



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEX SIQ 14.0005X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 3	Issue 2 (2016-12-08)
Date of Issue:	2023-03-15		Issue 1 (2016-09-27)
Applicant:	TDK-Lambda UK Ltd Kingsley Avenue, Ilfracombe Devon, EX34 8ES United Kingdom		Issue 0 (2014-11-05)
Equipment:	Power supply, types DRF240-24-1/HL-xyz and DRF240-24-1/HLIVS-xyz		
Optional accessory:			
Type of Protection:	Increased safety and Type of protection "n"		
Marking:	Ex ec nC IIC T4 Gc		

Approved for issue on behalf of the IECEx
Certification Body:

Bojan Pečavar

Position:

Certification Manager

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
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Certificate issued by:

Slovenian Institute of Quality and Metrology (SIQ)
Masera-Spasicева ulica 10
SI-1000 Ljubljana
Slovenia





IECEX Certificate of Conformity

Certificate No.: **IECEX SIQ 14.0005X**

Page 2 of 4

Date of issue: 2023-03-15

Issue No: 3

Manufacturer: **TDK-Lambda UK Ltd**
Kingsley Avenue, Ilfracombe
Devon, EX34 8ES
United Kingdom

Manufacturing locations: **TDK-Lambda Malaysia Sdn. Bhd.**
Lot 2&3
Kawasan Perindustrian Bandar Baru
Jaya Gading
26070 Kuantan, Pahang Darul Makmur
Malaysia

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-15:2017](#) Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition:5.0

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[SI/SIQ/ExTR14.0005/00](#)
[SI/SIQ/ExTR14.0005/03](#)

[SI/SIQ/ExTR14.0005/01](#)

[SI/SIQ/ExTR14.0005/02](#)

Quality Assessment Report:

[SI/SIQ/QAR14.0001/05](#)



IECEX Certificate of Conformity

Certificate No.: **IECEX SIQ 14.0005X**

Page 3 of 4

Date of issue: 2023-03-15

Issue No: 3

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Power supply models DRF240-24-1/HL-xyz⁽¹⁾ and DRF240-24-1/HLIVS-xyz⁽¹⁾ manufactured by TDK-Lambda UK Ltd is an AC/DC converter and AC/DC or DC/DC converter, respectively. It is installed in metal enclosure with degree of ingress protection of IP20. Power supply is designed in type of protection "ec", except relays are in type of protection "nC". Power supply has external terminals for connections and shall be installed in appropriate enclosure with degree of ingress protection of at least IP54 according to IEC 60079-0 and IEC 60079-7.

(1) Suffix -xyz can be alphanumeric characters or blank and is non explosion protection related information.

Allowed ambient temperature is from -25°C to +70°C⁽²⁾.

(2) For ambient temperature from +60°C to +70°C linear derate from 100% load (240 W) at +60°C to 75% load (180 W) at +70°C shall be considered.

Electrical ratings:

Model DRF240-24-1/HL-xyz

Input: 100 V – 240 V a.c., 50 Hz / 60 Hz, 2.7 A

Output: 24 V – 28 V d.c., 10 A – 8.6 A, 240 W

Model DRF240-24-1/HLIVS-xyz

Input: 100 V – 240 V a.c., 50 Hz / 60 Hz, 2.7 A

108 V – 145 V d.c., 2.7 A

Output: 22.5 V – 25.5 V d.c., 10 A – 9.4 A, 240 W

SPECIFIC CONDITIONS OF USE: YES as shown below:

- Power supply shall be installed in a suitable housing so that a degree of protection of at least IP54 according to IEC 60079-0 and IEC 60079-7 is achieved. This is assured with enclosure in type of protection Ex ec or Ex eb.
- The installation in the enclosure must be carried out in such a way that the following allowed ambient temperature range for the power supply is not exceeded during operation:
from -25°C to +70°C with derating of 2.5%/°C above +60°C.
- The metal parts of the power supply shall be earthed.
- Adjustment of the potentiometer is allowed only when explosive atmosphere is not present.
- The distances to other components or enclosure's wall shall be at least 5 mm (left, right), 40 mm (top) and 20 mm (bottom). If the adjacent device is a heat source, the distance to it shall be at least 15 mm.



IECEX Certificate of Conformity

Certificate No.: **IECEX SIQ 14.0005X**

Page 4 of 4

Date of issue: 2023-03-15

Issue No: 3

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- New editions of standards were considered.
- Type of explosion protection was changed from "nA nC" to "ec nC" according to new editions of the standards.
- Some electronic components were changed or modified.