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)	:	INTERFACE series, SED 4.5A R57

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 61347-2-11:2001 and EN 61347-1:2015
- 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 certification mark.

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

This certificate is issued on 25 October 2019 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 81-110833

DEKRA Certification B.V.

B.T.M. Holtus
Managing Director

S. Lehner
Certification Manager

ACCREDITED BY THE
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)	:	BLL DALI INTERFACE, BLL DALI INTERFACE EX, MINI BLL INTERFACE, MINI BLL INTERFACE BI, MINI BLL INTERFACE EX, MINI BLL INTERFACE EX BI, MINI BLL INTERFACE EX OF, MINI BLL INTERFACE OF, MINI CASAMBI INTERFACE BS, MINI CASAMBI INTERFACE BS BI, MINI CASAMBI INTERFACE BS OF, MINI CASAMBI INTERFACE RGBW, MINI CASAMBI INTERFACE RGBW BI, MINI CASAMBI INTERFACE RGBW OF, MINI CASAMBI INTERFACE TW, MINI CASAMBI INTERFACE TW BI, MINI CASAMBI INTERFACE TW OF, MINI ZD LIGHT INTERFACE BI, MINI ZD LIGHT INTERFACE OF, MINI ZLL INTERFACE, MINI ZD LIGHT INTERFACE, MINI ZLL INTERFACE BI, MINI ZLL INTERFACE OF, SED 4.5A R57, ZD LIGHT INTERFACE II ECO, ZD LIGHT INTERFACE II ECO COORD., ZD LIGHT INTERFACE II ECO COORD. I, ZD LIGHT INTERFACE II ECO COORD. OF, ZD LIGHT INTERFACE II ECO OF and ZD LIGHT INTERFACE II ECO i
Primary voltage	:	100-240 V
Nature of supply	:	alternate current
Rated frequency	:	50/60 Hz
Power factor	:	0,5 C
Working voltage U-OUT	:	From 5 to 24 V
Type of load	:	LED controlgears, auxiliary devices
Type of thermal protection	:	From 100 to 110 °C
Classification	:	Independent, Built in, Integral

Product data – type BLL DALI INTERFACE and BLL DALI INTERFACE EX

Primary voltage	:	100-240 V
Nature of supply	:	alternate current
Rated frequency	:	50/60 Hz
Primary current	:	0,05
Ambient temperature	:	From -25 to +50 °C

Product data – type SED 4.5A R57

Primary voltage	:	From 12 to 24 V
Nature of supply	:	direct current
Rated frequency	:	0 Hz
Primary current	:	4,6
Ambient temperature	:	From -20 to +45 °C

Product data – type ZD LIGHT INTERFACE II ECO COORD., ZD LIGHT INTERFACE II ECO COORD. I and ZD LIGHT INTERFACE II ECO COORD. OF

Primary voltage	:	5 V
Nature of supply	:	direct current
Rated frequency	:	0 Hz
Primary current	:	0,04
Ambient temperature	:	From -20 to +60 °C

Product data – type MINI BLL INTERFACE, MINI BLL INTERFACE BI, MINI BLL INTERFACE EX, MINI BLL INTERFACE EX BI, MINI BLL INTERFACE EX OF, MINI BLL INTERFACE OF, MINI CASAMBI INTERFACE BS, MINI CASAMBI INTERFACE BS BI, MINI CASAMBI INTERFACE BS OF, MINI CASAMBI INTERFACE RGBW, MINI CASAMBI INTERFACE RGBW BI, MINI CASAMBI INTERFACE RGBW OF, MINI CASAMBI INTERFACE TW, MINI CASAMBI INTERFACE TW BI, MINI CASAMBI INTERFACE TW OF, MINI ZD LIGHT INTERFACE BI, MINI ZD LIGHT INTERFACE OF, MINI ZLL INTERFACE BI, MINI ZLL INTERFACE, MINI ZD LIGHT INTERFACE, MINI ZLL INTERFACE OF, ZD LIGHT INTERFACE II ECO, ZD LIGHT INTERFACE II ECO i and ZD LIGHT INTERFACE II ECO OF

Primary voltage	:	100-240 V or 12 V or 8-13 V or 11-16 V
Nature of supply	:	alternate current or direct current
Rated frequency	:	50/60 Hz or 0 Hz
Primary current	:	From 0,025 to 0,055
Ambient temperature	:	From -20 to +55 °C

TESTS

Test requirements
EN 61347-2-11:2001
EN 61347-1:2015

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. 2102850.50 is laid down in DEKRA test file 350033600; it contains test results and 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 lighting controllers intended to convert, transmit, receive digital signals for LED drivers. The wireless protocol can be ZLL, BLL or CASAMBI; the analogic control can be 1-10V or Push LV, the digital control can be DALI. BLL DALI INTERFACE has IN input (switch normally open) to reset the device.

Type/s	Input			Output		t_a [°C]	t_c [°C] (2)	thermal protection [°C]	Symbol, notes [5]
	Voltage [V]	Current [A]	Power Factor	Voltage [V]	Power [W]				
ZD LIGHT INTERFACE II ECO i or K3027	100-240 (50/60 Hz) 12 (0 Hz, SELV)	0,06	0,5 C	12 (0 Hz)	2	-20..55	65	110 (3)	IND, II
ZD LIGHT INTERFACE II ECO or K3028									BI
ZD LIGHT INTERFACE II ECO OF or K3029		0,055	-			-	80	-	
ZD LIGHT INTERFACE II ECO COORD.i or K3030	5 (0 Hz, SELV)	0,04	-	5 (0 Hz)	(1)	-20..60	65	100 (3)	IND, III
ZD LIGHT INTERFACE II ECO COORD. or K3031									BI
ZD LIGHT INTERFACE II ECO COORD. OF or K3032						-	80	-	INT
MINI ZLL INTERFACE or K3011	100-240 (50/60 Hz) 11-16 (0 Hz, SELV)	0,05	0,5 C	12 (0 Hz)	2	-25..50	65	100 (3)	IND, II
MINI ZLL INTERFACE BI or K3012									BI
MINI ZLL INTERFACE OF or K3014		0,06	-			-	80	-	INT
MINI ZD LIGHT INTERFACE or K3036	100-240 (50/60 Hz) 11-25 (0 Hz, SELV)	0,05	0,5 C	-	-	-25..50	65	100 (3)	IND, II
MINI ZD LIGHT INTERFACE BI or K3037									BI
MINI ZD LIGHT INTERFACE OF or K3038		0,06	-			-	80	-	INT
MINI CASAMBI INTERFACE TW or K3018, MINI CASAMBI INTERFACE RGBW or K3021, MINI CASAMBI INTERFACE BS or K3024	100-240 (50/60 Hz)	0,05	0,5 C	-	-	-25..50	65	100 (3)	IND, II
MINI CASAMBI INTERFACE TW BI or K3019, MINI CASAMBI INTERFACE RGBW BI or K3022, MINI CASAMBI INTERFACE BS BI or K3025									BI
MINI CASAMBI INTERFACE TW OF or K3020, MINI CASAMBI INTERFACE RGBW OF or K3023, MINI CASAMBI INTERFACE BS OF or K3026						-	80	-	INT
MINI BLL INTERFACE or K3015, MINI BLL INTERFACE EX or K3033	100-240 (50/60 Hz) 8-13 (0 Hz, SELV)	0,05	0,5 C	12 (0 Hz)	2	-25..50	65	100 (3)	IND, II
MINI BLL INTERFACE BI or K3016, MINI BLL INTERFACE EX BI or K3034		0,03							BI
MINI BLL INTERFACE OF or K3017, MINI BLL INTERFACE EX OF or K3035						-	80	-	INT
SED 4.5A R57 or K3036	12-24 (0 Hz)	4,6	-	12 24	55 110	-20..45	70	100 (4)	BI
BLL DALI INTERFACE or K3039 BLL DALI INTERFACE EX or K3040	100-240 (50/60 Hz)	0,05	0,5 C	-	-	-25..50	75	110 (3)	BI2

Notes: (1) – Power is limited by USB port of computer, not included in the input current. (2) – t_c for OF version is measured on the cap of U300 (VDC IN) or C207 capacitor (a.c. supply). (3) – Products with overheating protection (C.5.a) and complying with temperature limit of clause 4.16.2 of IEC 60598-1:03 (“F” triangle marking), IEC 60598-1:2014/AMD1:2017, VDE 0710 T14 ("MM" triangle marking). (4) – Product with overheating protection (C.5.c) and complying with temperature limit of clause 4.16.2 of IEC 60598-1:03 (“F” triangle marking), IEC 60598-

1:2014/AMD1:2017, VDE 0710 T14 ("MM" triangle marking). [5] – Symbol: IND=independent; II=class II; III=class III; BI=built-in; BI2=built-in double insulated; INT=integral.

Connections		
LV supply (if present)	PRI, PRI IN, PRI OUT	screw terminal 0,75-2,5 mm² for independent models, 0,5-2,5 mm² for built-in models
Connection for dimming (if present)	1-10V, PUSH L, LV PUSH, DA+, DA-	screw terminal 0,75-2,5 mm² for independent models, 0,5-2,5 mm² for built-in models
Input SELV d.c. supply, output d.c. supply	5Vdc IN/OUT, 12Vdc IN/OUT, VDC, VDC IN/OUT, GND, IN, VDC IN	screw terminal 0,5-2,5 mm² for SED 4.5A R57, screw terminal 0,2-1,0 mm² for other models
Input for analogic signals (if present)	AD1, AD2, GND	screws terminal 0,2-1,0 mm²
Input for reset (if present)	IN	screwless terminal 0,2-1,5 mm²
Output control for dimming (if present)	1-10V OUT	screwless terminal 0,2-0,5 mm² for CASAMBI models, screw terminal 0,2-1,0 mm² for all other models.
Output open collector control (if present)	PWM1,PWM2, PWM3, PWM4	connector
Auxiliary output (if present)	CH1A, CH1B, CH2A, CH2B	screwless terminal 0,2-0,5 mm²

Additional information

All models have the following features: Interfaces; short-circuit proof type; impulse withstand category II; pollution degree 2; material group IIIa. MINI ZD LIGHT INTERFACE models have a DALI output but it can't be used in the same time with other SELV connections (VDC IN, 1-10V OUT) and it is a local connection.
OF models have been tested in an enclosure of same dimensions as built-in models. The creepage distances, clearances and connections of controlgears in the final application shall be according to IEC 60598-1 or national deviations of the country where installed in the final application; SED model has SELV DC input and the control (1-10V, Push LV) shall be local or insulated from main supply with minimum supplementary insulation; other models have:

INSULATION: B= basic, S=supplementary, D= double or reinforced	PRI, PUSH L (if present)	AD1, AD2, 1-10V OUT, CH1-4, (if present)	DA+, DA- (if present)	5/12Vdc IN/OUT, VDC, VDC IN (if present)	PWM1-4, CH1A-B, CH2A-B, PUSH LV (if present)
PRI, PUSH L (if present)	-	D	D	D	D
DA+, DA- (if present)	D	-	-	-	-
IN (if present)	D	-	-	-	-
AD1, AD2, 1-10V OUT, CH1-4, (if present)	D	-	-	-	-
5/12Vdc IN/OUT, VDC, VDC IN (if present)	D	-	-	-	-
PWM1-4, CH1A-B, CH2A-B, PUSH LV (if present)	D	-	-	-	-
Between active parts and the enclosure	D (independent models), B (built-in models)				