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	:	Miscellaneous electronic circuits used with luminaires
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 ** (*means any alphanumeric characters)

The product and any acceptable variation thereof as specified in the Annex to this certificate and the documents referred to therein.

DEKRA hereby declares that the above-mentioned product has been certified based on:
- a type test according to EN 61347-2-11:2001, EN 61347-2-11:2001/A1:2019, EN 61347-1:2015 and EN 61347-1:2015/A1:2021
- 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 3 October 2024 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 81-110833 REV.1

DEKRA Certification B.V.

B.T.M. Holtus
Managing Director

MT Tonsi
Certification Manager

ACCREDITED BY THE
DUTCH ACCREDITATION
COUNCIL

PRODUCTS
RvA C 001

SPECIFICATION OF THE CERTIFIED PRODUCT

Product data

Product	:	Miscellaneous electronic circuits used with luminaires
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 ** (*means any alphanumeric characters)
Primary voltage	:	100-240 V for a.c., 5-25 V for d.c.
Rated frequency	:	50/60 Hz, 0 Hz
Primary current	:	0,05-0,06 A for a.c., 0,03-0,6 A for d.c.
Secondary voltage	:	From 5 to 24 V
Secondary power	:	LED controlgears, auxiliary devices
Classification	:	Built in or independent

TESTS

Test requirements

EN 61347-2-11:2001
EN 61347-2-11:2001/A1:2019
EN 61347-1:2015
EN 61347-1:2015/A1:2021

Test result

The test results are documented in DEKRA test file 350964600.

Additional information

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

This certificate replaces certificate No. 81-110833 which we hereby declare invalid.

The list of components is laid down in test report 3509646.350.

Conclusion

The examination has confirmed that all requirements were met.

Factory location

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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 (4)
	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		0,055	-						BI
ZD LIGHT INTERFACE II ECO OF or K3029						-	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	-	OF
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		0,06	-						BI
MINI ZLL INTERFACE OF or K3014						-	80	-	OF
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		0,06	-						BI
MINI ZD LIGHT INTERFACE OF or K3038						-	80	-	OF
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	-	OF
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	-	OF
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: The Kxxxx code can replace the type reference. (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 IEC/EN 60598-1. (4) – IND=independent; II=class II; III=class III; BI=built-in; BI2= built-in with double insulation; OF=built-in without enclosure.

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, PUSH LV, 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 0,2-1,0 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/EN 60598-1 or national deviations of the country where installed in the final application.	
INSULATION (B= basic, S=supplementary, R= double or reinforced)	
Between PRI, PUSH L ↔ AD1, AD2, 1-10V OUT, CH1-4; between PRI, PUSH L ↔ DA+, DA-; between PRI, PUSH L ↔ 5/12Vdc IN/OUT, VDC, VDC IN; between PRI, PUSH L ↔ PWM1-4, CH1A-B, CH2A-B, PUSH LV	R
Between active parts ↔ the enclosure of independent models, BLL DALI INTERFACE, BLL DALI INTERFACE EX	R
Between active parts ↔ the bottom side of enclosure of built-in models (OF escluded)	R
Assessment to EN IEC 60598-2-2:2024 used in conjunction with EN IEC 60598-1:2021 has been performed. Assessment to normally flammable surfaces according to EN IEC 60598-1:2021 have been performed.	