CERTIFICATE

Issued to:
Applicant:
TCI Telecomunicazioni Italia S.r.l.
Via Parma, 14
21047 Saronno (Va), Italy

Licensee:
TCI Telecomunicazioni Italia S.r.l.
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)	:	BULL ** (*means any alphanumeric characters), DC ** KU3 (*means any alphanumeric characters), DC 10W 700mA TW/E OF, STC ** (*means any alphanumeric characters), STMP ** (*means any alphanumeric characters) and STM ** (*means any alphanumeric characters)

The product and any acceptable variation thereto as 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 EN 61347-2-13:2014, EN 61347-2-13:2014/A1:2017, EN 61347-1:2015, EN 61347-1:2015/A1:2021 and EN IEC 62384:2020
- an inspection of the factory location according to CENELEC Operational Document CIG 021
- a DEKRA certification agreement with the number 2033015

DEKRA hereby grants the right to use the ENEC certification mark.

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

This certificate is issued on 20 February 2024 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 81-123706 REV.1

DEKRA Certification B.V.

B.T.M. Holtus
Managing Director

K Xu
Certification Manager

ACCREDITED BY THE
DUTCH ACCREDITATION
COUNCIL

PRODUCTS
RvA C 001

DEKRA Certification B.V. Meander 1051, 6825 MJ Arnhem P.O. Box 5185, 6802 ED Arnhem, Netherlands
T +31 88 96 83000 F +31 88 96 83100 www.dekra-product-safety.com Company registration 09085396

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)	:	BULL ** (*means any alphanumeric characters), DC ** KU3 (*means any alphanumeric characters), DC 10W 700mA TW/E OF, STC ** (*means any alphanumeric characters), STMP ** (*means any alphanumeric characters) and STM ** (*means any alphanumeric characters)
Primary voltage	:	100-240 V for a.c., 189-255 V for d.c.
Rated frequency	:	50/60 Hz or 50-60 Hz, 0 Hz
Primary current	:	From 0,07 A to 0,1 A for a.c., 0,05 A to 0,075 A for d.c.
Secondary power	:	From 6 W to 10 W
Secondary current	:	From 0,25 A to 0,7 A
Secondary voltage	:	From 12 V to 24 V
Type of load	:	LED modules, power LED
Classification	:	Independent, Built-in

TESTS

Test requirements

EN 61347-2-13:2014
EN 61347-2-13:2014/A1:2017
EN 61347-1:2015
EN 61347-1:2015/A1:2021
EN IEC 62384:2020

Test result

The test results are laid down in DEKRA test file 350908000.

Additional information

DEKRA test report No. 3509080.450 and 3509080.451 are laid down in DEKRA test file 350908000; they contain test results.

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

This certificate replaces certificate No. 81-123706 which we hereby declare invalid.

The list of components is laid down in test report 3509080.450.

Conclusion

The examination proved that all requirements were met.

Factory location

TCI Telecomunicazioni Italia S.r.l.
Via Parma, 14
21047 Saronno (Va), Italy

General product information:

The devices are controlgears for LED modules with SELV stabilized output current or voltage. Primary supply for BULL, STM, STMP, STC models: 100*-127*-220-240 V 50/60 Hz or 50-60 Hz, 196-250 V (operative range 176-275 V) 0 Hz. Primary supply for KU3 models: 220-240 V 50/60 Hz or 50-60 Hz, 189-255 V (operative range 170-280 V) 0 Hz. Primary supply for DC 10W 700mA TW/E OF: 220-240 V 50/60 Hz or 50-60 Hz. The TW model has two output channels for tunable white purpose; current and power are divided into 2 channels according to the chosen CCT and module specifications; total maximum power of the 2 channels can't exceed the Pout in the Table.

Type/s	PRI Current (A)	Power factor	Pout (W)	SEC	Uout (V)	t_a (°C)	t_c (°C) [2]	Use [3]
STM 6W 500mA HPFU (K2G83)	0,1 0,05 [1]	0,8-0,9* C	6	500 mA	13	-20...55 -20...50*	75	BI, 100
STMP 6W 500mA HPFU (K2G84)								II, IP54, MM, 100
STM 6W 500mA HPFU OF (K2H19)						-	80	OF
STMP 6W 500mA HPFU OF (K2H20)						-	80	OF
STM 8W 350mA HPFU (K2G85)	0,1 0,058 [1]	0,87 C	6*/8	350 mA	24	-20...60 -20...55*	80	BI, MM, 100
STMP 8W 350mA HPFU (K2G86)								II, IP54, MM, 100
STM 8W 350mA HPFU OF (K2H21)						-	80	OF
STMP 8W 350mA HPFU OF (K2H22)						-	80	OF
STM 8W 700mA HPFU (K2H96)	0,1 0,058 [1]	0,87 C	6*/8	700 mA	13	-20...45	80	BI, MM, 100
STMP 8W 700mA HPFU (K2H97)								II, IP54, MM, 100
STM 8W 700mA HPFU OF (K2H98)						-	80	OF
STMP 8W 700mA HPFU OF (K2H99)						-	80	OF
STM 9W 250mA HPFU (K2H23)	0,1 0,065 [1]	0,88 C	6*/9	250 mA	39	-20...55	80	BI, MM, 100
STMP 9W 250mA HPFU (K2H25)								II, IP54, MM, 100
STM 9W 250mA HPFU OF (K2H24)						-	80	OF
STMP 9W 250mA HPFU OF (K2H26)						-	80	OF
STM 10W 350mA HPFU (K2G87)	0,1 0,072 [1]	0,88 C	6*/10	350 mA	32	-20...55	80	BI, MM, 100
STMP 10W 350mA HPFU (K2G88)								II, IP54, MM, 100
STM 10W 350mA HPFU OF (K2H27)						-	80	OF
STMP 10W 350mA HPFU OF (K2H28)						-	80	OF
STC 6W 500mA HPFU (K2H29)	0,1	0,8-0,9* C	6	500	14	-25...45	75	BI, MM,

	0,05			mA				100
STC 6W 500mA HPFU OF (K2H30)						-	80	OF
STC 8W 350mA HPFU (K2H31)	0,1 0,058	0,87 C	6*/8	350 mA	26	-25...50	80	BI, MM, 100
STC 9W 350mA HPFU (K2H32)	0,1 0,065	0,88 C	6*/9	350 mA	30	-25...45 -25...50*	75 80*	BI, MM, 100
STC 9W 350mA HPFU OF (K2H33)						-	80	OF
BULL 6W 500mA HPFU (K2I02)	0,1 0,05 [1]	0,8-0,9* C	6	500 mA	13	-20...55 -20..50*	75	II, MM, 100
BULL 8W 350mA HPFU (K2I01)	0,1 0,065 [1]	0,88 C	6*/8	350 mA	24	-20...60 -20...55*	80	II, MM, 100
BULL 9W 250mA HPFU (K2I00)	0,1 0,065 [1]	0,88 C	6*/9	250 mA	39	-20...55	80	II, MM, 100
BULL 10W 350mA HPFU (K2J06)	0,1 0,072 [1]	0,88 C	6*/10	350 mA	32	-20...55	80	BI, MM, 100
DC 10W 700mA KU3 (K2G89)	0,07 0,075 [1]	0,88 C	10	700 mA	17	-25...55	85	II, IP20, MM, 100
DC 10W 700mA KU3 OF (K2H34)						-	80	OF
DC 10W 350mA KU3 (K2H35)	0,07 0,075 [1]	0,86 C	10	350 mA	32	-25...55	85	II, IP20, MM, 100
DC 10W 350mA KU3 OF (K2H36)						-	80	OF
DC 10W 12V KU3 (K2H37)	0,07 0,075 [1]	0,88 C	10	12 V	12	-25...55	85	II, IP20, MM, 100
DC 10W 12V KU3 OF (K2H38)						-	80	OF
DC 10W 24V KU3 (K2H39)	0,07 0,075 [1]	0,86 C	10	24 V	24	-25...55	85	II, IP20, MM, 100
DC 10W 24V KU3 OF (K2H40)						-	80	OF
DC 10W 700mA TW/E OF	0,075	0,82 C	10	700 mA	17	-	80	OF

Notes: [1] – d.c. supply. [2] tc for OF models is measured on the top of C2A for BULL, STM, STMP models and C2 for STC, KU3 and DC 10W 700mA TW/E OF models. [3] – II=Class II independent, IPxx=protection to dust and water; BI=built-in; OF= built-in model without enclosure; MM= "MM" triangle marking (VDE 0710 T14); 100=Thermal protection (°C).

Connections	STC, STM models	STMP models	DC 10W 700mA TW/E OF	BULL, DC KU3 models
Supply (PRI)	screw terminals (0,5-2,5 mm²)	Tails (0,75 mm²)	screw terminals (0,5-2,5 mm²)	screw terminals (0,75-2,5 mm²)
Load (SEC)	screw terminals (0,5-2,5 mm²)	Tails (0,5 mm²)	Connector	screw terminals (0,5-2,5 mm²)
Control port (if present)	N/A	N/A	Connector	N/A

Additional information	
Use	Independent or built-in controlgear for ordinary luminaire, up to 2000 m above sea level.
Features	For LED; stabilized output current or voltage; multiple value load; short-circuit proof type; impulse withstand category II and III; Pollution degree 2; Material group IIIa. The material of enclosure was tested with favourable result for Glow-wire at temperature 750-960 °C. Total circuit power: 12,8 W for DC 10W 700mA KU3, DC 10W 700mA TW/E OF, 12,4 W for DC 10W 350mA KU3, 12,3 W for DC 10W 12V KU3, 12 W for DC 10W 12V KU3, 8,5 W for STM 6W 500mA HPFU, BULL 6W 500mA HPFU, STMP 6W 500mA HPFU and STC 6W 500mA HPFU, 8/10 W for STM 8W 350mA HPFU, BULL 8W 350mA HPFU, STMP 8W 350mA HPFU and STC 8W 350mA HPFU, 8/11 W for STM 9W 250mA HPFU, BULL 9W 250mA HPFU, STMP 9W 250mA HPFU and STC 9W 350mA HPFU, 8/12 W for STM 10W 350mA HPFU, BULL 10W 350mA HPFU, STM 10W 350mA HPFU, STMP 10W 350mA HPFU.
DC operation	The products were tested in the nominal range 196-250 V (operative range 176-275 V) 0 Hz for STM, STMP, STC models and 189-255 V (operative range 170-280) for KU3 models; assessment EN IEC 60598-2-22:2022 used in conjunction with EN IEC 60598-1:2021 has been performed for independent models (for built-in models only Clauses 22.7.2 and 22.7.3 have been assessed).

OF models have been tested inside the enclosure of equivalent independent models. 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	OF models	BULL, STMP, DC KU3 models	STM, STC models
Between active parts ↔ external parts of enclosure	-	R	B
Between active parts ↔ bottom side of enclosure, fixing screw	-	R	R
Between PRI ↔ SEC	R	R	R

All models are suitable for use on normally flammable surface with the following limitations:

- DC 10W 700mA KU3, DC 10W 350mA KU3, DC 10W 12V KU3, DC 10W 24V KU3 only with limitation to tc=80 °C
- STM 8W 350mA HPFU, STMP 8W 350mA HPFU, BMU 8W 350mA HPFU only with limitation to tc=75 °C
- STM 10W 350mA HPFU, STMP 10W 350mA HPFU, STM 9W 250mA HPFU, STMP 9W 250mA HPFU, STM 6W 500mA HPFU, STMP 6W 500mA HPFU, STC 9W 350mA HPFU, STC 8W 350mA HPFU, STC 6W 500mA HPFU, BULL 9W 250mA HPFU, BULL 6W 500mA HPFU, BULL 10W 350mA HPFU at nominal tc.

Assessment to EN 62493:2015/A1:2022 has been performed.

Assessment to Clauses 8.1.4, 19.11.4, 22.5, 22.27, 22.42, 24.1.1, 24.1.2, 29, 30.2.3, 30.2.4 of EN 60335-1:2012, A11:2014, A13:2017, A1:2019, A14:2019, A2:2019 has been performed for KU3 and DC 10W 700mA TW/E OF models.