

[1] **EC-TYPE EXAMINATION CERTIFICATE**



[2] **Equipment or Protective System intended for use
in Potentially Explosive Atmospheres
Directive 94/9/EC**

[3] **EC-Type Examination Certificate Number: DEMKO 01 ATEX 130437**

[4] **Equipment or Protective System: Control Panels and Terminal Enclosures**

[5] **Manufacturer: Adalet, A Scott Fetzer Co.**

[6] **Address: 4801 W. 150th Street, Cleveland, OH 44135 USA**

[7] This equipment or protective system and any acceptable variation there to is specified in the schedule to this certificate and the documents therein referred to.

[8] UL International Demko A/S, notified body number 0539 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report no. 01NK12700 Report.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50014 June 1997+A1-A2, EN 50018: 2000, EN 50019 July 2000, EN 50281-1-1 September 1998

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

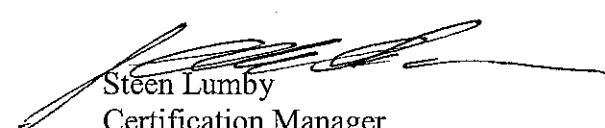
[11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. If applicable, further requirements of this Directive apply to the manufacture and supply of this requirement or protective system.

[12] The marking of the equipment or protective system shall include the following:

 **II 2 G/D EEx e II T4-T6 or EEx ed IIC T5-T6**

For and on behalf of UL International Demko A/S

Herlev, 2002-02-05


Steen Lumby
Certification Manager

UL International Demko A/S

Lyskaer 8, P.O. Box 514
DK-2730, Herlev, Denmark
Telephone: +45 44856565
Fax: +45 44856500

Certificate: 01 ATEX 130437
This certificate may only be reproduced in its
entirety and without any change, schedule included



A Subsidiary of
**Underwriters
Laboratories Inc.®**

[13]

[14]

Schedule
EC-TYPE EXAMINATION CERTIFICATE No.
DEMKO 01 ATEX 130437X
Report: 09CA20219

[15]

Description of Equipment or protective system

The Type TN series of enclosures are junction boxes provided with increased safety terminal blocks. These enclosures are manufactured of powder coated cold rolled steel, brushed finish stainless steel 304 and brushed finish steel 316L respectively and are available in various sizes and depths. The boxes consist of a cover, hinge assembly, body, grounding lug, gland plates and gaskets. The enclosures may be mounted in a vertical or horizontal position and can be fitted with up to eight gland plates to provide future expansion and configuration.

The Type CN series of enclosures are Control Panel Enclosures designed to incorporate control, display and regulatory type devices. Connections to these devices are made directly or through terminal blocks fitted inside the enclosure. Their construction is identical to the Type TN series enclosures.

The Type HV series of stainless steel enclosures are for high power use. Their construction is identical to the Type TN and CN series enclosures with the exception of two types of porcelain stand-offs used for terminal connections.

Nomenclature for Type TN:

TN4	-18	18	08	-A	R0010
I	II	III	IV	V	VI

I – Enclosure Material

- TN4 – Powder Coated Cold Rolled/Hot Rolled Steel
- TN4X – Brushed Finish Stainless Steel 304
- TN4X6 – Brushed Finish Stainless Steel 316L

II – Enclosure Length

XX – Any two-digit number

III – Enclosure Width

XX – Any two-digit number

IV – Enclosure Depth

XX – Any two-digit number

V – Gland Plate Location(s)*

- A – Gland plate on topside
- B – Gland plate on bottom side
- C – Gland plate on left side
- D – Gland plate on right side
- *Omit dashes when multiple Gland Plates are installed

VI – Adalet Assembly Part Number

XXXXX – Any five digit alphanumeric characters

Nomenclature for Type CN:

CN4	-18	18	08	-1	-A	R0010
I	II	III	IV	V	VI	VII

I – Enclosure Material

- CN4 – Powder Coated Cold Rolled/Hot Rolled Steel
- CN4X – Brushed Finish Stainless Steel 304
- CN4X6 – Brushed Finish Stainless Steel 316L

II – Enclosure Length

XX – Any two-digit number

III – Enclosure Width

XX – Any two-digit number

[13]

[14]

Schedule
EC-TYPE EXAMINATION CERTIFICATE No.
DEMKO 01 ATEX 130437X
Report: 09CA20219

Nomenclature for Type CN (Cont'd):

IV – Enclosure Depth

XX – Any two-digit number

V – Number of Operating Devices

1-240

VI – Gland Plate Location(s)*

A – Gland Plate on topside

B – Gland plate on bottom side

C – Gland plate on left side

D – Gland plate on right side

*Omit dashes when multiple Gland plates are installed.

VII – Adalet Assembly Part Number

XXXXX – Any five digit alphanumeric characters

Nomenclature for Type HV:

HV4	-2412	06	-A	R0010
I	II	III	IV	V

I – Enclosure Material

HV4 – Powder Coated Cold Rolled/Hot Rolled Steel

HV4X – Brushed Finish Stainless Steel 304

HV4X6 – Brushed Finish Stainless Steel 316L

II – Enclosure Sizes

	Size (L x W) Dimensions in mm
-1616	406 x 406
-2012	508 x 305
-2014	508 x 356
-2016	508 x 406
-2020	508 x 508
-2412	610 x 305
-2416	610 x 406
-2420	610 x 508
-2424	610 x 610
-2518	635 x 457
-3016	762 x 406
-3020	762 x 508
-3022	762 x 559
-3024	762 x 610
-3624	914 x 610
-3625	914 x 635
-6036	1524 x 914

III – Enclosure Depth

XX – Any two-digit number

IV – Gland Plate Location(s)*

A – Gland plate on topside

B – Gland plate on bottom side

C – Gland plate on left side

D – Gland plate on right side

*Omit dashes when multiple gland plates are installed.

V – Adalet Assembly Part Number

XXXXX – Any five digit alphanumeric characters.

[13]
[14]

Schedule
EC-TYPE EXAMINATION CERTIFICATE No.
DEMKO 01 ATEX 130437X
Report: 09CA20219

Temperature range

The relation between ambient temperature and the assigned temperature class is as follows:

Ambient temperature range	Temperature class
-20 °C to +70 °C	T4 (TN)
-20°C to +55°C	T5 (TN, CN)
-20°C to +40°C	T6 (TN, CN)
-20°C to +55°C	≤ 650 A, T6 (HV)
-20°C to +55°C	> 650 A, T5 (HV)

Electrical data

Maximum Voltage:
Type HV Series: 8 kV
Type TN Series: 1.1 kV
Type CN series: 1.1 kV

Installation instructions

All cable entry devices and blanking elements shall be certified for protection type 'e' and IP66.

Unused apertures shall be closed with suitable blanking elements of protection type 'e' and IP66.

For ambient temperatures below -10 °C and above +60 °C use field wiring suitable for both minimum and maximum ambient temperature.

Routine tests

Routine tests are not required.

[16]

Report No.
Project Report No.: 01NK12700 (Hazardous Location Testing)
02NK42008 (Hazardous Location Testing)
09CA20219 (Hazardous Location Testing)

Documents:

Description:	Drawing No.:	Rev. Level:	Date:
TN4(X)(X6) Increased Safety Terminal Enclosure Series Metric Datasheet	DS546M	C	2001-11-20
CN4-CN4X-CN4X6 Optional TN4-TN4X-TN4X6 Single Door Clamp Control Panel Enclosure Metric Datasheet (2 sheets)	DS553M	E	2001-11-20
CN4(X)(X6) Series Control Station Cover Matrix for Increased Safety and Flameproof Components.	DS585	D	2001-08-23
Installation Sheet TN Series Terminal Enclosures (4 sheets)	DS645	B	2009-06-19
Installation Sheet HV Series High Voltage Junction Boxes (4 sheets)	DS646	B	2009-06-30
Installation Sheet CN Series Control Enclosures (4 sheets)	DS648	B	2009-06-30
Alternate Construction Design Guide for CN Enclosures	DS653	A	2001-08-22
Alternate Construction Design Guide for TN Enclosures	DS654	A	2001-11-20
Installation Sheet TN Series Alternate Constructions Terminal Enclosures (3 sheets)	DS656	B	2009-06-30
Installation Sheet CN Series Alternate Constructions Control Enclosures (3 sheets)	DS657	B	2009-06-30
Nameplate for TN Series Increased Safety Enclosures with Terminal Blocks	M3321	E	2009-06-30
Nameplate for CN Series Increased Safety Enclosures with 'd e m' Components	M3324	C	2009-06-30
Nameplate for HV Series Increased Safety Enclosures with Terminal Blocks	M3325	E	2009-06-30

[13]

[14]

Schedule
EC-TYPE EXAMINATION CERTIFICATE No.
DEMKO 01 ATEX 130437X
Report: 09CA20219

Documents (Cont'd):

Description:	Drawing No.:	Rev. Level:	Date:
Nameplate for CN Series Increased Safety Enclosures with 'd e m' Components (T6 Only)	M3329	D	2009-06-30
Minimum Conductor Rating Label	M3281	B	2002-01-02
Ground Stud for Terminal Enclosures	18812	E	2000-11-29
HV4(X)(X6) Series High Voltage Junction Box 8 kV Maximum, 1 X 1 Phase (2 sheets)	DS593M	C	2001-08-22
HV4(X)(X6) Series High Voltage Junction Box 1.1 kV Maximum, 2 X 2 Phase (2 sheets)	DS594M	D	2009-07-31

Terminal Content for TN and CN Series Enclosure Types

Sheet No.	Size (L x W x H) Dimensions in mm	Enclosure Type	Rev.	Date:
DS632-1	305 x 610 x 138	TN4/TN4X/TN4X6-1224	B	2002-11-12
DS632-2	405 x 305 x 138	TN4/TN4X/TN4X6-1612	B	2002-11-12
DS632-3	406 x 406 x 138	TN4/TN4X/TN4X6-1616	B	2002-11-12
DS632-4	406 x 508 x 138	TN4/TN4X/TN4X6-1620	B	2002-11-12
DS632-5	508 x 305 x 138	TN4/TN4X/TN4X6-2012	B	2002-11-12
DS632-6	508 x 356 x 173	TN4/TN4X/TN4X6-2014	B	2002-11-12
DS632-7	508 x 406 x 138	TN4/TN4X/TN4X6-2016	B	2002-11-12
DS632-8	508 x 508 x 138	TN4/TN4X/TN4X6-2020	B	2002-11-12
DS632-9	508 x 610 x 138	TN4/TN4X/TN4X6-2024	B	2002-11-12
DS632-10	610 x 305 x 138	TN4/TN4X/TN4X6-2412	B	2002-11-12
DS632-11	610 x 406 x 138	TN4/TN4X/TN4X6-2416	B	2002-11-12
DS632-12	610 x 610 x 138	TN4/TN4X/TN4X6-2424	B	2002-11-12
DS632-13	610 x 762 x 138	TN4/TN4X/TN4X6-2430	B	2002-11-12
DS632-14	635 x 457 x 173	TN4/TN4X/TN4X6-2518	B	2002-11-12
DS632-15	762 x 406 x 138	TN4/TN4X/TN4X6-3016	B	2002-11-12
DS632-16	762 x 508 x 138	TN4/TN4X/TN4X6-3020	B	2002-11-12
DS632-17	762 x 559 x 173	TN4/TN4X/TN4X6-3022	B	2002-11-12
DS632-18	762 x 610 x 138	TN4/TN4X/TN4X6-3024	B	2002-11-12
DS632-19	762 x 762 x 138	TN4/TN4X/TN4X6-3030	B	2002-11-12
DS632-20	762 x 914 x 138	TN4/TN4X/TN4X6-3036	B	2002-11-12
DS632-21	914 x 610 x 138	TN4/TN4X/TN4X6-3624	B	2002-11-12
DS632-22	914 x 635 x 173	TN4/TN4X/TN4X6-3625	B	2002-11-12
DS632-23	914 x 914 x 138	TN4/TN4X/TN4X6-3636	B	2002-11-12
DS632-24	991 x 737 x 173	TN4/TN4X/TN4X6-3929	B	2002-11-12
DS632-25	1067 x 610 x 138	TN4/TN4X/TN4X6-4224	B	2002-11-12
DS632-26	1067 x 762 x 138	TN4/TN4X/TN4X6-4230	B	2002-11-12
DS632-27	1067 x 914 x 138	TN4/TN4X/TN4X6-4236	B	2002-11-12
DS632-28	1219 x 610 x 138	TN4/TN4X/TN4X6-4824	B	2002-11-12
DS632-29	1219 x 762 x 138	TN4/TN4X/TN4X6-4830	B	2002-11-12
DS632-30	1219 x 914 x 138	TN4/TN4X/TN4X6-4836	B	2002-11-12
DS632-31	1524 x 914 x 138	TN4/TN4X/TN4X6-6036	B	2002-11-12

[13]

[14]

Schedule
EC-TYPE EXAMINATION CERTIFICATE No.
DEMKO 01 ATEX 130437X
Report: 09CA20219

Terminal Content for TN and CN Series Enclosure Types (Cont'd)

Sheet No.	Size (Lx W x H) Dimensions in mm	Enclosure Type	Rev.	Date:
DS668-1	229 x 76 x 152	TN4/TN4X/TN4X6-090306	B	2002-11-12
DS668-2	381 x 76 x 152	TN4/TN4X/TN4X6-150306	B	2002-11-12
DS668-3	533 x 76 x 152	TN4/TN4X/TN4X6-210306	B	2002-11-12
DS668-4	533 x 381 x 152	TN4/TN4X/TN4X6-211506	B	2002-11-12
DS668-5	533 x 533 x 152	TN4/TN4X/TN4X6-212106	B	2002-11-12
DS668-6	686 x 76 x 152	TN4/TN4X/TN4X6-270306	B	2002-11-12
DS668-7	838 x 76 x 152	TN4/TN4X/TN4X6-330306	B	2002-11-12
DS668-8	838 x 229 x 152	TN4/TN4X/TN4X6-330906	B	2002-11-12
DS668-9	838 x 381 x 152	TN4/TN4X/TN4X6-331506	B	2002-11-12
DS668-10	838 x 533 x 152	TN4/TN4X/TN4X6-332106	B	2002-11-12
DS668-11	838 x 686 x 152	TN4/TN4X/TN4X6-332706	B	2002-11-12
DS668-12	838 x 838 x 152	TN4/TN4X/TN4X6-333306	B	2002-11-12
DS668-13	914 x 229 x 165	TN4/TN4X/TN4X6-360806.5	B	2002-11-12
DS668-14	991 x 76 x 152	TN4/TN4X/TN4X6-390306	B	2002-11-12
DS668-15	991 x 229 x 152	TN4/TN4X/TN4X6-390906	B	2002-11-12
DS668-16	1753 x 229 x 152	TN4/TN4X/TN4X6-391506	B	2002-11-12
DS668-17	991 x 533 x 152	TN4/TN4X/TN4X6-392106	B	2002-11-12
DS668-18	991 x 686 x 152	TN4/TN4X/TN4X6-392706	B	2002-11-12
DS668-19	991 x 838 x 152	TN4/TN4X/TN4X6-393306	B	2002-11-12
DS668-20	991 x 991 x 152	TN4/TN4X/TN4X6-393906	B	2002-11-12
DS668-21	1143 x 76 x 152	TN4/TN4X/TN4X6-450306	B	2002-11-12
DS668-22	1143 x 229 x 152	TN4/TN4X/TN4X6-450906	B	2002-11-12
DS668-23	1143 x 838 x 152	TN4/TN4X/TN4X6-453306	B	2002-11-12
DS668-24	1143 x 991 x 152	TN4/TN4X/TN4X6-453906	B	2002-11-12
DS668-25	1295 x 76 x 152	TN4/TN4X/TN4X6-510306	B	2002-11-12
DS668-26	1295 x 76 x 152	TN4/TN4X/TN4X6-510306	B	2002-11-12
DS668-27	1295 x 381 x 152	TN4/TN4X/TN4X6-510906	B	2002-11-12
DS668-28	1295 x 533 x 152	TN4/TN4X/TN4X6-512106	B	2002-11-12
DS668-29	1295 x 686 x 152	TN4/TN4X/TN4X6-512706	B	2002-11-12
DS668-30	1295 x 838 x 152	TN4/TN4X/TN4X6-513306	B	2002-11-12
DS668-31	1295 x 991 x 152	TN4/TN4X/TN4X6-513906	B	2002-11-12
DS668-32	1448 x 76 x 152	TN4/TN4X/TN4X6-570306	B	2002-11-12
DS668-33	1448 x 229 x 152	TN4/TN4X/TN4X6-570906	B	2002-11-12
DS668-34	1448 x 381 x 152	TN4/TN4X/TN4X6-571506	B	2002-11-12
DS668-35	1448 x 533 x 152	TN4/TN4X/TN4X6-572106	B	2002-11-12
DS668-36	1448 x 686 x 152	TN4/TN4X/TN4X6-572706	B	2002-11-12
DS668-37	1448 x 838 x 152	TN4/TN4X/TN4X6-573306	B	2002-11-12
DS668-38	1448 x 991 x 152	TN4/TN4X/TN4X6-573906	B	2002-11-12
DS668-39	1600 x 76 x 152	TN4/TN4X/TN4X6-630306	B	2002-11-12

[13]

[14]

Schedule
EC-TYPE EXAMINATION CERTIFICATE No.
DEMKO 01 ATEX 130437X
Report: 09CA20219

Terminal Content for TN and CN Series Enclosure Types (Cont'd)

Sheet No.	Size (Lx W x H) Dimensions in mm	Enclosure Type	Rev.	Date:
DS668-40	1600 x 229 x 152	TN4/TN4X/TN4X6-630906	B	2002-11-12
DS668-41	1600 x 381 x 152	TN4/TN4X/TN4X6-631506	B	2002-11-12
DS668-42	1600 x 533 x 152	TN4/TN4X/TN4X6-632106	B	2002-11-12
DS668-43	1600 x 838 x 152	TN4/TN4X/TN4X6-633306	B	2002-11-12
DS668-44	1600 x 991 x 152	TN4/TN4X/TN4X6-633906	B	2002-11-12
DS668-45	1753 x 76 x 152	TN4/TN4X/TN4X6-690306	B	2002-11-12
DS668-46	991 x 381 x 152	TN4/TN4X/TN4X6-690906	B	2002-11-12
DS668-47	1753 x 381 x 152	TN4/TN4X/TN4X6-691506	B	2002-11-12
DS668-48	1753 x 533 x 152	TN4/TN4X/TN4X6-692106	B	2002-11-12
DS668-49	1753 x 686 x 152	TN4/TN4X/TN4X6-692706	B	2002-11-12
DS668-50	1753 x 838 x 152	TN4/TN4X/TN4X6-693306	B	2002-11-12
DS668-51	1753 x 991 x 152	TN4/TN4X/TN4X6-693906	B	2002-11-12
DS668-52	1829 x 229 x 165	TN4/TN4X/TN4X6-720906	B	2002-11-12
DS668-53	1829 x 305 x 152	TN4/TN4X/TN4X6-721206	B	2002-11-12
DS668-54	1829 x 305 x 165	TN4/TN4X/TN4X6-721206.5	B	2002-11-12
DS668-55	1905 x 76 x 152	TN4/TN4X/TN4X6-750306	B	2002-11-12
DS668-56	1905 x 229 x 152	TN4/TN4X/TN4X6-750906	B	2002-11-12
DS668-57	1905 x 381 x 152	TN4/TN4X/TN4X6-751506	B	2002-11-12
DS668-58	1906 x 533 x 152	TN4/TN4X/TN4X6-752106	B	2002-11-12
DS668-59	1905 x 686 x 152	TN4/TN4X/TN4X6-752706	B	2002-11-12
DS668-60	1905 x 991 x 152	TN4/TN4X/TN4X6-753906	B	2002-11-12
DS668-61	2057 x 76 x 152	TN4/TN4X/TN4X6-810306	B	2002-11-12
DS668-62	2057 x 229 x 152	TN4/TN4X/TN4X6-810906	B	2002-11-12
DS668-63	2057 x 381 x 152	TN4/TN4X/TN4X6-811506	B	2002-11-12
DS668-64	2057 x 533 x 152	TN4/TN4X/TN4X6-812106	B	2002-11-12
DS668-65	2057 x 686 x 152	TN4/TN4X/TN4X6-812706	B	2002-11-12
DS668-66	2057 x 838 x 152	TN4/TN4X/TN4X6-813306	B	2002-11-12
DS668-67	2057 x 991 x 152	TN4/TN4X/TN4X6-813906	B	2002-11-12

[17]

Special conditions for safe use:

- This certificate applies to equipment without cable/conduit entries. The cable/conduit entries must be certified as increased safety and have a minimum IP66 rating.
- The number of conductors entering an enclosure plus the number of internal connections (bridges and ground conductors are not counted) shall not exceed that of the Enclosure Size Terminal Content sheets. All terminals shall be evaluated according to EN 60079-7:2007 and covered by a Component Certificate for actual use, current and voltage.
- All operators are covered by a component certificate for protection type 'd,' 'e,' 'mb,' and have a minimum IP66 rating.
- After installation, all creepage distances and clearances shall be according to Table 1 in EN 60079-7:2007.
- When operating devices of protection type 'd,' 'e,' 'mb' are installed in the enclosure it shall be marked:
 - Ex d e mb IIC T6 for use in ambient temperature $-20^{\circ}\text{C} \leq T_{\text{amb}} \leq +40^{\circ}\text{C}$ or
 - Ex d e mb IIC T5 for use in ambient temperature $-20^{\circ}\text{C} \leq T_{\text{amb}} \leq +55^{\circ}\text{C}$
- Operating temperature of all terminal blocks must be appropriate for the application.

[13]

[14]

Schedule
EC-TYPE EXAMINATION CERTIFICATE No.
DEMKO 01 ATEX 130437X
Report: 09CA20219

[18]

Essential Health and Safety Requirements

Concerning ESR this Schedule verifies compliance with the ATEX directive only. The manufacturer's Declaration of Conformity declares compliance with other relevant Directives.

Additional information

The Type CN, TN and HV Series of Enclosures has in addition passed the tests for Ingress Protection to IP 66 in accordance with EN60529: 1991/A1 2000.

These devices have been additionally evaluated to EN 60079-0:2006, EN 60079-7:2007, EN 61241-0:2006 and EN 61241-1:2004 and are now marked:

Ex e II T4/T5/T6
Ex tD A21 IP66 200°C

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 94/9/EC of the European Parliament and the Council of 23 March 1994.

Certification Manager

Jan-Erik Storgaard

Date of issue: 2009-08-10

Notified Body

UL International Demko A/S, Lyskaer 8, P.O. Box 514, DK-2730
Herlev, Denmark, Tel. +45 44 85 65 65, info.dk@dk.ul.com
www.ul-europe.com