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**MOTOR DRIVE  
Type NKM-1.2**

**TECHNICAL AND MOTOR SPECIFICATION**

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## TABLE OF CONTENTS

1.USAGE.....	1
2.TECHNICAL DATA.....	1
3.MOTOR DRIVE CONSTRUCTION.....	2
4.MOTOR DRIVE INSTALLATION.....	3,4
- Installation on a pillar	
- Installation of powering and controlling conduits	
- Adjustments	
- Motor drive blocking	
5.MEINTANCE AND SERVICE.....	5
6.WARRANTY CARD.....	6

## 1.USAGE

NKM-1.2 motor drive is designed to close and open overhead disconnectors and switch-disconnectors in lines of medium voltage.

NKM-1.2 motor drive is expected to cooperate with connectors, in which the change of the position is done by the longitudinal movement of a strand. It was checked and examined in cooperation with disconnectors and switch-disconnectors produced by IE-ZD Białystok:

- Disconnector type SON-24
- Switch-disconnector type SRN-24

## 2.TECHNICAL DATA

- Supply voltage..... 24V DC
- Rated current..... 19A
- Connection time..... 1,0s
- Drive mass..... 16kg
- Overall dimensions..... 290x480x210mm
- The level of casing protection..... IP43W

The motor drive is fitted for the installation on the pillar of an overhead line. Fastening parts are adjusted to the type of the rod given in the order. The casing is in the form of a galvanized and pulverized steel cabinet.

The motor drive can be activated:

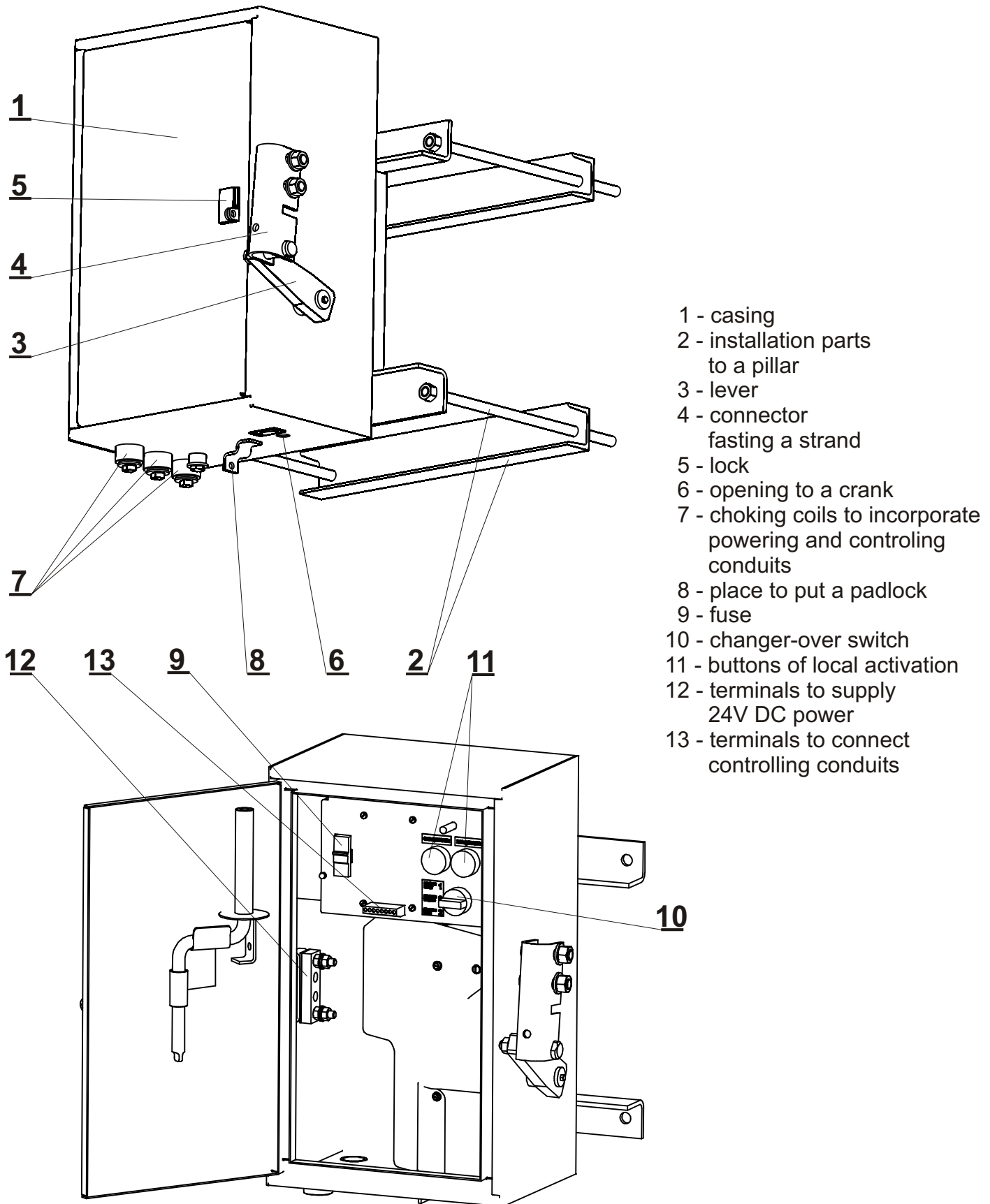
- Locally (with buttons placed in the cabinet)
- Remotely (with conduits or via radio waves)
- Manually (with a crank)

**The manual change of the drive position serves only adjusting purposes. The live linear circuit cannot be opened or closed this way.**

The mechanism is equipped with a mechanical and electric blockade. It is also possible to put a padlock after blocking of the drive.

The cabinet has a lock and can be equipped with a padlock too.

### 3.MOTOR DRIVE CONSTRUCTION



- 1 - casing
- 2 - installation parts to a pillar
- 3 - lever
- 4 - connector fastening a strand
- 5 - lock
- 6 - opening to a crank
- 7 - choking coils to incorporate powering and controlling conduits
- 8 - place to put a padlock
- 9 - fuse
- 10 - changer-over switch
- 11 - buttons of local activation
- 12 - terminals to supply 24V DC power
- 13 - terminals to connect controlling conduits

Illustration 1 - Motor drive construction

## 4.MOTOR DRIVE INSTALLATION

### 4.1.INSTALLATION ON A PILLAR

The way of the drive installation on a pillar is shown in the assembly drawing of a disconnecter with a drive appropriately to the make. The information can be found in the manual.

### 4.2.INSTALLATION OF POWERING AND CONTROLLING CONDUITS

Powering conduits ought to be attached to the terminals (item 12). Controlling and transmitting conduits ought to be attached to terminals (item 13) according to the illustration 2 presented below.

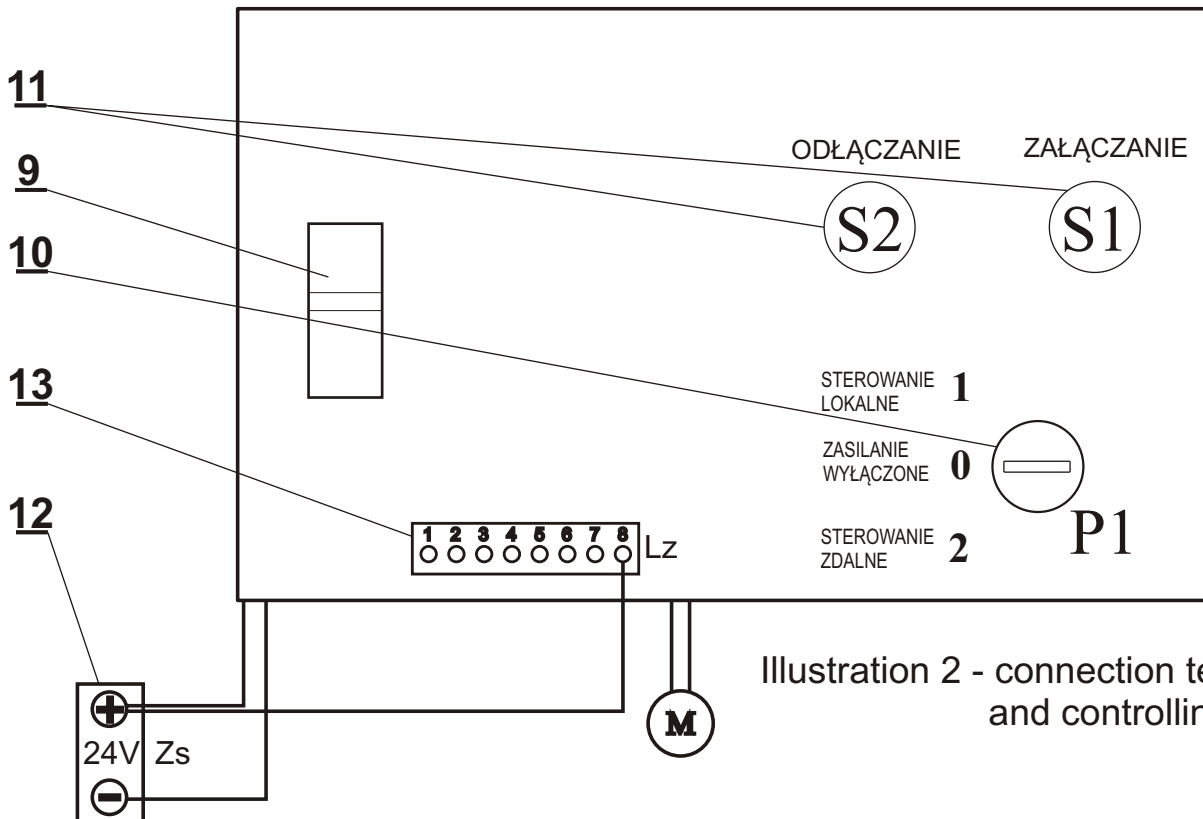


Illustration 2 - connection terminals and controlling buttons

Zs - screw terminal M8 - drive supply 24V DC

M - electric motor

Lz 1-8 - terminal strip

Lz1 - remote disconnection - signal application +24V

Lz2 - remote connection - signal application +24V

Lz3 - active mode signalling of REMOTE CONTROLLING +24V

Lz4 - blockade installation signalling +24V

Lz5 - openingdoor signalling +24V

Lz6 - signalling of the state ON +24V

Lz7 - signalling of the state OFF +24V

Lz8 - signaling supply from before a fuse +24V

P1 - charger-over switch

0 - supply OFF

1 - local control

2 - remote control

S1 - local connection button (green)

S2 - local disconnection button (red)

### 4.3.ADJUSTMENTS

After a switch-disconnector and a drive installation it is required to settle the length of a strand and cut the excess of bottom segment. The strand pipe ought to be clamped in a wrapping-connector **4** in an ON state of the switch-connector and in ON position of the drive lever.

The regulation of strand position ought to be done in an ON position of the switch-disconnector in the following order:

- Loosen the strand clamp in the connector **4**
- Put switch-disconnector contacts in a proper position (manual full closure)
- Change manually the lever position **3** (slightly rotate the drive lever with the use of a crank towards disconnecting in case switch-disconnector contacts do not close fully)
- Clamp the strand pipe in the connector
- Retry disconnecting-connecting

When the position of the strand in the connector's clamp is settled, it is required to drill a hole in the strand and additionally connect the strand with a connector with the use of a screw ( detail'a in the assembly drawing in the switch-disconnector manual).

### 4.4.MOTOR DRIVE BLOCKING

In order to block the drive in a particular position it is required to use a crank into the hole **6** (illustration 1) and **not rotating** lead to the disappearance of the red marker to crank. Next, by pushing in and slightly moving the crank snap it in the mechanism. Then rotate the crank to such a position the putting a padlock is possible (illustration 3 - mechanism blocked).

Putting the crank into the hole in the casing causes an electric drive blockade. The padlock, however, is a mechanical blockade.

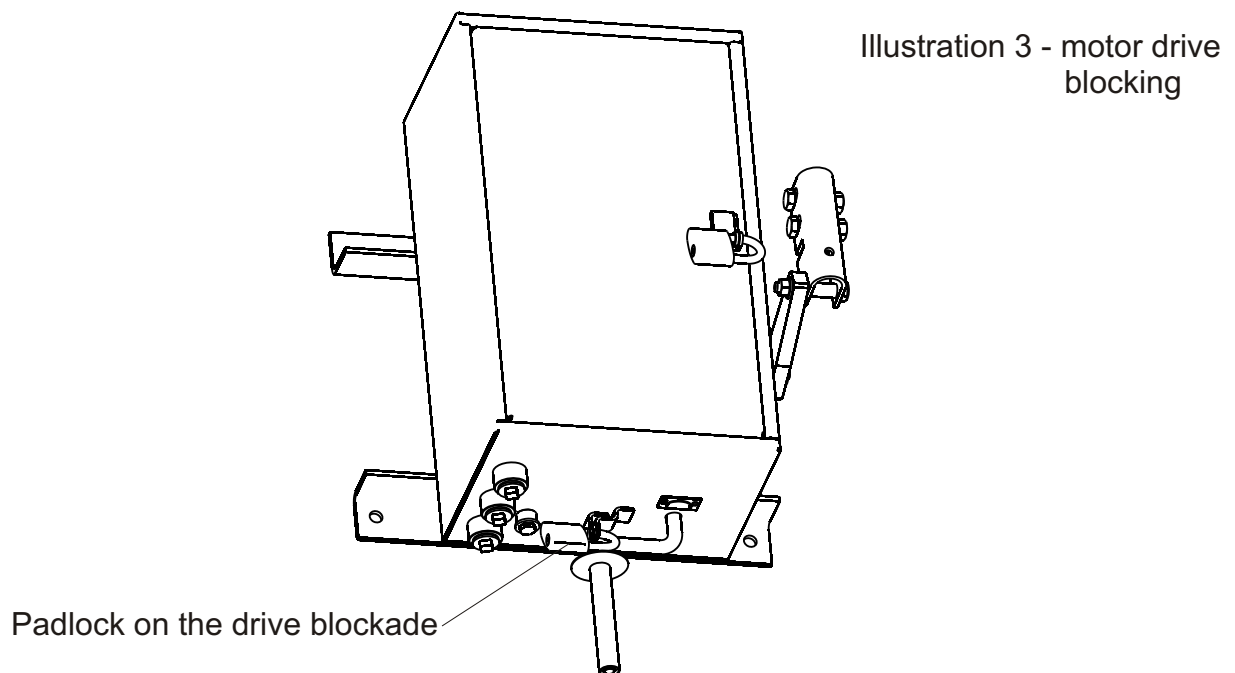


Illustration 3 - motor drive blocking

## **5.MAINTANCE AND SERVICE**

We advice to service the set of the switch-disconnector together with the motor drive twice a year.

The service ought to include:

- Checking the motor drive performance to state if it properly realizes the operations of disconnecting and connecting a connector
- Checking backlashes and the level of wear of gear elements
- Possible refilling of lubricant in a worm gear and a mschanism of Maltes cross
- Checking the state of terminals of electric conduits
- Evaluation of the battery state

Warranty and post-warranty service is conducted by the manufacturer.



## WARRANTY CARD

1. We confirm good quality and parametr compatibility of  
**the motor drive type NKM-1.2**

serial number .....

According to the standard EN 60694 and IEC 60529

2. We provide a 3-year warranty starting from the  
purchase date in IE-ZD Białystok
3. The warranty does not include any faults resulted from the  
installation, using and constructional modifications made  
without manufacturer's permission.

Purchase date

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Quality control

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