



# CERTIFICATE FI/41193

Our Ref. HEL-CERT210600588-02



**Product** Optocoupler

**Type** KAQV210, KAQV210A, KAQV210S, KAQV212, KAQV212A, KAQV214, KAQV214A, KAQV214S, KAQV414, KAQV414A, KAQV414S, KAQW210, KAQW210A, KAQW210S, KAQW210TS, KAQW214, KAQW214A, KAQW214S, KAQW414, KAQW414A, KAQW414S, KAQW614, KAQW614A, KAQW614S, KAQY210, KAQY210A, KAQY210B, KAQY210AB, KAQY210S, KAQY214, KAQY214A, KAQY214S, KAQY414, KAQY414A, KAQY414S

**Trademark** 

**Certificate Holder** Cosmo Electronics Corporation  
8F., No. 258, Lian Cheng Rd., Chung-Ho Dist., New Taipei City 235, Taiwan

**Technical information** Environment temperature: max. 85 °C  
SMD and DIP package: Max. 250V AC mains / OVC III / MG IIIa/IIIb / PD2, reinforced insulation  
SOP package: Max. 150V AC mains / OVC II or 250V AC mains / OVC I: MG IIIa/IIIb / PD2, reinforced insulation

**Other information** -

**The product is certified according to the following standard(s)** EN IEC 62368-1:2020 + A11:2020  
EN 60601-1:2006 + A1:2013 + A12:2014

**Validity** This certificate is valid until 22.10.2026 provided that the Conditions for FI certification are met. This certificate includes the right to use the FI mark under the condition that changes (if any) will be checked at SGS Fimko before the product is brought onto market and that the conditions for FI certification are met.

**Date of issue** 22.10.2021

**SGS Fimko Ltd**

**Signature**



Tom Törn  
Certification Director

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<b>Manufacturer</b>	Cosmo Electronics Corporation 8F., No. 258, Lian Cheng Rd., Chung-Ho Dist., New Taipei City 235, Taiwan
<b>Manufacturing site</b>	<ol style="list-style-type: none"> <li>1. COSMO Electronics Corporation. No.396, Lu-Pu Road, Dong-Shan Hsiang 269, I-Lan Hsien, Taiwan</li> <li>2. COSMO Electronics Corporation. No. 16 Tsu-Chen Road, Dong-Shan Hsiang 269, I-Lan Hsien, Taiwan</li> <li>3. Cosmo Electronics Technology Kunshan Co., Ltd. No. 339, Qing Yang Highway, Zhoushi Town Kunshan, 215300, Jiangsu, China</li> </ol>
<b>Directive information</b>	The certified product(s) fulfils requirements of mentioned standard(s) which are harmonised under the Low Voltage Directive (2014/35/EU) at the date of issue of the certificate.
<b>Additional information</b>	<p>The lead form of the model is specified in the model name by the following:</p> <p>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</p> <p>According to standard EN IEC 62368-1:2020/A11:2020 optocoupler used as safeguard shall comply with the requirements of clause 5.4 or Annex G.12 for optocouplers which requires component to fulfill standard IEC 60747-5-5 2007. In addition, the type testing voltage Vini,a and routine testing voltage Vini,b shall be at least equal to the appropriate test voltage in EN IEC 62368-1:2020/A11:2020 clauses 5.4.9.1 and 5.4.9.2.</p> <p>Models have been tested and certified by VDE certificate Ref. No. VDE 40053989 according to the standard EN 60747-5-5:2011+A1:2015. The used test voltages for Vini,a and Vini,b are</p> <ul style="list-style-type: none"> <li>- SMD and DIP package: 6000 Vpeak</li> <li>- SOP package: 2122 Vpeak</li> </ul> <p>Minimum external clearance and creepage distance:</p> <ul style="list-style-type: none"> <li>- SOP package: 5,9 mm</li> <li>- SMD package: 7,7 mm</li> <li>- DIP package: 7,9 mm</li> </ul> <p>Operating temperature: 85 °C max.</p>



**Additional information**

For ITAV applications, based on test voltages, optocouplers can be used in implementation where required withstand voltage is SMD and DIP package 4kVp/(reinforced AC mains max. 250 V/OVC III) SOP package max. 1,5 kVp/(reinforced AC mains max. 150 V/OVC II or 250 V/OVC I).

Complying other insulation requirements construction of the optocouplers, final assembly as well as environmental conditions shall be considered.

For medical applications according to standard EN60601-1:2006 + A1:2013 + A12:2014 insulation requirements shall be considered case by case (e.g. operator/patient interface). Opto-couplers complying with IEC 60747-5-5:2007, or a later edition, are considered equivalent to the requirements of 8.8.2 and 8.9.3.

This certificate replaces the previous Certificate FI/41103, dated 8 June 2021, due to standard update.

**As shown in the Test Report(s) No(s):** HELES2106000614-1