

# 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) : DC BULL (series), DC KU2 (series), DC MR (series), DC STC (series),  
DC STF (series), DC STM (series) and DC TW (series)

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 31 March 2024 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 81-125055 REV.2

DEKRA Certification B.V.



B.T.M. Holtus  
Managing Director



K Xu  
Certification Manager

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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)	: DC BULL (series), DC KU2 (series), DC MR (series), DC STC (series), DC STF (series), DC STM (series) and DC TW (series)
Primary voltage	: 100-240 V for a.c., 189-250 V for d.c
Rated frequency	: 50/60 Hz, 0 Hz
Primary current	: From 0,065-0,2 A for a.c., from 0,025-0,08 A for d.c.
Secondary power	: From 3 W to 12 W
Secondary current	: From 0,125-1,2 A
Secondary voltage	: 12 V, 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 350964600.

**Additional information**

DEKRA test report No. 3500336.92 and 3500336.93 are laid down in DEKRA test file 350964600.

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

This certificate replaces certificate No. 81-125055 REV.1 which we hereby declare invalid.

The list of components is laid down in test report 3500336.92.

**Conclusion**

The examination proved that all requirements were met.

**Factory location**

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



<b>General product information:</b>										
The devices are controlgears for LED modules with SELV output. The devices have a stabilized output current or voltage. The Kxxxx code can replace the type reference according to the following tables:										
Type/s	Primary voltage [V] [1]	Primary current [A] [1]	Power factor	Output power [W]	SEC output	Uout [V]	ta [°C]	tc [°C] [2]	Use [3]	
DC 6W 150mA BULL (K2848)	220-240 *176-264	0,1	0,45-0,5 C	6	150 mA	50	-25..45	75	IND, MM,100	
BULL6.150OF (K2849)		*0,045					-	80	OF	
DC 9W 250mA BULL (K2680)		100-240 *176-264	0,1	0,58 C	9	250 mA	43	-25..45	75	IND, MM,100
BULL9.250OF (K2681)			*0,063					-	80	OF
DC 12W 12V MR (K2682)			0,12	0,55 C	12	12 V	13	-25..50	75	IND, MM,100
DC 12W 12V MR BI (K2683)								*0,08	-	80
MR12.12OF (K2684)			-	-	-	-	-	-	80	OF
DC 6W 1200mA STC/U (K2557)	100-240 *176-264		0,065	0,6 C	6	1200 mA	7	-25..50	70	BI, MM, 100
STC6.1200OF (K2685)			*0,044					-	80	OF
DC 4W 350mA BULL/U (K2173)		0,1	0,45-0,6 C	4	350 mA	13	-25..60	75	IND, MM,100	
BULL4.350OF (K2174)							*0,031	-	80	OF
DC 8W 350mA BULL/U (K2177)		0,17	0,45-0,6 C	6/8 <sup>▲</sup>	350 mA	25	-25..	75	IND, MM,100	
BULL8.350OF (K2178)							*0,055	45 <sup>▲</sup> /50	80	OF
DC 6W 500mA BULL/U (K2210)		100-240 *176-264	0,14	0,45-0,6 C	6	500 mA	13	-25..50	75	IND, MM,100
BULL6.500OF (K2175)	*0,044		-					80	OF	
DC 6W 250mA STC/U (K2176)	0,12		0,47-0,55 C	6	250 mA	26	-25..55	75	BI, MM, 100	
STC6.250OF (K2211)							*0,044	-	80	OF
DC 8W 350mA STC/U (K2018)	0,15		0,47-0,55 C	6/8 <sup>▲</sup>	350 mA	26	-25..	75	BI, MM, 100	
STC8.350OF (K2211)							*0,055	50 <sup>▲</sup> /55	80	OF
DC 8W 350mA STCP/U (K2880)	100-240 *176-264		0,15	0,47-0,55 C	6/8 <sup>▲</sup>	350 mA	26	-25..	80	DI, MM, 100
DC 9W 350mA STC/U (K2846)		*0,055	45 <sup>▲</sup> /50					80	OF	
STC9.350OF (K2847)		0,2	0,5-0,6 C	6/9 <sup>▲</sup>	350 mA	30	-25..	85	BI, MM, 100	
DC 6W 500mA STC/U (K2019)		*0,06					45 <sup>▲</sup> /55	80	OF	
STC6.500OF (K2213)		100-240 *176-264	0,15	0,47-0,55 C	6	500 mA	13	-25..45	70	BI, MM, 100
DC 3W 125mA STM/U (K2852)			*0,044					-	80	OF
STM3.125OF (K2853)			0,1	0,43-0,6 C	3	125 mA	25	-25..60	75	BI, MM, 100
DC 6W 150mA STM/U (K2850)	*0,025		-					80	OF	
STM6.150OF (K2851)	0,15		0,48-0,6 C	6	150 mA	44	-25..55	75	BI, MM, 100	
DC 6W 250mA STM/U (K2208)							*0,044	-	80	OF
STM6.250OF (K2214)	0,12		0,47-0,6 C	6	250 mA	26	-25..60	80	BI, MM, 100	
DC 8W 350mA STM/U (K2209)		*0,044					-	80	OF	
STM8.350OF (K2215)	0,15	0,47-0,6 C	6/8 <sup>▲</sup>	350 mA	26	-25..	80	BI, MM, 100		
DC 6W 500mA STM/U (K2048)						*0,055	55 <sup>▲</sup> /60	80	OF	
STM6.500OF (K2216)	100-240 *176-264	0,15	0,47-0,6 C	6	500 mA	13	-25..55	75	BI, MM, 100	
DC 6W 700mA STM/U (K2049)		*0,044					-	80	OF	
STM6.700OF (K2217)		0,15	0,47-0,6 C	6	700 mA	13	-25..50	70	BI, MM, 100	
DC 3W 250mA STF/U (K2854)							*0,044	-	80	OF
STF3.250OF (K2855)		0,11	0,47-0,6 C	3	250 mA	15	-25..45	80	BI, MM, 100	
DC 4W 350mA STF/U (K2856)							-	80	OF	
STF4.350OF (K2857)		0,15	0,48-0,6 C	4	350 mA	15	-25..45	80	BI, MM, 100	
DC 3W 700mA STF/U (K2119)	-						80	OF		
STF3.700OF (K2120)	0,08	0,48-0,6 C	3	700 mA	6	-25..40	80	BI, MM, 100		
DC 7W 500mA STC/U OF (K2G22)						-	80	OF		
		0,16	0,47-0,55 C	7	500 mA	17	-	85	OF	

Type/s	Primary voltage [V] [1]	Primary current [A] [1]	Power factor	Output power [W]	SEC output	Uout [V]	ta [°C]	tc [°C] [2]	Use [3]
DC 10W 350mA KU2 (K2559)	110-240 *170-280	0,12/0,2 <sup>▲</sup> *0,075	0,46-0,62 C	5/10 <sup>▲</sup>	350 mA	32	-25.. 50 <sup>▲</sup> /60	80	IND, MM, 100
DC 10W 350mA KU2 BI (K2694)									BI, MM, 100
KU2.10.350OF (K2695)							-	80	-
DC 7W 350mA KU2 (K2883)		0,16	0,46-0,6 C	7	350 mA	32	-25..55	80	IND, MM, 100
DC 7W 350mA KU2 BI (K2884)									BI, MM, 100
KU2.7.350OF (K2885)		*0,06					-	80	-
DC 5W 350mA KU2 (K2560)		0,12	0,46-0,58 C	5	350 mA	32	-25..60	80	IND, MM, 100
DC 5W 350mA KU2 BI (K2696)									BI, MM, 100
KU2.5.350OF (K2697)		*0,04					-	80	-
DC 10W 700mA KU2 (K2464)		0,12/0,2 <sup>▲</sup>	0,46-0,62 C	5/10 <sup>▲</sup>	700 mA	17	-25.. 50 <sup>▲</sup> /60	80	IND, MM, 100
DC 10W 700mA KU2 BI (K2465)		*0,075							BI, MM, 100
KU2.10.700OF (K2466)							-	80	-
DC 5W 700mA KU2 (K2558)		0,12	0,46-0,58 C	5	700 mA	17	-25..60	80	IND, MM, 100
DC 5W 700mA KU2 BI (K2698)									BI, MM, 100
KU2.5.700OF (K2699)		*0,04					-	80	-
DC 10W 12V TW (K2D10)		0,2	0,5-0,62 C	10	2x12 V	13	-25..60	80	IND, MM, 100
DC 10W 12V TW BI (K2D11)									BI, MM, 100
TW.10.12OF (K2D12)		*0,075					-	80	-
DC 10W 12V KU2 (K2561)		0,12/0,2 <sup>▲</sup>	0,46-0,62 C	5/10 <sup>▲</sup>	12 V	13	-25.. 50 <sup>▲</sup> /60	80	IND, MM, 100
DC 10W 12V KU2 BI (K686)		*0,07	(P>3 W)						BI, MM, 100
KU2.10.12OF (K2687)							-	80	-
DC 5W 12V KU2 (K2562)		0,12	0,46-0,58 C	5	12 V	13	-25..60	80	IND, MM, 100
DC 5W 12V KU2 BI (K2688)			(P>3 W)						BI, MM, 100
KU2.5.12OF (K2689)		*0,04					-	80	-
DC 10W 24V KU2 (K2563)		0,12/0,2 <sup>▲</sup>	0,46-0,62 C	5/10 <sup>▲</sup>	24 V	24	-25.. 50 <sup>▲</sup> /60	80	IND, MM, 100
DC 10W 24V KU2 BI (K2690)		*0,07	(P>3 W)						BI, MM, 100
KU2.10.24OF (K2691)							-	80	-
DC 5W 24V KU2 (K2564)		0,12	0,46-0,58 C	5	24 V	24	-25..60	80	IND, MM, 100
DC 5W 24V KU2 BI (K2692)			(P>3 W)						BI, MM, 100
KU2.5.24OF (K2693)		*0,04					-	80	-

Notes: [1] – Value with a.c. or \*d.c. supply (see Additional information for the rated range). [2] – The tc position for OF models is on the top of C2, C3, C10. [3] – IND=independent IP20 class II; BI=built-in; DI= built-in with double insulation to supporting surface; OF= Built-in without enclosure; MM= suitable for direct mounting on normally flammable surfaces; 110= products have an overheating protection (C.5.a automatic resetting type).

Connections		STCP/U model	STF models	Other independent models	Other built-in models
Input supply	PRI (L, N)	Tails (0,5 mm <sup>2</sup> )	Tails (AWG 18, 0,83 mm <sup>2</sup> )	screw terminals (0,75-2,5 mm <sup>2</sup> )	screw terminals (0,5-2,5 mm <sup>2</sup> )
Analog control	PWM +, +, -	N/A	N/A	screw terminals (0,75-2,5 mm <sup>2</sup> )	screw terminals (0,5-2,5 mm <sup>2</sup> )
Output load	SEC +, -	Tails (0,5 mm <sup>2</sup> )	Tails (AWG 22, 0,34 mm <sup>2</sup> )	screw terminals (0,5-2,5 mm <sup>2</sup> )	screw terminals (0,5-2,5 mm <sup>2</sup> )
<b>Additional information</b>					
Use		Independent or built-in controlgear for ordinary luminaire, up to 2000 m above sea level.			

Features	<p>For LED; stabilized output current or voltage; multiple value load; short-circuit proof type; impulse withstand category II; Pollution degree 2; Material group IIIa. The material of enclosure for SUPERSLIM and SUPERFLAT SLIM models was tested with favourable result for Glow-wire at temperature 750-960 °C.</p> <p>Total circuit power at max. load: 4,2 W for 125 mA STM models, 4,4 W for 250mA STF models, 5 w for 700mA STF models, 5,6 W for 4W 350mA BULL models, 5,8W for 350mA STF models, 6,4 W for 5W 24V KU2 models, 6,5 W for 5W 12V KU2 models, 6,9 W for 5W 350mA KU2 models, 7,5 W for 5W 700mA KU2 models, 7,7 W for 500mA BULL models, 7,8 W for 150mA and 250mA STM models, and 250mA STC models, 8 W for 1200mA STC models, 8,2 W for 6 W 500mA STC and STM models, 8,5 W for 6 W 700mA STM models, 8,8 W for 150mA BULL models, 8,9 W for 7W 350mA KU2 models, 9,35 W for DC 7W 500mA STC/U OF, 10 W for 8W 350mA STC, STM and STCP models, 10,3 W for 8W 350mA BULL models, 11,3 W for 9W 350mA STC models, 11,4 W for 250mA BULL models, 12,2 W for 10W 24V KU2 models, 12,5 W for 10W 12V KU2 models and TW models, 12,6 W for 10W 350mA KU2 models, 13,3 W for 10W 700mA KU2 models, 14,7 W for 12W 12V MR models.</p>
DC operation	<p>The products were tested in the nominal range 196-240 V (operative range 176-264 V) or 189-250 V (operative range 170-280 V) according to EN 61347-2-13 (EL symbol) for the specific use in centralized emergency installations; assessment to EN IEC 60598-2-22 has been performed for independent models (for built-in models only Clauses 22.7.2 and 22.7.3 have been assessed).</p>
<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 EN 60598-1 or national deviations of the country where installed in the final application.</p>	
<p>INSULATION (B= basic, S= supplementary, R= double or reinforced)</p>	
Between L, N ↔ SEC	R
Between L, N ↔ PWM (if present)	R
Between PWM (if present) ↔ SEC	R
Between active parts ↔ bottom of the enclosure for built-in models	R
Between active parts ↔ external touchable parts for independent models	R
<p>Assessment to EN 60598-2-22 used in conjunction with EN IEC 60598-1 has been performed. All models are suitable for direct mounting on normally flammable surfaces for values (most unfavourable) up to <math>t_a</math> or the <math>t_c = 67</math> °C for DC 9W 250mA BULL and DC 8W 350mA BULL/U, <math>t_c = 75</math> °C for DC 10W 700mA KU2.</p> <p>Assessment to EN 62493 has been performed.</p> <p>Assessment to Clauses 19.11.4, 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; A15:2021 has been performed for KU2 models.</p> <p>Assessment to EN IEC 62442-3 has been performed.</p>	