CERTIFICATE

Issued to:
Applicant:
T C I Telecomunicazioni S.r.l.
Via Parma 14
21047 Saronno (VA) - ITALY

Manufacturer/Licensee:
T C I Telecomunicazioni S.r.l.
Via Parma 14
21047 Saronno (VA) - ITALY

Product(s) : Electronic controlgear for LED modules
Trade name(s) : TCI or TN101
Type(s)/model(s) : DC MAXI JOLLY HV (series), DC MAXI JOLLY SLIM (series), MP 60 SLIM (series)

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 61347-2-13:2014; EN 61347-1:2008+A1:2011+A2:2013; EN 62384:2006+A1:2009

- an inspection of the production location according to CENELEC Operational Document CIG 021
- a certification agreement with the number 2033015

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: February 16, 2015 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 2102435.01

DEKRA Certification B.V.

drs. G.J. Zoetbrood
Managing Director

Massimiliano Triulzi
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

PRODUCTS
RvA C 001

ENEC 05

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General product information:
The devices are electronic controlgears for LED modules. The devices have a stabilized output current or voltage with values depending on the selection of the DIP switch. The DIP switch options are detailed both in the technical specification and in the labels. The stabilized output can be reduced by NTC control signal (if present) in case of overheating on the LED module. Dimming features are detailed in the technical specification: PUSH L, 1-10V, MIDNIGHT, BILEVEL, BILEVEL N, PLV and DALI. The SYNC port can synchronize other devices as master/slave configuration. Different independent enclosures are used for TCM (twin cap enclosure) models. S. GND and 12Vaux (if present) can provide up to 100 mA to an external fan.

Type/s	Primary voltage (50/60 Hz)	Max. primary current	Power Factor	Primary DC voltage (0 Hz)	Output Power (W)	Secondary Parameter (A)	Voma x (V)	ta (°C)	tc (°C)	Class (IP grade)	Classification	Thermal Protection	Protection type
DC MAXI JOLLY HV or K2402	220-240 V 110-127 V	0,26 A 0,43 A	0,95 [1]	176-280 V [2]	30-50 [3]	0,25 - 0,7 [3]	119	-25..45/50 [3]	90	II (IP20)	Independent SELV output	130 °C [5]	C.5.a
DC MAXI JOLLY HV DALI or K2403													
DC MAXI JOLLY HV MIDNIGHT or K2404													
DC MAXI JOLLY HV BILEVEL or K2405													
DC MAXI JOLLY HV BILEVEL N or K2406													
DC MAXI JOLLY HV PLV or K2407													
DC MAXI JOLLY HV TCM or K2420									70	II (IP20)	Independent SELV output	130 °C [5]	C.5.a
DC MAXI JOLLY HV DALI TCM or K2421													
DC MAXI JOLLY HV MIDNIGHT TCM or K2422													
DC MAXI JOLLY HV BILEVEL TCM or K2423													
DC MAXI JOLLY HV BILEVEL N TCM or K2424													
DC MAXI JOLLY HV PLV TCM or K2425													
DC MAXI JOLLY HV BI or K2408									90	-	Built-in SELV output	130 °C [5]	C.5.a
DC MAXI JOLLY HV DALI BI or K2409													
DC MAXI JOLLY HV MIDNIGHT BI or K2410													
DC MAXI JOLLY HV BILEVEL BI or K2411													
DC MAXI JOLLY HV BILEVEL N BI or K2412													
DC MAXI JOLLY HV PLV BI or K2413													
DC MAXI JOLLY SLIM HV or K2472	220-240 V 110-127 V	0,31 A 0,43 A	0,95 [1]	176-280 V [2]	30-60 [3]	0,25-0,7 [3]	119 [4]	-25..45	75	-	Built-in SELV output	130 °C [5]	C.5.a
DC MAXI JOLLY SLIM HV DALI or K2473													
MP 60 SLIM HV or K2474													
DC MAXI JOLLY SLIM or K2475					25-60 [3]	0,35-1,05 [3]	90 [4]	-25..45	75/80 [3]				
DC MAXI JOLLY SLIM DALI or K2476													
MP 60 SLIM or K2477													

Notes: [1] – Rated value at P>25 W. **[2]** – The products were tested in this operative range and they can be used for centralized emergency installations (EN 50171 and EN 50172); Imax=0,38 A (SLIM models), 0,32 A (other models). DC can't be used for PUSH L/RED ON/OFF/ OPERATION features. **[3]** – Different values according to DIP switch selection (see label). **[4]** – 58 Vdc limitation: S50/1=ON. **[5]** – The products have an overheating protection and comply with temperature limit of clause 4.16.2 of EN 60598-1:04 ("F" triangle marking), EN 60598-1:2008, EN 60598-1 /A11:2009.

Common parameters for DC MAXI JOLLY HV models, DC MAXI JOLLY HV TCM models	
Connection to supply (PRI)	screw terminal block 0,5…2,5 mm²
Connection to PUSH L, OPERATION, RED ON, RED OFF, DA (if present)	screwless terminal block 0,5…1,5 mm²
Connection to 1…10V, LEVEL, Vaux, NTC (if present)	screwless terminal block 0,2…1,5 mm²
Connection to SYNC	connector
Connection to load (SEC)	screw terminal block 0,5…2,5 mm²
Common parameters for DC MAXI JOLLY HV BI models	
Connection to supply (PRI)	screw terminal block 0,5…1,5 mm²
Connection to PUSH L (if present)	screw terminal block 0,5…1,5 mm²
Connection to SYNC	connector
Connection to load (SEC)	screw terminal block 0,5…1,5 mm²
Common parameters for DC MAXI JOLLY SLIM (series) , MP 60 SLIM (series)	
Connection to supply (PRI)	screwless terminal block 0,5…1,5 mm²
Connection to PUSH L, DA (if present)	screwless terminal block 0,5…1,5 mm²
Connection to 1…10V (if present)	screwless terminal block 0,2…1,5 mm²
Connection to SYNC (if present)	2 poles connector
Connection to SEC+; SEC-; 12Vaux, I-SET, NTC, S. GND	6 poles connector
Connection to load (SEC)	screw terminal block 0,5…1,5 mm²
Additional information	
All models with enclosure fulfil the requirements for: Impulse withstand category II; Pollution degree 2 (Normal Pollution); Material group IIIa. All models have the following features: output protection to open and short circuit; the material of enclosure was tested with favourable result for Glow-wire at temperature (750 °C for SLIM models, 960 °C for other models).	

***INSULATION for* DC MAXI JOLLY HV (series)**	PRI	PUSH L, OPERATION, RED ON, RED OFF (if present)	DA (if present)	PR	1…10V, LEVEL, Vaux, NTC, SYNC, PUSH/1..10V (if present)	SEC
PRI	-	basic	basic	double	double	double
PUSH L, OPERATION, RED ON, RED OFF (if present)	basic	-	basic	double	double	double
DA (if present)	basic	basic	-	supplem.	double	double
PR	double	double	supplem.	-	basic	basic
1…10V, LEVEL, Vaux, NTC, SYNC, PUSH/1..10V (if present)	double	double	double	basic	-	functional
SEC	double	double	double	basic	functional	-

***INSULATION for* DC MAXI JOLLY SLIM (series), MP 60 SLIM (series)**	PRI	PUSH L (if present)	DA (if present)	1…10V, LEVEL, 12 Vaux, I-SET, NTC, SYNC, S.GND (if present)	SEC
PRI	-	basic	basic	double	double
PUSH L (if present)	basic	-	basic	double	double
DA (if present)	basic	basic	-	double	double
1…10V, LEVEL, 12 Vaux, I-SET, NTC, SYNC, S.GND (if present)	double	double	double	-	functional
SEC	double	double	double	functional	-

In the final application the connections of external wiring shall be according to IEC 60598-1 or national deviations of the country where installed. Creepage distances and clearances for built-in models shall comply with the requirements of IEC/EN 60598-1 when the device is installed in the final application:		
INSULATION: MODELS:	**Between active parts and the bottom surface of enclosure**	**Between active parts and outer surfaces of enclosure**
DC MAXI JOLLY HV models, DC MAXI JOLLY HV TCM models	double	double
DC MAXI JOLLY HV BI models, DC MAXI JOLLY SLIM (series), MP 60 SLIM (series)	double	-

TESTS

Test requirements
EN 61347-2-13:2014; EN 61347-1:2008+A1:2011+A2:2013; EN 62384:2006+A1:2009

Test result
The test results are laid down in DEKRA test reports No.2102435.50 and No.2102435.60

Remarks

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Conclusions
The examination proved that all test requirements were met.

Tested by : Massimo Banchelli

Checked by : Filippo Tiezzi

Factory-Location
TCI Telecomunicazioni Italia S.r.l.
Via Parma 14
I-21047 Saronno (VA)