

# CERTIFICATE ENEC/FI 2017080 M1



Our Ref. 294832-1

<b>Product</b>	Electronic control gear for LED module
<b>Rating and principal characteristics</b>	See page 2
<b>Trade mark (if any)</b>	Helvar
<b>Type</b>	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+
<b>Name and address of the licensee and the manufacturer</b>	Helvar Oy Ab Keilaranta 5 FI-02150 ESPOO, FINLAND
<b>Is in conformity with</b>	EN 61347-2-13:2014 + A1:2017 EN 61347-1:2015 EN 62384:2006 + A1:2009
<b>As shown in the Test Report(s) No(s)</b>	289530-1A, 289530-1B, 289530-1A Amendment-1
<b>It is authorized to use of the marks</b>	ENEC 16 and FI
<b>Validity</b>	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.
<b>Directive information</b>	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.
<b>With the following limitations</b>	-
<b>Date of issue</b>	17 December 2018

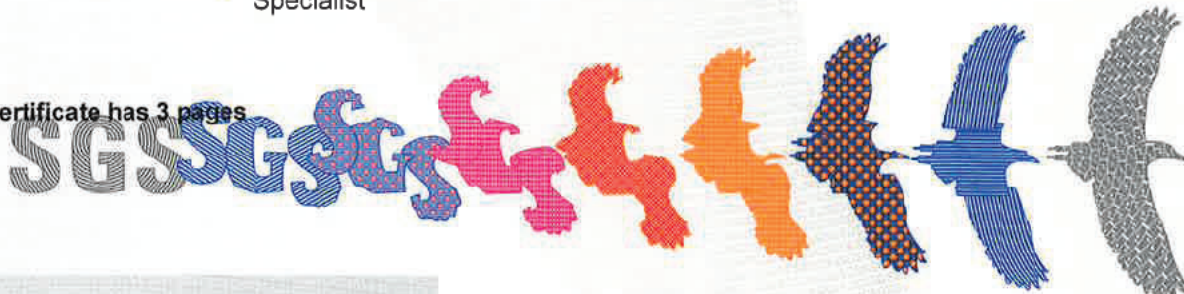
**SGS Fimko Ltd**

**Signature**

Joonas Leinonen  
Specialist



This certificate has 3 pages



This certificate is issued by the company under its General Conditions for Certification Services accessible at <http://www.sgs.fi/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitations of liability defined therein and in the Test Report here above mentioned which findings are reflected in this certificate. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



**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;  $\lambda$  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;  $\lambda$  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;  $\lambda$  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;  
 $\lambda$  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;  
 $\lambda$  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;  $\lambda$  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;  $\lambda$  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;  $\lambda$  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  
Yrittäjätie 23  
FI-03600 Karkkila  
Finland