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	:	Battery supplied controlgear for emergency lighting
Trade name(s)	:	TCI or TN101
Type(s)/model(s)	:	ELD P2 (series) and ELED (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 61347-2-7:2012 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 4 September 2018 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 81-105565

DEKRA Certification B.V.

drs. G.J. Zoetbrood
Managing Director

Susan Lehner
Certification Manager

ACCREDITED BY THE
DUTCH ACCREDITATION
COUNCIL

PRODUCTS
RvA C 001

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SPECIFICATION OF THE CERTIFIED PRODUCT

Product data

Product	:	Battery supplied controlgear for emergency lighting
Trade name(s)	:	TCI or TN101
Type(s)/model(s)	:	ELD P2 (series) and ELED (series)
Type of load	:	LED modules, power LED
Primary voltage	:	220-240 V
Nature of supply	:	alternate current
Rated frequency	:	50/60 Hz
Primary current	:	From 0,027 to 0,035 A
Class	:	II for independent model
Protection degree	:	IP20 for independent model
Classification	:	Independent, built in, integral

TESTS

Test requirements

EN 61347-2-7:2012
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. 2102645.50 are laid down in DEKRA test file 350033600; they contain 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 battery supplied controlgears used in emergency lighting; all models are for maintained operation with external driver or non-maintained operation; external driver can be supplied by L1, LT and the output (max 2 A, 90 V) is connected to POWER IN terminals. Rest mode is a 7-12 V 0 Hz. HP models have S1 DIP-switch for the load selection.

Primary voltage	220-240 V
Nature of supply	Alternate current
Rated frequency	50/60 Hz
Types of load	Power LED or LED Modules
Type of thermal protection	Electronic thermal protection (C.5.e)
Overheating protection	100 °C for independent and built-in models

Type	Classification	ta [°C]	tc [°C]	Iin [A] (1)	Output (2)	Uout [V]	Battery type	Time duration (7)	Time duration (8)
ELD P2/2 or K8043 (4)	Class II, IP20	0…55	70	0,034	90 mA 30 V 40 mA 68 V	90 (1) 75 (2)	7,2 V 2 Ah NiMH 7,2 V 2,5 Ah NiMH	3 h 3 h	- -
ELD P2 or K8044	Built-in								
ELD P2 OF or K8045	Integral	-	80 (3)						
ELED LP or K8049, ELED LP/1 or K8053 (4)	Class II, IP20	0…55	70	0,027	10-62 mA	90 (1) 75 (2)	7,2 V 1,1 Ah NiMH 7,2 V 1,6 Ah NiCd 7,2 V 2 Ah NiMH	1 h 3 h 3 h	- 2 h 2 h
ELED LP BI or K8050, ELED LP/1 BI or K8054	Built-in								
ELED LP OF or K8051, ELED LP/1 OF or K8055	Integral	-	80 (3)						
ELED HP or K8046, ELED HP/3 or K8057 (4)	Class II, IP20	0…55	75	0,027 (5) 0,035 (6)	15-195 mA (5) 20-214 mA (6)	90 (1) 65 (2)	7,2 V 1,6 Ah NiCd 7,2 V 2 Ah NiMH 7,2 V 4 Ah NiCd 2x3,6 V 4 Ah NiCd 7,2 V 4 Ah NiMH 2x3,6 V 4 Ah NiMH	1 h 1 h 3 h 3 h 3 h 3 h	- 1 h 1,5 h 1,5 h 1,5 h 1,5 h
ELED HP BI or K8047, ELED HP/3 BI or K8058	Built-in								
ELED HP OF or K8048, ELED HP/3 OF or K8059	Integral	-	80 (3)						

Notes: (1) - during normal mode. (2) - during emergency mode. (3) – measured on the top of C13. (4) – Codes 123xxxSV have an enclosure to built-in with double insulation; codes 123xxxK have an additional enclosure for the battery pack. (5) – for 1 h models. (6) – for 3 h models. (7) – After 24 h recharge. (8) – After 12 h recharge.

Battery type	technology	Cell no.	Vnom [V]	Typ. capacity [mAh]	Discharge [mA]	ta [°C]
VHT AAL U ARTS ENERGY	Ni-MH	6	7,2	1,1	660	0...55
VNT Cs U ARTS ENERGY	Ni-Cd	6	7,2	1,6	960	5...55
VHT Cs U ARTS ENERGY	Ni-MH	6	7,2	2,0	1200	0...55
H-SC2500BT Bst Power	Ni-MH	6	7,2	2,5	625	0...50
VNT DH U ARTS ENERGY	Ni-Cd	6	7,2	4,0	1000	5...55
VHT 7/5Cs U ARTS ENERGY	Ni-MH	6	7,2	4,0	1000	0...55

Connections		**ELD P2 models**	**ELED models**
Input charge	N L	Screw-less terminal block 0,5-1,5 mm^2 and screw terminals 0,75-2,5 mm^2 for independent models.	Screw-less terminal block 0,5-1,5 mm^2 and 0,75-1,5 mm^2 for independent models. Models with 123xxxMV have screw terminals 0,75-2,5 mm^2
Supply connection	L1, LT	Screw-less terminal block 0,5-1,5 mm^2 and screw terminals 0,75-2,5 mm^2 for independent models.	Screw-less terminal block 0,5-1,5 mm^2 and 0,75-1,5 mm^2 for independent models. Models with 123xxxMV have screw terminals 0,75-2,5 mm^2
Rest mode	7-12V + -	Screw-less terminal block (0,5-1,5 mm^2)	
Power IN	+ -	Screw-less terminal block (0,5-1,5 mm^2)	
Battery	BATT	Connection device	
Signal LED	J7	Connection device	
Load connection	LED OUT + -	Screw-less terminal block (0,5-1,5 mm^2)	

Additional information

All models fulfil the requirements for: short-circuit proof type; impulse withstand category II; Pollution degree 2 (Normal Pollution); Material group IIIa; recharging device with self-resetting protection; the material of enclosure was tested with favourable result for Glow-wire at temperature 850 °C. All models with the enclosure have a 100 °C overheating protection and comply with temperature limit of clause 4.16.2 of EN 60598-1:04 ("F" triangle marking), EN 60598-1, VDE 0710 T14 ("MM" triangle marking); heating tests have been performed only with the selected battery types at their nominal temperature.

INSULATION (B= basic, S= supplementary, D= double or reinforced)	INPUT CHARGE	L1, LT	SIGNAL LED, BATT	POWER IN, LED OUT	REST MODE
INPUT CHARGE	-	S	D	D	D
L1, LT	S	-	D	D	D
SIGNAL LED, BATT	D	D	-	-	-
POWER IN, LED OUT	D	D	-	-	-
REST MODE	D	D	-	-	-

OF models (printed circuit boards and electrical components) do not have an enclosure; the heating tests have been performed using an enclosure for built-in models (see pictures in Annex 11); they shall comply with the requirements of IEC 60598-1 when built into a luminaire. In the final application the connections shall be according to IEC 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:

INSULATION (B= basic, S= supplementary, D= double or reinforced)	Between live parts and external or bottom of enclosure	Between live parts and standard test finger
ELD P2/2, ELED HP, ELED HP/3, ELED LP, ELED LP/1	D	D
ELD P2/2, ELED HP, ELED HP/3, ELED LP, ELED LP/1 with code 123xxxSV	D	D
ELD P2, ELED HP BI, ELED HP/3 BI, ELED LP BI, ELED LP BI/1	D	B
ELD P2 OF, ELED HP OF, ELED HP/3 OF, ELED LP OF, ELED LP/1 OF	N/A (to be verified in the final application)	