

Certificate of Compliance

Certificate: 1184873

Master Contract: 166260

Project: 1249664

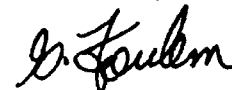
Date Issued: November 13, 2001

Issued to: Marquardt GmbH
Schlosstrasse 16
78604 RIETHEIM-WEILHEIM
GERMANY

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US'



Issued by: G. Foulem, E.I.T.



PRODUCTS

CLASS 6241 10 - SWITCHES - Snap - Special Use

CLASS 6241 90 - SWITCHES - Snap - Special Use - CERTIFIED TO U.S. STANDARDS

Special-Use Switches, Component



CSA INTERNATIONAL

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Cat No.	Electrical Rating		Temp (°C)	POL/THR	PP	ENDURANCE	SPCOA
155 f/b 0,1,2,5 w Code R38 w/wo Suffix RMTE	16A 1hp 2hp	125-250Vac 125V ac 250V ac	105	1.2/1	PP	6 K	2,3,A1,A2
155 f/b 0,5 w Code R74 w/wo Suffix RMTE	10A 1/2hp	250V ac 250V ac	105	1.2/1	PP	6 K	2,3,A1,A2
155 f/b 1,2 w Code R112 w/wo Suffix RMTE	10A 1/4hp 1/2hp	125-250V ac 125V ac 250V ac	105	1.2/1	PP	6 K	2,3,A1,A2
155 f/b 0,5 w Code R113 w/wo Suffix RMTE	10A 1/4hp	125V ac 125V ac	105	1.2/1	PP	6 K	2,3,A1,A2
155 f/b 1 w Code R131 w/wo Suffix RMTE	16A	28V dc	105	1.2/1	--	6 K	2,3,A1,A2
155 f/b 0,5 w Code R144 w/wo Suffix RMTE	16A 1hp	125V ac 125V ac	105	1.2/1	PP	6 K	2,3,A1,A2
155 f/b 0,5 w Code R145 w/wo Suffix RMTE	16A 2hp	250V ac 250V ac	105	1.2/1	PP	6 K	2,3,A1,A2
155 f/b 2,5 w Code R174 w/wo Suffix RMTE	20A 1hp 2hp	125-250V ac 125V ac 250V ac	105	1.2/1	PP	6 K	2,3,A1,A2

CAT. NO.: f/b = followed by w/wo = with or without . denotes any number
 ELECTRICAL
 RATING: "R" = Resistive "L" = AC Tungsten "T" = AC and DC Tungsten
 POL/THR: # of Poles/# of Throws. "M" indicates "Multi" (eg. 2/M indicates 2 pole, Multi-Throw)
 PP: Per pole, "PP" in this column indicates each pole may carry the rated current (for 2 or more pole switches), with opposite polarity between adjacent poles.
 ENDUR: Endurance rating
 SPCOA: Applicable Special Conditions of Acceptability are indicated here in numeric form. Refer to the following pages for corresponding Special Conditions of Acceptability.

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General:

These devices are single- and double-pole, single-throw special-use switches. Suffix RMTE represents Remote Actuated Version. Refer to Fig. No. 2 for additional details.

ENGINEERING CONSIDERATIONS

Use: The switches covered by this Report are for use only in complete equipment where the suitability of the combination is determined by the Canadian Standards Association (CSA).

STANDARD CONDITIONS OF ACCEPTABILITY

General: The following five Conditions of Acceptability apply to all switches covered by this report.

1. The switch terminals have been investigated for use only with copper wire or copper alloy quick-connect terminals.
2. A standard size quick connect tab (as noted in Standard) is to be mated with the appropriate standard-size-quick-connect connector. The tab is provided with a detent that shall be properly matched to the connector.
3. The spacing between any terminals and a flat mounting surface has been judged in accordance with the Standard for Special Use Switches. However, the spacing requirements between the connection when installed on the terminal and the mounting surface shall comply with the end-use standard spacings.
4. For switches with integral leads, the temperature rating of the leads is 60°C minimum unless the leads are surface marked with a higher rating.
5. The switch has been subjected to a minimum 6000 cycle Endurance Test.

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SPECIAL CONDITIONS OF ACCEPTABILITY

General: One or more of the following Conditions of Acceptability apply as indicated in the SUBJECT table of this Report under the SPCOA (Special COA's) column.

1. The non-standard quick-connect table (ie. other than noted in Standard) have been investigated with a special non-standard connector attached to wires of a specified size.
2. These are lighted switches employing a lamp. The lamp life should be evaluated when required by the end-use product Standard.
3. The switch has openings in the housing adjacent to arcing parts. The end-use application may involve environments (such as excessive dust or adjacent combustible material) that would exclude an opening in the switch housing.
4. These are diaphragm activated water level switches. Samples of the diaphragm have been subjected to aging tests for use at a specific temperature (shown within parenthesis in °C) and have also been examined for tensile strength and elongation after exposure to detergent. However, if the switch is mounted below the level of water which indirectly actuates it and the switch has an integral metal case, the metal case is to be considered a live part.
5. These are speed control switches. The investigation was limited to the switching function of the switch. In the final application it should be determined that the speed control can be used with a particular appliance without resulting in a hazardous condition such as overheating of a motor or the switch in other than the full speed position. Open and shorted components of the speed control circuit shall be evaluated for compliance with the end-use Standard.
6. The switch employs screw-type pressure wire connectors or push-in terminals. These have been evaluated for use with solid and/or solder dipped stranded conductors of a specified size (shown within parenthesis in AWG).
7. These switches employ an integral potentiometer. The investigation was limited to the switching function of the switch. The insulating materials and the spacings of the integral potentiometer should be investigated for compliance with the end-use product Standard.
8. The switch employs auxiliary contacts located externally to the main switch contact chamber. The auxiliary contacts were not tested as part of this investigation. The suitability of the auxiliary contacts must be determined in accordance with the end-use product Standard.
- A1. The supply source of the bulb circuit was not evaluated during the investigation of the switch. The suitability of this feature shall be determined in the end-use application.
- A2. The performance of the remote actuated version (Suffix RMTE) is dependant upon the of
 - a. the length of the extension rod and
 - b. the distance between the Recognized component switch and the remote actuator button. The suitability of this combination should be determined in the end product.



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CONSTRUCTION DETAILS

Corrosion Protection: All ferrous metal parts are protected against corrosion by plating, painting, galvanizing or equivalent.

Spacings: Spacings between uninsulated live-metal parts of opposite polarity and also those parts and dead-metal parts, including opening for mounting screws, are not less than 3/64 in (1.2mm) through air or over surface for switches rated 250V or less and not less than 1/8 in (3.2mm) for switches rated 251V or greater, unless noted.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 0-M91	-	General Requirements - Canadian Electrical Code, Part II
CSA Std C22.2 No. 55-M1986	-	Special Use Switches
UL Std No. 1054	-	Special-Use Switches
Electrical Notice 526	-	Publication of the Third Edition of CSA Standard C22.2 No. 55-M1986, "Special Use Switches"