

CERTIFICATE



Issued to:
Applicant:
T C I Telecomunicazioni S.r.l.
Via Parma 14
21047 Saronno (VA) - ITALY

Manufacturer/Licensee:
T C I Telecomunicazioni S.r.l.
Via Parma 14
21047 Saronno (VA) - ITALY

Product(s) : Electronic controlgear for LED modules
Trade name(s) : TCI or TN101
Type(s)/model(s) : DCC (series), BMU (series), MP 15 (series), DCCH (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 EN 61347-2-13:2014; EN 61347-1:2015; EN 62384:2006+A1:2009

- an inspection of the production location according to CENELEC Operational Document CIG 021
- a certification agreement with the number 2033015

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

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

This certificate is issued on: November 2, 2016 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 2102524.01

DEKRA Certification B.V.

drs. G.J. Zoetbrood
Managing Director

Massimiliano Triulzi
Certification Manager

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All testing, inspection, auditing and certification activities of the former KEMA Quality are an integral part of the DEKRA Certification Group.

ACCREDITED BY
THE DUTCH COUNCIL
FOR ACCREDITATION



General product information: the devices are electronic SELV step-down controlgears, intended to supply high power Light Emitting Diodes or LED modules. The devices have a constant output current (secondary parameter) and for some models it can be selected by the DIP switch.

Type/s	Primary voltage (50/60 Hz) [1]	Max. primary current	Power Factor	Operative d.c. range (0 Hz) [2]	Output Power (W) [3]	Secondary Parameter (mA)	Vomax (V)	t _a (°C)	t _c (°C) [4]	Thermal Protection [5]	Class (IP grade)	Classification
DCC 10W 250mA/U S OF or K2225	100-240 V	0,12 A (220-240 V) 0,19 A (100-127 V)	0,52-0,60 C	176-280 V I≤65 mA	10	250	44	-	80	-	-	Integral
-25..50								75	100 °C	Built-in		
										II (IP20)	Independent	
DCC 10W 250mA/U S BI or K2226	100-240 V	0,15 A (220-240 V) 0,19 A (100-127 V)	0,54-0,64 C	110 V (10 W) 176-280 V I≤110 mA	10 / 15	350	44	-	80	-	-	Integral
-25..45								75	100 °C	Built-in		
										II (IP20)	Independent	
DCC 10W 250mA/U S or K2227	100-240 V	0,13 A 220-240 V) 0,19 A (100-127 V)	0,54-0,64 C	176-280 V I≤82 mA	10 / 12	500	26	-	80	-	-	Integral
-25..50								80	100 °C	Built-in		
										II (IP20)	Independent	
DCC 10W 250mA/U S IP54 or K2228	100-240 V	0,13 A 220-240 V) 0,19 A (100-127 V)	0,54-0,64 C	176-280 V I≤82 mA	10 / 12	700	18	-	80	-	-	Integral
-25..45								75	100 °C	Built-in		
										II (IP20)	Independent	
DCC 15W 350mA/U S OF or K2179	100-240 V	0,13 A 220-240 V) 0,19 A (100-127 V)	0,54-0,64 C	176-280 V I≤82 mA	10 / 12	700	18	-	80	-	-	Integral
-25..45								75	100 °C	Built-in		
										II (IP20)	Independent	
DCC 15W 350mA/U S BI or K2182	100-240 V	0,13 A 220-240 V) 0,19 A (100-127 V)	0,54-0,64 C	176-280 V I≤82 mA	10 / 12	700	18	-	80	-	-	Integral
-25..45								75	100 °C	Built-in		
										II (IP20)	Independent	
DCC 15W 350mA/U S or K2185	100-240 V	0,13 A 220-240 V) 0,19 A (100-127 V)	0,54-0,64 C	176-280 V I≤82 mA	10 / 12	700	18	-	80	-	-	Integral
-25..45								75	100 °C	Built-in		
										II (IP20)	Independent	
DCC 15W 350mA/U S IP54 or K2188	100-240 V	0,13 A 220-240 V) 0,19 A (100-127 V)	0,54-0,64 C	176-280 V I≤82 mA	10 / 12	700	18	-	80	-	-	Integral
-25..45								75	100 °C	Built-in		
										II (IP20)	Independent	
DCC 12W 500mA/U S OF or K2180	100-240 V	0,13 A 220-240 V) 0,19 A (100-127 V)	0,54-0,64 C	176-280 V I≤82 mA	10 / 12	500	26	-	80	-	-	Integral
-25..50								80	100 °C	Built-in		
										II (IP20)	Independent	
DCC 12W 500mA/U S BI or K2183	100-240 V	0,13 A 220-240 V) 0,19 A (100-127 V)	0,54-0,64 C	176-280 V I≤82 mA	10 / 12	500	26	-	80	-	-	Integral
-25..50								80	100 °C	Built-in		
										II (IP20)	Independent	
DCC 12W 500mA/U S or K2186	100-240 V	0,13 A 220-240 V) 0,19 A (100-127 V)	0,54-0,64 C	176-280 V I≤82 mA	10 / 12	500	26	-	80	-	-	Integral
-25..50								80	100 °C	Built-in		
										II (IP20)	Independent	
DCC 12W 500mA/U S IP54 or K2189	100-240 V	0,13 A 220-240 V) 0,19 A (100-127 V)	0,54-0,64 C	176-280 V I≤82 mA	10 / 12	700	18	-	80	-	-	Integral
-25..45								75	100 °C	Built-in		
										II (IP20)	Independent	
DCC 12W 700mA/U S OF or K2181	100-240 V	0,13 A 220-240 V) 0,19 A (100-127 V)	0,54-0,64 C	176-280 V I≤82 mA	10 / 12	700	18	-	80	-	-	Integral
-25..45								75	100 °C	Built-in		
										II (IP20)	Independent	
DCC 12W 700mA/U S BI or K2184	100-240 V	0,13 A 220-240 V) 0,19 A (100-127 V)	0,54-0,64 C	176-280 V I≤82 mA	10 / 12	700	18	-	80	-	-	Integral
-25..45								75	100 °C	Built-in		
										II (IP20)	Independent	
DCC 12W 700mA/U S or K2187	100-240 V	0,13 A 220-240 V) 0,19 A (100-127 V)	0,54-0,64 C	176-280 V I≤82 mA	10 / 12	700	18	-	80	-	-	Integral
-25..45								75	100 °C	Built-in		
										II (IP20)	Independent	
DCC 12W 700mA/U S IP54 or K2190	100-240 V	0,13 A 220-240 V) 0,19 A (100-127 V)	0,54-0,64 C	176-280 V I≤82 mA	10 / 12	700	18	-	80	-	-	Integral
-25..45								75	100 °C	Built-in		
										II (IP20)	Independent	
MP 15 OF or K2431	220-240 V	0,19 A	0,54 C	170-280 V I≤100 mA	15	60-360	44	-	80	-	-	Integral
MP 15 BI or K2432	100-127 V	0,19 A	0,54 C	170-280 V I≤100 mA	15	60-360	44	-25..45	75	100 °C	-	Built-in
MP 15 or K2433												
DC 6W 200mA BMU OF or K2580	100-240 V	0,12 A	0,5-0,62 C	176-276 V I≤43 mA	6	200	36	-	80	-	-	Integral
DC 6W 200mA BMU or K2578								-25..60		100 °C	Built-in	
DC 6W 210mA BMU OF or K2581											Integral	
DC 6W 210mA BMU or K2579								-25..60		100 °C	Built-in	
DC 12W 350mA BMU OF or K2191	100-240 V	0,22 A	0,54-0,64 C	176-276 V I≤82 mA	10 / 12	350	36	-	85	-	-	Integral
DC 12W 350mA BMU or K2194								-25..50	80	100 °C	Built-in	
DC 12W 500mA BMU OF or K2192											Integral	
DC 12W 500mA BMU or K2195								-25..50	80	100 °C	Built-in	
DC 12W 700mA BMU OF or K2193	100-240 V	0,22 A	0,54-0,64 C	176-276 V I≤82 mA	10 / 12	500	25	-	85	-	-	Integral
DC 12W 700mA BMU or K2196								-25..50	80	100 °C	Built-in	
											Integral	
								-25..50	80	100 °C	Built-in	
DCCH 12W OF or K2435	220-240 V	0,13 A	0,55 C	170-280 V I≤84 mA	10 / 12	250-350	44	-	80	-	-	Integral
DCCH 12W 250/350mA or K2436								-25..45/50	80	100 °C	Built-in	
DCCH 7W OF or K2843	220-240 V	0,07-0,08 A	0,5 C	170-280 V I≤50 mA	5,6 / 7,2	140-180	44	-	80	-	-	Integral
DCCH 7W 140/180mA or K2842								-25..50	75	100 °C	Built-in	

Notes: [1] – Rated value for AC range; [2] – Operative d.c. range according to IEC 61347-2-13:2014 in which the product can work; they can be used for centralized emergency installations (EN 50171 and EN 50172) in the rated 196-250 V. [3] – Different values according to DIP switch selection (see label). [4] – t_c for OF version is measured on the cap of C₂ or C_{2A} capacitor. [5] –The products have an overheating protection (C.5.a type) and comply with temperature limit of clause 4.16.2 of IEC 60598-1:03 ("F" triangle marking), IEC 60598-1:2014; VDE 0710 T14 ("MM" triangle marking).

Common parameters for all models			
Connection to supply (PRI)	screw terminal block 0,75...2,5 mm ² for DCC, MP 15 (series); screwless terminal block 0,5...1,5 mm ² for DCCH, BMU (series).		
Connection to load (SEC)	screw terminal block 0,5...2,5 mm ² for DCC, MP 15 (series); screwless terminal block 0,5...1,5 mm ² for DCCH, BMU (series).		
Additional information			
DCCH models are derived from DC 12W 350mA BMU with the additional feature: the A-B terminal is used for the selection of output current (see labels). All models have the following features: Impulse withstand category II; Pollution degree 2; Material group IIIa; use up to 2000 m above sea level; multiple value load control gear; short-circuit proof type control gear; the material of enclosure was tested with favourable result for Glow-wire at temperature 850/950 °C; multiple value load control gear; stabilized output current; short-circuit proof type.			
INSULATION	PRI	A B (if present)	SEC
PRI	-	double	double
A B (if present)	double	-	functional
SEC	double	functional	-
In the final application the connections to the controlgears shall be according to IEC 60598-1 or national deviations of the country where installed. Creepage distances and clearances for built-in models shall comply with the requirements of IEC/EN 60598-1 when the device is installed in the final application:			
MODELS:	INSULATION:	Between active parts and the bottom surface of enclosure	Between active parts and outer surfaces of enclosure
DCC 10W 250mA/U S, DCC 15W 350mA/U S, DCC 12W 500mA/U S, DCC 12W 700mA/U S, DCC 10W 250mA/U S IP54, DCC 15W 350mA/U S IP54, DCC 12W 500mA/U S IP54, DCC 12W 700mA/U S IP54, MP 15		double	double
DCC 10W 250mA/U S BI, DCC 15W 350mA/U S BI, DCC 12W 500mA/U S BI, DCC 12W 700mA/U S BI, MP 15 BI, DC 6W 200mA BMU, DC 6W 210mA BMU, DC 12W 350mA BMU, DC 12W 500mA BMU, DC 12W 700mA BMU, DCCH 12W 250/350mA, DCCH 7W 140/180mA		double	-
OF models		-	-

TESTS

Test requirements

EN 61347-2-13:2014; EN 61347-1:2015; EN 62384:2006+A1:2009

Test result

The test results are laid down in DEKRA test files No.2102524.50 and No.2102524.60

Remarks

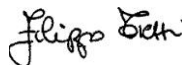
This ENEC KEMA-KEUR Certificate replaces the Certificate no. 2102463.01 dated June 6, 2015; it includes the following changes and/or additions:

- Added DCCH 7W 140/180mA models.
- OF models are classified as Integral.
- Min. cross section is 0,75 mm² for independent input connection, 0,5 mm² all other connections.
- The maximum input current for DCC models has been extended to 100-127 V.
- Alternative suppliers: VR2 (Thinking); pwb (TCI).

Conclusions

The examination proved that all test requirements were met.

Tested by : Filippo Tiezzi



Checked by : Massimo Banchelli



Factory-Location

TCI Telecomunicazioni Italia S.r.l.
Via Parma 14
I-21047 Saronno (VA)