

File E208613

Project 01ME20951

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REPORT

on

COMPONENT - MOTORS

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Lahr, Germany

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DESCRIPTION

PRODUCT COVERED:

USR, CNR - Three phase inverter duty / stepper motors, Series VRDM364, VRDM366, VRDM368, VRDM397, VRDM3910, VRDM3913, VRDM31117, VRDM31122.

Note - Type designation maybe followed by suffixes as indicated under nomenclature.

GENERAL:

These products are grounded, continuous-duty, permanently connected, indoor use inverter duty/steppermotors. The motors are totally enclosed and provided with leads, terminal box or supply connector(s). The motors may be provided with encoders and/or thermal sensors, external magnetic brakes, all electrically located in a ELV circuitry, which are isolated from the primary circuit by basic insulation. All models are similar in construction with the differences detailed under nomenclature.

ELECTRICAL RATINGS:

The models can be delivered in following voltages:

Model	Voltage (Vac)	Nom. current (A)	Nom. Output (W)
VRDM364	28.3	5.2	56
VRDM366	28.3	5.8	67
VRDM366	92	1.65	81
VRDM368	28.3	5.8	65
VRDM368	92	1.9	82
VRDM368	230	0.9	82
VRDM397	28.3	5.8	73
VRDM397	92	4.4	200
VRDM397	230	1.8	200
VRDM3910	28.3	5.8	130
VRDM3910	92	5.0	225
VRDM3910	230	2.0	225
VRDM3913	28.3	5.8	100
VRDM3913	92	5.0	270
VRDM3913	230	2.3	270
VRDM31117	230	2.5	280
VRDM31117	230	4.1	440
VRDM31122	230	2.5	210
VRDM31122	230	4.8	570

ENGINEERING CONSIDERATIONS (NOT FOR UL REPRESENTATIVE'S USE):

- USR - Indicates investigation to U.S. National Standard for Electric Motors, UL 1004 (5th Edition) with revisions through and including February 7th, 2001.
- * CNR - Indicates investigation to Canadian National standards for "Motors and Generators", C22.2 No. 100 - 95, dated January 1995.

Note:

- USR = United States Standards - Recognized.
- * CNR = Canadian National Standards - Recognized.

CONDITIONS OF ACCEPTABILITY:

Conditions of Acceptability - These motors are for use in applications where Underwriters Laboratories Inc. has determined the acceptability of the combination. The features, which should be considered in determining the acceptability of these motors, are indicated below.

- *1. This Report covers the general construction features on the motors and a evaluation of the performance characteristics.
2. The motor is based upon the assurance that the motor model will change for significant construction variations. The complete motor Model (i.e. VRDM.../....) shall be included in the end-product Report, nameplate ratings, and significant construction features.
3. This report does not cover the investigation of any motor-protector combination. Details of such a protector and its wiring must be described in the end-product.
4. These motors are evaluated for factory wiring only.
5. These motors are provided with Class F (155°) insulating system.
6. The suitability of or need for an enclosure, shall be determined in the end product.
7. Motors with a terminal box are provided with a cable gland for wiring entry. The suitability of or need for a strain relief, shall be determined in the end use.
- *8. The R/C connectors as described on page 6, item 7c, shall have adequate electrical ratings for use in the end product. The insulating material may be different how described in the Connector Report. It shall be used, as temperature rated in the Connector Reports for the UL recognition, and a temperature rise of 30°C under CN conditions. This need to be verified and determined in the end product evaluation.

NOMENCLATURE:

Motor Model Numbers for Series VRDM36X, -39X and -311X

VRDM	3	6	4	/	50	L	W	B	E	B	IP41
1	2	3	4		5	6	7	8	9	10	11

1. - Indicates Series
VRDM = Stepper Motors
2. - Indicates No. of phases
3 = Three-phase
3. - Indicates Flange size (similar to motor size)
6 = 60 mm (approx. 57 mm square), only for model -36X
9 = 90 mm (approx. 85 mm square), only for model -39X
11 = 110 mm (approx. 110 mm square), only for model -311X
4. - Indicates approx. length of motor

VRDM36		VRDM39		VRDM311	
4	= 79 mm	7	= 110 mm	17	= 180 mm
6	= 93 mm	10	= 140 mm	22	= 230 mm
8	= 116 mm	13	= 170 mm		
5. - Indicates Number of pole pairs
50 = 50 poles
6. - Indicates construction of rotor
L = Laminated rotor stack
7. - Indicates operating voltage
N = Standard 92 Vac , only models -36X + -39X
H = High current 28.3 Vac , only models -36X + -39X
W = Wall mounting 230 Vac
V = Wall mounting
 High current 230 Vac , only model -311X
S = Special model
8. - Indicates supply connection method
A = AWM wiring ,only model -36X and -39X
B = Terminal box
C = Straight connector
T = Elbow connector (turn able 310°; only Intercontec)
9. - Indicates Signal method and measure units
E = Encoder (1000 impulse/rpm or other impulses/rpm)
O = Without encoder
10. - Indicates presence of brake

B = with break
O = without break

11. - Protection degree, IP ratings.