The REMOTE CONTROL® Range

Top Quality Valve Actuators
Made in Sweden

RCE4L

Indikeringsbox **EEx ib**

Tillägg till Instruktion 980558

Tillverkare:	Rotork Sweden AB
Enligt direktiv:	94/9/EC
Enligt standard:	CENELEC EN 50014:1997+A1: 1999+A2 CENELEC EN 50020:2002 CENELEC EN 50281-1-1:1998
Grupp och kategori:	CE 0470 Ex II 2 G D EEx ib IIC T5 / T6 För användning i potentiell explosiv atmosfär.
Certifikat EC Nemko:	Nemko 04 ATEX 1030

INSTALLATION

Kontrollera att indikeringsboxens art nr överensstämmer med det som är beställt. Vid oklarhet kontakta Rotork Sweden AB.

Installatören som ansluter indikeringsboxen har skyldighet att följa regler och krav enligt gällande föreskrifter för installation. Kontrollera elektriska data på RCE4:ans märkskylt och EX certifikatet Nemko 04ATEX1030, för att säkerställa att de elektriska och miljömässiga parametrarna uppfylls för installationskraven.

Montera explosionsklassade EEx e förskruvningar vid bruk i Ex miljö.

OBS: Kabelförskruvningar anpassade till RCE4, kabeltyp och omgivningsmiljö eller EX klassade blindpluggar fordras.

ANVÄNDNING

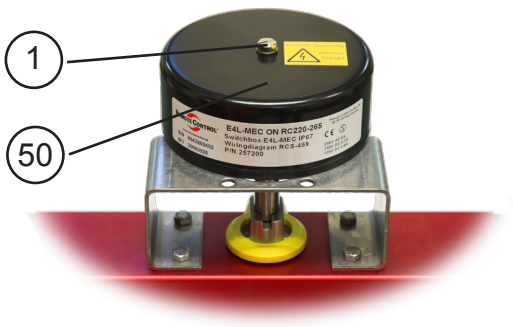
Se broschyr 380.

DEMONTERING

1. Stäng av strömmen och avlufta donet om det behövs. Skruva loss skruven (1) på indikeringsboxens lock (50). Vrid därefter locket och lyft det rakt upp.

2. Koppla loss trådarna från kopplingsplinten och jordningen. Öppna kabelförskruvningen / kabelförskruvningarna och dra ut kabeln / kablarna.

3. Lossa de fyra skruvarna på donets ovansida som håller indikeringsboxens montagekonsol. Lyft bort konsolen med indikeringsboxen från donet. Montera tillbaka locket på indikeringsboxen. Dra åt skruven (1). Plugga ingångarna för skydd mot damm och smuts.



RCE4L EXPLOSIONSSÄKER INDIKERINGSBOX

TEKNISKA DATA

RCE4L GC2 EEx ib ATEX med guldpläterade brytare Saia-Burgess XGG2-81-S2:

CE 0470 Ex II 2 G D EEx ib IIC IP67
T6/T80 °C -25 °C≤ Ta ≤+65 °C
30V DC 100mA resistiv last
Ui: 30V, Ii: 100 mA, Pi: 750 mW

RCE4L N2-NJ2-V3N EEx ib ATEX med Namur givare Pepperl & Fuchs NJ2-V3-N:

CE 0470 Ex II 2 G D EEx ib IIC IP67
T6/T80 °C -25 °C≤ Ta ≤+65 °C
T5/T100 °C -25 °C≤ Ta ≤+80 °C
Ui:16V, Ii:25mA, Pi:64mW

RCE4L N2-NS5002 EEx ib ATEX med Namur givare IFM NS 5002:

CE 0470 Ex II 2 G D EEx ib IIC IP67
T6/T80 °C -20 °C≤ Ta ≤+65 °C
T5/T100 °C -20 °C≤ Ta ≤+80 °C
Ui:15V, Ii:50mA, Pi:120mW

RCE4L N2-NS5009 EEx ib ATEX med Namur givare IFM NS 5009:

CE 0470 Ex II 2 G D EEx ib IIC IP67
T6/T80 °C -20 °C≤ Ta ≤+65 °C
Ui:15V, Ii:50mA, Pi:120mW

RCE4L indikeringsboxar enligt ovan finns även i extra korrosionsskyddad design T.

ROTORK SWEDEN AB
Box 80, Kontrollvägen 15, SE-791 22 Falun, Sweden
Tel: +46 (0)23-587 00 • Fax: +46 (0)23-587 45 • falun.info@rotork.com

The REMOTE CONTROL® Range

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RCE4L

Switch box **EEx ib**

Addition to Instruction No. 980559

Manufacturer:	Rotork Sweden AB
Directive conformity:	94/9/EC
Standard conformity:	CENELEC EN 50014:1997+A1: 1999+A2 CENELEC EN 50020:2002 CENELEC EN 50281-1-1:1998
Group and category:	CE 0470 Ex II 2 G D EEx ib IIC T5 / T6
	For use in potentially explosive atmospheres.

EC type Examination Certificate: Nemko 04 ATEX 1030

INSTALLATION AND COMMISSIONING

Make certain that the switch box corresponds to the ordered part specifications. If needed please contact Rotork Sweden AB.

The installer is to establish the electrical connection between the switch box and the control system, according to the standards for installation and must also refer to the label on the switch box and the EC-type ewamination certificate Nemko 04ATEX1030, to ensure that the electrical and environmental parameters correspond to the installation requirements.

Fit suitable cable gland. If a solenoid valve is to be connected, an extra cable gland may be required.

Note: Cable entries suitable for the cable type and ambient condition and/or a plug are demanded for approved application.

USE

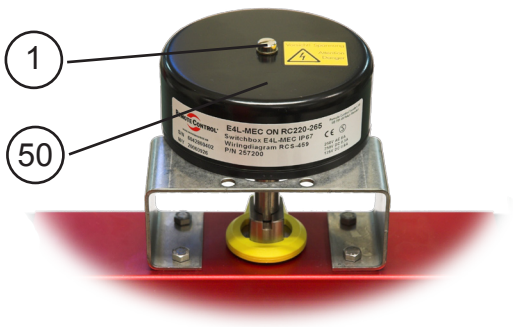
Please see leaflet No. 381.

DISMANTLING

1. Switch off the power if necessary and vent the actuator. Dismantle the cover (50) on the switch box with the screw (1). Twist the cover and lift it straight up when the screw is loosened.

2. Disconnect the wires from the terminal strip and open the cable gland/s. Remove the cable/les.

3. Dismantle the mounting bracket by loosening the 4 pcs fastening screws on the upper side of the actuator. Remove the switch box. Put the cover back on the switch box. Tighten with screw (1). Plug the entries for protection against dust and dirt.



RCE4L INTRINSICALLY SAFE SWITCH BOX

TECHNICAL DATA

RCE4L GC2 EEx ib Atex with mechanical gold plated switches Saia-Burgess XGG2-81-S2:

CE 0470 II 2 G D EEx ib IIC IP67
T6/T80 °C -25 °C≤ Ta ≤+65 °C
30V DC 100mA resistive load
Ui: 30V, Ii: 100 mA, Pi: 750 mW

RCE4L N2-NJ2-V3N EEx ib Atex with proximity namur sensor Pepperl & Fuchs NJ2-V3-N:

CE 0470 II 2 G D EEx ib IIC IP67
T6/T80 °C -25 °C≤ Ta ≤+65 °C
T5/T100 °C -25 °C≤ Ta ≤+80 °C
Ui:16V, Ii:25mA, Pi:64mW

RCE4L N2-NS5002 EEx ib Atex with proximity namur sensor IFM NS 5002:

CE 0470 II 2 G D EEx ib IIC IP67
T6/T80 °C -20 °C≤ Ta ≤+65 °C
T5/T100 °C -20 °C≤ Ta ≤+80 °C
Ui:15V, Ii:50mA, Pi:120mW

RCE4L N2-NS5009 EEx ib Atex with proximity namur sensor IFM NS 5009:

CE 0470 II 2 G D EEx ib IIC IP67
T6/T80 °C -20 °C≤ Ta ≤+65 °C
Ui:15V, Ii:50mA, Pi:120mW

Above RCE4L switch boxes are also available in reinforced corrosion protection design T.

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[1] EC-TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protected System Intended for use in Potentially explosive atmospheres Directive 94/9/EC

[3] EC-Type Examination Certificate Number: Nemko 04ATEX 1030 Issue 1

[4] Equipment or Protective System: Switchbox
[5] Applicant/ Manufacturer: Rotork Sweden AB
[6] Address: Kontrollvägen 15
SE-791 45 Falun
SWEDEN

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

[8] Nemko AS, notified body number 0470 in accordance with Article 9 of 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 the 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. 145596

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

CENELEC EN 50014: 1997 + A1: 1999 + A2: 1999 , CENELEC EN 50020 :2002 and CENELEC EN 50281-1-1 :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, 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 this certificate.

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

II 2 GD T80/100°C EEx ib IIC T5/T6

Oslo, 2010-04-06

Rolf Hoel
Certification Manager, Ex-products

[13] Schedule

[14] EC-TYPE EXAMINATION CERTIFICATE No Nemko 04ATEX1030 | Issue 1

[15] Description of Equipment or Protective System

The equipment consists of switch boxes supplied with micro switches, inductive sensors and transmitter. Cable entries and plugs have to be appropriately certified and rated with regard to the temperature and ingress protection IP. The certified equipment must be connected to certified intrinsically safe circuits according to the table below.

Type Designation

E4LN2..-.., E4LGC2 and 1990 series

Technical Data

Maximum values:

Description	Type	Ui [V]	Ii [mA]	Pi [mW]	Ci [nF]	Li [µH]
Kinax transmitter	3W2 kode:708-xxx	30	160	1000	10	0
Inductive sensor	NJ5-18GK-SN	16	25	64	120	200
Inductive sensor	NCB2-V3-N0	16	25	64	100	100
Inductive sensor	SJ3,5-SN	16	25	64	30	100
Inductive sensor	NJ2-11-SN-G	16	25	64	50	150
Micro switch	V5J012BB1C	30	100	750	0	0
Inhead transmitter	IPAQ-HX	Ui / Uo: 30	Ii 100 / Io 25	Pi 900 / Po 188	Ci 0 / Co 66	Li 0 / Lo 50
Inductive sensor	NJ 2-V3-N	16	25	64	40	50
Inductive sensor	NS5002	15	50	120	80	110
Inductive sensor	NS5009	15	50	120	80	110
Micro switch	E4LGC2	30	100	750		

Maximum values shall be set in conformity with technical data and shall be specified in wiring diagram inside the switch box.

Temperature class, maximum surface temperature (T) and maximum range of ambient temperature (Ta):

T5 / T100ºC : -55ºC $\leq$ Ta $\leq$ 80ºC

T6 / T80ºC : -55ºC $\leq$ Ta $\leq$ 65ºC

The temperature class, T and Ta range shall be set in conformity with temperature properties of components listed in descriptive documents. Minimum Ta for E4LN2..-..E4LGC2: -40ºC

Ingress Protection Code

IP 66 / IP 67

[16]

Report No. 145596

Descriptive Documents

Name/Title	Drawing No.	Rev.	Date	Sheets
1990 Marking sign EEx ib IIC	006600	B	2009-04-22	1
General drawing Label for RC E4 EEx ib	004419	E	2010-03-15	1

1990 Switchbox Base General drawing for ATEX certificate	004474	D	2010-03-23	1
RC E4/1990 EEx ib Technical data	000093	C	2010-03-24	1
Drive Shaft bush 1990-Box	001333-B	B	2005-05-19	1
1990 Switchbox Lid Machining	003316-C	C	2004-11-23	1
Shaft for 1990-box General drawing for Atex Certificate	004084-B	B	2004-03-16	1
1990 EEx ib IIC T6 ATEX Switch box IP66/67 General drawing for components	006602-A	A	2004-11-29	1
Base plate RC E4 all	005616-B	B	2005-05-30	1
Shaft E4 General drawing for Atex certificate	005726-A	A	2005-08-18	1
Electric circuit for RC E4 / RC E4L and 1990 with gold plated mechanical switches General drawing	005754-A	A	2005-09-01	1
Electric circuit for a RC E4 / E4L / 1990 with proximity switches General drawing	005763-A	A	2005-09-07	1
E4LN2 Swich box Inductive switch	004734-C	C	2006-08-25	1
E4L GC Switch box Gold plated micro switch	004757-C	C	2006-08-25	1
E4/E4L Cover Huv Cover Generell ritning	005773-A	A	2005-09-08	1

Routine Test
None

Certificate History and Associated Nemko Reports

Issue	Date	Report	Description
0	2004-07-14	12588	Prime Certificate released
Suppl. 1	2006-09-15	72199	New type of switchbox. 1990 series
1	2010-03-16	145596	Appendix to test report, Nemko Order No. 12588

[17] Special Conditions for Safe Use
None

[18] Essential Health and Safety Requirements
See item 9