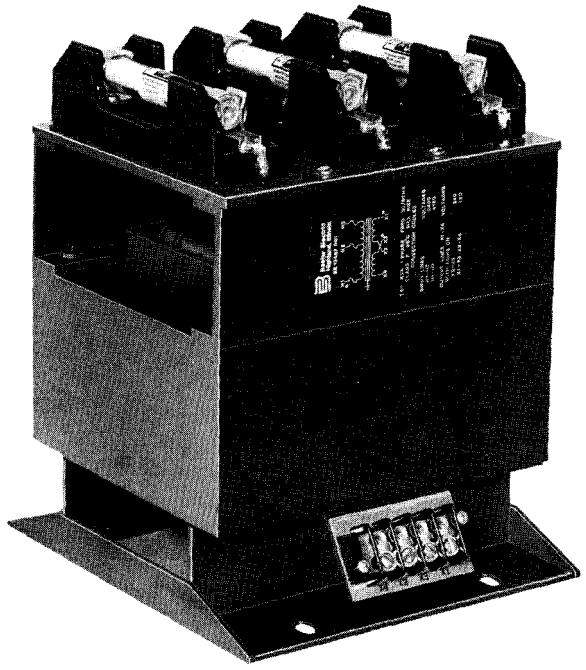
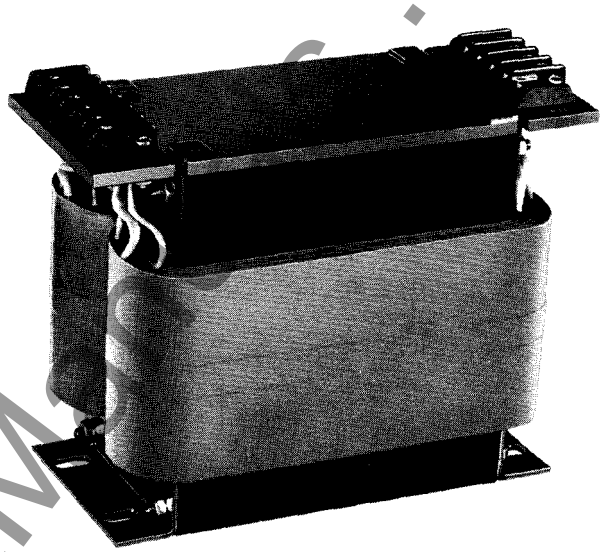
POWER ISOLATION TRANSFORMERS



TYPICAL HIGH VOLTAGE TRANSFORMER



TYPICAL LOW VOLTAGE TRANSFORMER

FEATURES:

- Available for both high and low voltage generating systems.
- Designed for operation with Basler standard voltage regulators or equivalent equipment.
- Terminals arranged for easy connection.
- Frequency range of 50-400 Hz on low voltage units.
- Fused primary windings on 5 kv class units.
- Multiple primary and secondary voltages on most types.
- Withstand underfrequency/overvoltage operation encountered in generating systems.
- Ruggedly constructed.
- CSA approved (selected models).
- Available from stock.

DESCRIPTION:

Basler Electric manufactures a series of power isolation transformers for use with the standard Basler Voltage Regulators or wherever power isolation or voltage matching requirements exist. These transformers outperform ordinary control transformers particularly in the underfrequency and overvoltage conditions associated with generator operation.

These transformers are available from stock with either low voltage (up to 600 VAC) or high voltage (over 600 VAC) windings, and ratings up to 4000 VA, maximum. The high voltage transformers feature low corona and high moisture resistance characteristics. The low voltage transformers operate from 50 to 400 Hz. All transformers are constructed to withstand the rigors of shock and vibration encountered in generating system applications. Conservative in design, these Basler transformers assure years of trouble-free operation.

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APPLICATION:

Basler SR, KR, and XR series of voltage regulators require a source of either 60, 120, 240 or 480 VAC power, depending upon which regulator is used. Since this power is normally obtained from generator terminal voltage, an isolation transformer must be used whenever the generator terminal voltage is not the same as that required by the regulator. An isolation transformer is also required to isolate the voltage regulator input from ground in installations where the exciter field or field flashing circuit is grounded.

SPECIFICATIONS:

	Low Voltage Transformer	High Voltage Transformer
• **INSULATION TEMPERATURE**	185°C ①	185°C
• **DIELECTRIC TEST VOLTAGE**		
Primary	2500 Vac ③	12000 Vac ⑤
Secondary	2500 Vac ③	2500 Vac ④
• **OPERATING FREQUENCY RANGE**	50 - 400 Hz	50/60 Hz
• **FINISH**	Varnish impregnated ②	Varnish impregnated and epoxy coated

① BE 10647 001 — 130°C
② BE 12819 001 — 4000 Vac
③ BE 12819 001 — Varnish impregnated and epoxy coated
④ BE 12818 001, BE 13658 001 — 4 KVac
⑤ BE 13658, BE 14014 — 19 KVac

CONNECTION INSTRUCTIONS:

To determine proper winding connection, refer to Table 1 and locate primary and secondary code letters for the selected transformer. Then, in Table 2, locate the same code letters, and select the required voltage. The necessary connections (jumpers) are indicated in the column headed "Jump Terminals".

Example: To connect BE 10317 001 for 240 V primary and 120 V secondary, refer to Table 1 and note that connection code letters for this transformer are A and W. Then refer to Table 2, code letter A. For 240 VAC at primary terminals H1 and H6, jump H3 to H6 and H4 to H1. Referring to code letter W, 120 VAC is made available at secondary terminals X1 and X4 by jumping X2 to X4 and X3 to X1.

TABLE 2

PRIMARY WINDINGS				SECONDARY WINDINGS			
Code Letter	Voltage VAC	Voltage At Terminals	Jump Terminals	Code Letter	Voltage VAC	Voltage At Terminals	Jump Terminals
A	208 240 416 480	H1 and H6 H1 and H6 H1 and H6 H1 and H6	H2-H6; H5-H1 H3-H6; H4-H1 H2-H5 H3-H4	U	240 240	3 and 4 E1	Power Input Voltage Sensing
B	600	H1 and H2	None	V	240 480	X1 and X4 X1 and X4	X2-X4; X3-X1 X2-X3
C	240 480 600	H1 and H2 H1 and H4 H1 and H5	H2-H4; H3-H1 H2-H3 H2-H3	W	120 240	X1 and X4 X1 and X4	X2-X4; X3-X1 X2-X3
D	2400 4160	H1 and H2 H1 and H3	None None	Y	60 120	X1 and X4 X1 and X4	X2-X4; X3-X1 X2-X3
E	6600 3300	H1 and H3 H1 and H2	None None	Z	139	X1 and X2	None
F	7200	H1 and H2	None				

See Table 1 for connection code letters assigned to each transformer.

TABLE 1

WHEN USING				SELECT BASLER TRANSFORMER PART NO.	PER UNIT IMP.	MAXIMUM WEIGHT IN POUNDS		FIG. NO.	OUTLINE DIMENSIONS						CONNECTIONS (TABLE 2)	
BASLER VOLTAGE REGULATOR MODEL [1]	IN POWER ISOLATION APPLICATIONS REQUIRING: PRIMARY VA(MAX.) [6]	PRIMARY VOLTS	SECONDARY VOLTS			NET	SHIP.		INCHES A	B	C	D ±1/32	E ±1/16	F	PRI	SEC.
LOW VOLTAGE TRANSFORMERS																
SR4A SR6A SR4F	1000	208/240 x 416/480	120 x 240	BE 10493 002 [2]	.0414	36	38	1	6.50	7.00	8.75	2.50	4.75	.37x.75	A	W
	1000	600	120 x 240	BE 11049 002 [2]	.0418	36	38	3	6.50	6.87	8.75	2.50	4.75	.37x.75	B	W
SR8A SR9A SR8F SR63H SRN4	2000	208/240 x 416/480	120 x 240	BE 10494 002 [2]	.0339	67	71	1	6.50	10.75	8.75	2.50	8.50	.37x.75	A	W
	2000	600	120 x 240	BE 11050 002 [2]	.0299	67	71	3	6.50	10.75	8.75	2.50	8.50	.37x.75	B	W
SR32A SR32H	1200	208/240 x 416/480	60 x 120	BE 11304 002	.0327	48	50	1	6.50	8.50	8.75	2.50	6.25	.37x.75	A	Y
SR125H SRN8	4000	208/240 x 416/480	240 x 480	BE 12819 001 [2] [4]	.041	87	91	4	8.25	9.25	12.50	7.25	3.50	.31x.44	A	V
SR250H	8000	208/240 x 416/480	240 x 480	BE 12819 001 [4] (Two in parallel)	.041	87 Each	91 Each	4	8.25	9.25	12.50	7.25	3.50	.31x.44	A	V
KR2F KR2FF	640	208 x 240/ 600	139 [5]	BE 10647 001 [2]	.0193	28	30	2	6.37	6.50	5.43	5.31	3.87	.28x.56	C	Z
KR4F KR6F KR4FF	500	208/240 x 416/480	120 x 240	BE 10317 002 [2]	.0670	19	21	1	6.50	5.25	8.75	2.50	3.00	.37x.75	A	W
	500	600	120 x 240	BE 11048 001 [2]	.0640	19	21	3	6.50	5.25	8.75	2.50	3.00	.37x.75	B	W
KR7F KR7FF	1000	208/240 x 416/480	120 x 240	BE 10493 002 [2]	.0414	36	38	1	6.50	7.00	8.75	2.50	4.75	.37x.75	A	W
	1000	600	120 x 240	BE 11049 002 [2]	.0418	36	38	3	6.50	6.87	8.75	2.50	4.75	.37x.75	B	W
APR63-5 APR-125 VR63-4 XR2001 XR2001F	1000	240/480 600	240 x 240 [7]	BE 18674 001 [2]	.0148	28	30	7	6.375	6.50	6.25	5.31	4.25	.563 x .281	C	U
XR2004,F SR2004,F DVR2004,F	500	240/480 600	240 x 240 [7]	BE 18675 001 [2]	.0311	19	21	8	5.25	4.625	4.375	4.375	3.50	.243 x .375	C	U
HIGH VOLTAGE TRANSFORMERS																
SR4A SR4F	1000	2400/4160	120 x 240	BE 13616 001 [2] [6]	.033	40	42	6	9.00	10.00	9.75	5.00	8.50	.41x.75	D	W
SR8A SR8F SR63H SRN4	2000	2400/4160	120 x 240	BE 13487 001 [2] [6]	.0175	70	74	6	9.00	10.00	11.75	5.00	8.50	.41x.75	D	W
SR125H SRN8	4000	2400/4160	240 x 480	BE 12818 001 [2] [4] [5]	.064	107	112	5	12.00	10.00	17.50	9.75	3.25	.31x.44	D	V
SR250H	8000	2400/4160	240 x 480	BE 12818 001 [4] (Two in parallel)	.064	107 Each	112 Each	5	12.00	10.00	17.50	9.75	3.25	.31x.44	D	V
SR8A SR8F SR63H SRN4	2000	3300/6600	120 x 240	BE 14014 001	.020	70	74	9	10.00	9.00	11.25	8.50	5.00	.31x.44	E	W
SR8A SR8F	4000	13800	240 x 480		.066	107	112	10	10.00	13.75	16.25	10.75	3.25	.31x.44	F	V
SR125H SR250H	4000	7200	240 x 480	BE 13658 001	.066	107	112	10	10.00	13.75	16.25	10.75	3.25	.31x.44	F	V

[1] If regulator is to be consistently operated at less than maximum output, power isolation transformer can be of a lesser rating than indicated in the table. In such cases, determine the transformer VA rating by multiplying input volts by DC output current.

[2] CSA approved.

[3] Transformer has airgap to withstand DC component of half-wave bridge.

[4] Convection cooling requires that transformer be vertically mounted.

[5] 120 VAC output available with inputs of 208 x 416 VAC — primary VA reduced to 555.

[6] VA rating of secondary winding is approximately 88% of primary.

[7] Two secondary windings are provided, one is used for voltage sensing. The second is used for the input to the automatic voltage regulator.

[8] Fuses supplied.

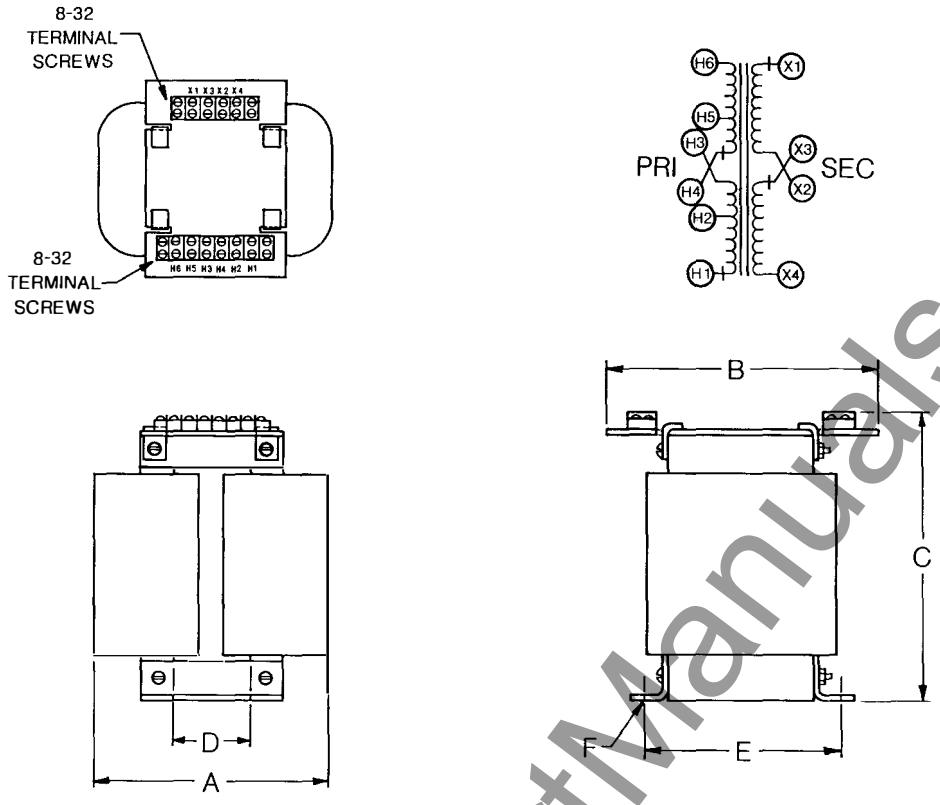

FIGURE 1

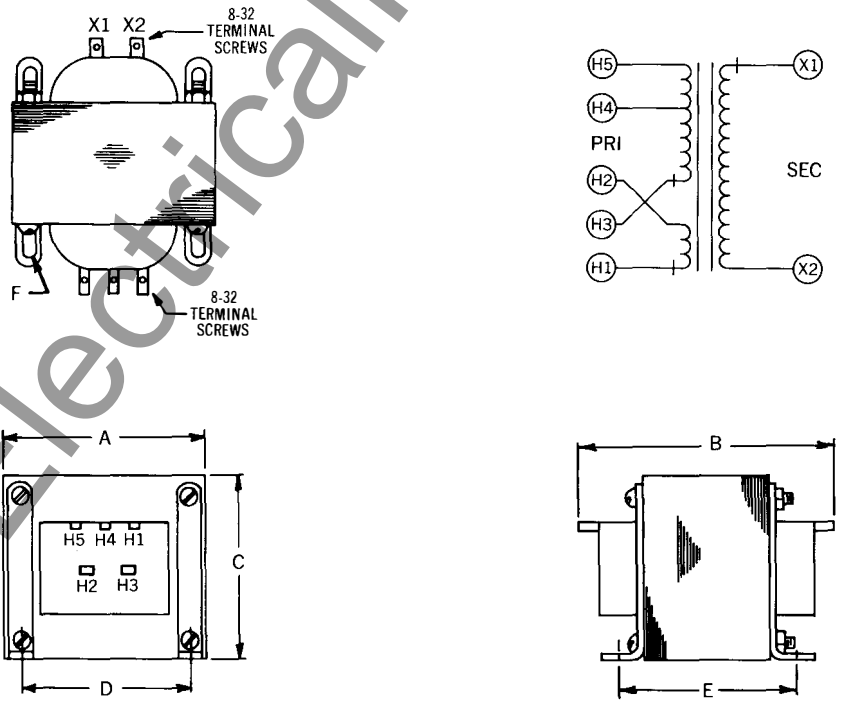

FIGURE 2

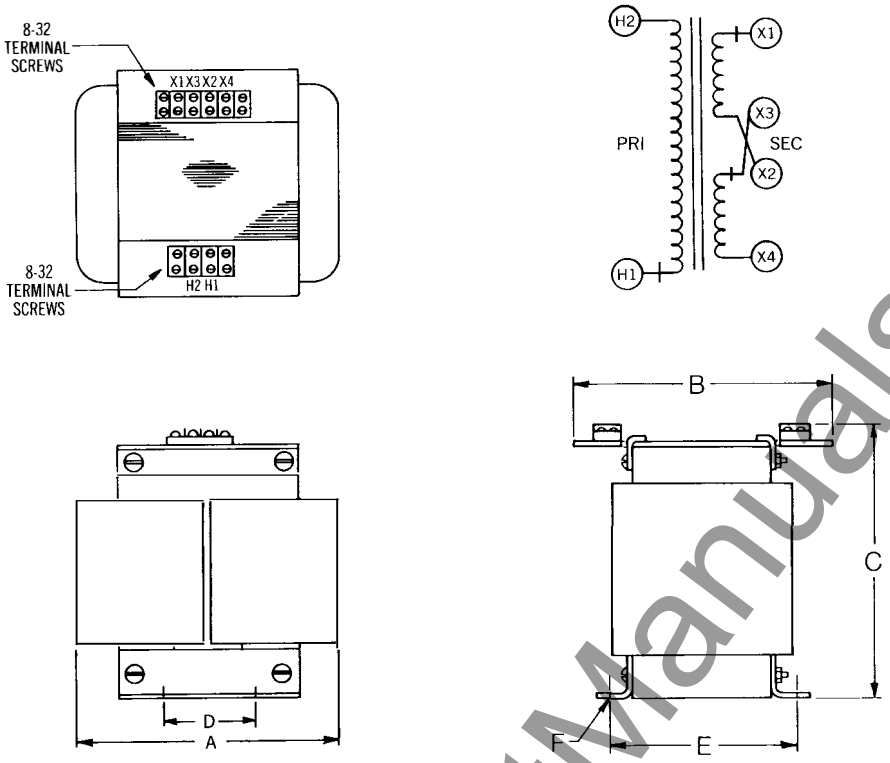

FIGURE 3

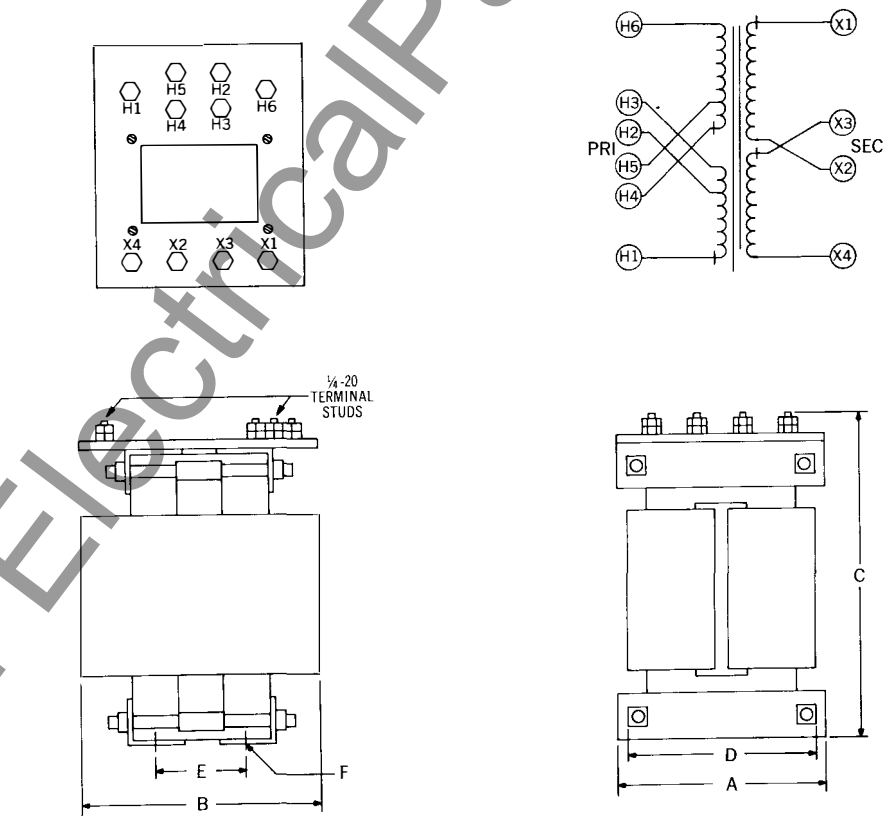

FIGURE 4

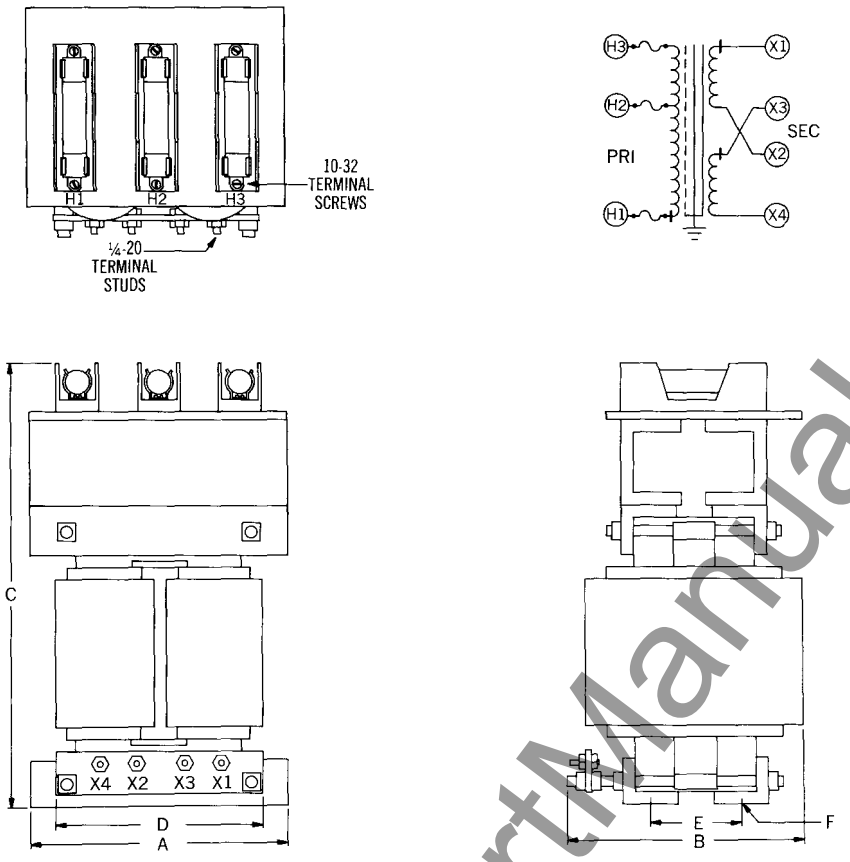

FIGURE 5

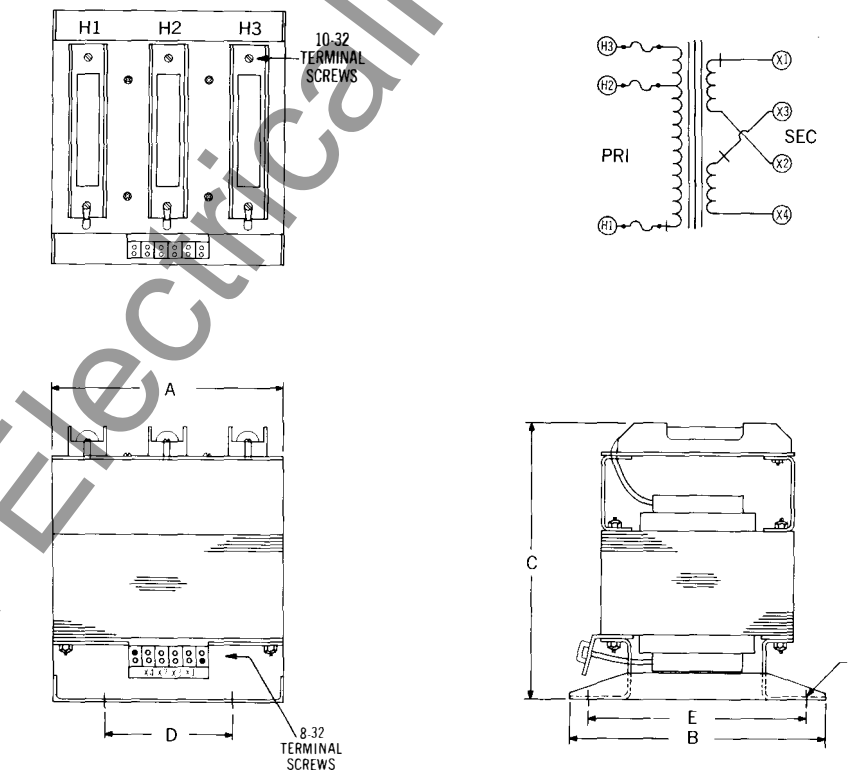

FIGURE 6

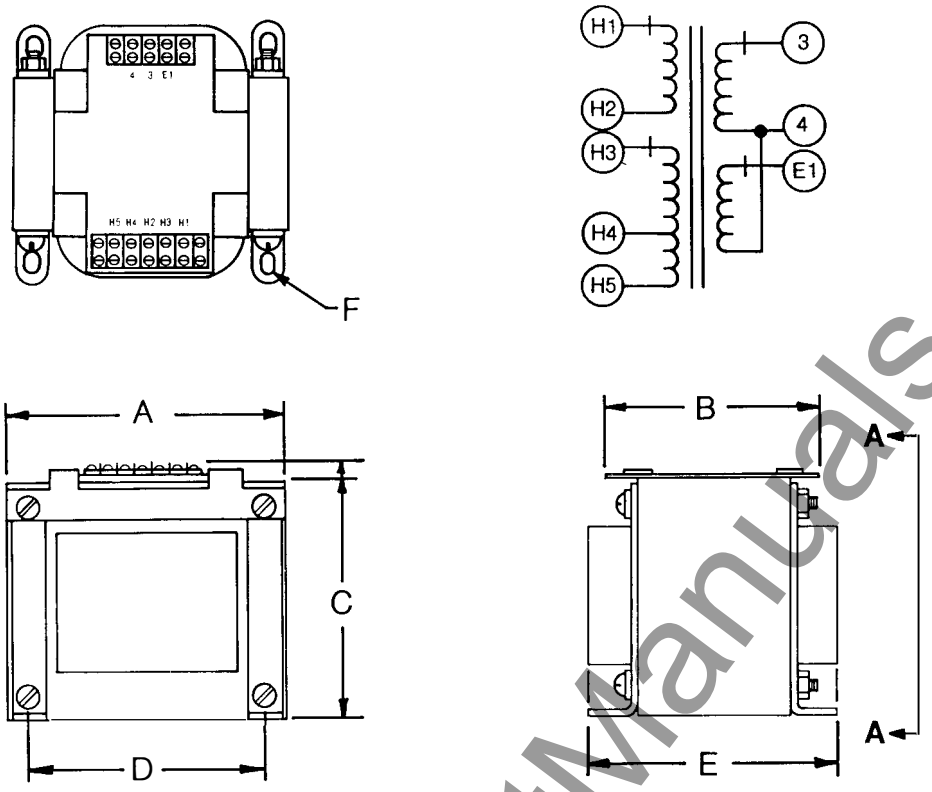

FIGURE 7

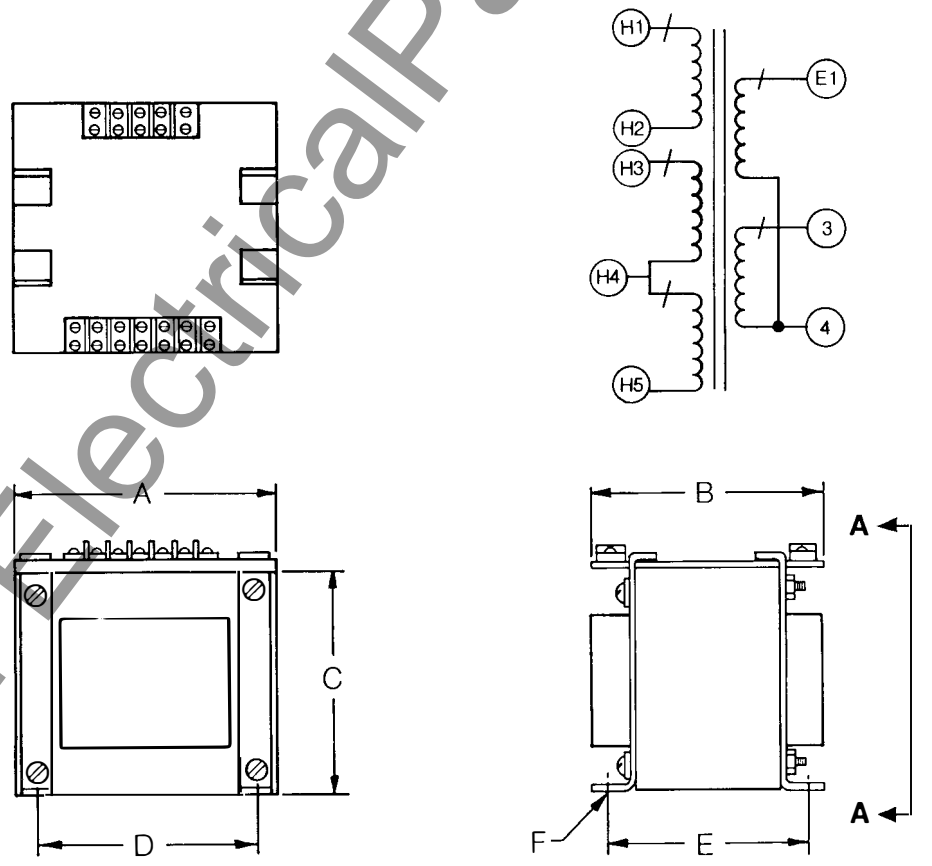

FIGURE 8

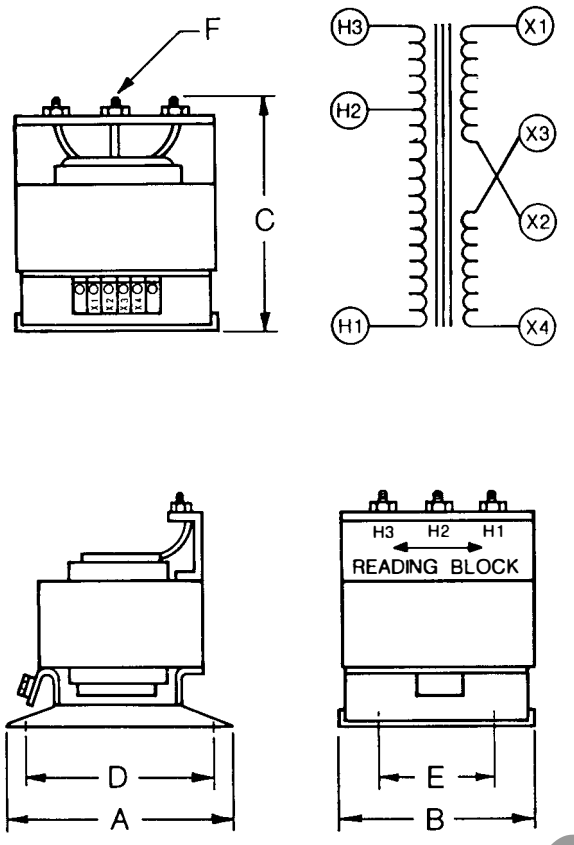

FIGURE 9

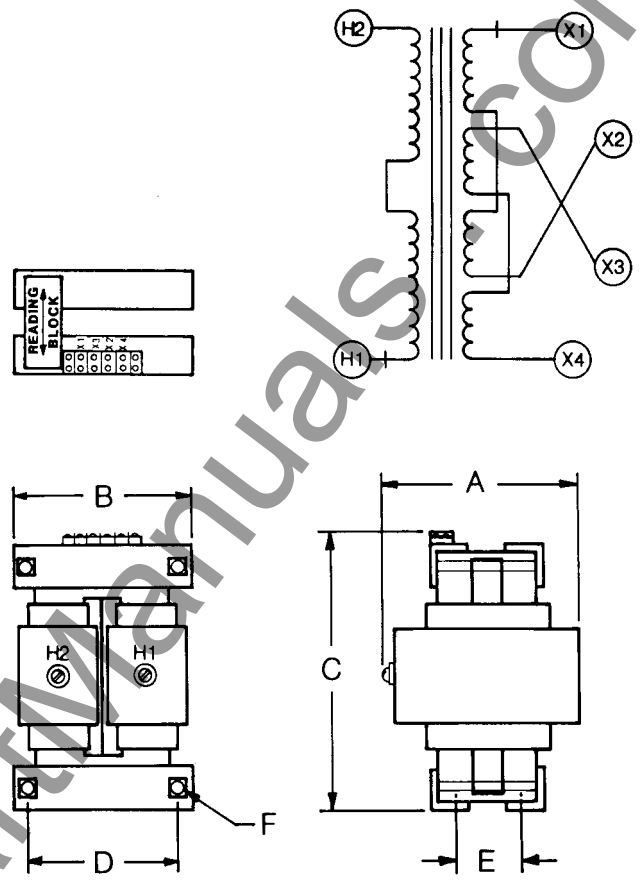

FIGURE 10

HOW TO ORDER:

Specify by part number and description: Basler Part No. BE_____ Power Isolation Transformer. Select the proper part number by referring to transformer data in Table 1.

SAMPLE SPECIFICATIONS:

A power isolation transformer is required capable of providing an output of 240 VAC, 60 Hz, 1680 VA with inputs of either 208/240 or 416/480 VAC, 60 Hz. It shall be capable of withstanding underfrequency and overvoltage conditions associated with generator operation and shall be constructed to withstand the shock and vibration encountered in such applications.

The power isolation transformer shall be a Basler Electric Company BE 10494 001 or equivalent.

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