

CERTIFICATE

No. U8V 05 06 56232 002



Holder of Certificate: Analog Devices, Inc.

804 Woburn Street
Wilmington MA 01887
USA

Production Facility(ies): 56024

Certification Mark:



Product: Transferring units
Multiple Channel Digital Isolators

Model(s): ADuM130 (3 channel digital isolator)
ADuM140 (4 channel digital isolator)
The above model numbers can also be provided with alphanumeric suffixes which indicate options that do not affect safety.

Parameters:

Reinforced Isolation:	2704 Vrms
Rated Input Voltage:	400 Vrms
Rated Input Current:	10 µA Max.
Rated Output Current:	22 mA Max.

Tested according to: CSA C22.2.61010.1:2004
UL 61010-1:2004
EN 61010-1:2001/IEC 61010-1:2001

The product was voluntarily tested according to the relevant safety requirements and mentioned properties. It can be marked with the certification mark shown above. See also notes overleaf.

Test report no.: DI501436-101

Date, 2005-06-17

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Aufbauübersicht für Elektrogeräte und Maschinen

Data form for electrical equipment and machinery



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Auftraggeber / Applicant:	Analog Devices, Inc., 804 woburn Street, Wilmington, MA 01887 USA		
Fertigungsstätte / Production facility: 56024	Analog Devices Gen. Trias, Gateway Business Park, Javalera, Geb. Trias, Cavite Philippines		
Geräteart / Type of equipment:	Multiple Channel Digital Isolators		
Typenbezeichnung / Type/model:	ADuM130 (3 channel digital isoaltor) ADuM140 (4 channel digital isoaltor) The above model numbers can also be provided with alphanumeric Suffixes which indicate options that do not affect safety.		
Seriennr. / Serial no.:	-		
Nennspannung/Frequenz / Rated voltage/frequency:	400 Vrms , 2704 Vrms Reinforced Isoaltion		
Nennaufnahme/Nennstrom / Rated input power/current:	10µA Max.		
Anschlußdaten-Hydraulik: / Connection to hydraulic power:	-		
Anschlußdaten-Pneumatik / Connection to pneumatic power:	-		
Anschlußdaten-Wasser / Connection to waterinstallation:	-		
Gewicht / weight:	>1 Kg		
Ausführung / Construction:	Ortsfest	Stationary	N/A
	Ortsveränderlich	Portable	N/A
	Handgerät	Hand-held	N/A
	Einbaugerät	Open-frame	N/A
Schutzklasse / Protection class:	Schutzklasse I:	Schutzleiteranschluß	PE-connection
	Schutzklasse II:	Schutzisoliert	Double insulation
	Schutzklasse III:	Schutzkleinspannung/ interne Stromversorgung	SELV/internally powered
Schutzart / Degree of protection against liquids:	IP		N/A
Anschlußart / Supply connection:	Feste Anschlußleitung	Non detachable cord	N/A
	Fester Anschluß	Permanent connection	N/A
	Gerätesteckvorrichtung	Appliance inlet	N/A
Netzbetriebsart / Rated operation:	Dauerbetrieb	Continuous operation	<input checked="" type="checkbox"/>
	Aussetzbetrieb	Intermittent operation	<input type="checkbox"/>
	Kurzzeitbetrieb	Short time operation	<input type="checkbox"/>

Material: a) Gehäuse/Enclosure N/A
b) Leiterplatten/p.c.b. N/A

Zusätzliche Angaben für Laser, Klassifizierung nach EN 60825/Additional information for Laser equipment, classification according to EN 60825

Klasse/Class:

Wellenlänge/Wavelength:

Pulsdauer/Pulse duration:

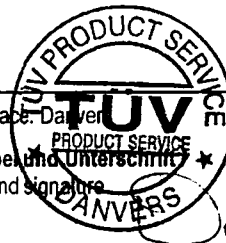
Prüfbericht Nr. / Test Report No.: DI501436-101

Ort / place: Datteln

Datum / date: 6/17/05

Projektleiter / Project manager: David Dorfner

Stempel und Unterschrift
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Sicherheitsrelevante Bauteile: (Schalter, Temperaturregler, Heizkörper, Stecker, Fassungen, Leitungen, Kondensatoren, Motoren und sonstige Wicklungen z.B. Transformatoren, Magnetspulen)
(Not-Aus Geräte, 2-Handsteuerungen, Verriegelungsschalter, Sicherheits-Lichtschranken, Sicherheitsventile, Programmierbare Steuerungen-SPS, hydraulische Steuerungen, pneumatische Steuerungen)
Safety relevant components: (switch, temperature regulator, heating element, plug, socket, wiring, capacitor, motors and other components with windings e.g. transformers, coils)
(emergency off devices, 2-hand-control-devices, interlock switches, safety light barriers, safety valves, programmable electronic controllers -PLC, hydraulic controllers, pneumatic controllers)

Bauteil/ Kind of component	Hersteller/ Manufacturer	Angaben über Typ, Stromstärke, Leistung, Transformatorspezifikationsnummer, Isolationsklasse/ Information about type, current, power, transformer specification number, insulating class	Prüfzeichen von Test mark from (VDE, BSI, UL etc.)
Case (Outer Compound)	Sumitomo Bakelite Co. Ltd.	#EME-6600H, Epoxy Molding Compound, UL94V-0 min.	UL
Insulation Compound (Provides isolation between driver and receiver circuits)	Asahi Kasei Corporation	#8124, Polyimide (Provides isolation between driver and receiver circuits) This compound is spin coated and cured in 2 separate layers with the first layer measured after deposition and the second layer subsequently deposited to maintain a specified minimum total thickness of 0.017 mm.	Tested in device
Lead Frame	-	Solder Plated Copper Alloy	Tested in device

Prüfbericht Nr. / Test Report No.: DI501436-101

Projektleiter / Project manager: David Dorfner

Ort/place: Danvers

Stempel und Unterschrift /
Seal and signature



Datum / date: 6/17/05

Technical Report No. DI501436-101

Rev. 1

Dated 2005-06-15

Client: Analog Devices, Inc.
804 Woburn Street
Wilmington, MA 01887 USA

Ronn Kliger

Manufacturing place: Analog Devices Gen. Trias
Gateway Business Park
Javalera, Geb. Trias, Cavite
Philippines

Test subject: ADuM130 (3 channel digital isolator)
ADuM140 (4 channel digital isolator)
The above model numbers can also be provided with alpha-numeric suffixes which indicate options that do not affect safety.
Multiple Channel Digital Isolators

Test specification: EN 61010-1: 2001 (2nd Edition)
IEC 61010-1: 2001 (2nd Edition)
UL 61010-1:2004
CSA C22.2.61010.1:2004

Purpose of examination: Test according to the test specification.

Test result: *positive:* The test subject was found to be in compliance with

- the mentioned test specification

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1 Description of the test subject

1.1. Function

Manufacturer's specification for intended use:

The devices under consideration are multiple channel digital isolators combining high speed CMOS and monolithic air core transformer technology. These isolating components act much like optocoupler devices without the use of LED's and photodiodes. These devices provide four independent isolation channels in a variety of channel configurations and data rates. All models operate with the supply voltage on either side ranging from 2.7V to 5.5V, providing compatibility with lower voltage systems as well as enabling a voltage translation functionality across the isolation barrier.

These are component level devices intended for building-in. They are not directly connected to mains. The entire package is molded over. This molding does not provide internal distance through insulation so TÜV America has performed 30 day thermal cycling as required by the applicable standard. The reinforced isolation voltage is 2704Vrms and has been verified by TÜV America.

Manufacturer's specification for predictive misuse:

No restrictions provided.

1.2 Technical Data

2704Vrms Reinforced Isolation, 400Vrms, 10 μ A Max. Input Current, 22mA Max. Output Current

2. Order

2.1 Date of Purchase Order, Customer's Reference

2005-03-21

2.2 Receipt of Test Sample, Location

2005-03-29

2.3 Date of Testing

2005-03-29 Through 2005-04-29

2.4 Location of Testing

TÜV America, 5 Cherry Hill Drive, Danvers, MA 01923 USA

2.5 Points of Non-compliance or Exceptions of the Test Procedure

None.

3. Test Results

3.1 Positive Test Results

- Electrical safety

EN 61010-1: 2001 (2nd Edition)
IEC 61010-1: 2001 (2nd Edition)
UL 61010-1:2004
CSA C22.2.61010.1:2004

3.2 Points of non-compliance according to the test specification

None.

4. Remark 4.1 Remarks to Factory

The assembly of the product has to comply with the documentation (CDF). Before the implementation of safety relevant modifications to the product into the ongoing production the product must be assessed for acceptance. The results must be implemented to the documentation and if necessary the certificate must be updated. The final inspections in the production are described in the IEC 61010. If fluctuations in production quality in a production facility are to be expected it has to be pondered whether a shorter cycle of factory inspections must be applied. Causes therefore may be up directly to the manufacturer or arise from the environment in the country.

TÜV PRODUCT SERVICE GMBH

Engineer:  Technical Report checked: 