

# EC-TYPE EXAMINATION CERTIFICATE



[1]

[2]

**Component intended for use on/in equipment or protective system  
intended for use in Potentially Explosive Atmospheres  
Directive 94/9/EC**

[3]

EC-Type Examination Certificate Number: **DEMKO 09 ATEX 146637U Rev. 1**

[4]

Component: **Pushbutton and Selector Switch Operators, E-Series**

[5]

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

[6]

Address: **4801 W. 150<sup>th</sup> Street, Cleveland, OH 44135 USA**

[7]

This Component 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 component has been found to comply with the Essential Health and Safety Requirements relating to design and construction of components 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. **4786917100**

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

**EN 60079-0:2012+A11:2013  
EN 60079-31:2009**

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

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The sign "U" placed after the certificate number indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.

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This EC-Type examination certificate relates only to the design, examination and tests of the specified component in accordance with the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this component. These are not covered by this certificate.

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The marking of the component shall include the following:

 **II 2 G Ex d e IIC Gb**

 **II 2 D Ex tb IIIC Db IP66**

**Certification Manager**  
Jan-Erik Storgaard

This is to certify that the sample(s) of the Component described herein ("Certified Component") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Equipment Certification Program Requirements. This certificate and test results obtained apply only to the component sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured component. UL has not established Follow-Up Service or other surveillance of the component. The Manufacturer is solely and fully responsible for conformity of all component to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

**Date of issue:** 2009-10-14

**Re-issued:** 2015-07-31



**Notified Body**

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## Schedule

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# EC-TYPE EXAMINATION CERTIFICATE No.

## DEMKO 09 ATEX 146637U Rev. 1

Report: 4786917100

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### Description of Component:

The E-series pushbutton and selector switch operators are intended for connection to the Cat. No. EBT contact block via a mounting bracket manufactured by Adalet and intended to be mounted in an increased safety enclosure. The pushbuttons come in a metallic flat-head version in black, green, or red, a metallic mushroom-head version in black or red, or a mushroom-head push-pull version in red. The selector switches have a plastic knob and come in two-position, three-position, and spring-return keyed and non-keyed (knob) versions.

### Nomenclature for E-Series Pushbuttons:

**EHP**  
**I**

**BM**  
**II**

**I – Pushbutton Series**  
EHP – Series Designation

**II – Pushbutton Version**  
B – Metallic flat-head in black, green, or red  
BM – Metallic mushroom-head in black or red  
PM – Metallic mushroom-head push-pull head in red  
PLC - Metallic flat-head in black, green, or red with pad-lockable Lexan cover

### Nomenclature for E-Series Selector Switches:

**EH**  
**I**

**S**  
**II**

**R2**  
**III**

**LC**  
**IV**

**I – Selector Switch Series**  
EH – Series Designation

**II – Selector Switch Version**  
S – Knob Selector Switch  
KS – Keyed-Selector Switch

**III – Position Details**  
S – Two-position or three-position, no spring return  
C – Three-position, spring return center from right and left  
R – Three-position, spring return center from right, maintain left  
R2 – Two-position, spring return to left from right  
L – Three-position, spring return center from left, maintain right  
L2 – Two-position, spring return to right from left

**IV – Cover Option**  
LC – Lexan Padlockable Cover  
Blank – No Cover Option Provided

### Temperature range

The ambient temperature range is -40°C to +60°C.

### Electrical data

With Cat. No. EBT contact block:  
Voltage: 600 V AC/ 300 V DC (A600 AC/Q300 DC)  
Current: 10 A

### Routine tests

A routine dielectric test according to EN 60079-7, Clause 7.1, is required on the E-Series pushbuttons and selector switches mounted to the Cat. No. EBT contact block on a statistical basis according to ISO 2859-1 with an acceptance quality limit (AQL) of 0.04. The device shall withstand the test voltage of 2640 V r.m.s for 100 ms without dielectric breakdown occurring.

As an alternative to the above test, the E-Series pushbuttons and selector switches shall withstand the test voltage of 2200 V r.m.s for 1 minute without dielectric breakdown occurring.



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## Schedule

[14]

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### Descriptive Documents

The scheduled documents are listed in the report no. provided under item no. [ 8 ] on page 1 of this EC-Type Examination Certificate.

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### Schedule of Limitations:

- Device must be mounted on a flat surface in a suitable 'Ex e' increased safety enclosure and installed in accordance with installation instructions DS842, DS843, DS845, or DS847.
- To maintain IP66 rating and/or Dust protection method 'tD', a minimum of two gaskets must be installed in accordance with applicable installation instructions DS842, DS843, DS845, or DS847.
- For use with the Cat. No. EBT contact block.
- The Cat. No. EBT contact block will accommodate wire sizes from 22 AWG (0.5 mm<sup>2</sup>) to 12 AWG (4 mm<sup>2</sup>), with a maximum of two wires per terminal. Strip wire insulation 10-12 mm. Tighten terminal screws 7 to 10 in-lbs (0.8 N-m to 1.1 N-m).
- The Cat. No. EBT contact block must be mounted to provide a minimum of 10 mm clearance to any conductive surfaces.
- When used with the Cat. No. EBT contact block, the device reaches a maximum temperature of 73°C corresponding to a temperature code of T6.
- All power is to be shut off before connecting/disconnecting the conductors from the terminals.
- For ambient temperatures below -10°C, use field wiring suitable for the minimum ambient temperature.
- If using the optional padlockable cover, ensure that the equipment is not installed in a location where it may be subjected to conditions which would allow for the build-up of electrostatic charge. These covers must only be cleaned with a damp cloth.

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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 E-Series pushbutton and selector switch operators have in addition passed the tests for Ingress Protection to IP 66 in accordance with EN 60529:1991+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.

