

# 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) : AR\*\* (\*means any alphanumeric characters),  
BMU\*\* (\*means any alphanumeric characters),  
DCC\*\* (\*means any alphanumeric characters),  
MP 15\*\* (\*means any alphanumeric characters) and RZB 15W HPFU

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

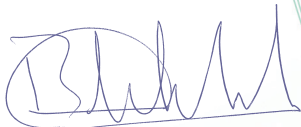
DEKRA hereby grants the right to use the ENEC certification mark.

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 7 February 2024 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 81-122371 REV.1

DEKRA Certification B.V.



B.T.M. Holtus  
Managing Director



Miranda Zhou  
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)	: AR** (*means any alphanumeric characters), BMU** (*means any alphanumeric characters), DCC** (*means any alphanumeric characters), MP 15** (*means any alphanumeric characters) and RZB 15W HPFU
Primary voltage	: 100-240 V for a.c., 196-250 V for d.c
Rated frequency	: 50/60 Hz, 0 Hz
Primary current	: From 0,04 A to 0,18 A for a.c., 0,05 A to 0,1 A for d.c.
Secondary power	: From 2,5 W to 15 W
Secondary current	: From 0,06 A to 0,7 A
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. 3509080.490 and 3509080.491 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. 81-122371 which we hereby declare invalid.

The list of components is laid down in test report 3509080.490.

**Conclusion**

The examination proved that all requirements were met.

**Factory location**

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21047 Saronno (Va), Italy



**General product information:** The devices are intended to supply high power Light Emitting Diodes or LED modules. The stabilized output current (C.C.) can be set by DIP switch S1 for MP 15 models. The output power can be up to Pout max with proportionate values of lin.

Type/s	Input voltage (V) [1]	Input current (A) [1]	Power Factor	Output Power (W)	Output Current (A)	U <sub>OUT</sub> (V)	ta (°C)	tc (°C) [3]	Use [4]
DCC 10W 250mA HPFU (K2G91)	220-240	0,07	0,85 C	10	0,25	45	-25...50	75	II, IP20, MM, 100
DCC 10W 250mA HPFU BI (K2G92)	100"-127	0,16	0,85 C	10				75/80"	BI, MM, 100
DCC 10W 250mA HPFU OF (K2G93)	*176-275	*0,07					-	80	OF
DCC 12W 700mA HPFU (K2G23)	220-240	0,08	0,85 C	12	0,7	19	-25...45	75	II, IP20, MM, 100
DCC 12W 700mA HPFU BI (K2G24)	*176-275	*0,085							BI, MM, 100
DCC 12W 700mA HPFU OF (K2G25)							-	80	OF
DCC 12W 500mA HPFU (K2G26)	220-240	0,08	0,85 C	12	0,5	25	-25...50	80	II, IP20, MM, 100
DCC 12W 500mA HPFU BI (K2G27)	*176-275	*0,085							BI, MM, 100
DCC 12W 500mA HPFU OF (K2G28)							-	80	OF
DCC 15W 350mA HPFU (K2G66)	220-240	0,1	0,9 C	14,5	0,35	45	-25...45	75	II, IP20, MM, 100
DCC 15W 350mA HPFU BI (K2G67)	100"-127	0,16	0,85 C	10				75/80"	BI, MM, 100
DCC 15W 350mA HPFU OF (K2G68)	*176-275	*0,1 A					-	80	OF
MP 15 HPFU (K2G29)	220-240	0,1	0,8 C [2]	2,5-15	0,06-0,36	45	-25...45	75	II, IP20, MM, 100
MP 15 HPFU BI (K2G30)	100"-127	0,18	0,83 C	2,5-10				75/80"	BI, MM, 100
RZB 15W HPFU	*176-275	*0,1 A	0,7-0,9 C [2]						
MP 15 HPFU OF (K2G31)			0,7-0,9 C				-	80	OF
DCCH 12W 250/350MA HPF (K2H83)	220-240	0,06	0,8 C	10	0,25	48	-25 ...45	80	DI, 100, MM
DCCH 12W 250/350MA HPF OF (K2H84)	220-240	0,08	0,85 C	12	0,35		-	80	OF
DCCH 7W 140/180MA HPF (K2H85)	*176-276	*0,085		10/12					
DCCH 7W 140/180MA HPF OF (K2H86)	220-240	0,04	0,75 C	5,6	0,14	48	-25...50	75	DI, 100, MM
	220-240	0,05	0,8 C	7,2	0,18		-	80	OF
	*176-276	*0,05		5,6/7,2					

Type/s	Input voltage (V) [1]	Input current (A) [1]	Power Factor	Output Power (W)	Output Current (A)	U <sub>OUT</sub> (V)	ta (°C)	tc (°C) [3]	Use [4]
BMU 12W 700MA HPFU (K2H87)	220-240 110-127	0,08 0,15	0,85 C 0,85 C	12 10	0,7	22	-25...50	80	DI, 100, MM
BMU 12W 700MA HPFU OF (K2H88)	100 *176-276	0,16 *0,085	0,75 C	8 12			-	80	OF
BMU 12W 500MA HPFU (K2H89)	220-240 110-127	0,08 0,16	0,85 C 0,8 C	12 10	0,5	28	-25...50	75	DI, 100, MM
BMU 12W 500MA HPFU OF (K2H90)	100 *176-276	0,16 *0,083	0,8 C	8 12			-	80	OF
BMU 12W 350MA HPFU (K2H91)	220-240 110-127	0,08 0,16	0,85 C 0,8 C	12 10	0,35	39	-25...50	75	DI, 100, MM
BMU 12W 350MA HPFU OF (K2H92)	100 *176-276	0,16 *0,082	0,8 C	8 12			-	80	OF
AR 14W 350MA HPFU (K2H93)	220-240 110-127 *176-276	0,086 0,133 *0,094	0,86 C 0,86 C	14 10 14	0,35	45	-25...45	80	DI, 100, MM
AR 12W 550MA HPFU (K2H94)	220-240 110-127 100 *176-276	0,076 0,135 0,135 *0,084	0,85 C 0,8 C 0,8 C	12 10 8 12	0,55	26	-25...45	80	DI, 100, MM

Notes: The Kxxxx code can replace the type reference. [1] – 50/60 Hz and \*0 Hz, see additional information for the d.c. nominal range; [2] – for Pout>4,2 W; [3] – The tc point for OF models is measured on the metal cap of C<sub>2</sub> or C<sub>2A</sub> capacitor; [4] – Classification: II= independent, class II; IP20= case IP20; MM= suitable for direct mounting on normally flammable surfaces; 100= overheating protection (C.5.a type) and comply with temperature limit of EN 60598-1; DI=built-in with double insulation; BI= built-in; OF=built-in without enclosure.

Connection		
Supply	PRI	screwless terminal block 0,5...1,5 mm <sup>2</sup> for DCCH models, BMU models and RZB 15W HPFU screw terminal block 0,75-2,5 mm <sup>2</sup> (0,5-2,5 mm <sup>2</sup> for built-in models) all other models
Load	SEC	screwless terminal block 0,5...1,5 mm <sup>2</sup> for DCCH models, BMU models and RZB 15W HPFU screw terminal block 0,5...2,5 mm <sup>2</sup> all other models

Additional information	
Use	Independent, built-in for ordinary luminaire, up to 2000 m above sea level.

Features	For LED; multiple value load control gear; short-circuit proof type; impulse withstand category II and III; pollution degree 2 (Normal Pollution); material group IIIa. The material of enclosure was tested with favourable result for Glow-wire at temperature 750/960 °C. In the DCCH models the A-B terminal is used for the selection of output current. Total circuit power: 12-13 W for DCC 10W 250mA HPFU models, 15 W for DCC 12W 700mA HPFU models, DCC 12W 500mA HPFU models, 13-17,5 W for MP 15 HPFU models, DCC 15W 350mA HPFU models, RZB 15W HPFU; 12,2/14,5 W for DCCH 12W 250/350MA HPF models, 7/8,8 W for DCCH 7W 140/180MA HPF models, 11,3/13,5/15 W for BMU 12W 700MA HPFU models, 10,7/12,7/14,5 W for BMU 12W 500MA HPFU and BMU 12W 350MA HPFU models, 12,7/16,5 W for AR 14W 350MA HPFU, 10,7/12,7/14,5 W for AR 12W 550MA HPFU.		
DC operation	Models suitable for d.c. operation (EL symbol) have been tested in the rated supply range 196-250 V for the specific use in centralized emergency installations (extended range 176-275 V or 176-276 V); assessment to 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).		
The creepage distances, clearances and connections of control gears in the final application shall be according to EN 60598-1 or national deviations of the country where installed:			
INSULATION (B= basic, S= supplementary, R= double or reinforced)	Independent models	Built-in models	OF models
PRI ↔ SEC	R	R	R
PRI ↔ AB (if present)	R	R	R
SEC ↔ AB (if present)	-	-	-
active parts ↔ the external surfaces of enclosure	R	-	-
active parts ↔ the supporting surface on the bottom of enclosure	-	R	-
OF models have been tested inside the enclosure of equivalent built-in models.			
Assessment to EN IEC 60598-2-22:2022 used in conjunction with EN IEC 60598-1:2021 has been performed.			
Assessment to EN 62493:2015, EN 62493/A1:2022 has been performed.			
Assessment to EN IEC 62442-3:2022 has been performed.			
All models are suitable for direct mounting on normally flammable surfaces with the following limitation:			
DCC 12W 500mA HPFU models			tc ≤ 75 °C
BMU 12W 700mA HPFU models			tc ≤ 70 °C
Other models			nominal tc