

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) : MAXI JOLLY SLIM HV (series), MPSE SLIM (series), MPV 55/350 SLIM,
MPX (series), MP SLIM (series) and T-LED (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, EN 62384:2006 and EN 62384:2006/A1:2009
- an inspection of the factory location according to CENELEC Operational Document CIG 021
- a DEKRA certification agreement with the number 2033015

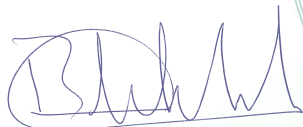
DEKRA hereby grants the right to use the ENEC certification mark.

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 June 2021 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 81-119400

DEKRA Certification B.V.



B.T.M. Holtus
Managing Director



M. Triulzi
Certification Manager

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DUTCH ACCREDITATION
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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) | : MAXI JOLLY SLIM HV (series), MPSE SLIM (series), MPV 55/350 SLIM, MPX (series), MP SLIM (series) and T-LED (series) |
| Primary voltage | : 220-240 V for a.c., 196-250 for d.c. |
| Rated frequency | : 50-60 Hz, 0 Hz |
| Primary current | : From 0,19 to 0,9 A for a.c., from 0,23 to 0,96 A for d.c. |
| Type of load | : LED modules, power LED |
| Classification | : Independent, Built-in |

Product data – type MAXI JOLLY SLIM HV (series)

| | |
|-------------------|---------------------|
| Secondary current | : From 0,2 to 0,5 A |
| Secondary power | : From 34 to 80 W |

Product data – type MP SLIM (series)

| | |
|-------------------|----------------------|
| Secondary current | : From 0,1 to 0,75 A |
| Secondary power | : From 25 to 120 W |

Product data – type MPSE SLIM (series)

| | |
|-------------------|---------------------|
| Secondary current | : From 0,1 to 0,7 A |
| Secondary power | : From 24 to 55 W |

Product data – type MPV 55/350 SLIM

| | |
|-------------------|----------------------|
| Secondary current | : From 0,2 to 0,35 A |
| Secondary power | : From 44 to 55 W |

Product data – type MPX (series)

| | |
|-------------------|---------------------|
| Secondary current | : From 0,2 to 0,8 A |
| Secondary power | : From 59 to 165 W |

Product data – type T-LED (series)

| | |
|-------------------|----------------------|
| Secondary current | : From 0,14 to 0,7 A |
| Secondary power | : From 35 to 80 W |

TESTS**Test requirements**

EN 61347-2-13:2014
EN 61347-2-13:2014/A1:2017
EN 61347-1:2015
EN 62384:2006
EN 62384:2006/A1:2009

Test result

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

Additional information

DEKRA Test report No. 3500336.370 and 3500336.371 are laid down in DEKRA Test file 350033600; they contain test results.

DEKRA test report No. 3500336.370 contains the critical component list .

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

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: | | | | | | | | | | | |
|--|--------------------------------|----------------------|-----------------------|------------------------------|---------------|------------|------------|-----------------------------|-------------------|----|-------------------|
| <p>The devices are electronic controlgears for LED modules. The MP, MPX, T-LED, MAXI JOLLY SLIM models can be independent only with the additional cable retainer (accessory). The devices have a stabilized output current with values depending on the selection of the DIP switch. The DIP switch options are detailed both in the technical specification and in the labels and can be changed by a screwdriver or equivalent tool. The MP models are not dimmable; the other ones are dimmable by analogical signals (PUSH L, 1-10V) or DALI protocol (DA), down to 1 % for some models. The output load can have minimum LEDs corresponding to V_o min, but I_{in}, t_a and t_c are related to max load. NTC port (if present) is for the thermal protection of LED module. The Kxxxx code can replace the type reference according to the following tables:</p> | | | | | | | | | | | |
| Type/s | a.c. *d.c. PRI Current (A) [1] | Power Factor | Max. Output Power (W) | Constant SEC current (A) [2] | d.c. Uout (V) | t_a (°C) | t_c (°C) | Thermal Protection (°C) [3] | Use [4] | | |
| T-LED 80/700 DALI SLIM (K2497), T-LED 80/700 DALI SLIM 1% (K2901), T-LED 80/700 1-10V SLIM (K2498) | 0,4 *0,5 | 0,95 (P>42 W) | 42-80 | 0,35-0,7 | 180 | -25..50 | 85 | 110 | IND, BI, PE | | |
| T-LED 80/500 DALI SLIM (K2487), T-LED 80/500 DALI SLIM 1% (K2902), T-LED 80/500 1-10V SLIM (K2501) | 0,4 *0,5 | 0,95 (P>37 W) | 37,4-80 | 0,22-0,5 | 210 | | | | | | |
| MAXI JOLLY 80 SLIM HV (K2350) | | 0,95 (P>30 W) | 34-80 | 0,2-0,5 | 210 | | | | | | |
| MAXI JOLLY 50 SLIM HV (K2904) | 0,25 *0,32 | 0,95 (P>37 W) | 34-50 | | | | | | | | |
| T-LED 80/350 DALI SLIM (K2499), T-LED 80/350 DALI SLIM 1% (K2903), T-LED 80/350 1-10V SLIM (K2500) | 0,4 *0,5 | 0,95 (P>35 W) | 35-80 | 0,14-0,35 | 300 | | | | | | |
| MP 80/700 SLIM (K2348) | 0,4 | 0,95 (P>46 W) | 52-80 | 0,325-0,7 | 340 | | | | | 85 | IND, BI, FE |
| MP 80/700 SLIM GW (K2C43) | *0,5 | | | | | | | | | 90 | |
| MP 60/700 SLIM (K2639) | 0,3 *0,38 | 0,95 (P>47 W) | 60 | 0,45-0,7 | 340 | | | | | 85 | |
| MP 80/500 SLIM (K2347) or MP 80/500 SLIM LIV, MP 80/500 SLIM cod. 122214I (K2C44) or 122214ICC | 0,4 *0,5 | 0,95 (P>46 W) | 73,5-80 | 0,35-0,5 | 340 | | | | | | |
| MP 80/350 SLIM (K2346) or MP 80/350 SLIM LIV | 0,4 *0,5 | 0,95 (P>46 W) | 54-80 | 0,2-0,35 | 300-390 [5] | | | | | 85 | |
| MP 80/350 SLIM GW (K2905) | | | | | | 90 | | | | | |
| MP 56/350 SLIM (K2638) | 0,29 *0,35 | 0,87 C-0,95 (P>27 W) | 27-56 | 0,1-0,35 | 390 | 85 | | | | | |
| MP 50/350 SLIM (K2471) | 0,25 | 0,87 C-0,95 | 27-50 | 0,1-0,35 | 300 | 85 | | | | | |

| | | | | | | | | |
|------------------------|---------------|-------------------------|----|-----------|-----|--|----|--|
| | *0,32 | (P>27 W) | | | | | | |
| MP 35/350 SLIM (K2637) | 0,19 *0,23 | 0,83 C-0,95 (P>27 W) | 35 | 0,25-0,35 | 300 | | 80 | |

Notes: * all models can be used for centralized emergency installations (EN 50171 and EN 50172) in the rated 196-250 V range; the operative range is 176-276 V. [1] – Rated primary voltage: 220-240 V, 50-60 Hz. [2] – Output parameter where the product is declared as “stabilized”; values according to DIP switch selection (see marking plate). [3] – The products have an overheating protection (C.5.a type) and comply with temperature limit of clause 4.16.2 and Annex N of IEC 60598-1. [4] – Classification: IND=independent with cable retainer; BI=built-in; PE=protective earth; FE=functional earth. [5] – 300 V for 300-350 mA selections; 390 V for 200-290 mA selections.

| Type/s | a.c. *d.c. PRI Current (A) [1] | Power Factor | Max. Output Power (W) | Constant SEC current (A) [2] | d.c. Uout (V) | ta (°C) | tc (°C) [3] | Thermal Protection (°C) [4] | Use [5] |
|-----------------------------------|---|-------------------|--------------------------------|------------------------------------|---------------------|------------|-------------------|-----------------------------------|----------------|
| MPSE 40/350 SLIM (K2E72) | 0,23 *0,26 | 0,95 (Po>19 W) | 24-40 | 0,2-0,35 | 330 | -25..60 | 85 | 110 | BI |
| MPSE 40/700 SLIM (K2G82) | 0,23 *0,26 | 0,95 (Po>19 W) | 26-40 | 0,325-0,7 | 330 | -25..50 | 85 | 110 | BI |
| MPSE 55/350 SLIM (K2D74) | 0,31 *0,35 | 0,95 (Po>27 W) | 26-55 | 0,1-0,35 | 340 | -25..50 | 85 | 110 | BI, PE |
| MPSE 55/350 SLIM MO (K2G81) | | | | | 300 | | | | |
| MPV 55/350 SLIM (K2G04) | 0,31 *0,35 | 0,95 (Po>37 W) | 44-55 | 0,2-0,35 | 320 | -25..50 | 90 | 110 | BI |
| MPSE 55/700 SLIM (K2D75) | 0,31 *0,35 | 0,95 (Po>27 W) | 45,5-55 | 0,325-0,625 | 360 | -25..50 | 85 | 110 | BI, PE |
| | | | | 0,65-0,7 | | | 90 | | |
| MP 100/350 SLIM (K2D76) | 0,6 *0,6 | 0,95 (Po>32 W) | 59-100 | 0,2-0,35 | 340 | -25..60 | 90 | 110 | IND, BI, FE |
| MPX 100/350 277V SLIM (K2D84) | 0,6 *0,6 | 0,95 (Po>25 W) | 59-100 | 0,2-0,35 | 340 | -25..50 | 85 | 110 | IND, BI, FE |
| MPX 100/350 277V SLIM 127671BR | | | | | | | | | |
| MP 100/750 SLIM (K2D77) | 0,6 *0,6 | 0,95 (Po>32 W) | 55-100 | 0,25-0,6 | 340 | -25..60 | 90 | 110 | IND, BI, FE |
| | | | | 0,65-0,75 | | -25..50 | 85 | | |
| MP 120/700 SLIM (K2D78) | 0,65 *0,7 | 0,95 (Po>43 W) | 79-120 | 0,325-0,6 | 350 | -25..60 | 90 | 110 | IND, BI, FE |
| | | | | 0,65-0,7 | | -25..55 | 90 | | |
| MPX 120/700 277V SLIM (K2D85) | 0,65 *0,7 | 0,95 (Po>43 W) | 79-120 | 0,325-0,7 | 350 | -25..50 | 90 | 110 | IND, BI, FE |
| MPX 165/800 SLIM (K2D79) | 0,9 *0,9 | 0,98 (Po>61 W) | 103-165 | 0,425-0,7 | 340 | -25..60 | 90 | 110 | IND, BI, FE |
| | | | | 0,725-0,8 | | -25..55 | 90 | | |
| MPX 160GW OF (K2G61) | 0,77 *0,96 | 0,95 (P>52 W) | 160 | 0,4-0,7 | 340 | - | 87 | - | OF, FE |
| MPX 80GW OF (K2G62) | 0,4 *0,5 | 0,98 (P>61 W) | 80 | 0,4-0,7 | 340 | - | 83 | - | OF, FE |
| MPX 120/800 SLIM (K2G05) | 0,65 *0,7 | 0,95 (P>61 W) | 103-120 | 0,425-0,7 | 330 | -25..60 | 95 | 110 | IND, BI, FE |
| | | | | 0,725-0,8 | | -25..55 | 90 | | |
| MP 80/350 277V SLIM (K2D80) | 0,4 *0,5 | 0,95 (P>41 W) | 25-80 | 0,2-0,35 | 390 | -25..50 | 85 | 110 | IND, BI, FE |
| MP 80/500 277V SLIM (K2D81) | 0,4 *0,5 | 0,95 (P>41 W) | 25-80 | 0,35-0,5 | 390 | -25..50 | 85 | 110 | IND, BI, FE |

Notes: * all models can be used for centralized emergency installations (EN 50171 and EN 50172) in the rated 196-250 V range; the operative range is 176-276 V. [1] – Rated primary voltage: (110-)220-240 V, 50-60 Hz, tested in 220-240 V. [2] – Output parameter where the product is declared as “stabilized”; values according to DIP switch selection (see marking plate). [3] – tc measured on the top of C3 capacitor for OF models. [4] – The products have an

overheating protection (C.5.a type) and comply with temperature limit of clause 4.16.2 and Annex N of IEC 60598-1. [5] – Classification: IND=independent with additional cable retainer as accessory; BI=built-in; OF=built-in without enclosure; PE= protective earth; FE= functional earth.

| Connections | | |
|---|---------------------------|---|
| Input supply | PRI | screwless terminal block 0,2...1,5 mm ² screwless terminal block 0,5...2,5 mm ² (only for MPX OF models) |
| Input for thermal protection (if present) | NTC | screwless terminal block 0,2...1,5 mm ² |
| Input for dimming or control (if present) | PUSH L, DA 1, DA 2, 1-10V | screwless terminal block 0,2...1,5 mm ² |
| Output load | SEC | screwless terminal block 0,2...1,5 mm ² |

| Additional information | | | | | | |
|--|--|--|--------------------|--------------|-----|---|
| Use | Independent, built-in for ordinary luminaire, up to 2000 m above sea level. | | | | | |
| Features: | AC/DC P/S for LED; stabilized output current (CC); multiple value load; short-circuit proof type; impulse withstand category II; 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. NTC can be terminated with a resistor. The metal spring (MP, MPX SLIM models) can be used for the functional earth connection of controlgear for EMC compliance. Models with functional earth can be used in class II applications. 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 in the final application. | | | | | |
| DC operation | The products were tested in 176-276 V 0 Hz operational range according to IEC/EN 61347-2-13 and they can be used for centralized emergency installations (EN 50171 and EN 50172) in the rated 196-250 V; Uout is up to 430 V (480 V for 277V models); d.c. operation for standards different from IEC/EN 61347 can be allowed with external fuse installed in front of the controlgear. | | | | | |
| | | | INSULATION: | B | S | R |
| | | | Models | | | |
| Between active parts ↔ the touchable parts | All models without additional cable retainer | | N/A | N/A | N/A | |
| | MP, MPX, T-LED and MAXI JOLLY SLIM models with additional cable retainer | | N/A | N/A | P | |
| Between functional earth ↔ the active parts | MP and MPX SLIM | | N/A | N/A | P | |
| Between L, N, PUSH L, DALI, 1-10V ↔ PE earth | T-LED, MAXI JOLLY SLIM, MPSE 55/350 SLIM, MPSE 55/700 SLIM | | P | N/A | N/A | |
| Between L, N, PE, PUSH L ↔ 1-10V | T-LED 1-10V SLIM models | | P | N/A | N/A | |
| Between L, N, PE, PUSH L ↔ DALI | T-LED DALI SLIM, MAXI JOLLY SLIM models | | P | N/A | N/A | |
| Between 1-10V ↔ SEC | T-LED 1-10V SLIM models | | N/A | P | N/A | |
| Between DALI ↔ SEC | T-LED DALI SLIM, MAXI JOLLY SLIM models | | N/A | P | N/A | |
| Between PRI ↔ SEC | All | | N/A | N/A | N/A | |
| Between live parts ↔ fixing screw to supporting surface of class I luminaire | MPSE 55/350 SLIM, MPSE 55/700 SLIM, T-LED and MAXI JOLLY models (with PE) | | P | N/A | N/A | |
| Between live parts ↔ fixing screw to supporting surface | MP models out of 277V models, MPX models (with FE), MPSE 40/350 SLIM, MPV 55/350 SLIM | | N/A | N/A | P | |
| B= basic, S= supplementary, R= double or reinforced; P= Pass, N/A= Not Applicable | | | | | | |
| All products with enclosure are suitable for direct mounting on normally flammable surfaces (EN 60598-1 Annex N, VDE 0710 T14 for "MM" triangle marking) only for values (most unfavourable) up to the ta or following tc value: | | | | | | |
| | | | | Max. tc (°C) | | |
| MP 80/500 SLIM, MP 80/500 SLIM cod. 122214I, MP 80/500 277V SLIM, MP 80/500 SLIM, MP 80/500 SLIM cod. 122214I, MP 80/500 277V SLIM | | | | 75 | | |
| MP 80/700 SLIM, MP 80/700 SLIM GW, MPSE 55/350 SLIM, MPSE 55/350 SLIM MO, MPX 165/800 SLIM, MPX 120/800 SLIM, MP 120/700 SLIM, MPX 120/700 277V SLIM, MP 100/750 SLIM, MPSE 40/700 SLIM | | | | 80 | | |
| MPSE 55/700 SLIM, MPV 55/350 SLIM, MP 100/350 SLIM | | | | 85 | | |
| All other models out of OF models | | | | nominal tc | | |

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. DC operation: add an external fuse if necessary, according to standards different from IEC 61347 series.

Assessment to EN 60598-2-22:2014/AMD1:2020 used in conjunction with EN 60598-1:2014/AMD1:2017 and EN 60598-1:2015/A1:2018 has been performed.

Assessment to EN 62493:2015 has been performed.

Assessment to VDE 0710 Part 14/04.82 has been performed.

Assessment to EN 62442-3:2018 has been performed.

Assessment to Annex H of SASO 2902:2018 has been performed.