

# 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) : AR HPFU (series), BMU HPFU (series) and DCCH HPF (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, EN 61347-1:2015 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

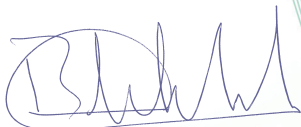
DEKRA hereby grants the right to use the ENEC certification mark.

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.

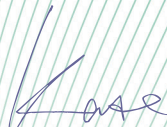
This certificate is issued on 8 May 2022 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 81-123598

DEKRA Certification B.V.



B.T.M. Holtus  
Managing Director



K Xu  
Certification Manager

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DUTCH ACCREDITATION  
COUNCIL



**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 HPFU (series), BMU HPFU (series) and DCCH HPF (series)
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 0,16 A for a.c., 0,05 A to 0,094 A for d.c.
Type of load	: LED modules, power LED
Classification	: Built-in

**Product data – type AR HPFU (series)**

Secondary power	: From 8 W to 14 W
Secondary current	: From 0,35 A to 0,55 A

**Product data – type BMU HPFU (series)**

Secondary power	: From 8 W to 12 W
Secondary current	: From 0,35 A to 0,7 A

**Product data – type DCCH HPF (series)**

Secondary power	: From 5,6 W to 12 W
Secondary current	: From 0,14 A to 0,35 A

**TESTS****Test requirements**

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

**Test result**

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

**Additional information**

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

DEKRA test report No. 3500336.530 and 3500336.531 are laid down in DEKRA test file 350033600; they contain test results. DEKRA test report No. 3500336.530 contains critical component list.

**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:** The devices are intended to supply high power Light Emitting Diodes or LED modules. All models have a stabilized output current (C.C.). The output power can be up to Pout max with proportionate values of Iin.

Type/s	Input Voltage (V) [1]	Input current (A)	Power Factor	Output Power (W)	Output current (A)	Uout d.c. [V]	ta [°C]	tc [°C] [2]	Classification [3]
DCCH 12W 250/350MA HPF (K2H83)	220-240	0,06	0,8 C	10	0,25	48	-25..45	80	DI, 100, MM
	220-240	0,08	0,85 C	12	0,35				
DCCH 12W 250/350MA HPF OF (K2H84)	*176-276	*0,085		10/12			-	80	OF
DCCH 7W 140/180MA HPF (K2H85)	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				
DCCH 7W 140/180MA HPF OF (K2H86)	*176-276	*0,05		5,6/7,2			-	80	OF
BMU 12W 700MA HPFU (K2H87)	220-240	0,08	0,85 C	12	0,7	22	-25..50	80	DI, 100, MM
	110-127	0,15	0,85 C	10					
BMU 12W 700MA HPFU OF (K2H88)	100	0,16	0,75 C	8			-	80	OF
	*176-276	*0,085		12					
BMU 12W 500MA HPFU (K2H89)	220-240	0,08	0,85 C	12	0,5	28	-25..50	75	DI, 100, MM
	110-127	0,16	0,8 C	10					
BMU 12W 500MA HPFU OF (K2H90)	100	0,16	0,8 C	8			-	80	OF
	*176-276	*0,083		12					
BMU 12W 350MA HPFU (K2H91)	220-240	0,08	0,85 C	12	0,35	39	-25..50	75	DI, 100, MM
	110-127	0,16	0,8 C	10					
BMU 12W 350MA HPFU OF (K2H92)	100	0,16	0,8 C	8			-	80	OF
	*176-276	*0,082		12					
AR 14W 350MA HPFU (K2H93)	220-240	0,086	0,86 C	14	0,35	45	-25..45	80	DI, 100, MM
	110-127	0,133	0,86 C	10					
	*176-276	*0,094		14					
AR 12W 550MA HPFU (K2H94)	220-240	0,076	0,85 C	12	0,55	26	-25..45	80	DI, 100, MM
	110-127	0,135	0,8 C	10					
	100	0,135	0,8 C	8					
	*176-276	*0,084		12					

Notes: [1] – Input supply: 50/60 Hz or \*0 Hz. [2] The tc point for OF models is measured on the metal cap of C2 or C2A capacitor. [3] – Classification: DI=built-in with double insulation; OF=built-in without enclosure; 100=overheating protection (C.5.a type) according to the temperature limit of clause 4.16.2 of IEC 60598-1; MM=suitable for direct mounting on normally flammable surfaces ("MM" triangle marking).

Connection		DCCH models, BMU models	AR models
Supply	PRI	screwless terminal block 0,5...1,5 mm <sup>2</sup>	screw terminal block 0,5...2,5 mm <sup>2</sup>
Load	SEC	screwless terminal block 0,5...1,5 mm <sup>2</sup>	screw terminal block 0,5...2,5 mm <sup>2</sup>

Additional information	
Use	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 at different supply ranges: 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 other BMU 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	The products were tested in the nominal range 196-250 V (operative range 176-276 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).

<b>INSULATION</b> (B= basic, S= supplementary, R= double or reinforced)	BMU models, AR models	DCCH models
PRI ↔ SEC	R	R
PRI ↔ AB	-	R
SEC ↔ AB	-	-
active parts ↔ the supporting surface on the bottom of enclosure	R	R
<p>OF models have been tested inside the enclosure of equivalent built-in 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:</p> <p>Assessment to requirements for final applications (EN 60598-2-22:2014/AMD1:2020 used in conjunction with EN 60598-1:2014/AMD1:2017 and EN 60598-1:2015/A1:2018) and MM mark (VDE 0710 Part 14/04.82) has been performed.</p> <p>Assessment to EN 62493:2015 has been performed.</p> <p>Assessment to EN IEC 62442-3:2022 has been performed.</p> <p>All models are suitable for direct mounting on normally flammable surfaces with the following limitation:</p>		
BMU 12W 700mA HPFU models		$t_c \leq 70 \text{ }^\circ\text{C}$
Other models		nominal $t_c$