



UNITED KINGDOM CONFORMITY ASSESSMENT

UK TYPE EXAMINATION CERTIFICATE

Product or Protective System Intended for use in Potentially Explosive Atmospheres

UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

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- 3 Type Examination Certificate No.: **TÜV 22 UKEX 7115** Issue: **00**
- 4 Product: **Power Supply Module, type PSD24Ex**
- 5 Manufacturer: **Hans Turck GmbH & Co KG**
- 6 Address: **Witzlebenstraße 7**
45472 Mülheim an der Ruhr, Germany
- 7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- 8 TUV Rheinland UK Ltd, Approved Body number 2571, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.
- The examination and test results are recorded in the confidential report 557 / UKEx 7115.00 / 22.
- 9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
- EN IEC 60079-0:2018** **EN IEC 60079-7:2015 / A1:2018**
EN 60079-11:2012 **EN 60079-18:2015 / A1:2017**
- Except in respect of those requirements listed at section 18 of the schedule to this certificate.
- 10 If the sign "X" is placed after the certificate number, it indicates that the product is subject to specific conditions of use specified in the schedule to this certificate.
- 11 This TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- 12 The marking of this product shall include the following:



II 2 G Ex eb mb [ib Gb] IIC T4 Gb

This certificate and its schedules may only be reproduced in its entirety and without change.

TUV Rheinland UK Ltd

Solihull, 2023-02-18


Dipl.-Ing. Klauspeter Graffi

This Type Examination Certificate without signature shall not be valid. Alterations are subject to approval by
TUV Rheinland UK Ltd, 1011 Stratford Road, Shirley, Solihull, B90 4BN, Tel. +44 (0) 121 7969400
A UKAS accredited certification body, No. 8400

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MS-0045113 Attachment A3

13 SCHEDULE TO UK TYPE EXAMINATION CERTIFICATE

14 CERTIFICATE NUMBER TÜV 22 UKEX 7115

15 Description of Product

Power Supply Module, type PSD24Ex

General product information

The PSD24Ex module supplies the excom system with power to the full extension. The power supply module is designed in a combined protection rating of Ex m, Ex e and Ex i and can therefore be used in zone 1. It is fully potted, installed in a die-cast aluminium frame and powered with 24 VDC. The external power supply is hooked up to Ex e clamps at the module rack certified under TÜV 22 UKEX 7116 U and therefore must only be operated inside this rack.

Two power supply units can be installed in combination with a suitable module rack. In case of power cut or failure of one device, the second unit provides the power for the whole system.

Technical Data

Galvanic isolation U_m	60 V
Power consumption P_i	75 W

Supply circuits:

Multilayer lead-in wire via subrack unit (TÜV 22 UKEX 7116 U)

Power supply U_{in}	Type of protection Ex e
Plug connector:	
L+: z24, b24, d24	$U_{in} = 18 \dots 32V$ DC (residual ripple $\pm 10 \%$)
L-: z28, b28, d28	
PE: z32, b32, d32	Not connected

System-internal connections effective only within the subrack unit, type
 MT... –

AC-output voltage U_{out}	system-internal circuit
(plug connector: z2, b2, d2, z6, b6, d6)	without external connection facilities

An external current limitation required for this circuit is provided by the Excom system.

The intrinsically safe output voltage U_{out} is safely electrically isolated from the power supply U_{in} and all other circuits up to a voltage of 60 V.

Multiple-spring wire plug	PA (equipotential bonding)
Release circuit for mechanical locking (plug connector: z16, d16)	type of protection Intrinsic Safety Ex ib IIC system-internal circuits without external connection facilities

The following system connections are electrically interconnected.

Interfacing between power supply units	system-internal circuits without external connection facilities
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Clock out..... type of protection Intrinsic Safety Ex ib IIC
 (plug connector: z1)

Ground (Ex)
 (plug connector: z12)

Clock in..... type of protection Intrinsic Safety Ex ib IIC
 (plug connector: d14)

Ground (Ex)
 (plug connector: z12)

Gateway connection

Power..... type of protection Intrinsic Safety Ex ib IIC
 (plug connector: d12) system-internal circuit
 without external connection facilities

Ground (Ex)
 (plug connector: z12)

The permissible range of the ambient temperature is -20 °C up to 70 °C.

List of used equipment and components

Device	Manufacturer	Type	Ex-Marking	Certificate no.
none				

16 Test report No. (associated with this certificate issue): 557 / UKEx 7115.00 / 22

17 Specific conditions of use
 none

18 Essential Health and Safety Requirements (Regulations Schedule 1)

In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated in the relevant reports.

19 Drawings and Documents

Reg. no.	Document title:	Document no.:	Rev.:	Date:
1.	Approval documentation PSD (286 p.)	Approval documentation PSD24Ex signed.pdf	01	24.01.2023