

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) : DC MAXI JOLLY (series), DC MJ (series), IPR1 (series) and MP (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

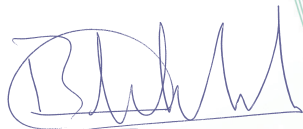
DEKRA hereby grants the right to use the ENEC certification mark.

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

Certificate number: 81-118889

DEKRA Certification B.V.



B.T.M. Holtus
Managing Director



H.R.M. Barends
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 MAXI JOLLY (series), DC MJ (series), IPR1 (series) and MP (series)
Primary voltage	: 100-240 V a.c., 189-250 V d.c.
Rated frequency	: 50/60 Hz, 0 Hz
Primary current	: From 0,16 to 0,55 A for a.c.; From 0,18 to 0,45 A for d.c.
Output current	: From 0,25 to 1,4 A
Output voltage	: From 24 to 58 V
Output power	: From 3,5 to 70 W
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 62384:2006
EN 62384:2006/A1:2009

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. 3500336.260 and 3500336.261 are laid down in DEKRA test file 350033600; they contain test results; DEKRA test report No. 3500336.260 contains 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: These devices are electronic controlgears for LED modules with SELV output. The devices have a stabilized output current (CC) or voltage (CV) according to S50 DIP switch selection. BLL, ZB3 and CASAMBI models have wireless control; dimming features are detailed in the technical specification: PUSH L, 1-10V, MIDNIGHT, BILEVEL, BILEVEL N, PIR, PLV, DALI. An alternative /xxxx at the end of the commercial code can be present if a particular setting value of the output is requested from the client (i.e.: /700 stands for S50= 700 mA); different commercial codes are assigned for PWM, AM+PWM, AM dimming. MP models are not dimmable. Supply can be ac 50/60 Hz or dc 0 Hz, but dc can't be used for PUSH L/RED ON/ RED OFF/ OPERATION features.

Type/s (codes: 122xxx, 127xxx)	ac or *dc [1] PRI current [A] at voltage	Power Factor [2]	Output Power (W)	Output Parameter	U _{out} (V)	ta (°C)	tc (°C) [3]	Use [4]
MP 50 K3 (K2224), MP 50 PR K3 (K2438), MP 50 S K3** (K2442)	0,25 at 220-240 V 0,55 at 110-127 V	0,95	25-50 25-40	0,35 -1,05 A	90	-25..45/50 /55 at 40 W 700 mA	85	II, 110
MP 50 BI (K2241), MP 50 PR BI (K2439), MP 50 S BI** (K2443)	0,42 at 100 V *0,33 at 170-280 V		25-35	58 V**				BI, 110
MP 50 OF (K2230), MP 50 PR OF (K2440), MP 50 S OF** (K2444)						-	80	OF
MP 40 K3 (K2728)	0,22 at 220-240 V	0,92 C- 0,95	25-40	0,35 -1,05 A	90	-25..45/50	85	II, 110
MP 40 BI (K2734)	0,45 at 110-127 V							BI, 110
MP 40 OF (K2740)	*0,27 at 170-280 V					-	80	OF
MP 50 SV K3 (K2725)	0,25 at 220-240 V	0,92 C- 0,95	20-50	0,35 -1,05 A	60	-25..45/50	85	II, 110
MP 50 SV BI (K2731)	0,55 at 110-127 V							BI, 110
MP 50 SV OF (K2737)	*0,33 at 170-280 V						80	OF
MP 40 SV K3 (K2728)	0,2 at 220-240 V	0,92 C- 0,95	20-40	0,35 -1,05 A	60	-25..45/50	85	II, 110
MP 40 SV BI (K2734)	0,45 at 110-127 V							BI, 110
MP 40 SV OF (K2740)	*0,27 at 170-280 V					-	80	OF

Notes: the Kxxxx can replace the type reference. [1] – 170-280 V is the operative d.c. range at which the product can work; they can be used for centralized emergency installations in the rated 189-250 V. [2] – Rated value at output power greater than 25 W. [3] – tc measured on the top of C16 capacitor for OF models. [4] – II= independent, IP20, class II; BI=built-in with enclosure; OF= built-in without enclosure; 110= overheating protection (C.5.a type) and comply with temperature limit of clause 4.16.2 of IEC 60598-1:2014/AMD1:2017.

Type/s (codes for AM+PWM dimming: 125xxx, codes for AM dimming: 151xxx, codes for BLL: 135xxx)	ac or *dc [1] PRI current [A] at voltage	Power Factor [2]	Output Power (W)	Output Current (A)	U _{out} (V)	ta (°C)	tc (°C) [3]	Use [4]
DC MAXI JOLLY SV (K2996), DC MAXI JOLLY SV DALI (K2997), DC MAXI JOLLY SV DALI NG (K2G69), DC MAXI JOLLY SV MIDNIGHT (K2998), DC MAXI JOLLY SV BILEVEL (K2999), DC MAXI JOLLY SV BILEVEL N (K2A00), DC MAXI JOLLY SV PLV (K2A01), DC MAXI JOLLY SV BLL (K2A02), DC MAXI JOLLY SV BLL EX (K2F17), DC MAXI JOLLY SV ZB3 (K2A03), DC MAXI JOLLY SV CASAMBI (K2F14), DC MAXI JOLLY SV 1-10V S (K2F20), DC MAXI JOLLY SV 1-10V S NG (K2G70)	0,26 at 220-240 V 0,42 at 110-127 V *0,32 at 170-276 V	0,9 C (P _o >21 W) 0,96	18,5-50	0,35 -1,2	60	-25..50	90	II, 110

DC MAXI JOLLY SV BI (K2A05), DC MAXI JOLLY SV DALI BI (K2A06), DC MAXI JOLLY SV DALI BI NG (K2G71), DC MAXI JOLLY SV MIDNIGHT BI (K2A07), DC MAXI JOLLY SV BILEVEL BI (K2A08), DC MAXI JOLLY SV BILEVEL N BI (K2A09), DC MAXI JOLLY SV PLV BI (K2A10), DC MAXI JOLLY SV BLL BI (K2A11), DC MAXI JOLLY SV BLL EX BI (K2F18), DC MAXI JOLLY SV ZB3 BI (K2A12), DC MAXI JOLLY SV CASAMBI BI (K2F15), DC MAXI JOLLY SV 1-10V S BI (K2F21), DC MAXI JOLLY SV BI 1-10V S NG (K2G72)						-25..55		BI, 110
DC MJ SV OF (K2A14), DC MJ SV DALI OF (K2A15), DC MAXI JOLLY SV DALI NG OF (K2G73), DC MJ SV MIDNIGHT OF (K2A16), DC MJ SV BILEVEL OF (K2A17), DC MJ SV BILEVEL N OF (K2A18), DC MJ SV PLV OF (K2A19), DC MJ SV BLL OF (K2A20), DC MJ SV BLL EX OF (K2F19), DC MJ SV ZB3 OF (K2A21), DC MJ SV CASAMBI OF (K2F16), DC MJ SV 1-10V S OF (K2F22), DC MAXI JOLLY SV 1-10V S NG OF (K2G74)						-	80	OF

Type/s (codes for AM dimming: 151xxx)	ac or *dc [1] PRI current [A] at voltage	Power Factor [2]	Output Power (W)	Output Current (A)	U _{out} (V)	ta (°C)	tc (°C) [3]	Use [4]
DC MAXI JOLLY SV WR (K2F23), DC MAXI JOLLY SV DALI WR (K2F24)	0,26 at 220-240 V	0,9 C (Po>26 W)	18,5-50	0,35 -1,2	60	-25..50	90	II, 110
DC MAXI JOLLY SV WR BI (K2F36), DC MAXI JOLLY SV DALI WR BI (K2F37)	0,52 at 100-127 V	0,96						BI, 110
DC MJ SV WR OF (K2F38), DC MJ SV DALI WR OF (K2F39)	*0,32 at 170-276 V					-	80	OF

Notes: the Kxxxx can replace the type reference; 277 V is only for supply in USA. [1] – 170-276 V is the operative d.c. range at which the product can work; they can be used for centralized emergency installations in the rated 189-250 V. [2] – Rated value. [3] – tc measured on the top of C14 capacitor for OF models. [4] – II= independent, IP20, class II; BI=built-in with enclosure; OF= built-in without enclosure; 110= overheating protection (C.5.a type) and comply with temperature limit of clause 4.16.2 of IEC 60598-1:2014/AMD1:2017.

Type/s (codes for AM+PWM dimming: 125xxx, codes for AM dimming: 151xxx)	ac or *dc [1] PRI current [A] at voltage	Power Factor [2]	Output Power (W)	Output Current (A)	U _{out} (V)	ta (°C)	tc (°C) [3]	Use [4]
DC MAXI JOLLY SV 40 (K2A23), DC MAXI JOLLY SV DALI 40 (K2A24), DC MAXI JOLLY SV	0,21 at 220-240 V	0,9 C (Po>21)	18,5-40	0,35 -1,2	60	-25..50	90	II, 110

CASAMBI 40 (K2F11)	0,42 at 110-127 V *0,26 at 170-276 V	W) 0,96								
DC MAXI JOLLY SV 40 BI (K2A26), DC MAXI JOLLY SV DALI 40 BI (K2A27), DC MAXI JOLLY SV CASAMBI 40 BI (K2F12)									-25..55	BI, 110
DC MJ SV 40 OF (K2A29), DC MJ SV DALI 40 OF (K2A30), DC MJ SV CASAMBI 40 OF (K2F13)									-	80 OF

Notes: the Kxxxx can replace the type reference. [1] – 170-276 V is the operative d.c. range at which the product can work; they can be used for centralized emergency installations in the rated 189-250 V. [2] – Rated value. [3] – tc measured on the top of C14 capacitor for OF models. [4] – II= independent, IP20, class II; BI=built-in with enclosure; OF= built-in without enclosure; 110= overheating protection (C.5.a type) and comply with temperature limit of clause 4.16.2 of IEC 60598-1:2014/AMD1:2017.

Type/s (codes for AM+PWM dimming: 123xxx, 125xxx, 127xxx, codes for AM dimming:151xxx, 126xxx**, codes for BLL: 135xxx)	ac or *dc [1] PRI current [A] at voltage	Power Factor [2]	Output Power (W)	Output Parameter	U _{out} (V)	ta (°C)	tc (°C) [3]	Use [4]
DC MAXI JOLLY US (K2931), DC MAXI JOLLY US 24 (K2A96)**, DC MAXI JOLLY US DALI (K2932), DC MAXI JOLLY US MIDNIGHT (K2933), DC MAXI JOLLY US BILEVEL (K2934), DC MAXI JOLLY US BILEVEL N (K2935), DC MAXI JOLLY US PLV (K2936), DC MAXI JOLLY US BLL (K2922), DC MAXI JOLLY US BLL EX (K2F04), DC MAXI JOLLY US ZB3 (K2960), DC MAXI JOLLY US CASAMBI (K2F00), DC MAXI JOLLY US 1- 10V S (K2F07)	0,29 at 220-240 V	0,95 (Po>30 W)	25-60	0,35 -1,05 A 24 V**	90	-25..50 /55 at 40 W 700 mA	90	II, 110
	0,42 at 110-127 V	0,98 (Po>20 W)	25-40					
	*0,38 at 170-276 V		22**					
DC MAXI JOLLY US BI (K2937), DC MAXI JOLLY US 24 BI (K2A96)**, DC MAXI JOLLY US DALI BI (K2938), DC MAXI JOLLY US MIDNIGHT BI (K2939), DC MAXI JOLLY US BILEVEL BI (K2940), DC MAXI JOLLY US BILEVEL N BI (K2941), DC MAXI JOLLY US PLV BI (K2942), DC MAXI JOLLY US BLL BI (K2923), DC MAXI JOLLY US BLL EX BI (K2F05), DC MAXI JOLLY US ZB3 BI (K2961), DC MAXI JOLLY US CASAMBI BI (K2F01), DC MAXI JOLLY US 1-10V S BI (K2F08)						-25..55		BI, 110
DC MJ US OF (K2943), DC MJ US 24 OF (K2A98)**, DC MJ US DALI OF (K2944), DC MJ US MIDNIGHT OF (K2245), DC MJ US BILEVEL OF (K2946), DC MJ US BILEVEL N OF (K2947), DC MJ US PLV OF (K2948), DC MJ US BLL OF (K2924), DC MJ US BLL EX OF (K2F06), DC MJ US ZB3 OF (K2962), DC MJ US CASAMBI OF (K2F02), DC MJ US 1-10V S OF (K2F09)						-	80	OF
Notes: the Kxxxx can replace the type reference. [1] – 170-276 V is the operative d.c. range at which the product can work; they can be used for centralized emergency installations in the rated 189-250 V. [2] – Rated value. [3] – tc measured on the top of C16 capacitor for OF models. [4] – II= independent, IP20, class II; BI=built-in with enclosure; OF= built-in without enclosure; 110= overheating protection (C.5.a type) and comply with temperature limit of clause 4.16.2 of IEC 60598-1:2014/AMD1:2017.								

Type/s (codes for AM+PWM dimming: 127xxx, codes for AM dimming: 151xxx, codes for BLL: 135xxx)	ac or *dc [1] PRI current [A] at voltage	Power Factor [2]	Output Power (W)	Output Current (A)	U _{out} (V)	ta (°C)	tc (°C) [3]	Use [4]
DC MAXI JOLLY HV (K2A32), DC MAXI JOLLY HV DALI (K2A33), DC MAXI JOLLY HV MIDNIGHT (K2A34), DC MAXI JOLLY HV BILEVEL (K2A35), DC MAXI JOLLY HV BILEVEL N (K2A36), DC MAXI JOLLY HV PLV (K2A37), DC MAXI JOLLY HV BLL (K2A38), DC MAXI JOLLY HV BLL EX (K2F25), DC MAXI JOLLY HV ZB3 (K2A39), DC MAXI JOLLY HV CASAMBI (K2F26), DC MAXI JOLLY STREET HV (K2E98), DC MAXI JOLLY HV 1-10V S (K2F27)	0,30 at 220-240 V 0,44 at 110-127 V *0,38 at 170-276 V	0,95 (Po>30 W) 0,98 (Po>20 W)	28-60 28-40	0,25 -0,7	119	-25..50	90	II, 110
DC MAXI JOLLY HV BI (K2A40), DC MAXI JOLLY HV DALI BI (K2A41), DC MAXI JOLLY HV MIDNIGHT BI (K2A42), DC MAXI JOLLY HV BILEVEL BI (K2A43), DC MAXI JOLLY HV BILEVEL N BI (K2A44), DC MAXI JOLLY HV PLV BI (K2A45), DC MAXI JOLLY HV BLL BI (K2A46), DC MAXI JOLLY HV BLL EX BI (K2F28), DC MAXI JOLLY HV ZB3 BI (K2A47), DC MAXI JOLLY HV CASAMBI BI (K2F29), DC MAXI JOLLY STREET HV BI (K2F34), DC MAXI JOLLY HV 1-10V S BI (K2F30)						-25..55		BI, 110
DC MJ HV OF (K2A48), DC MJ HV DALI OF (K2A49), DC MJ HV MIDNIGHT OF (K2A50), DC MJ HV BILEVEL OF (K2A51), DC MJ HV BILEVEL N OF (K2A52), DC MJ HV PLV OF (K2A53), DC MJ HV BLL OF (K2A54), DC MJ HV BLL EX OF (K2F31), DC MJ HV ZB3 OF (K2A55), DC MJ HV CASAMBI OF (K2F32), DC MJ STREET HV OF (K2F35), DC MJ HV 1-10V S OF (K2F33)						-	80	OF
Notes: the Kxxxx can replace the type reference. [1] – 170-276 V is the operative d.c. range at which the product can work; they can be used for centralized emergency installations in the rated 189-250 V. [2] – Rated value. [3] – tc measured on the top of C16 capacitor for OF models. [4] – II= independent, IP20, class II; BI=built-in with enclosure; OF= built-in without enclosure; 110= overheating protection (C.5.a type) and comply with temperature limit of clause 4.16.2 of IEC 60598-1:2014/AMD1:2017.								

Type/s (codes for AM dimming: 152xxx)	ac or *dc [1] PRI current [A] at voltage	Power Factor [2]	Output Power (W)	Output Current (A)	U _{out} (V)	ta (°C)	tc (°C) [3]	Use [4]
DC MAXI JOLLY SV DALI IPR1 (K2E84), DC MAXI JOLLY SV DALI IPR1 LO (K2E85)	0,37 at 220-240 V 0,46 at 110-127 V	0,95 (Po>30 W)	3,5-70 3,5-40	0,35-1,4 [6]	60	-40..55 -40..60	90	II, IP68, 120

IPR1 70/1400 SV (K2E86) IPR1 70/1400 SV LO (K2E87)	*0,45 at 170-276 V		14-70 14-40	1,4			
IPR1 60/1200 SV (K2E88) IPR1 60/1200 SV LO (K2E89)	0,32 at 220-240 V 0,42 at 110-127 V *0,39 at 170-276 V	0,95 (Po>31 W)	12-60 12-40	1,2		-40..60 -40..65	
IPR1 52/1050 SV (K2E90) IPR1 52/1050 SV LO (K2E91)	0,28 at 220-240 V 0,42 at 110-127 V *0,33 at 170-276 V	0,95 (Po>31 W)	10-52 10-40	1,05		-40..70	
IPR1 45/900 SV (K2E92) IPR1 45/900 SV LO (K2E93)	0,25 at 220-240 V 0,42 at 110-127 V *0,29 at 170-276 V	0,95 (Po>31 W)	9-45 9-40	0,9		-40..70	
IPR1 35/700 SV (K2E94) IPR1 35/700 SV LO (K2E95)	0,2 at 220-240 V 0,37 at 110-127 V *0,23 at 170-276 V	0,95 (Po>31 W)	7-35	0,7		-40..70	
IPR1 25/500 SV (K2E96) IPR1 25/500 SV LO (K2E97)	0,16 at 220-240 V 0,26 at 110-127 V *0,18 at 170-276 V	0,85 C- 0,95	5-25	0,5		-40..70	

Notes: the Kxxxx can replace the type reference. LO models are provided of looping on mains, I_{max}= 5 A. [1] – 170-276 V is the operative d.c. range at which the product can work; they can be used for centralized emergency installations in the rated 189-250 V. [2] – Rated value. [3] – tc measured on the enclosure. [4] – II= independent class II; BI=built-in with enclosure; OF= built-in without enclosure; IP68=case with IP68 protection. [6] – The value is according to AOC (Adjustable Output Current) via DALI port with DALI WEB PROGRAMMER (see instructions).

Group 2								
Type/s (codes for AM+PWM dimming: 127xxx)	ac or *dc [1] PRI current [A] at voltage	Power Factor [2]	Output Power (W)	Output Current (A)	U _{out} (V)	ta (°C)	tc (°C) [3]	Use [4]
DC MAXI JOLLY US, DC MAXI JOLLY US DALI	0,29 at 220-240 V 0,42 at 110-127 V *0,38 at 170-276 V	0,95 (Po>30 W) 0,98 (Po>20 W)	25-60 25-40	0,35 -1,05	90	-25..50 /55 at 40 W 700 mA	90	II, 110

Notes: [1] – 170-276 is the operative d.c. range at which the product can work; they can be used for centralized emergency installations in the rated 189-250 V. [2] – Rated value at output power greater than 20/30 W. [3] – tc measured on the case. [4] – II= independent, IP20, class II; 110= overheating protection (C.5.a type) and comply with temperature limit of clause 4.16.2 of IEC 60598-1:2014/AMD1:2017.

Connections

Input supply	PRI	screw terminal block 0,75...2,5 mm ² (for independent models) screwless terminal block 0,5...1,5 mm ² (for BI and OF models) IPR1 models provided with leads wiring J1-J2, J3-J4 (if present) H07RN-F 2x1 mm ²
Input for dimming or control	PUSH L, RED ON, RED OFF, DA, OPERATION, INSULATED 1..10V	screwless terminal block 0,75...1,5 mm ² IPR1 models provided with leads wiring J6-J7 H05RN-F 2x0,75 mm ²
Other controls	ADIM or 1..10V, LEVEL, PUSH LV, NTC, PIR +/-	screw terminal block 0,2...1,5 mm ² IPR1 models provided with leads wirings J13-J14 Style 20233 FT2 2x18AWG
Output reference	PR, NG	screwless terminal block 0,5...1,5 mm ²
Auxiliary voltage	Vaux +/-	screw terminal block 0,2...1,5 mm ²
Syncro	SYNC	connector
Output load	SEC +/-	screw terminal block 0,75...2,5 mm ² (for independent models) screwless terminal block 0,5...1,5 mm ² (for BI and OF models) IPR1 models provided with leads wirings J15-J16 Style 20233 FT2 2x18AWG

Additional information									
Features	Control gear for LED with stabilized output current or voltage (not for all models); multiple value load; short-circuit proof type; short-circuit proof type; impulse withstand category II and III; pollution degree 2; material group IIIa; overheating protection (C.5.a type) and comply with temperature limit of IEC/EN 60598-1; the material of enclosure was tested for Glow-wire at temperature of 750-960 °. Vaux can supply an external fan (12 V, max. 100 mA). The PR connection is for protection of the LED module load. The output can be reduced by NTC control signal (if present) in case of overheating on the LED module. The SYNC port can synchronize other devices as master/slave configuration.								
DC operation	The products were tested in 176-280 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 range 189-250 V. D.c. operation can't be used for DC not used for PUSH L/RED ON/OFF/ OPERATION features. D.c. operation can be allowed with external fuse installed in front of the controlgear for standards different from IEC/EN 61347.								
INSULATION: B= basic, S= supplementary, D= double or reinforced	PRI	PUSH L, RED OFF, RED ON, OPERATION (if present)	DA (if present)	PR (if present)	NG (if present)	INSULATED 1..10V (if present)	SYNC, Vaux, NTC, ADIM or 1..10V, LEVEL, PUSH LV, PIR (if present)	SEC	
PRI	-	-	B	D	D	B	D	D	
PUSH L, RED OFF, RED ON, OPERATION	-	-	B	D	D	B	D	D	
DA (if present)	B	B	-	S	S	-	S	S	
PR (if present)	S	S	S	-	-	S	B	B	
NG (if present)	D	D	S	-	-	S	-	-	
INSULATED 1..10V (if present)	B	B	-	S	S	-	S	S	
SYNC, Vaux, NTC, ADIM or 1..10V, LEVEL, PUSH LV, PIR (if present)	D	D	D	B	-	S	-	-	
SEC	D	D	S	B	-	S	-	-	
ADIM or 1..10V, SYNC, Vaux, NTC, ADIM or 1..10V, LEVEL, PUSH LV, PIR, NG are part of SEC circuit. The OF models have been tested in the same enclosure of built-in models, the safety evaluations must be repeated if they will be assembled in a final luminaire in a different enclosure. 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:									
INSULATION: B= basic, S= supplementary, D= double or reinforced					independent models	BI models	OF models		
Between active parts ↔ external touchable parts					D	B	-		
Between active parts ↔ bottom side of the enclosure					D	D	-		

Assessment to IEC 60598-2-22:2014/AMD1:2017 used in conjunction with IEC 60598-1:2014/AMD1:2017 has been performed (valid for EN 60598-2-22:2014/AMD1:2020 used in conjunction with EN 60598-1:2014/AMD1:2017 and EN 60598-1:2015/A1:2018).	
Assessment to IEC 62493:2015 (valid for EN 62493:2015) has been performed.	
Assessments to VDE 0710 Part 14/04.82 and normally flammable surfaces according to IEC 60598 have been performed with the following limits:	
IPR1 models,	N/A
MP 50 K3, MP 50 PR K3, MP 50 S K3, MP 50 BI, MP 50 PR BI, MP 50 S BI	$t_{c} \leq 70^{\circ}\text{C}$
Other models	$t_{c} \leq 80^{\circ}\text{C}$