



CERTIFICATE NCS/FI 23149 A3

Our Ref. 271518-10

Product Optocoupler

Type KP1010, KP1020, KP1040, KP2010, KP3010, KP3020, KP3040, KP4010, KP4020, KP4040, KP5010, KP6010, K1010, KP1110, K2010, K3010, K1010L

Trade mark COSMO or

Certificate Holder Cosmo Electronics Corporation
8F, No. 258, Lian Cheng Rd., Chung-Ho, TAIPEI HSIEN 235, TAIWAN

Manufacturer Cosmo Electronics Corp.
No. 396, Lupu Rd., TungShan Village, I-LAN HSIEN 269, TAIWAN

Technical information DIP, SMD and H and L types of pins.
Operating temperature 115 °C.

Other information Marking: Without 'K' or 'KP' on the type number.

The product is certified according to the following standard(s) EN 60065:2002 + A1:2006 + A11:2008 + A2:2010 + A12:2011

Validity This certificate is valid until 29 May 2018 unless the standard in question has been amended or superseded with significant changes in requirements, in which case, SGS Fimko has the right to shorten the validity of the certificate based on the legislation of the European Union. 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 29 May 2013

SGS Fimko Ltd

Signature

Matti Huttunen
Certification Engineer



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 site(s)

Cosmo Electronics Corporation
No. 396, Lupu Rd.
TungShan Village
I-LAN HSIEN 269
TAIWAN

Cosmo Electronics Corporation
No. 16, Tzu-Chen Rd.
Tung-Shan Town
I-LAN HSIEN 269
TAIWAN

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

Additional information

The product has been tested with relevant parts of standard
EN 60065:2002 + A1:2006 + A11:2008 + A2:2010 + A12:2011

For all types mentioned in this certificate:

Reinforced insulation for mains voltage max. 250 Vrms/420 V peak, OVC II, external PD2, internal PD1, 2000 m.

Internal creepage distances between input and output are more than 4 mm; measured a minimum of 5.3 mm.

External creepage distances between input and output are more than 5 mm; measured a minimum of 8.0 mm.

External clearance distances between input and output are more than 4 mm; measured a minimum of 8.0 mm.

Distance through insulation between input and output is more than 0.4 mm; measured a minimum of 0.5 mm.

Insulation between input and output withstands electric strength test of 3 000 V/1 minute, it withstands even electric strength test of 5 000 V/1 minute.

Enclosure of the component withstands electric strength test of 1 500 V/ 1 minute between pins of input and enclosure and it fulfils the requirement of the basic insulation.

Enclosure is made of class V-0 material.

After judgement from case to case, the optocouplers can bridge basic, supplementary or reinforced insulation, provided that the ratings in data sheet are not exceeded in normal operation or under fault conditions in the appliance.

This certificate replaces previous NCS/FI Certificate 23149 A2
Dated 20 April 2010 due to standard update: EN60065/A2:2010 + A12:2011.

Is based on test / Our ref.

245292-1, 245292-1 Amendment -1, 245292-1 Modification -1,
245292-1 Amendment -2, 245292-1 Amendment -3.

Supplement to Certificate: **NCS/FI 23149 A3**

Internal ref.
271518-10

29 May 2013

NORDIC CERTIFICATION SERVICE

We hereby confirm that the product(s) appearing from the certificate with above certificate reference also comply(ies) with requirements for secondary certification in the following countries: Sweden

NOTIFICATION

Certificate holder for Sweden	Cosmo Electronics Corporation 8F, No. 258, Lian Cheng Rd., Chung-Ho TAIPEI HSIEN 235, TAIWAN Attn. Mr. Nicholas Nio (nicholas@cosmo-ic.com)
	Please send the invoice and the certificate directly to licence holder.
Safety standard(s) applied	EN 60065:2002 + A1:2006 + A11:2008 + A2:2010 + A12:2011
Deviations	Not applicable
EMC requirements	-
The assignment is based on	Testing in own premises.
Limitations or reservations regarding the testing / examination performed	None
Certification marks	Affixing of the certification mark(s) of the Nordic body(ies) on the product must not take place before notice about national certification is received from the individual body.
Production surveillance	Will be carried out by SGS Fimko according to agreed procedures.
Other information	Copy of the certificate, this Notification and other agreed documentation are transferred directly from SGS Fimko to SEMKO.
Test samples must be submitted to the secondary body(ies)	No
Date of issue	29 May 2013

This Notification may be challenged if it is more than 3 years old.

SGS Fimko Ltd

Signature

Matti Huttunen
Certification Engineer



CERTIFICATE NCS/FI 24584 A2

Our Ref. 271518-8

Product	Optocoupler
Type	KP1010, KP1020, KP1040, KP2010, KP3010, KP3020, KP3040, KP4010, KP4020, KP4040, KP5010, KP6010, K1010, KP1110, K2010, K3010, K1010L
Trade mark	COSMO or
Certificate Holder	Cosmo Electronics Corporation 8F, No. 258, Lian Cheng Rd., Chung-Ho, TAIPEI HSIEN 235, TAIWAN
Manufacturer	Cosmo Electronics Corp. No. 396, Lupu Rd., TungShan Village, I-LAN HSIEN 269, TAIWAN
Technical information	Operating temperature max. 100 °C, PD2, 2000 m and CTI IIIb assumed.
Other information	Marking: Without 'K' or 'KP' on the type number.
The product is certified according to the following standard(s)	EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 EN 60335-1:2012
Validity	This certificate is valid until 31 May 2018 unless the standard in question has been amended or superseded with significant changes in requirements, in which case, SGS Fimko has the right to shorten the validity of the certificate based on the legislation of the European Union. 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	31 May 2013
Signature	SGS Fimko Ltd Matti Huttunen Certification Engineer



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 site(s)

Cosmo Electronics Corporation
No. 396, Lupu Rd.
TungShan Village
I-LAN HSIEN 269
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No. 339, Qing Yang Highway
Zhoushi Town, Kunshan
JIANSU 215300
CHINA

Additional information

The optocouplers have been evaluated to be connected between primary circuit connected to the a.c. supply mains and secondary circuit connected to SELV as indicated in the test report.

Thermal cycling test has been carried out ten times at 100 °C / 25 °C / 0 °C / 25 °C. For two optocouplers the test was followed by a humidity treatment for 48 h at (29 ± 2) °C, (93 ± 2) %rH. After the above mentioned treatment all optocouplers have been subjected to an electric strength test of 4800 V a.c. for 1 min at elevated temperature or humidity respectively. No breakdown of insulation was observed.

According to EN 60335-1:2002+A11:2004+ A1:2004+A12:2006+A2:2006 following additional test has been carried out for one optocoupler: High temperature treatment at 150 °C for 48 h followed by a 3000 V a.c. high voltage test at 150 °C and after cooling down to room temperature.

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

This certificate replaces previous NCS/FI certificate 24584 A1, dated 21 April 2010 due to standard updates:
EN 60950-1/A12:2011 and EN 60335-1:2012

Is based on test / Our ref.

252843-1; 252843-1 Amendment-1, 252843-1 Amendment-2

Supplement to Certificate: NCS/FI 24584 A2

Internal ref.
271518-8

31 May 2013

NORDIC CERTIFICATION SERVICE

We hereby confirm that the product(s) appearing from the certificate with above certificate reference also comply(ies) with requirements for secondary certification in the following countries: Sweden

NOTIFICATION

Certificate holder for Sweden	Cosmo Electronics Corporation 8F, No. 258, Lian Cheng Rd., Chung-Ho TAIPEI HSIEN 235, TAIWAN Attn. Mr. Nicholas Nio (nicholas@cosmo-ic.com) Please send the invoice and the certificate directly to licence holder.
Safety standard(s) applied	EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 EN 60335-1:2012
Deviations	Not applicable
EMC requirements	-
The assignment is based on	Testing in own premises.
Limitations or reservations regarding the testing / examination performed	None
Certification marks	Affixing of the certification mark(s) of the Nordic body(ies) on the product must not take place before notice about national certification is received from the individual body.
Production surveillance	Will be carried out by SGS Fimko according to agreed procedures.
Other information	Copy of the certificate, this Notification and other agreed documentation are transferred directly from SGS Fimko to SEMKO.
Test samples must be submitted to the secondary body(ies)	No
Date of issue	31 May 2013

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SGS Fimko Ltd

Signature



Matti Huttunen
Certification Engineer