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REPORT

on

COMPONENT - SWITCHES, INDUSTRIAL CONTROL

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## DESCRIPTION

## PRODUCT COVERED:

USR, **CNR** - Component, Industrial Control Solid State Switch, Model WG A8, may be followed by 6 or 8, followed by D, followed by 03, followed by R or Z.

## GENERAL:

These devices are open type solid state relays, for use in a Pollution Degree 2 environment, and intended to be used in applications where the suitability of the combination has been determined by Underwriters Laboratories Inc.

## ELECTRICAL RATINGS:

Input:       Control Voltage: 3-32 V dc  
              Control Current: max. 14 mA

Output:       Voltage: 24-280 V ac  
              Current: 3 A / General Use

## NOMENCLATURE BREAKDOWN:

WG A8	6	D	03	Z
I	II	III	IV	V

- I. Basic series designation: - WG-A8
- II. Line Voltage (V ac):  
- 6 = 280 V ac (600 V Breakdown-voltage)  
- 8 = 280 V ac (800 V Breakdown-voltage)
- III. Control Voltage (V dc): - D = 3 - 32
- IV. Load Current - 03 = 3 A
- V. Switching  
- R = Random switching (inductive loads)  
- Z = Zero voltage switching (resistor loads)

## ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

CNR - Indicates investigation to Canadian National Standards C22.2  
No. 14 - 95.

USR - Indicates investigation to U.S. National Standard UL 508.

## Note:

CNR = Canadian National Standards - Recognized.

USR = United States Standards - Recognized.

Use - For use only in products where the acceptability of the combination  
is determined by Underwriters Laboratories Inc.

## CONDITIONS OF ACCEPTABILITY:

1. These devices should be used within their Recognized ratings as specified above.
2. These devices should be mounted in an enclosure having adequate strength and thickness.
3. The terminals are suitable for factory wire only.
4. The output wave-form of this device may not be sinusoidal under certain inductive loading conditions and the effect of this output wave on the intended equipment must be determined in the end use application.
5. The input voltage ratings are considered to be absolute minimum and maximum values.
6. Spacings at factory wiring terminals of not less than 6.4 mm (1/4 in) should be maintained between any uninsulated live part and the walls of a metal enclosure.

## CONSTRUCTION DETAILS:

The product shall be constructed in accordance with the following description.

Spacings for all devices are evaluated according UL508, 17<sup>th</sup> Edition, table 36.1, column B, for devices having limited ratings.

The following min spacings are provided:

Between any uninsulated live parts and an uninsulated live part of opposite polarity, uninsulated grounded part other than the enclosure or exposed metal parts.	Potential in Volts	151 - 300
	Through air	1.6 mm
	or oil	
	Over surface	3.2 mm
Between any uninsulated live part and the walls of a metal enclosure including fittings for conduit or armored cable	Shortest distance	6.4 mm

Spacings at PWB, Table 6.2 of UL840 Second Edition

Min acceptable creepage distances on printed wiring boards

Operating voltage, volts ac rms or dc	Min. creepage, mm Pollution degree 2
10-50	0.04
63	0.63
80	0.1
100	0.16
125	0.25
160	0.4
200	0.63
250	1.0
320	1.6

Tolerances - Unless specified otherwise, all indicated dimensions are nominal.

Corrosion Protection - All parts are of corrosion resistant material or are plated or painted as corrosion protection.

## MARKING:

Ink-stamped on cover, mylar label, permanently secured to housing, designating manufacturer's name, catalog number, only suitable for a pollution degree 2 environment, recognized component mark for USA and Canada and electrical ratings.