

ECON SWITCHBOX FOR HYDRAULIC ACTUATORS

Fig. 21440 Linear Switchbox



Fig. 21540-21543 Quarter turn Switchbox



**Installation & Operation Manual for Hydraulic Switchbox:
Fig. 21440, 21540, 21541, 21542, 21543**

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1 INTRODUCTION

1.1 Purpose

The purpose of this manual is to introduce and explain the installation, operation and maintenance of the ECON Switchbox for Hydraulic Actuators.

1.2 Safety Notices

This manual contains safety notices and precautions the user must take to reduce the risk of personal injury and damage to the equipment. The user(s) must read these instructions before the installation, operation or maintenance of the ECON Switchbox for Hydraulic Actuators.



DANGER: Refers to personal safety and alerts the user for danger and/or injury.
Hazardous or unsafe practice may result in severe injury or death.



WARNING: Refers to personal safety. Alerts the user for potential danger.
Not following warning notices could result in personal injury or death.



CAUTION: Directs the user's attention to general precautions that, if not followed, could result in personal injury and/or equipment damage.

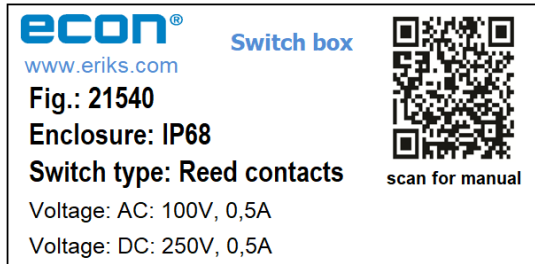
Note: Information in this manual is critical to the user's understanding of the actuator's installation and operation.

2 PRODUCT IDENTIFICATION

2.1 Product Identification

The product sticker is located on side of the switchbox. The sticker contains the following:

2.1.1 Marking



- ECON logo (trademark)
- Figure number
- Enclosure rate
- Switch type
- Electric specifications
- QR code

2.1.2 Certification

- LRS Type Approval Certificate.

2.2 Initial Inspection

Upon the receipt of the switchbox, the user should inspect the condition of the product and ensure that the product specification stated on the product sticker matches with the order sheet.

2.3 Storage

An electric switchbox must be stored in a clean, cool and dry area. The item should be stored with the top cover installed and the cable gland plugged. Storage must be off the floor, covered with a sealed dust protector.

3 GENERAL INFORMATION AND FEATURES

3.1 General Information

ECON Switchbox for Hydraulic actuator are made of VALOX plastic which is durable and fire retarded. The switchbox contains “reed contacts” and can be used in an Atex environment when a Zener Barrier is used. When this is done the switchbox becomes a “simple apparatus” and is intrinsically safe.

3.1.1 Switchbox Versions

- Fig. 21440 – Switchbox open/closed for ESL/EDL actuators
- Fig. 21540 – Switchbox open/closed for ESR/EDR actuators
- Fig. 21541 – Switchbox open/closed & Potentiometer for ESR/EDR actuators
- Fig. 21542 – Switchbox open/closed for ESH/EDH actuators
- Fig. 21543 – Switchbox open/closed & Potentiometer for ESH/EDH actuators

4 SWITCHBOX DIMENSIONS & SPECIFICATIONS

ECON Limit Switchbox fig. 21440

Technical Data:
 Operation principle: magnetically operated reed contacts (2 sets)
 Suitable for: hydraulic linear actuators
 Protection degree: IP68 - 50mtr. / 48hrs.

Reed relay features:
 Switching capacity max.: 10 W/VA
 Switching voltage max.: 100 VAC
 Switching current max.: 0,5 A
 Limiting current max.: 1 A
 Dielectric strength min.: 250 VDC
 Contact resistance max.: 150 mOhms
 Insulation resistance typ.: 10 Ohms
 Switching time: 1,8 ms
 Bounce time: 0,2 ms
 Release time: 0,03 ms
 Resonance frequency: 5000 Hz
 Operating frequency max.: 200 Hz
 Shock (11ms): 50 g's
 Capacitance: 0,7 pF
 Operating temperature: -40°C - +150°C
 Test coil type: 1035

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	ECON Limit Switchbox	fig. 21440
Designed by		Checked by	Approved by
Joost Douwes Dekker		R. v. Eekelen	Date
			Date
			15-5-2020
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			Edition
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			Sheet
			1 / 1

ECON Limit Switchbox fig. 21540/21542

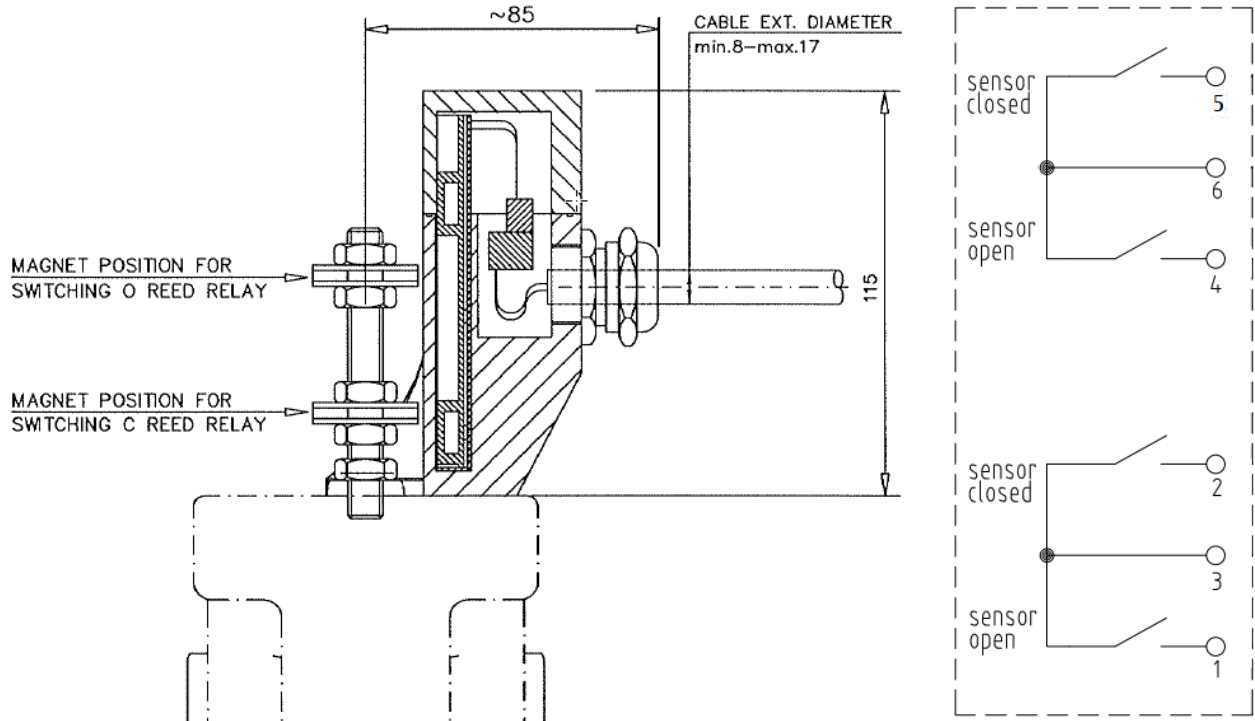
Technical Data:
 Operation principle: magnetically operated reed contacts (2 sets)
 Suitable for: hydraulic quarter turn actuators
 Protection degree: IP68 - 50mtr.

Reed relay features:
 Switching capacity max.: 10 W/VA
 Switching voltage max.: 100 VAC
 Switching current max.: 0,5 A
 Limiting current max.: 1 A
 Dielectric strength min.: 250 VDC
 Contact resistance max.: 150 mOhms
 Insulation resistance typ.: 10 Ohms
 Switching time: 1,8 ms
 Bounce time: 0,2 ms
 Release time: 0,03 ms
 Resonance frequency: 5000 Hz
 Operating frequency max.: 200 Hz
 Shock (11ms): 50 g's
 Capacitance: 0,7 pF
 Operating temperature: -40°C - +150°C
 Test coil type: 1035

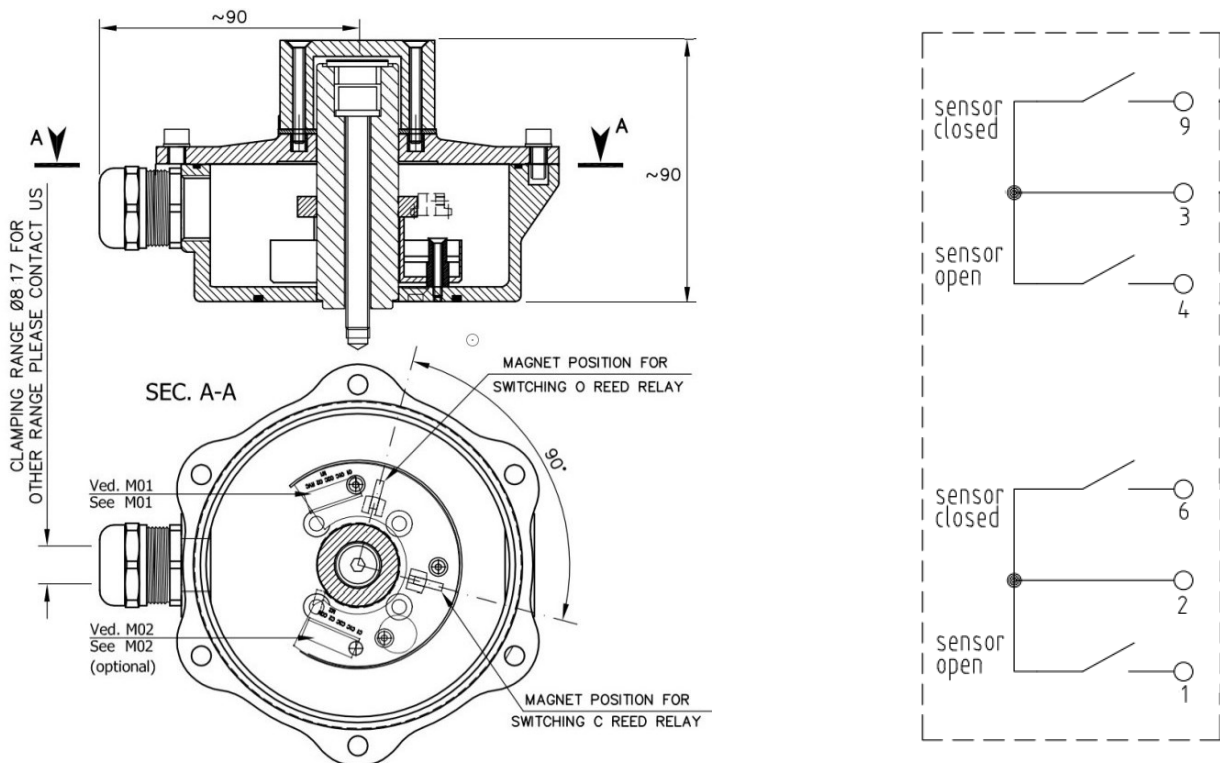
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	Econ Limit Switchbox	fig. 21540/24542
Designed by		Checked by	Approved by
Joost Douwes Dekker		R. v. Eekelen	Date
			Date
			27-5-2020
ERIKS			
			Edition
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			Sheet
			1 / 1

5 SWITCH ASSEMBLY & ELECTRIC CONNECTION SCHEDULE

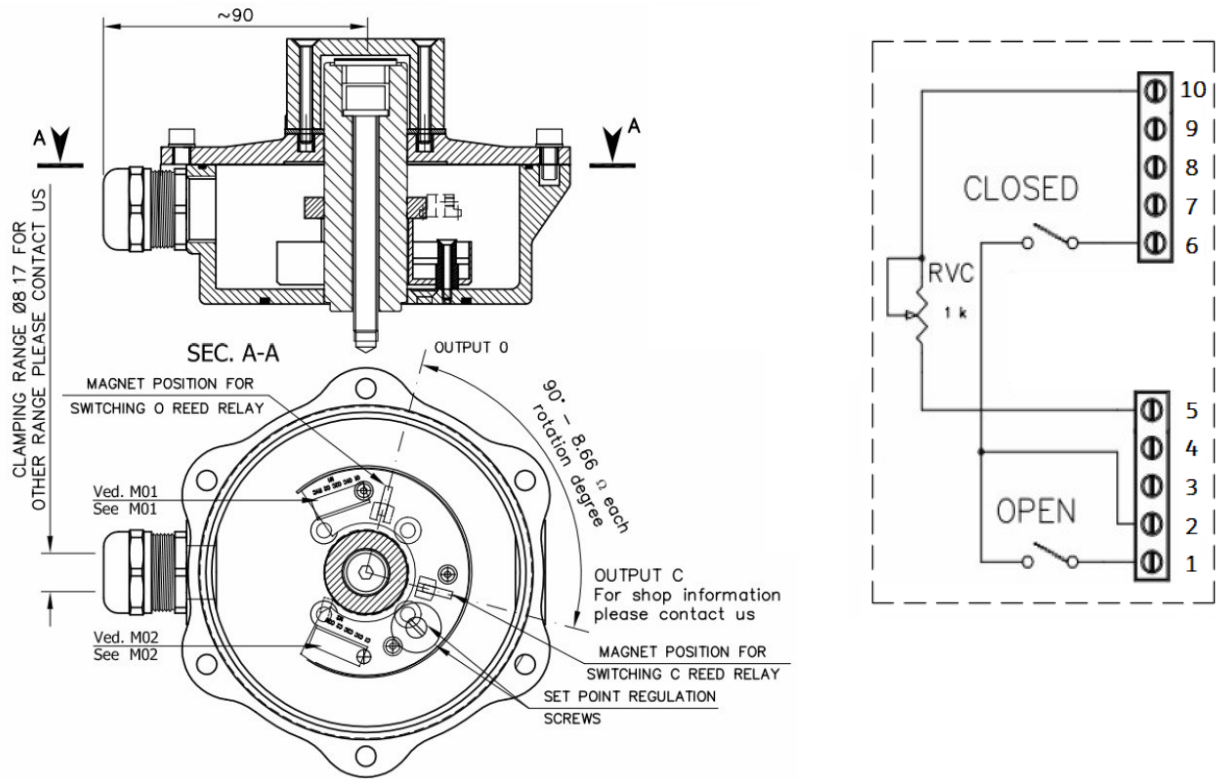
5.1 Fig. 21440 open / closed switchbox



5.2 Fig. 21540 & 21542 open / closed switchbox

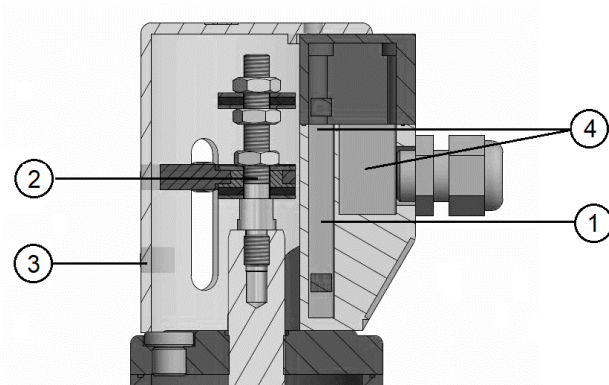


5.3 Fig. 21541 & 21543 open / closed switchbox with Potentiometer



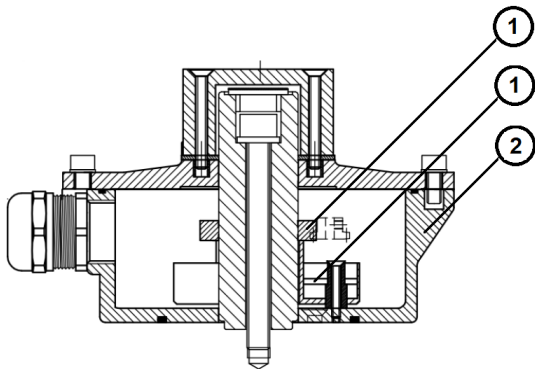
6 SPARE PARTS

6.1 Figure 21440



position	part description
1	Reed Sensor block for open/closed switchbox
2	Spindle set with magnet rings and indicator for switchbox
3	Switch cover
4	Switchbox

6.2 Figure 21540 & 21542



position	part description
1	Reed Sensor set for open/closed switchbox
2	Complete switchbox

**If you have questions about this product,
Please contact the nearest ECON distributor.
You can find them on www.eriks.com**

ERIKS

ERIKS Flow Control

Cypresbaan 63,
2908 LT Capelle aan den IJssel,
The Netherlands

Phone: +31 (0)88 855 8100