

EC-TYPE EXAMINATION CERTIFICATE



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[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 130438X Rev. 1**

[4]

Equipment or Protective System: **Increased Safety Terminal Enclosures**

[5]

Manufacturer: **Adalet/Scott Fetzer Co.**

[6]

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

[7]

This equipment or protective system and any acceptable variation thereto are 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. **11NK13139**

[9]

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

**EN 60079-0:2009
EN 61241-0:2006**

**EN 60079-7:2007
EN 61241-1:2004**

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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, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by the certificate.

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

II 2 G Ex e II T4-T6 Gb

II 2 G Ex d e mb IIC T5-T6 Gb

II 2 D Ex tD A21 IP66 T120°C

II 2 D Ex tD A21 IP66 T200°C

Certification Manager

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Notified Body

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Schedule
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[15]

Description of Equipment or protective system

These are steel or stainless steel enclosures with screw secured covers and terminal blocks. The Type TSC series enclosures are manufactured of polyester powder coated steel or brushed series 304 and 316L stainless steel (respectively) and are available in various sizes and depths. The boxes consist of a cover, 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 four gland plates.

The Type CSC 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 enclosures. Their construction is identical to the Type TSC series enclosures.

Nomenclature for Type TSC:

TSC4	-18	18	08	-EMC	-A	R0001
I	II	III	IV	V	VI	VII

I – Enclosure Material and Type

- TSC4 – Powder Coated Cold Rolled/Hot Rolled Steel Terminal Enclosure
- TSC4X – Brushed Finish Stainless Steel 304 Terminal Enclosure
- TSC4X6 – Brushed Finish Stainless Steel 316L Terminal Enclosure

II – Enclosure Length

XX – Any two-digit number (Maximum 2100 mm)

III – Enclosure Width

XX – Any two-digit number (Maximum 1000 mm)

IV – Enclosure Depth

XX – Any two-digit number (Maximum 406 mm)

V – EMC

EMC shielding installed on cover

VI – Gland Plate Location(s)*

- A – Gland plate on top side
- 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 alpha-numeric characters

Nomenclature for Type CSC:

CSC4	-18	18	08	1	-A	R0001
I	II	III	IV	V	VI	VII

I – Enclosures Material Type

- CSC4 – Powder Coated Cold Rolled/Hot Rolled Steel Control Panel Enclosure
- CSC4X – Brushed Finish Stainless Steel 304 Control Panel Enclosure
- CSC4X6 – Brushed Finish Stainless Steel 316L Control Panel Enclosure

II – Enclosure Length

XX – Any two-digit number (Maximum 610 mm)

III – Enclosure Width

XX – Any two-digit number (Maximum 610 mm)

IV – Enclosure Depth

XX – Any two-digit number (Maximum 406 mm)

V – Number of Operating Devices

1-25



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Nomenclature for Type CSC (Cont'd):

VI – Gland Plate Location(s)*

A – Gland plate on top side

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

XXXX – Any four digit alpha-numeric characters

Temperature range

The TSC series of enclosures have a Dust Temperature Rating of T120°C. The CSC series of enclosures have a Dust Temperature Rating of T200°C.

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

Ambient temperature range	Temperature class
-20°C to +40 °C	T6
-20°C to +55°C	T5
-20°C to +70°C	T4

Electrical data

Maximum working voltage: 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 glancing 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. All cable and conductors must be suitable for 80°C when the ambient temperature is -20°C to 40°C, 95°C when the ambient temperature is -20°C to 55°C, and 110°C when the ambient temperature is -20°C to 70°C.

Routine tests

Routine tests are not required.

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Report No.

Project Report No.: 11NK13139 (Hazardous Location Testing)

Documents:

Description:	Drawing No.:	Rev. Level:	Date:
TSC4(X)(X6) Increased Safety Terminal Enclosure Series Metric Datasheet (2 pages)	DS545M	D	2012-01-30
Alternate construction Design Guide for TSC Series Enclosures	DS652	D	2011-12-05
EMC Shielding Box Flange Design and EMC Gasket Installation	DS655	B	2002-06-10
Installation Sheet TSC Series Terminal Enclosures (4 pages)	DS647	C	2012-02-10
Minimum Conductor Rating Label	M3281	C	2009-09-04
ATEX Nameplate for TSC Series Increased Safety Enclosures with Terminal Blocks	M3326	F	2012-01-25
Ground Stud for Enclosures	18812	E	2000-11-29
CSC4(X)(X6) Control Panel Enclosure Series Metric Datasheet (2 pages)	DS849	A	2009-07-22
Installation Sheet CSC Series Control Panel Enclosures (4 pages)	DS711	C	2012-02-03
Nameplate for CSC Series Control Panel Enclosures with 'd e mb' Components (T6 only)	M6174	C	2012-02-03
Nameplate for CSC Series Control Panel Enclosures with 'e' Components (T6 only)	M6175	C	2012-02-03
Nameplate for CSC Series Control Panel Enclosures with 'd e mb' Components	M6176	C	2012-02-03
Nameplate for CSC Series Control Panel Enclosures with 'e' Components	M6177	C	2012-02-03



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Terminal Content for TSC and CSC Series Enclosure Types

Sheet No.	Size (L x W x H) Dimensions in mm	Enclosure Type	Rev.	Date:
DS633-1	127 x 127 x 76.2	TSC4(X)(X6)-050503	B	2002-11-12
DS633-2	152 x 152 x 87.4	TSC4(X)(X6)-060604	B	2002-11-12
DS633-3	178 x 178 x 87.4	TSC4(X)(X6)-070704	B	2002-11-12
DS633-4	203 x 203 x 87.4	TSC4(X)(X6)-080804	B	2002-11-12
DS633-5	254 x 254 x 138	TSC4(X)(X6)-101006	B	2002-11-12
DS633-6	254 x 254 x 189	TSC4(X)(X6)-101008	B	2002-11-12
DS633-7	305 x 152 x 87	TSC4(X)(X6)-120604	B	2002-11-12
DS633-8	305 x 152 x 113	TSC4(X)(X6)-120605	B	2002-11-12
DS633-9	305 x 203 x 113	TSC4(X)(X6)-120805	B	2002-11-12
DS633-10	305 x 203 x 138	TSC4(X)(X6)-120806	B	2002-11-12
DS633-11	305 x 305 x 138	TSC4(X)(X6)-121206	B	2002-11-12
DS633-12	305 x 305 x 189	TSC4(X)(X6)-121208	B	2002-11-12
DS633-13	381 x 381 x 138	TSC4(X)(X6)-151506	B	2002-11-12
DS633-14	381 x 381 x 189	TSC4(X)(X6)-151508	B	2002-11-12
DS633-15	406 x 305 x 138	TSC4(X)(X6)-161206	B	2002-11-12
DS633-16	406 x 305 x 189	TSC4(X)(X6)-161208	B	2002-11-12
DS633-17	406 x 406 x 138	TSC4(X)(X6)-161606	B	2002-11-12
DS633-18	406 x 406 x 189	TSC4(X)(X6)-161608	B	2002-11-12
DS668-1	229 x 76 x 152	TSC4(X)(X6)-090306	B	2002-11-12
DS668-2	381 x 76 x 152	TSC4(X)(X6)-150306	B	2002-11-12
DS668-3	533 x 76 x 152	TSC4(X)(X6)-210306	B	2002-11-12
DS668-4	533 x 381 x 152	TSC4(X)(X6)-211506	B	2002-11-12
DS668-5	533 x 533 x 152	TSC4(X)(X6)-212106	B	2002-11-12
DS668-6	686 x 76 x 152	TSC4(X)(X6)-270306	B	2002-11-12
DS668-7	838 x 76 x 152	TSC4(X)(X6)-330306	B	2002-11-12
DS668-8	838 x 229 x 152	TSC4(X)(X6)-330906	B	2002-11-12
DS668-9	838 x 381 x 152	TSC4(X)(X6)-331506	B	2002-11-12
DS668-10	838 x 533 x 152	TSC4(X)(X6)-332106	B	2002-11-12
DS668-11	838 x 686 x 152	TSC4(X)(X6)-332706	B	2002-11-12
DS668-12	838 x 838 x 152	TSC4(X)(X6)-333306	B	2002-11-12
DS668-13	914 x 229 x 165	TSC4(X)(X6)-360906.5	B	2002-11-12
DS668-14	991 x 76 x 152	TSC4(X)(X6)-390306	B	2002-11-12



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Sheet No.	Size (L x W x H) Dimensions in mm	Enclosure Type	Rev.	Date:
DS668-15	991 x 229 x 152	TSC4(X)(X6)-390906	B	2002-11-12
DS668-16	1753 x 229 x 152	TSC4(X)(X6)-391506	B	2002-11-12
DS668-17	991 x 533 x 152	TSC4(X)(X6)-392106	B	2002-11-12
DS668-18	991 x 686 x 152	TSC4(X)(X6)-392706	B	2002-11-12
DS668-19	991 x 838 x 152	TSC4(X)(X6)-393306	B	2002-11-12
DS668-20	991 x 991 x 152	TSC4(X)(X6)-393906	B	2002-11-12
DS668-21	1143 x 76 x 152	TSC4(X)(X6)-450306	B	2002-11-12
DS668-22	1143 x 229 x 152	TSC4(X)(X6)-450906	B	2002-11-12
DS668-23	1143 x 838 x 152	TSC4(X)(X6)-453306	B	2002-11-12
DS668-24	1143 x 991 x 152	TSC4(X)(X6)-453906	B	2002-11-12
DS668-25	1295 x 76 x 152	TSC4(X)(X6)-510306	B	2002-11-12
DS668-26	1295 x 229 x 152	TSC4(X)(X6)-510906	B	2002-11-12
DS668-27	1295 x 381 x 152	TSC4(X)(X6)-511506	B	2002-11-12
DS668-28	1295 x 533 x 152	TSC4(X)(X6)-512106	B	2002-11-12
DS668-29	1295 x 686 x 152	TSC4(X)(X6)-512706	B	2002-11-12
DS668-30	1295 x 838 x 152	TSC4(X)(X6)-513306	B	2002-11-12
DS668-31	1295 x 991 x 152	TSC4(X)(X6)-513906	B	2002-11-12
DS668-32	1448 x 76 x 152	TSC4(X)(X6)-570306	B	2002-11-12
DS668-33	1448 x 229 x 152	TSC4(X)(X6)-570906	B	2002-11-12
DS668-34	1448 x 381 x 152	TSC4(X)(X6)-571506	B	2002-11-12
DS668-35	1448 x 533 x 152	TSC4(X)(X6)-572106	B	2002-11-12
DS668-36	1448 x 686 x 152	TSC4(X)(X6)-572706	B	2002-11-12
DS668-37	1448 x 838 x 152	TSC4(X)(X6)-573306	B	2002-11-12
DS668-38	1448 x 991 x 152	TSC4(X)(X6)-573906	B	2002-11-12
DS668-39	1600 x 76 x 152	TSC4(X)(X6)-630306	B	2002-11-12
DS668-40	1600 x 229 x 152	TSC4(X)(X6)-630906	B	2002-11-12
DS668-41	1600 x 381 x 152	TSC4(X)(X6)-631506	B	2002-11-12
DS668-42	1600 x 533 x 152	TSC4(X)(X6)-632106	B	2002-11-12
DS668-43	1600 x 838 x 152	TSC4(X)(X6)-633306	B	2002-11-12
DS668-44	1600 x 991 x 152	TSC4(X)(X6)-633906	B	2002-11-12
DS668-45	1753 x 76 x 152	TSC4(X)(X6)-690306	B	2002-11-12
DS668-46	991 x 381 x 152	TSC4(X)(X6)-690906	B	2002-11-12
DS668-47	1753 x 381 x 152	TSC4(X)(X6)-691506	B	2002-11-12
DS668-48	1753 x 533 x 152	TSC4(X)(X6)-692106	B	2002-11-12
DS668-49	1753 x 686 x 152	TSC4(X)(X6)-692706	B	2002-11-12
DS668-50	1753 x 838 x 152	TSC4(X)(X6)-693306	B	2002-11-12
DS668-51	1753 x 991 x 152	TSC4(X)(X6)-693906	B	2002-11-12
DS668-52	1829 x 229 x 165	TSC4(X)(X6)-720906	B	2002-11-12
DS668-53	1829 x 305 x 152	TSC4(X)(X6)-721206	B	2002-11-12



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Sheet No.	Size (Lx W x H) Dimensions in mm	Enclosure Type	Rev.	Date:
DS668-54	1829 x 305 x 165	TSC4(X)(X6)-721206.5	B	2002-11-12
DS668-55	1905 x 76 x 152	TSC4(X)(X6)-750306	B	2002-11-12
DS668-56	1905 x 229 x 152	TSC4(X)(X6)-750906	B	2002-11-12
DS668-57	1905 x 381 x 152	TSC4(X)(X6)-751506	B	2002-11-12
DS668-58	1905 x 533 x 152	TSC4(X)(X6)-752106	B	2002-11-12
DS668-59	1905 x 686 x 152	TSC4(X)(X6)-752706	B	2002-11-12
DS668-60	1905 x 991 x 152	TSC4(X)(X6)-753906	B	2002-11-12
DS668-61	2057 x 76 x 152	TSC4(X)(X6)-810306	B	2002-11-12
DS668-62	2057 x 229 x 152	TSC4(X)(X6)-810906	B	2002-11-12
DS668-63	2057 x 381 x 152	TSC4(X)(X6)-811506	B	2002-11-12
DS668-64	2057 x 533 x 152	TSC4(X)(X6)-812106	B	2002-11-12
DS668-65	2057 x 686 x 152	TSC4(X)(X6)-812706	B	2002-11-12
DS668-66	2057 x 838 x 152	TSC4(X)(X6)-813306	B	2002-11-12
DS668-67	2057 x 991 x 152	TSC4(X)(X6)-813906	B	2002-11-12

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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 the 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 the actual use, current and voltage.
- After installation, all creepage distances and clearances shall be according to Table 1 in EN 60079-7:2007.
- All operators are covered by a component certificate for protection type 'd,' 'e,' and 'mb' and have a minimum IP66 rating.
- When suitably certified 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.

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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 CSC and TSC Series have in addition passed the tests for Ingress Protection to IP 66 in accordance with EN60529: 1991/A1 2000.

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.

