

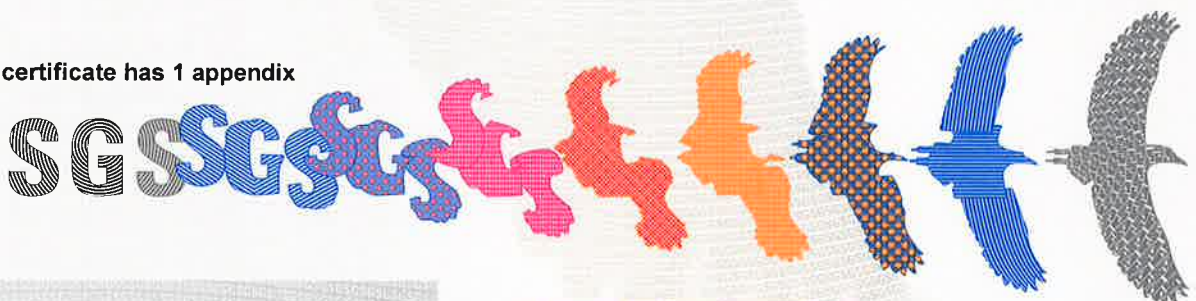
# CERTIFICATE FI 29613



Our Ref. 283774-3

<b>Product</b>	Optocoupler
<b>Type</b>	KAQY214S, KAQV214S, KAQW214S, KAQY210S, KAQY414S, KAQV210S, KAQV414S, KAQW210S, KAQW414S, KAQW614S, KAQW210TS, KAQV210, KAQV214, KAQV414, KAQV414A, KAQV210A, KAQV214A, KAQW210, KAQW214, KAQW414, KAQW210A, KAQW214A, KAQW414A, KAQW614, KAQW614A, KAQY210, KAQY210A, KAQY210B, KAQY210AB, KAQY214, KAQY214A, KAQY414, KAQY414A, KAQV212, KAQV212A
<b>Trade mark</b>	<b>cosmo</b>
<b>Certificate Holder / Manufacturer</b>	Cosmo Electronics Corporation 8F, No. 258, Lian Cheng Rd., Chung-Ho Dist. NEW TAIPEI CITY 235, TAIWAN
<b>Technical information</b>	Operating temperature: max. 85 °C OVC II: max. 250 Vrms / 420 Vpeak, reinforced insulation
<b>Other information</b>	See Appendix
<b>The product is certified according to the following standard(s)</b>	EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013 EN 60065:2014
<b>Validity</b>	This certificate is valid until 06 July 2021 provided that the Conditions for FI certification are met. This certificate includes the right to use the FI mark under the condition that product changes (if any) will be approved at SGS Fimko before the product is brought onto market.
<b>Date of issue</b>	06 July 2016
<b>Signature</b>	<b>SGS Fimko Ltd</b>  Tom Törn Director, Certification Services

This certificate has 1 appendix



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.

**Manufacturing sites**

Cosmo Electronics Corporation  
 No.396, Lupu Rd.  
 Dongshan Township  
 Yilan County 269  
 TAIWAN

Cosmo Electronics Corporation  
 No.16, Ziqiang Rd.  
 Dongshan Township  
 Yilan County 269  
 TAIWAN

Cosmo Electronics Technology Kunshan Co.,Ltd  
 No. 339, Qing Yang Highway  
 Zhoushi Town, Kunshan  
 JIANSU 215300  
 CHINA

**Additional information**



The lead form of the model is specified in the model name by the following:

Surface mount type: "A" in the model name  
 Small outline for surface mount type: "S" in the model name  
 Dual-in-line type: all the rest

The optocouplers without<sup>1)</sup> internal clearance and creepage distance have been evaluated to be connected between primary circuit connected to the a.c. supply mains and secondary circuit connected to SELV.

<sup>1)</sup> Thermal cycling according to EN 60950-1:2006 clause 2.10.9 has been carried out with ten times the following sequence: 68 h at 110 °C / 1 h at 25 °C / 2 h at 0 °C / 1 h at 25°C. Thermal cycling was followed by humidity conditioning of 2.9.2 for 48 h at (29 ± 2) °C, (93 ± 3) %rH. Optocouplers have been subjected to the electric strength test of 2.10.11 at 4800Va.c. for 1 minute after treatment of 2.10.9 and after 2.9.2. No breakdown of insulation was observed.

Operating temperature: max. 85 °C

Minimum external clearance and creepage distance:

- SOP package: 5,9 mm
- SMD package: 7,7 mm
- DIP package: 7,9 mm

After judgement from case to case, the optocouplers may also bridge functional, basic, supplementary or reinforced insulation, or may be used in other environments, provided that the ratings are not exceeded in normal operation.

This certificate replaces the FI certificate No. 25799 A1, dated 29 May 2013, due to the updated versions of the standards EN 60950-1 and EN 60065.

 As shown in the Test Report(s) No(s): 283774-3



# CERTIFICATE FI 29614

Our Ref. 283774-4

**Product** Optocoupler

**Type** Group A: KAQV217, KAQV217A, KAQW212, KAQW212A, KAQW217, KAQW217A, KAQY212, KAQY212A, KAQY217, KAQY217A  
 Group B: KAQV212S, KAQV217S, KAQW212S, KAQW217S, KAQY212S, KAQY212SE, KAQY217S, KCP1008, KCP1017

**Trade mark** **cosmo**

**Certificate Holder / Manufacturer** Cosmo Electronics Corporation  
 8F, No. 258, Lian Cheng Rd., Chung-Ho Dist.  
 NEW TAIPEI CITY 235, TAIWAN

**Technical information** Operating temperature: max. 85 °C  
 Group A: OVC II, max. 250 Vrms / 420 Vpeak, reinforced insulation  
 Group B: OVC II, max. 250 Vrms / 420 Vpeak, basic or supplementary insulation

**Other information** See Appendix

**The product is certified according to the following standard(s)** EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013  
 EN 60065:2014

**Validity** This certificate is valid until 06 July 2021 provided that the Conditions for FI certification are met. This certificate includes the right to use the FI mark under the condition that product changes (if any) will be approved at SGS Fimko before the product is brought onto market.

**Date of issue** 06 July 2016

**SGS Fimko Ltd**

**Signature**

Tom Törn  
 Director, Certification Services

This certificate has 1 appendix



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.

**Manufacturing sites**

Cosmo Electronics Corporation  
No.396, Lupu Rd.  
Dongshan Township  
Yilan County 269  
TAIWAN

Cosmo Electronics Corporation  
No.16, Ziqiang Rd.  
Dongshan Township  
Yilan County 269  
TAIWAN

Cosmo Electronics Technology Kunshan Co.,Ltd  
No. 339, Qing Yang Highway  
Zhoushi Town, Kunshan  
JIANSU 215300  
CHINA

**Additional information**



The lead form of the model is specified in the model name by the following:

Surface mount type: "A" in the model name  
Small outline for surface mount type: "S" and all other in Group B  
Dual-in-line type: models without "A" in Group A

The optocouplers without<sup>1)</sup> internal clearance and creepage distance have been evaluated to be connected between primary circuit connected to the a.c. supply mains and secondary circuit connected to SELV.

<sup>1)</sup> Thermal cycling according to EN 60950-1:2006 clause 2.10.9 has been carried out with ten times the following sequence: 68 h at 110 °C / 1 h at 25 °C / 2 h at 0 °C / 1 h at 25°C. Thermal cycling was followed by humidity conditioning of 2.9.2 for 48 h at (29 ± 2) °C, (93 ± 3) %rH. Optocouplers have been subjected to the electric strength test of 2.10.11 at 4800Va.c. (Group A) or 2400 Va.c. (Group B) for 1 minute after treatment of 2.10.9 and after 2.9.2. No breakdown of insulation was observed.

Operating temperature: max. 85 °C

Minimum external clearance and creepage distance:

- Group A: 7,7 mm
- Group B: 5,9 mm

After judgement from case to case, the optocouplers may also bridge functional, basic, supplementary or reinforced insulation, or may be used in other environments, provided that the ratings are not exceeded in normal operation.

This certificate replaces the FI certificate No. 25803 A1, dated 29 May 2013, due to the updated versions of the standards EN 60950-1 and EN 60065.

**As shown in the Test Report(s) No(s):** 283774-4

