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REPORT

on

COMPONENT - TRANSFORMERS, CLASS 2 AND CLASS 3

ACUMEN ELECTRONICS, DBA TRIAD MAGNETICS
CORONA, CA

DESCRIPTION

PRODUCT COVERED:

USR, CNR Component - Transformers, Class 2, Inherently Limited, Model Nos. TCT3-11E07AE, TCT3-03E07AE, TCT3-03E07K, TCT3-12E07AE, TCT3-04E07AE, TCT3-04E07K.

Models TCT3-11E07AE and TCT3-12E07AE may be followed by " -1".

GENERAL:

These transformers are concentrically wounded and provided with one primary and one secondary winding. The secondary winding is isolated from the primary.

USR indicate that the unit was evaluated to the requirements in the Standard for Class 2 and Class 3 Transformers, UL 1585, Fourth Edition.

CNR indicates investigation to the Canadian Standard for Specialty transformer, C22.2 No. 66, Third Edition.

RATINGS:

Model:	TCT3-11E07AE		
Primary:	120 V ac, 50/60Hz		
	V	(A)	VA
Secondary	10	0.25	2.5

Model:	TCT3-03E07AE, TCT3-03E07K		
Primary:	120 V ac, 50/60Hz		
	V	(A)	VA
Secondary	12	0.2	2.5

Model:	TCT3-12E07AE		
Primary:	240 V ac, 50/60Hz		
	V	(A)	VA
Secondary	10	0.25	2.5

Model:	TCT3-04E07AE, TCT3-04E07K		
Primary:	240 V ac, 50/60Hz		
	V	(A)	VA
Secondary	12	0.2	2.5

MODEL DIFFERENCES:

Models No. 07K is identical to Models No. 07AE except 07AE models are provided with input and output Quick Connect Terminal connections and 07K models are provided with input and output lead connections.

TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

For use only in complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.

These transformers have been judged on the basis of the required spacings in the Standard for Class 2 and Class 3 Transformers (UL 1585, Fourth Edition, Dated April 23, 1998), Sec. 21, and Canadian Standard C22.2 No. 66-1988, Specialty Transformers.

Conditions of Acceptability -

1. The windings employ a Class B (130°C) insulation system.

2. A strain relief test was not conducted on these units.

3. The suitability of the mounting means shall be determined in the end-use product.

4. The suitability of the leads shall be determined in the final application.

5. The suitability of the male quick-disconnect terminals, which have not been evaluated, shall be determined in the final application.

6. The need of a Temperature Test in the end product shall be determined.

7. This unit is only suitable for factory installation.

8. This device shall be used within Recognized ratings as specified above.

9. This device shall be mounted in the intended manner in an enclosure having adequate strength and thickness with acceptable spacings being provided.

DESCRIPTION

PRODUCT COVERED:

USR, CNR Component - Not-inherently Limited, Class 2 Transformers, Cat. Nos. TCT followed by 40, followed by –03E07, 04E07, 07E07, 08E07, or –10E07, followed by K, AB, or AE. See Nomenclature for additional details.

USR, CNR Component - Not-inherently Limited, Class 2 Transformers, Cat. Nos. TCT followed by 50, followed by –01E07, 02E07, 03E07, 04E07, 05E07, 06E07, 07E07, 08E07, 09E07, or –10E07, followed by K, AB, or AE. See Nomenclature for additional details.

USR, CNR Component - Inherently Limited, Class 2 Transformers, Cat. Nos. TCT followed by 40, followed by –01E07, 02E07, 05E07, 06E07, or 09E07, followed by K, AB, or AE. See Nomenclature for additional details.

USR, CNR - Component – Inherently Limited, Class 2 Transformer, Cat. No. 1070P1-RF or TCT40-05E07K-1.

GENERAL:

These transformers are provided with one secondary winding isolated from the primary. The primary may have three winding, Nos. 1, 2, and 3.

RATINGS:

Model			Hz	VA	(Wire AWG)	(Turns)
TCT40-01E07AB, K, AE						
	Primary No. 1	120 V, 0.33 A	50/60		29	700
	Secondary	24 V, 1.67 A		40	21.5	160
TCT40-02E07AB, K, AE						
	Primary No. 1	240 V, 0.165 A	50/60		29	1400
	Secondary	24 V, 1.67 A		40	21.5	160
TCT40-03E07AB, K, AE						
	Primary No. 1	120 V, 0.33 A	50/60		29	700
	Secondary	12 V, 3.33 A		40	18.5	80
TCT40-04E07AB, K, AE						
	Primary No. 1	240 V, 0.165 A	50/60		31.5	1400
	Secondary	12 V, 3.33 A		40	18.5	80
TCT40-05E07AB, K, AE						
	Primary No. 1 Primary No. 2 Primary No. 3	120 V, 0.33 A 208 V, 0.192 A 240 V, 0.165 A	50/60		30.5 33.5 34	680 505 185
	Secondary	24 V, 1.67 A		40	21.5	160

RATINGS CONTINUED:

Model			Hz	VA	(Wire AWG)	(Turns)
TCT40-06E07AB, K, AE						
	Primary No. 1 Primary No. 2	120 V, 0.33 A 240 V, 0.165 A	50/60		30.5 34	680 685
	Secondary	24 V, 1.67 A		40	21.5	160
TCT40-07E07AB, K, AE						
	Primary No. 1 Primary No. 2 Primary No. 3	120 V, 0.33 A 208 V, 0.192 A 240 V, 0.165 A	50/60		30.5 33.5 34	680 505 185
	Secondary	12 V, 3.33 A		40	18.5	80
TCT40-08E07AB, K, AE						
	Primary No. 1 Primary No. 2	120 V, 0.33 A 240 V, 0.165 A	50/60		21.5 34	680 685
	Secondary	12 V, 3.33 A		40	18.5	80
TCT40-09E07AB, K, AE						
	Primary No. 1 Primary No. 2	208 V, 0.192 A 240 V, 0.165 A	50/60		31.5 34	1225 180
	Secondary	24 V, 1.67 A		40	21.5	160
TCT40-10E07AB, K, AE						
	Primary No. 1 Primary No. 2	208 V, 0.192 A 240 V, 0.165 A	50/60		31.5 34	1225 180
	Secondary	12 V, 3.33 A		40	18.5	**80**

Model			Hz	VA	(Wire AWG)	(Turns)
TCT50-01E07AB, K, AE						
	Primary No. 1	120 V, 0.42 A	50/60		27.5	505
	Secondary	24 V, 2.08 A		50	20	113
TCT50-02E07AB, K, AE						
	Primary No. 1	240 V, 0.21 A	50/60		30	1012
	Secondary	24 V, 2.08 A		50	20	113
TCT50-03E07AB, K, AE						
	Primary No. 1	120 V, 0.42 A	50/60		27.5	505
	Secondary	12 V, 4.17 A		50	18	57
TCT50-04E07AB, K, AE						
	Primary No. 1	240 V, 0.21 A	50/60		30	1012
	Secondary	12 V, 4.17 A		50	18	57
TCT50-05E07AB, K, AE						
	Primary No. 1 Primary No. 2 Primary No. 3	120 V, 0.42 A 208 V, 0.24 A 240 V, 0.21 A	50/60		28.5 32.5 33	495 361 134
	Secondary	24 V, 2.08 A		50	20	113

RATINGS CONTINUED:

Model			Hz	VA	(Wire AWG)	(Turns)
TCT50-06E07AB, K, AE						
*	Primary No. 1	120 V, 0.42 A	50/		28.5	**494**
	Primary No. 2	240 V, 0.21 A	60		32.5	498
	Secondary	24 V, 2.08 A		50	20	113
TCT50-07E07AB, K, AE						
	Primary No. 1	120 V, 0.42 A	50/		28.5	495
	Primary No. 2	208 V, 0.24 A	60		32.5	361
	Primary No. 3	240 V, 0.21 A			33	134
	Secondary	12 V, 4.17 A		50	18	57
TCT50-08E07AB, K, AE						
	Primary No. 1	120 V, 0.42 A	50/		28.5	495
	Primary No. 2	240 V, 0.21 A	60		32.5	498
	Secondary	12 V, 4.17 A		50	18	57
TCT50-09E07AB, K, AE						
	Primary No. 1	208 V, 0.24 A	50/		30.5	870
	Primary No. 2	240 V, 0.21 A	60		31	140
	Secondary	24 V, 2.08 A		50	20	113
TCT50-10E07AB, K, AE						
	Primary No. 1	208 V, 0.24 A	50/		30.5	870
	Primary No. 2	240 V, 0.21 A	60		31	140
	Secondary	12 V, 4.17 A		50	18	57

Model			Hz	VA	(Wire AWG)	(Turns)
1070P1-RF	Primary No. 1	120 V, 0.33 A	60		30.5	666
(TCT40-05E07K-1)	Primary No. 2	208 V, 0.192 A			33.5	495
	Primary No. 3	240 V, 0.165 A			34	181
	Secondary	24 V, 2.08 A		50	21.5	157

The ratings in parentheses "( )", AWG and Turns, are for information only.

MODEL DIFFERENCES:

Model series TCT40 is similar to Model series TCT50 except for output VA ratings, number of turns and core dimensions. Model 1070P1-RF is similar to model TCT40-05E07AB except for the nomenclature, ratings, and winding turns.

Model TCT40-05E07K-1 is identical to model 1070P1-RF except for the nomenclature.

TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

For use only in complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.

USR indicates investigation to the Standard for Class 2 and Class 3 Transformers, UL 1585.

CNR indicates investigation to the Canadian standard for Specialty Transformer, CSA C22.2 No. 66.

These transformers have been judged on the basis of the required spacing in the Standard for Class 2 and Class 3 Transformers (UL 1585), Sec. 21.

Conditions of Acceptability -

1. The transformer windings employ a Class B (130) insulation system, except model 1070P1-RF (TCT40-05E07K-1) employs a Class F (155) insulation system.

2. A strain relief test was not conducted on these units.

3. The suitability of the grounding means and mounting means shall be determined in the end-use product.

4. Since these transformers exceed 15 V rms, but not 30 V rms, these transformers are considered to supply "Class 2 Not Wet, Class 3 Wet." This indicates that Class 3 wiring is required to be used, in accordance with Article 725 of the National Electrical Code, if the wiring extends into areas where wet contact is likely.

5. The suitability of the leads shall be determined in the final application.

6. The quick-connect type terminals comply with the dimensional requirements of UL 310. The acceptability of the terminals and connections to these terminals, including temperature and secureness, shall be determined in the ultimate application.

7. A UL Listed (JDYX/7) type 3AG time-delay fuse shall be provided in the primary or secondary as indicated below in order to comply with the Overload heating test requirements:

Model Series	Primary – Fuse Max	Secondary – Fuse Max
TCT40-03E07, 04E07, 07E07, 08E07, or -10E07, followed by K, AB, or AE	120 V - 0.600 A	12 V – 4 A
	208 V - 0.375 A	
	240 V - 0.300 A	
TCT50-01E07, 02E07, 05E07, 06E07, or -9E07, followed by K, AB, or AE	120 V - 0.800 A	24 V – 3 A
	208 V - 0.400 A	
	240 V - 0.375 A	
TCT50-03E07, 04E07, 07E07, 08E07, or -10E07, followed by K, AB, or AE	120 V - 0.500 A	N/A, no fuse specified
	208 V - 0.300 A	
	240 V - 0.300 A	