Level Control

Manual and Safety Instructions
General Information

Read this manual before installing and activating this product. Respect all safety instructions and local laws and regulations.

The installation may only be executed by qualified electricians. This product may only be used according to its intended use set forth in this manual.

The following Symbols and hazard statements are used in this operating and assembly instructions:

**Hazard statements**

**Danger**
Indicates a hazardous situation which, if not avoided, will result in death or serious personal injury.

**Warning**
Indicates a hazardous situation which, if not avoided, could result in death or serious personal injury.

**Caution**
Indicates a hazardous situation which, if not avoided, could result in minor or moderate personal injury.

**Notes**
A blue or grey circle with a white graphical symbol indicates that an action must be taken.

A red or grey circle with a diagonal bar, possibly with a black graphical symbol, indicates that an action must not be taken or must be stopped.

If these instructions are not observed, it may result in malfunction or damage to the equipment.

The hazard statements are structured in the following way:

**Signal Word**
**Description of Hazard**
Consequence of ignoring the warning.
Action to avoid the hazard.
Technical Data

Technical data for the 7.5 kW / 15 kW / 18.5 kW versions

<table>
<thead>
<tr>
<th>Switch cycles</th>
<th>Max. 30 starts/h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mech. life span</td>
<td>10^7 switching cycles</td>
</tr>
<tr>
<td>Operating voltage</td>
<td>400 V AC</td>
</tr>
<tr>
<td>Operating current</td>
<td>16A / 32A /38A</td>
</tr>
<tr>
<td>Rated power AC3/400V</td>
<td>Max. 7,5kW / 15kW / 18,5kW</td>
</tr>
<tr>
<td>Supply frequency</td>
<td>50 - 60 Hz</td>
</tr>
<tr>
<td>Temperature range</td>
<td>-20 - +50°C</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP44</td>
</tr>
<tr>
<td>Supply</td>
<td>CEE-plug 16A / 32A /63A</td>
</tr>
<tr>
<td>Consumer connection</td>
<td>CEE-connector 16A / 32A / 63A</td>
</tr>
<tr>
<td>Cable entry</td>
<td>M20 with sealing insert (2 (3) x 5 mm) or (2 x 6 mm)</td>
</tr>
<tr>
<td>Connection for:</td>
<td>1 x external switching contact (potential-free)</td>
</tr>
<tr>
<td>Level relay with connection for</td>
<td>1 x float switch KR2 or</td>
</tr>
<tr>
<td></td>
<td>2 x level controller MS1 / M2 or</td>
</tr>
<tr>
<td></td>
<td>2 (3) x level elektrode KS1</td>
</tr>
<tr>
<td>Housing</td>
<td>Polycarbonate (PC)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>325 x 145 x 140 mm (L x W x H)</td>
</tr>
<tr>
<td>Weight</td>
<td>approx. 3 kg / 3,5 kg / 4 kg</td>
</tr>
</tbody>
</table>

Table 1

Intended use

The NOLTA level control is intended for use in industrial and commercial areas in accordance with the EMC guideline and taking interference emissions into account. When using the device, the permissible ambient conditions according to the specified IP protection class and the permissible temperature range must be observed. Special provisions apply to EX zones, areas with an increased risk of fire and underground. Mechanical and electrical changes may only be carried out after consulting the manufacturer and only by certified specialists. All changes to the device must meet the safety requirements. The manufacturer assumes no liability for damage resulting from improper use.
**Warnings**

**DANGER**

**Death or serious personal injury**
- The device may only be installed, serviced and commissioned by a suitably trained specialist taking into account the local regulations and technical regulations. The „5 safety rules“ must be observed
- Before any intervention or opening of the device, it must be switched off using the on / off switch, the power supply must be interrupted by pulling the mains plug and secured against being switched on again
- Maximum current rating must not be exceeded

**Attention**
- Overcurrent and residual current protective devices must be provided by the customer
- In automatic mode, the connected consumer can start up at any time

**Notes**
- If an external switch contact is connected, the jumper at connections T1 and T2 must be removed
- Connection of level electrodes or level controllers according to the enclosed operating instructions for Finder level monitoring relay 72.01
- Installation of a float switch according to the instructions in the „Installation“ section - the float switch used must be suitable for low voltages
- Setting the level monitoring relay with regard to the sensitivity and the operating functions of the enclosed operating instructions for Finder level monitoring relay 72.01
- Only connect suitable cables respectively level controllers, level electrodes or float switches and observe the maximum cable length
- Never use oils, grease or any kind of solvents, these substances have negative effects on the plastics rigidity
Installation for typ 70 70....

In automatic mode the level control can be operated via level controllers, level electrodes or a float switch, the possible connection options are as follows (take the required sealing kits and bridge from the enclosed accessory pack):

**Connection of level-electrodes in combination with submersible pumps**
Insert sealing set with 2 x 5 mm leadthrough in cable entry M20. Connect upper level-electrode to terminal B1, and lower level-electrode to terminal B2. Connect terminal PE level controller and terminal B3 with enclosed bridge.

**Connection of level-electrodes in combination with dry installed pumps**
Insert sealing set with 3 x 5 mm leadthrough in cable entry M20. Connect the upper level-electrode to terminal B1 and the lower level-electrode to terminal B2. Connect earth electrode to B3. (please refer to the connection diagrams in the enclosed operating instructions for finder level-control-relay 72.01)

**Connection of level-controllers in combination with submersible pumps or dry installed pumps**
Insert sealing set with 2 x 6 mm leadthrough in cable entry M20. Connect the upper level-controller (normally open contact) to terminals B1 and B3, connect the lower levelcontroller (normally open contact) to terminals B2 and B3. Connect PE of both level controllers to terminal PE level control.

**Connection of a float switch**
Insert the connecting cable of the float switch through the M20 cable entry and connect the normally open contact to terminals B1 and B3, connect PE of the float switch to terminal PE level control. The NOLTA KR2 float switch (order number 40 0035 ..) is recommended for use with low voltages.

Installation for typ 70 71....

In automatic mode, the level control can be controlled via a float switch, to do this, connect the cable ends of the float switch as follows:
Insert the float switch cable through the M20 cable entry. Connect the two wires of the normally open contact to terminals S1 and S2 and the PE to terminal PE level control.
EU Declaration of Conformity

We hereby declare that the Nolta - Niveausteuerung specified below will, due to its design and construction, comply with the relevant regulations listed.

Product Designation         Nolta - Niveausteuerung

Manufacturer                 Nolta GmbH
                               Industriestr. 8
                               35091 Cölbe

EU directives / Harmonized standards / national techn. Standards - Specifications

Low Voltage Directive 2014/35/EU

Restriction of use of certain hazardous substances in electrical and electronic equipment (RoHS) – Directive 2011/65/EU & 2015/863/EU


EN 60204-1:2018 Safety of machinery – Electrical equipment of machines – Part 1: General requirements

Authorized representative
Name and address

David Loechelt
Nolta GmbH
Industriestr. 8
35091 Cölbe

We confirm that a CE mark according to the European directives is affixed to the above mentioned Nolta - Niveausteuerung.

29.06.2021
Date

CEO
Dr. Ing. J. Knake

Head of Quality Management
D. Loechelt
Attention! Do not disconnect under load!

Motor protection must be provided via an external motor protection plug!

Attention! Do not disconnect under load!

Overcurrent protection device in the supply line according to DIN VDE 0113 Part 1 Section 7.2 required.

Circuit diagram for typ 70 70...
Circuit diagram for typ 70 71....

Attention! Do not disconnect under load!

Overcurrent protection device in the supply line according to DIN VDE 0113 Part 1 Section 7.2 required.

Attention! Do not disconnect under load!

Motor protection must be provided via an external motor protection plug!

Attention! Do not disconnect under load!

Nolta GmbH
Industriestraße 8
35091 Cölbe

On/Off

phase sequence indicator
(optional)

L1 L2 L3 N PE

L1 L2 L3 N PE

phase sequencer indicator
(optional)

operating hours counter
(optional)

A1 A2

h

13 14

operating indicator
(optional)

L1 L2 L3 N PE

L1 L2 L3 N PE

phase sequence indicator
(optional)

load

load

PE

PE

float switch

external switch contact

S1 S2

F1 F2

X1 X2

f

manual/automatic

Attention! Do not disconnect under load!

Overcurrent protection device in the supply line according to DIN VDE 0113 Part 1 Section 7.2 required.

Attention! Do not disconnect under load!

Motor protection must be provided via an external motor protection plug!
**Operation**

**Rocker switch On/Off**
On = level control in operation  
Off = level control out of operation  

**Rocker switch manual/automatic**
In the manual mode, the connected consumer is switched on or off according to the rocker switch on/off.
In the automatic mode, the connected consumer is switched on or off according to the function set on the built-in level monitoring relay, depending on the status of the level electrodes/level controllers or the float switch connected to B1/B2/B3 (rocker switch on/off must be set to on).

**External switch contact**
An external switching contact (e.g. for an external release or shutdown) can be connected via terminals T1 and T2.

**For integrated phase-sequence test and phase inverter**
Red LED flashes up = phase angle incorrect.
The direction of rotation is changed by lightly pressing and turning the pole pins in the plug.

**For integrated operation display**
Bright LED lights up = device is operating

On the built-in level relay, the operating function can be switched between filling and emptying depending on the application - see the enclosed operating instructions for Finder level monitoring relay 72.01.

**Disposal**
This product or parts of it must be disposed of in an environmentally sound way:  
Use the public or private waste collection service. If this is not possible, please contact your NOLTA dealer.