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REPORT

on

COMPONENT - Switches, Appliance and Special Use

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## DESCRIPTION

## PRODUCT COVERED:

USR, CNR Component, Appliance Switches: (mechanical micro switch)

Model	Load	Amp	Volt	Hz	Temp C	Pol/ Thr/ (Cir)	Endurance		IP	DIS	SPCA
							30C	55C			
831611/ 831613	RM	16 (4)	125- 250	50/60	125	1/1 or 2 (1.2 or 2.2)	-	50k	40	μ	A, B
	RM	10 (4)	125- 250	50/60	150	1/1 or 2 (1.2 or 2.2)	-	50k	40	μ	A, B
	RM	10 (4)	400	50/60	125	1/1 or 2 (1.2 or 2.2)	-	50k	40	μ	A, B
	GP	16	125- 250	50/60	130	1/1 or 2 (1.2 or 2.2)	-	10k	40	μ	A, B
	HP	1/2	125- 250	50/60	55	1/1 or 2 (1.2 or 2.2)	6K	-	40	μ	A, B
	RM	16 (4)	125- 250	50/60	150	1/1 or 2 (1.2 or 2.2)	-	10K	40	μ	A, B
	RM	10 (8)	125- 250	50/60	90	1/1 or 2 (1.2 or 2.2)	-	50K	40	μ	A, B
	R	0,5	125	DC	130	1/1 or 2 (1.2 or 2.2)	-	10K	40	μ	A, B
	R	0,25	250	DC	130	1/1 or 2 (1.2 or 2.2)	-	10K	40	μ	A, B

831614	RM	10 (3)	125-250	50/60	150	1/1 or 2 (1.2 or 2.2)	-	50K	40	μ	A, B
	GP	10	125-250	50/60	130	1/1 or 2 (1.2 or 2.2)	-	10K	40	μ	A, B
	HP	1/4	125-250	50/60	55	1/1 or 2 (1.2 or 2.2)	6K	-	40	μ	A, B
831615, 831615 SP4136	RM	4 (1)	125-250	50/60	125	1/1 or 2 (1.2 or 2.2)	-	50K	40	μ	A, B
	GP	4	125-250	50/60	130	1/1 or 2 (1.2 or 2.2)	-	10K	40	μ	A, B
	HP	1/10	125-250	50/60	55	1/1 or 2 (1.2 or 2.2)	6K	-	40	μ	A, B
831616	RM	12 (3)	125-250	50/60	125	1/1 or 2 (1.2 or 2.2)	-	10K	40	Full	A, B
	GP	12	125-250	50/60	130	1/1 or 2 (1.2 or 2.2)	-	10K	40	Full	A, B
	HP	1/3	125-250	50/60	55	1/1 or 2 (1.2 or 2.2)	6K	-	40	Full	A, B

831618	RM	5 (1)	125- 250	50/60	125	1/1 or 2 (1.2 or 2.2)	-	50K	40	μ	A, B
	GP	5	125- 250	50/60	130	1/1 or 2 (1.2 or 2.2)	-	10K	40	μ	A, B
831619, 831619 SP4136	RM	4 (1)	125- 250	50/60	125	1/1 or 2 (1.2 or 2.2)	-	50K	40	μ	A, B
	GP	4	125- 250	50/60	130	1/1 or 2 (1.2 or 2.2)	-	10K	40	μ	A, B

Note 1: Product marking: part numbers may be prefixed by "U"

Basic model 83161 f/b 0 through 9 can be f/b 00 through 99, with or without Suffix SP or SF 0000 through 9999. The suffix indicates variations which would not affect the electrical or mechanical function of the switch.

Note 2: The horse power ratings are taken over from old certification to UL 1054. There is no constructional change.

Note 3: QC terminals 2.8 x 0.5 mm have a maximum rating of 5 A according to product marking

## and Report

## EXPLANATION OF COLUMN HEADINGS

Model - Cat. No. - Identifier used by the manufacturer for a specific switch Model or Catalog number.

f/b - followed by, ww/o - With or without,

Load - identify the load according the Testing. R= resistive, RM= resistive and motor, RC= resistive and capacitive, L=tungsten lamp load, Spc= specific load, mA =load below 20mA, SpcL, SpcT = specific lamp load such as US L or T, I= inductive, SpcM= specific motor rating, TV= television, GP= general purpose, GPM= general purpose and motor, GPhp= general purpose and horse power.

Amps - the steady state amp value of the switch. Per pole value may be marked "PP" and is verified by the circuit connection.

Volt - the Voltage (RMS) value.

Hz - the Frequency or range such as (50-60).

Temp - The declared operating temperature of the switch.

Pol/Thr/Cir - The number of Poles (Pol) and Throws (Thr) represented by the switch construction (where "M" indicates multiple poles (more than 2)). The circuit (Cir) is identified by a code explained in the standard and appendix pages (Table 2 of 61058-1).

IP - Degree of protection against ingress of solid objects and dust, and harmful ingress of water.

DIS - Disconnect air gap across open contact, electronic is indicated by "e", micro indicated "micro", FULL indicated with a measurement in mm.

30C cycle - the number of Endurance cycles completed with a temperature rise less than 30C (on terminals).

55C cycle - the number of Endurance cycles completed with a temperature rise less than 55C (on terminals).

SPCA - Identifies Special Conditions of Acceptability that must be considered in the end product. A list of typical SPCOAs (represented with a number) are found in the WOYR2 guide card. Conditions other than the typical are represented with a letter and described in the specific volume and section follow-up procedure description.

Products designated USR have been investigated using requirements contained in UL Standard for Switches for Appliance, UL 61058-1 edition 5 and UL 61058-1-1 edition 1.

Products designated CNR have been investigated using requirements contained in Canadian Standard CAN/CSA-C22.2 No. 61058-1:17 and CAN/CSA-C22.2 No. 61058-1-1:17.

Switch Declaration: Use table for general and indicate differences below.

Model	Series 83161		
Ambient Temp. C	See table page 1	Type Reference	C.T.
Total Cycles	See table page 1	Glow Wire Temp. C	850
IP rating	See table page 1	PTI	250
Electric shock Class	I	Over Voltage Category	II
Pollution degree Macro	3 - 250 V 2 - 400 V	Impulse withstand Volt	2500
Pollution degree Micro	2 - 250 V 1 - 400 V	Disconnect	See table page 1
Actuation	Linear (push- button)	Test Circuit	See table page 1

Terminal	Type	Wire range	Flexible/ Rigid	Wire type	Prepared or Unprepared	Specific test amps
1, 2, 4	Quick Connect Terminal (6.3 x 0.8 or 4.8 x 0.5 or 4.8 x 0.8 or 2.8 x 0.5 or 2.8 x 0.8 mm)	Table 4	Both	Solid/stranded	prepared	N/A
1, 2, 4	Solder Terminal	Table 4	Both	Solid/stranded	unprepared	N/A
1, 2, 4	Screw Terminal	Table 4	Both	Solid/stranded	unprepared	N/A

## FIGURE &amp; ILLUSTRATIONS:

The following Figures & Illustrations are included in this Report.

Figure and illustrations:	
Fig. 1	Overall view
Fig. 2	Internal view
Fig. 3	Overall view of construction variation Telescopic Plunger
Ill. 1	Specification
Ill. 2	Measurement of clearance and creepage distances

Model Differences: refer to Ill 1.

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

Use - The switches covered by this Report are for use only in complete equipment where the suitability of the combination is determined by UL.

STANDARD CONDITIONS OF ACCEPTABILITY: (See Section General or LIS guide Page)

SPECIAL CONDITIONS OF ACCEPTABILITY: (See section General or LIS guide Page)

Specific Conditions of Acceptability should be identified in page 1 column SPCA. Below are the conditions that apply to this description, items 1 to 8 or unique conditions are identified by a alphabetical letter.

- A. The switch provides only basic insulation which shall be ensured in the end use product.
- B. IP40 testing was completed on the complete switch without an end product enclosure.
- C. For model with "Plastic Telescopic Plunger" construction, additional requirements may be necessary.