



America

# CERTIFICATE

No. U8 10 08 13332 112

Holder of Certificate: **IDEC CORPORATION**

1-7-31 Nishimiyahara, Yodogawa-Ku  
Osaka  
532-8550 JAPAN

Production Facility(ies): 55518

Certification Mark:



Product:

**C Relays**  
**Safety relay**

Model(s):

**HR2S-301P, HR2S-301N, HR2S-332N-T075,  
HR2S-332N-T15, HR2S-332N-T30**

Parameters:

Rated Input Current:	HR2S-301P, HR2S-301N: 80mA HR2S-332N-T075, HR2S-332N-T15, HR2S-332N-T30:165mA
Rated Output Voltage:	Safety output, main contact: 250V ac, 50/60Hz or 30 Vdc Safety output, contact monitoring: 250Vac, 50/60Hz or 30 Vdc
Rated Output Current:	Safety output, main contact: Category 3: 5 A, Category 4: 3.6 A Safety output, contact monitoring: 1 A
Protection Class:	Class 2
Temperature Ambient:	55°C

**Tested according to:**

CAN/CSA C22.2 No. 14:2005  
UL 508/R:2005-07  
The product is intended and certified for USA and Canada. Other countries might have other requirements, which were not part of this certification.

The product was voluntarily tested according to the relevant safety requirements and mentioned properties. It can be marked with the certification mark shown above. The certification mark must not be altered in any way. This product certification system operated by TÜV SÜD America Inc. most closely resembles that described by ISO/IEC Guide 67, Conformity assessment - Fundamentals of product certification, System 3. See also notes overleaf.

Test report no.: 231-1006332-000

Date, 2010-08-09

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Technical Report No. 231-1006332-000, Revision 00

Issue Date: 2010-08-04

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Client: / Applicant: IDEC Corporation (13332)  
1-7-31 Nishimiyahara, Yodogawa-Ku  
Osaka 532-8550 Japan  
T: +81-6-6398-2516 F: +81-6-6398-2545  
ATTN: Hidetoshi Fukui

Responsible Manufacturer: JSK Co., Ltd (52487)  
1-5-1 Higashi-amakawa,  
Takatsuki-city, Osaka-fu, 569-0012, Japan  
T: 0081-72-661-4091 F: 0081-72-661-4096

Manufacturing location(s): JSK Co., Ltd Nagoya Factory (55518)  
1-8 Kitanoma Haguroshinden,  
Inuyama-city, 485-0075, Japan  
T: 0081-0568-69-2240 F: 0081-0568-69-2231

Test subject: Product: Safety Relay  
Type: HR2S-301P, HR2S-301N, HR2S-332N-T075,  
HR2S- 332N-T15, HR2S-332N-T30

Test specifications: UL 508/R2005-07, CAN/CSA C22.2 No.: 14: 2005

Purpose of examination: Test according to the listed test specification for NRTL requirements.

Test result: The equipment submitted **MEETS** the requirements of the test specifications as indicated.

This technical report may only be quoted in full. Any use for advertising purposes must be granted in writing. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production.

# 1 Description of the test object

## 1.1 Function / Intended use

Safety Relays

## 1.2 Consideration of foreseeable misuse:

Covered through the applied standard.

## 1.3 History of Device

Original Evaluation, Project PI1006332-101 was opened to add this OEM co-license for JSK Co., Ltd. See certificate U8.10.08.52487.011 dated 2010-08-04 and test report 231-701117-100 dated 2010-07-23 for further details. The table below shows the OEM co license models identical to models referenced on the JSK Co., Ltd. certificate.

No.	IDEC type no.	Version	JSK Co, Ltd. Type no	Version
1	HR2S-301P	E	SCR1-M01-P	E
2	HR2S-301N	D	SCR1-M01-N	D
3	HR2S-332N-T075	D	SCR1-M01-NTM07	D
4	HR2S-332N-T15	D	SCR1-M01-NTM15	D
5	HR2S-332N-T30	D	SCR1-M01-NTM30	D

## 1.4 Technical Data

### Rated Voltage:

Input: 24Vdc (-15%/+10%)

Safety output, main contact: 250V ac, 50/60Hz or 30 Vdc

Safety output, contact monitoring: 250Vac, 50/60Hz or 30 Vdc

### Rated Input Current:

Input: HR2S-301P, HR2S-301N: 80mA; HR2S-332N-T075, HR2S-332N-T15, HR2S-332N-T30: 165mA

Safety output, main contact: Category 3: 5 A, category 4: 3.6 A

Safety output, contact monitoring: 1A

### Protection Class:

II

### Maximum Altitude:

2000 m (6562 ft)

### Maximum Room Ambient:

55 °C (131°F)



**1.5 Conditions of Acceptability:**

Equipment is to be installed and used in accordance with the manufacturer's instructions.

**2 Order**

**2.1 Date of Purchase Order, Customer's Reference**

On file, SQA MD320420122624, dated 2010-03-04

**2.2 Receipt of Test Sample, Location**

2010-07-09, Test Lab

**2.3 Date of Testing**

2010-07-23 to 2010-07-30

**2.4 Location of Testing**

TÜV SÜD America, Inc., 7800 SW Durham Road, Suite #200, Portland, OR 97224, USA

**3 Test Results**

**3.1 Positive Results**

The equipment meets the specified test requirements.

**4 Remarks**

This Technical Report along with the attached Constructional Data Form (CDF) supplements your issued Product Certificate used for Products Certification Mark (see issued certificate for details). Maintain all items as evidence of this approval.

If any of the Applicant, Responsible Manufacture, Factory location(s) or Product information in this Technical Report is incorrect or misstated, please advise us of the correction, as this is the information to be placed in the finalized Test Report(s) and Certificate (if applicable).

**CERTIFICATE CANCELLATIONS:** For cancellation to be effective with associated costs for the following year, licenses/certificates **MUST BE** canceled on or before October 1.

#### 4.1 Remarks to Factory

See attached CDF that our auditor will use when reviewing this product.

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.

Failure to do so can result in recall, field service upgrade requirements, or discontinued authorization of Test Marks.

The final inspections in the production are described in the EN 50116.

#### 5. Documentation

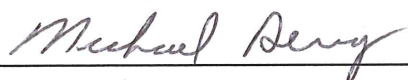
##### 5.1 Issued Product Documentation

- This Technical Report
- Construction Data Form (CDF)

#### 6 Summary

The test specification is met.

TÜV SÜD America Inc, Product Service



Michael Devoy  
Product Safety Engineer



Frank West  
Sr. Product Safety Engineer

# Aufbauübersicht für Elektrogeräte und Maschinen

## Data form for electrical equipment and machinery



Product Service

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<b>Auftraggeber</b> / Applicant:	(13332)	IDEC Corporation, 1-7-31 Nishimiyahara, Yodogawa-Ku, Osaka 532-8550 JAPAN		
<b>Fertigungsstätte</b> / Production facility:	(55518)	JSK Co., Ltd Nagoya Factory, 1-8 Kitanoma, Haguroshinden, Inuyama-city, Aichi-ken, 485-0075 Japan		
<b>Geräteart</b> / Type of equipment:		Safety Relay		
<b>Typenbezeichnung</b> / Type/model: .....		HR2S-301P, HR2S-301N, HR2S-332N-T075, HR2S-332N-T15, HR2S-332N-T30		
<b>Seriennr.</b> / Serial no.:		N/A		
<b>Nennspannung/Frequenz</b> / Rated voltage/frequency:		Input: 24Vdc (-15%/+10%) Safety output, main contact: 250V ac, 50/60Hz or 30 Vdc Safety output, contact monitoring: 250Vac, 50/60Hz or 30 Vdc		
<b>Nennaufnahme/Nennstrom</b> / Rated input power/current:		Input: HR2S-301P, HR2S-301N: 80mA: HR2S-332N-T075, HR2S-332N-T15, HR2S-332N-T30:165mA Safety output, main contact: Category 3: 5 A, category 4: 3.6 A Safety output, contact monitoring: 1A		
<b>Gewicht</b> / weight (kg):		HR2S-301P, HR2S-301N units: max. 0.2 HR2S-332N-T075, HR2S-332N-T15, HR2S-332N-T30: max. 0.32		
<b>Ausführung</b> / Construction:		<b>Ortsfest</b>	Stationary	<input type="checkbox"/>
		<b>Ortsveränderlich</b>	Portable	<input type="checkbox"/>
		<b>Handgerät</b>	Hand-held	<input type="checkbox"/>
		<b>Einbaugerät</b>	Open-frame	<input type="checkbox"/>
			Building-in	<input checked="" type="checkbox"/>
<b>Schutzklasse</b> / Protection class:	<b>Schutzklasse</b>	I: <b>Schutzleiteranschluß</b>	PE-connection	<input type="checkbox"/>
	<b>Schutzklasse</b>	II: <b>Schutzisoliert</b>	Double insulation	<input checked="" type="checkbox"/>
	<b>Schutzklasse</b>	III: <b>Schutzkleinspannung/ interne Stromversorgung</b>	SELV/internally powered	<input type="checkbox"/>
<b>Schutzart</b> / Degree of protection against liquids (IP):		IP20		<input checked="" type="checkbox"/>
<b>Anschlußart</b> / Supply connection:		<b>Feste Anschlußleitung</b>	Non detachable cord	<input type="checkbox"/>
		<b>Fester Anschluß</b>	Permanent connection	<input type="checkbox"/>
		<b>Gerätesteckvorrichtung</b>	Appliance inlet	<input type="checkbox"/>
			Building-in	<input checked="" type="checkbox"/>
<b>Netzbetriebsart</b> / Rated operation:		<b>Dauerbetrieb</b>	Continuous operation	<input checked="" type="checkbox"/>
		<b>Aussetzbetrieb</b>	Intermittent operation	<input type="checkbox"/>
		<b>Kurzzeitbetrieb</b>	Short time operation	<input type="checkbox"/>
Material:	a) <b>Gehäuse</b> / Enclosure	<b>PA66-FR</b> , flame class UL94-V0		
	b) <b>Leiterplatten</b> / p.c.b.	<b>FR-4</b> , Flame class UL94-V0		

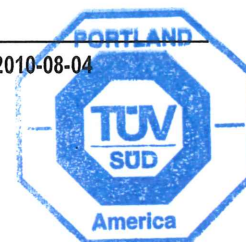
Prüfbericht Nr. / Test Report No.: 231-1006332-000

Projektleiter / Project manager: Michael Devoy

Ort / Place:  
TÜV SÜD PS, Portland, OR, USA  
Stempel und Unterschrift /  
Seal and signature

Datum / Date: 2010-08-04

*Michael Devoy*





# Aufbauübersicht für Elektrogeräte und Maschinen

## Data form for electrical equipment and machinery

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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.)
1 Enclosure	PHOENIX CONTACT (Products maker)  FRISSETTA POLYMER GMBH (Material maker)	Type: ME 22.5 OT-MSTBO RD ME 45 OT-MSTBO RD ME 22.5 UTG BK ME 45 UTG BK Type: Polyamide PA66, A63R V0 Rated: Flame class V-0	Credentials of material  UL E86034
2 Relay (K1-K6)	Matsushita or OMRON	Type: AG1S042-M90 or G7SA-4A2B Rated: Coil: 24 Vdc	TUV, cULus
3 PWB	Aikokiki MFG Co., Ltd	Type: FR-4 Rated: Flame class V-0	UL E48976 40V-0or M1A
4 Internal connector	MAC8 (Products maker) GE PLASTICS JAPAN LTD (Material maker)	Type: OW-3-3-4P or OW-3-25-4P or PM-61-04P Type: 420-SE0 Rated: Flame class V-0	Credentials of material  UL E45587
5 External connector	Tyco Electronics Corp.	Type: 1-1827876-4, 1-1827864-4 (Series D connectors) Rated: Flame class V-0	UL E28476
6 Alternative external connector	PHOENIX CONTACT (Products maker)  FRISSETTA POLYMER GMBH (Material maker)	Type: MSTBO 2.5/4-G1L(1861060) MSTBO 2.5/4-G1R(1861073) FKCT2.5/4-ST(1878037) Type: Polyamide PA66, A63R V0 Rated: Flame class V-0	Credentials of material  UL E86034
7 PolySwitch Thermistor (TH1)	NIDEC COPAL ELECTRONICS CORP(COPAL ELECTRONICS)	Type: PRCP-R090 Rated: DC60V, 0.9A	UL E300792
8 Fuse (F1) (Master PCB)	Daito Communication Apparatus Co., Ltd	Type: RD50 Rated: DC76V, 5A	UL E59783
9 Fuse (F1) (OffDelayTimer PCB)	ROHM Co., Ltd	Type: ICP-S0.5 Rated: 50 Vdc, 0.5A	UL E107856
10 HumiSeal (PCB coating)	CHASE CORP	Type: 1B73 Rated: -65 to +125°C, UL Recognized	UL E105698
11 Silicon (PCB coating)	Momentive Performance Materials Inc	Type: TSE3975 WHITE Rated: -50 to +200°C, UL94HB	UL E56745

Prüfbericht Nr. / Test Report No.: 231-1006332-000

Projektleiter / Project manager: Michael Devoy

Ort / Place:

TÜV SÜD PS, Portland, OR, USA

Stempel und Unterschrift /  
Seal and signature

Datum / Date: 2010-08-04

