

Certificate of Compliance

Certificate: 1121704

Master Contract: 166260

Project: 2312266

Date Issued: August 2, 2010

Issued to: Marquardt GmbH
Schloss-Strasse 16
D-78604 Rietheim-Weilheim
GERMANY

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only



M. Gryschuk
Issued by: M. Gryschuk

PRODUCTS

CLASS 6241 10 - SWITCHES - Snap – Special Use

CLASS 6241 90 - SWITCHES - Snap – Special-Use – To the requirements of US-Standards

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Special-Use Switches, Component

Cat. No.	Electrical Rating		Temperature. (° C)	POL/THR	PP	ENDURANCE
1838 w/wo suff .0000-9999 w/wo Code R58	6 A 1/8 hp 1/8 hp	125-250Vac 125 Vac 250 Vac	65	2/1	--	6 K
1838 w/wo suff .0000-9999 w/wo Code R88	10 A 1/8 hp 1/4 hp	125-250Vac 125 Vac 250 Vac	65	2/1	--	6 K
1838 w/wo suff .0000-9999 w/wo Code R105	12.5 A 1/8 hp 1/4 hp	125-250Vac 125 Vac 250 Vac	65	2/1	--	6 K
1838 w/wo suff .0000-9999 w/wo Code R135	16 A 1/3 hp 1/2 hp	125-250Vac 125 Vac 250 Vac	65	2/1	--	6 K
1839 w/wo suff .0000-9999 w/wo Code R58	6 A 1/8 hp 1/8 hp	125-250Vac 125 Vac 250 Vac	65	2/1	--	6 K
1839 w/wo suff .0000-9999 w/wo Code R88	10 A 1/8 hp 1/4 hp	125-250Vac 125 Vac 250 Vac	65	2/1	--	6 K
1839 w/wo suff .0000-9999 w/wo Code R135	16 A 1/3 hp 1/2 hp	125-250Vac 125 Vac 250 Vac	65	2/1	--	6 K
Cat. No. with 4 digits may be f/b “.” w/wo suffix 0000-9999 w/wo Rating Code R f/b 1-999						
Cat. No. with 3 digits may be f/b “.” or 0-9 may be f/b by “.” w/wo suffix 0000-9999 w/wo Rating Code R f/b 1-999						

Electrical Rating: "R" = Resistive "L" = AC Tungsten "T" = AC and DC Tungsten
Poles/Throws: # of Poles/# of Throws. "M" indicates "Multi" (e.g. 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
Temperature: Temperature rating exceeding 40°C in compliance with UL Std. 1054, Clause 15 (specifically 15.1, in °C).

Notes:

- Suffixes may be added, indicating contact arrangement, type of actuator and mechanical details.
- Certified for use only where the suitability of the combination is determined by CSA International or another NRTL

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APPLICABLE REQUIREMENTS

CSA Std. C22.2 No. 55-M1986, 3rd Ed - Special Use Switches
UL Std. No. 1054, 6th Ed - Special-Use Switches

CERTIFICATE

Issued to:
Applicant:
Marquardt GmbH
Schloss-Strasse 16
78604, Rietheim-Weilheim, Germany

Manufacturer/Licensee:
Marquardt GmbH
Schloss-Strasse 16
78604, Rietheim-Weilheim, Germany

Product(s) : rocker switches
Trade name(s) : MARQUARDT
Type(s)/model(s) : 1830., 1831., 1832., 1833., 1834., 1835., 1838., 1839.

The product and any acceptable variation thereto is specified in the Annex to this certificate and the documents therein referred to.

DEKRA hereby declares that the above-mentioned product has been certified on the basis of:

- a type test according to the standard EN 61058-1:2002 + A2:2008
- an inspection of the production location according to GENELEC Operational Document CIG 021
- a certification agreement with the number 983346

DEKRA hereby grants the right to use the ENEC KEMA-KEUR certification mark.

The ENEC KEMA-KEUR certification mark may be applied to the product as specified in this certificate for the duration of the ENEC KEMA-KEUR certification agreement and under the conditions of the ENEC KEMA-KEUR certification agreement.

This certificate is issued on: 15 January 2011 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 2139852.01

DEKRA Certification B.V.



drs. G.J. Zoetbrood
Managing Director

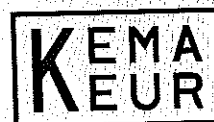


H.R.M. Barends
Certification Manager

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All testing, inspection, auditing and certification activities of the former KEMA Quality are an integral part of the DEKRA Certification Group.

ACCREDITED BY
THE DUTCH COUNCIL
FOR ACCREDITATION



SPECIFICATION OF THE CERTIFIED PRODUCT**Product data**

product	:	rocker switches
trade name(s)	:	MARQUARDT
type(s)	:	1830., 1831., 1832., 1833., 1834., 1835., 1838., 1839.
type reference	:	common type (C.T.)
type of switch	:	incorporated
rated voltage	:	250 V~
contact opening	:	full disconnection
class	:	for class II appliances
degree of pollution	:	3
category to heat and fire	:	850°C
insulating material	:	tracking resistant (250 V)
rated impulse withstandvoltage	:	2500 V
material group	:	IIIa
terminals	:	tab terminals (4,8 x 0,8 mm and 6,8 x 0,8 mm) solder terminals PCB terminals
description	:	body and actuating member of thermoplastic material
markings	:	trade name, type reference, temperature limit and electrical ratings on the body

Additional information

Additional tests according to Clause 30 of the following standards are performed with positive results for switches marked with the letter "G" on the switch or the label of the smallest shipping container.

- IEC 60335-1:2010
- EN 60335-1:2002

Resistance to heat and fire: Insulation material around connections within an area of 3,0 mm.

- Glow-wire test 750°C; no flame
- Glow-wire test 850°C; flame, if any, extinguished within 30 seconds after removal the glow-wire
- Glow-wire Ignition Temperature ≥ 775 °C; tested on raw material plates with the thickness of 0,75 mm, 1,5 mm and 3,0 mm.

The switches, types 1831, 1833 and 1838 can be provided with an alternative IP67 cap.

The appropriate IP protection should be realized in the appliance.

The switches with IP67 protection degree are not suitable for the exposure to water jets (IPx6).

Product data - type 1830.

type of switch	: rocker switch
pattern no.	: 1
circuit to be controlled	: - resistive and motor - resistive and capacitive
rated current	: 4(2)A, 6(4)A, 10(4)A, 10(8)A, 16(4)A, 20(4)A and 5/120A
frequency of operation	: - 10.000 operating cycles for 4(2)A, 10(4)A , 16(4)A, 20(4)A, 5/120A - 50.000 operating cycles for 6(4)A and 10(8)A
temperature limit	: T85/55
degree of protection	: IP40
design	: illuminated

Product data - type 1831.

type of switch	: rocker switch
pattern no.	: 1
circuit to be controlled	: - resistive and motor - resistive and capacitive
rated current	: 4(2)A, 6(4)A, 10(4)A, 10(8)A, 16(4)A, 20(4)A and 5/120A
frequency of operation	: - 10.000 operating cycles for 4(2)A, 10(4)A , 16(4)A, 20(4)A, 5/120A - 50.000 operating cycles for 6(4)A and 10(8)A
temperature limit	: T105/55
degree of protection	: IP40 or IP67 (with alternative cap)

Product data - type 1832.

type of switch	: rocker switch
pattern no.	: 2
circuit to be controlled	: - resistive and motor - resistive and capacitive
rated current	: 4(2)A, 6(4)A, 10(4)A, 10(8)A, 16(4)A, 20(4)A and 5/120A
frequency of operation	: - 10.000 operating cycles for 4(2)A, 10(4)A , 16(4)A, 20(4)A, 5/120A - 50.000 operating cycles for 6(4)A and 10(8)A
temperature limit	: T105/55
degree of protection	: IP40

Product data - type 1833.

type of switch	: rocker or push-button switch, which makes momentary and continuous contact
pattern no.	: 6
circuit to be controlled	: resistive and motor
rated current	: 4(2)A, 6(4)A, 10(4)A and 16(4)A
frequency of operation	: - 10.000 operating cycles for 4(2)A, 10(4)A and 16(4)A - 50.000 operating cycles for 6(4)A
temperature limit	: T105/55
degree of protection	: IP40 or IP67 (with alternative cap)

Product data - type 1834.

type of switch	:	rocker or push-button switch, which makes momentary and/or continuous contact
pattern nos.	:	6 and 6/2
circuit to be controlled	:	resistive and motor
rated current	:	4(2)A, 6(4)A, 10(4)A and 16(4)A
frequency of operation	:	- 10.000 operating cycles for 4(2)A, 10(4)A and 16(4)A - 50.000 operating cycles for 6(4)A
temperature limit	:	T105/55
degree of protection	:	IP40

Product data - type 1835.

type of switch	:	rocker switch
pattern no.	:	2
circuit to be controlled	:	- resistive and motor - resistive and capacitive
rated current	:	4(2)A, 6(4)A, 10(4)A, 10(8)A, 16(4)A, 20(4)A and 5/120A
frequency of operation	:	- 10.000 operating cycles for 4(2)A, 10(4)A, 16(4)A, 20(4)A, 5/120A - 50.000 operating cycles for 6(4)A and 10(8)A
temperature limit	:	T85/55
degree of protection	:	IP40
design	:	illuminated

Product data - type 1838.

type of switch	:	rocker or push-button switch, which makes momentary and/or continuous contact
pattern no.	:	4 and 6
circuit to be controlled	:	resistive and motor
rated current	:	6(4)A, 10(4)A and 16(4)A
frequency of operation	:	10.000 operating cycles
temperature limit	:	T105/55
degree of protection	:	IP40 or IP67 (with alternative cap)

Product data - type 1839.

type of switch	:	push-button switch, which makes momentary or continuous contact
pattern no.	:	4/2
circuit to be controlled	:	resistive and motor
rated current	:	6(4)A and 16(4)A
frequency of operation	:	10.000 operating cycles
temperature limit	:	T105/55
degree of protection	:	IP40

TESTS**Test requirements**

EN 61058-1:2002 + A2:2008

Test result

The test results are laid down in DEKRA test file 2139852.01.

Remarks

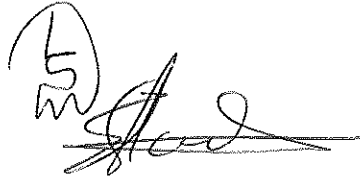
This certificate replaces our certificate 2109632.01 dated April 15, 2008 and is also partly based on the results of that certificate.

Conclusion

The examination proved that all test requirements were met.

Tested by : L.S.M. Mooi

Checked by : E. Stoel

**Factory locations**

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Marquardt GmbH,

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