

CERTIFICATE

Issued to:
Applicant:
TCI Telecomunicazioni Italia Srl
Via Parma 14
21047 Saronno (VA), Italy

Licensee:
TCI Telecomunicazioni Italia Srl
Via Parma 14
21047 Saronno (VA), Italy

Product : Electronic controlgear for LED modules
Trade name(s) : TCI, TCI (with little dragon), TCI LED, TCI LED (with little dragon),
TCI LIGHT (with little dragon and ball in square), TCI LIGHT Saronno Italy or
TN101
Type(s)/model(s) : DC NR (series) and DC R (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(s) EN 61347-2-13:2014, EN 61347-2-13:2014/A1:2017 and EN 61347-1:2015
- an inspection of the factory location according to CENELEC Operational Document CIG 021
- a DEKRA certification agreement with the number 2033016

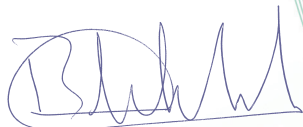
DEKRA hereby grants the right to use the KEMA-KEUR certification mark.

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


This certificate is issued on 7 February 2022 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 81-122370

DEKRA Certification B.V.



B.T.M. Holtus
Managing Director



H.R.M. Barends
Certification Manager

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SPECIFICATION OF THE CERTIFIED PRODUCT**Product data**

Product	: Electronic controlgear for LED modules
Trade name(s)	: TCI, TCI (with little dragon), TCI LED, TCI LED (with little dragon), TCI LIGHT (with little dragon and ball in square), TCI LIGHT Saronno Italy or TN101
Type(s)/model(s)	: DC NR (series) and DC R (series)
Primary voltage	: 110-240 V for a.c., 189-250 V for d.c.
Rated frequency	: 50/60 Hz or 50-60 Hz, 0 Hz
Primary current	: From 0,16 to 0,2 A for a.c., from 0,06 to 0,14 A for d.c.
Secondary current	: From 0,35 to 0,7 A
Secondary voltage	: 12 V
Type of load	: LED modules, power LED
Classification	: Independent or Built in

TESTS**Test requirements**

EN 61347-2-13:2014
EN 61347-2-13:2014/A1:2017
EN 61347-1:2015

Test result

The test results are laid down in DEKRA test file 350033600.

Additional information

DEKRA test report No. 3500336.450 is laid down in DEKRA test file 350033600; it contains test results and critical component list.

DEKRA test report No. 3500336.450 contains critical component list.

For specific Model/Type electrical rating refer to following pages.

Conclusion

The examination proved that all requirements were met.

Factory location

TCI Telecomunicazioni Italia SrL
Via Parma 14
21047 Saronno (VA), Italy

General product information:

Controlgears for LED modules with stabilized output voltage or current. The output can be dimmable by pwm signal for R models. All models have SELV output. Primary voltage: 110-240 V 50/60 Hz or 50-60 Hz, 189-250 V *0 Hz; power factor=0,87C/0,9C for HPFU models, 0,55C/0,61C for other models. The Kxxxx code can replace the type reference according to the following table:

Type/s	supply voltage (V) [1]	supply current (A) [1]	Po (W) [2]	SEC	Uout (V)	ta (°C)	tc (°C)	Use [3]
DC 8W 12V R (K2386), DC 8W 12V RS (K2488), DC 8W 12V NRS (K2490)	220-240 110-127	Max. 0,17	8	12 V	14	-25..45	75	IND, II, 100, MM
DC 8W 12V RBI (K2394), DC 8W 12V RSBI (K2489), DC 8W 12V NRSBI (K2491)	170-280*	0,06*				-	80	BI, 100, MM
DC 15W 700mA R (K2494), DC 15W 700mA RS (K2495)	220-240 110-127	0,17 0,2	15 8-10	700 mA	27	-25..45 -25..55	75	IND, II, 100, MM
DC 15W 700mA RBI (K2569), DC 15W 700mA RSBI (K2A59)	170-280*	0,11*	15*			-	80	BI, 100, MM
DC 12W 350mA RS (K2A60)	220-240 110-127	max. 0,16	12 8	350 mA	41	-25..45	75	IND, II, 100, MM
DC 12W 350mA RSBI (K2A61)	170-280*	0,09*	12*			-	80	BI, 100, MM
DC 20W 700mA R HPFU (K2H41)	220-240 110-127	0,11 0,18	20 15	700 mA	55	-25..50 -25..55	80	IND, II, 110
DC 20W 700mA RBI HPFU (K2H42)	170-280*	0,14*	20*			-	80	BI, 110
DC 15W 350mA R HPFU (K2H43)	220-240 110-127	0,09 0,16	15	350 mA	55	-25..55	75	IND, II, 110, MM
DC 15W 350mA RBI HPFU (K2H44)	170-280*	0,1*				-	80	BI, 110, MM
DC 8W 12V R HPFU (K2H60)	220-240 110-127	0,055 0,1	8	12 V	13	-25..50	80	IND, II, 110, MM
DC 8W 12V RBI HPFU (K2H61)	170-280*	0,06*				-	80	BI, 110, MM

Notes: [1] – maximum value with a.c. or *d.c. supply. [2] – measured at 110-120 V / 220-240 V. [3] – IND= independent IP20; II= class II; OF= built-in model without enclosure; 100= overheating protection (C.5.a type); MM= suitable for direct mounting on normally flammable surfaces (EN 60598-1:2015, VDE 0710 T14 for "MM" triangle marking).

Connections

Input supply	PRI, IN, J1	screw terminals 0,75...2,5 mm ²
Control (not for NR models)	PWM, J3, J101	Connector
Output load	SEC, J2, J103	screw terminals 0,5...2,5 mm ²

Additional information

Use	Independent or built-in controlgear for ordinary luminaire, up to 2000 m above sea level.
Features	For LED; stabilized output current; multiple value load; short-circuit proof type; impulse withstand category II; Pollution degree 2; Material group IIIa; thermal protection protection (C.5.a); the tests for OF models have been performed using the same enclosure of IND models. The material of enclosure was tested with favourable result for Glow-wire at temperature 850-960 °C.
DC operation	The products were tested in the nominal range 189-250 V (operative range 170-280 V) according to IEC/EN 61347-2-13; d.c. operation for standards different from IEC/EN 61347 can be allowed with external fuse installed in front of the controlgear (e.g. Littelfuse, 477 series, 5x20 mm time-lag rated for 500 Vac / 400 Vdc, VDE certificate No. 40025413).

The creepage distances, clearances and connections of control gears in the final application shall be according to IEC 60598-1 or national deviations of the country where installed:

INSULATION B= basic, S= supplementary, R= double or reinforced, S/S= two SELV signals	DC 15W 700mA RS, DC 15W 700mA RSBI, DC 8W 12V RS, DC 8W 12V RSBI, DC 15W 700mA RS, DC 15W 700mA RSBI	DC 8W 12V NRS, DC 8W 12V NRSBI	other models
PRI ↔ SEC, PRI ↔ PWM (if present)	R		
SEC ↔ PWM (under 25 V a.c. / 60V r.f.d.c.)	S/S	-	-
SEC ↔ PWM (under 250 V)	-	-	R
active parts ↔ touchable parts of enclosure	R for independent models		

active parts ↔ bottom surface of enclosure	R
Assessment to EN 60598-2-22:2014/AMD1:2020 used in conjunction with EN 60598-1:2014/AMD1:2017 and EN 60598-1:2015/A1:2018 has been performed.	
Assessment to EN 62493:2015 has been performed.	
Assessment to VDE 0710 Part 14/04.82 has been performed.	
Assessment to EN 62442-3:2018.	
All models out of HPFU models are suitable for direct mounting on normally flammable surfaces.	