CERTIFICATE ENEC/FI 2017080 M1

Our Ref. 294832-1

Product	Electronic control gear for LED module
Rating and principal characteristics	See page 2
Trade mark (if any)	Helvar
Type	LL1x150-CR-DA, LL1x150-CR Active+, LL1x110-CR-DA, LL1x110 Active+, LL1x110-CR Active+, LL1x80-CR-DA, LL1x80-CR Active+ LL1x23-80-CR-DA, LL1x23-80 Active+, LL1x80-DA-350-700, LL1x80-350-700 Active+, LL1x10-42 Active+ LL1x10-42-CR-DA, LL1x10-42-CR Active+
Name and address of the licensee and the manufacturer	Helvar Oy Ab Keilaranta 5 FI-02150 ESPOO, FINLAND
Is in conformity with	EN 61347-2-13:2014 + A1:2017 EN 61347-1:2015 EN 62384:2006 + A1:2009
As shown in the Test Report(s) No(s)	289530-1A, 289530-1B, 289530-1A Amendment-1
It is authorized to use of the marks	ENEC 16 and FI
Validity	This certificate is valid until 08 December 2022 provided that the Conditions for ENEC and FI certification are met. This certificate includes the right to use the ENEC 16 and FI mark under the condition that product changes (if any) will be approved at SGS Fimko before the product is brought onto market.
Directive information	The certified product(s) fulfils requirements of above mentioned standard(s) which are harmonised under the Low Voltage Directive (2014/35/EU) at the date of issue of the certificate.
With the following limitations	-
Date of issue	17 December 2018
	SGS Fimko Ltd
Signature	Joonas Leinonen Specialist

This certificate has 3 pages

FINAS
Finnish Accreditation Service
S003 (EN ISO/IEC 17065)

Additional information

This certificate replaces previous ENEC/FI certificate no. 2017080 A1, dated 02 May 2018.
New alternative capacitor C2, new PCB layout and updated circuit diagram for model LL1x150-CR-DA.
Name of the factory 3 has been updated.

Rating and principal characteristics

LL1x150-CR-DA, LL1x150-CR Active+:
220-240 V; 0/50-60 Hz; Iout/Vout: 350 mA / 257...350 V or 700 mA /128...214 V; λ 0,98; U-OUT: 400 V; Prated: 150 W; ta: -25...+50 °C; tc: 80 °C

LL1x110-CR-DA, LL1x110-CR Active+:
220-240 V; 0/50-60 Hz; Iout/Vout: 350 mA / 120...314 V or 700 mA / 50...157 V; λ 0,98; U-OUT: 400 V; Prated: 110 W; ta: -25...+50 °C; tc: 75 °C

LL1x80-CR-DA, LL1x80-CR Active+:
220-240 V; 0/50-60 Hz; Iout/Vout: 350 mA / 50...220 V or 700 mA / 35...114 V; λ 0,98; U-OUT: 250 V; Prated: 80 W; ta: -20...+50 °C; tc: 75 °C

LL1x23-80-CR-DA, LL1x23-80 Active+:
220-240 V; 0/50-60 Hz; Iout/Vout: 150 mA / 150...350 V or 350 mA / 64...228 V; U-OUT 400 V; Prated 80 W; λ 0.98; tc +75 °C; ta -25...+50 °C; EL-marked

LL1x80-DA-350-700, LL1x80-350-700 Active+:
220-240 V; 0/50-60 Hz; Iout/Vout: 350 mA / 71...228 V or 700 mA / 35...114 V; U-OUT 400 V; Prated 80 W; λ 0.98; tc +75 °C; ta -20...+50 °C; EL-marked

LL1x10-42 Active+:
220-240 V; 0/50-60 Hz; Iout/Vout: 120 mA / 80...350 V or 350 mA / 50...120 V; λ 0,98; U-OUT: 400 V; Prated: 42 W; ta: -20...+50 °C; tc: 75 °C

LL1x10-42-CR-DA, LL1x10-42-CR Active+:
220-240 V; 0/50-60 Hz; Iout/Vout: 120 mA / 80...220 V or 350 mA / 50...120 V; λ 0,98; U-OUT: 250 V; Prated: 42 W; ta: -25...+50 °C; tc: 75 °C

LL1x110 Active+:
220-240 V; 0/50-60 Hz; Iout/Vout: 350 mA / 120...314 V or 700 mA / 50...157 V; λ 0,98; U-OUT: 400 V; Prated: 110 W; ta: -20...+50 °C; tc: 75 °C

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Manufacturing site(s)

1. Helvar Oy Ab
Yrittäjäntie 23
FI-03600 Karkkila
Finland

JKE