117.9/120.7		0.6X	150	2.5	5.5	14
A2900120-570	115.5	: 120	0.6X	150	2.5	5.4	14
A2900722-570	117.5	: 120	0.6X	250	4	7	23
A2900724-570	117.5	: 120	0.6X	250	4	5.5	23
A2900100-570	118.7	: 120	0.6X	150	2.5	5.7	15
A2900908-570	120	: 12	1% @ 12.5 VA	100	2.5	5	15
A2900820-570	120	: 30/100/500	---	250	3	5.6	17
A2900490-570	120	: 35.3/68.7	1.2X	50	2.5	5.2	14
A2900570-570	120	: 50	0.6X	300	3	6.1	18
A2900770-570	120	: 66.4	0.6X	150	2.5	4.82	16
A2900390-570	120	: 69/120	0.6X	150	3	6.2	18
A2900630-570	120	: 69.3	0.6X	250	4	7.3	23
A2900070-570	120	: 69.4	0.6X	150	2.63	5.8	15
A2900270-570	120	: 69.6	0.6X	150	3	6.1	18
A2900290-570	120	: 115	0.6X	150	2.5	5.1	15
A2900310-570	120	: 120	0.6X	150	2.63	5.8	15
A2900790-570	Obsolete - Use A2900310-570						
A2900110-570	120	: 124	0.6X	150	2.5	5.5	14
A2900520-570	120	: 127	0.6X	150	4	7.3	23
A2900300-570	120	: 144	0.6X	150	2.5	5.8	16
A2900320-570	120	: 150	0.6X	150	2.5	5.8	16
A2900260-570	120	: 120/123/126	0.6X	60	4	6.1	22

Selection guide for APT-646 (cont'd)

Style number	Pri volts	Sec volts	Acc @ 60 Hz	Thermal VA	Dim A	Dim C	Wgt (lbs)
A2900540-570	120	: 120/123/126/ 129	0.6X	150	4	7.3	23
A2900728-570	120	: 120/123/126/ 129/132	0.6X	150	3	5.4	21
A2900915-570	120	: 120/124/126	0.6X	150	4	6.1	22
A2900726-570	120/123/ 126/129/132	: 120	0.6X	150	3	5.4	21
A2900580-570	123.6	: 120	0.6X	150	2.5	5.2	15
A2900250-570	125	: 69.4	0.6X	150	2.5	5	13
A2900160-570	125	: 72	0.6X	200	3	6.1	17
A2900410-570	125	: 120	0.6X	300	2	5.2	12
A2900190-570	125	: 125	0.6X	250	2.5	5.7	15
A2900370-570	125.26	: 120	0.6X	250	2.5	5.7	15
A2900500-570	135	: 135	0.6X	150	2.5	5.1	15
A2900731-570	139	: 360	0.6W	150	3	5.2	16
A2900240-570	200	: 120	0.6M	250	4	6.1	22
A2900440-570	200	: 120	0.6X	1500	4	8	31
A2900753-570	207.8	: 66.4	0.6X	250	2.5	5	15
A2900752-570	207.8	: 113.8	0.6X	250	2.5	5	15
A2900710-570	208	: 115	0.6X	150	3.5	6	19
A2900660-570	208	: 120	0.6X	150	3.5	6.2	20
A2900680-570	208	: 120	0.6X	500	4	7.2	23
A2900760-570	220	: 110	0.6X	150	2.5	5	15
A2900840-570	220	: 110	0.6X	250	3.5	6	19
A2900720-570	220	: 220	0.6X	100	3	6.3	17
A2900050-570	228	: 60	0.6X	400	4	7.1	24
A2900730-570	231	: 360	0.6W	150	3	5.3	16
A2900850-570	240	: 120	0.6X	250	4	6.4	22
A2900900-570	240	: 230	0.6X	250	3.5	5.9	19
A2900360-570	240	: 240	0.6X	150	4	7.2	23
A2900340-570	240	: 240	0.6X	500	4	7.2	23
A2900170-570	240	: 480	0.6X	250	4	6.8	22
A2900020-570	240/480	: 120	0.6X	150	4	7	22
A2900670-570	250	: 120	0.6X	150	2.63	5.2	15
A2900200-570	250	: 250	0.6X	250	4	7.2	23
A2900780-570	258	: 138.8	0.6X	150	2.5	4.75	14
A2900210-570	277	: 115	0.6X	250	4	7.2	23
A2900800-570	277	: 120	0.6X	150	2.5	5	16
A2900700-570	278.3	: 115	0.6X	250	4	6.4	20
A2900860-570	300	: 120	0.6X	250	4	6.2	21
A2900080-570	300	: 120	0.6X	300	4	6	22
A2900060-570	412.8	: 120	0.6X	250	4	6.8	22
A2900530-570	415.2	: 240	0.6X	500	4	7	22
A2900600-570	480	: 120	0.6X	200	4	7	22
A2900870-570	480	: 120	0.6X	250	3.5	5.9	19
A2900560-570	480	: 240	0.6X	200	4	6.2	22
A2900690-570	480	: 277	0.6X	150	4	7.2	23
A2900161-570	600	: 120	0.6X	40	2.5	5	13
A2900880-570	600	: 120	0.6X	250	4	6.4	22
A2900909-570	600	: 200	0.6X	250	4	6.4	27
A2900902-570	700	: 150	1.0X	150	2.5	4.9	14
A2900510-570	780	: 120	0.6X	150	4	6.2	21
A2900725-570	1000	: 250	0.6X	500	6	9.1	34
A2900380-570	1320	: 120	0.6X	150	5	7.6	26

Selection guide for APT-733

Style number	Pri volts	Sec volts	Acc @ 60 Hz	Thermal VA	Dim A	Dim C	Wgt (lbs)
A2300030-570	70	120	0.6X	500	4	6.6	41
A2300032-570	114,117,120	120	0.6M	500	2.5	5.3	31
A2300033-570	120	30,100,480	NA	500	3.25	--	36
A2300013-570	120	120	0.6X	150	2.5	5.2	30
A2300018-570	120	120	0.6X	500	3	5.9	31
A2300015-570	120	120	0.6X	1500	5	8.1	51
A2300021-570	120	156	1%	500	4	6.9	41
A2300031-570	120	120T	0.6X	500	2.5	5.3	26
A2300024-570	208	160/320	0.6X	500	3.5	6.2	36
A2300019-570	360	120	0.6M	500	4	6.6	41
A2300034-570	480	120	1%	500	2.5	5.2	30
A2300016-570	480	220	0.6X	2000	6	8.6	61
A2300023-570	840	120	1%	200	3	5.2	30
A2300020-570	960	120	2%	250	3	5	30
A2300017-570	1075	120	0.6X	150	2.63	5.1	27
A2300022-570	1080	120	1%	200	3	5.3	30
A2300014-570	1200	120	0.6X	150	4	6	42

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