



Network Loadcell Processor

Instruction Manual

Models:

version 1.0 since 3 February 2020

**NLP16, NLP12, NLP8, NLP4
NLP16-3U, NLP12-3U, NLP8-3U, NLP4-3U**

ATTENTION!

This instruction manual contains important information about the installation and the use of the equipment. Please read and follow these instructions carefully.

Always ensure that the power to the equipment is disconnected before opening the equipment or commencing any maintenance work.

NLPxx_en_manual_M200.doc

General information

IMPORTANT INSTRUCTIONS!

All safety and operating instructions should be read before the equipment is installed or operated.

IMPORTANT SAFETY INFORMATION

The following general safety precautions have to be observed during all phases of operation, service, and the repair of this equipment. Failure to comply with these precautions or with specific warnings in this manual violates safety standards of design, manufacture, and the intended use of this equipment.

Do not operate in an explosive atmosphere!

Do not operate this equipment in the presence of flammable gases or fumes. Operation of any electrical instrument in such an environment constitutes a definite safety hazard.

Water, moisture, heat and humidity

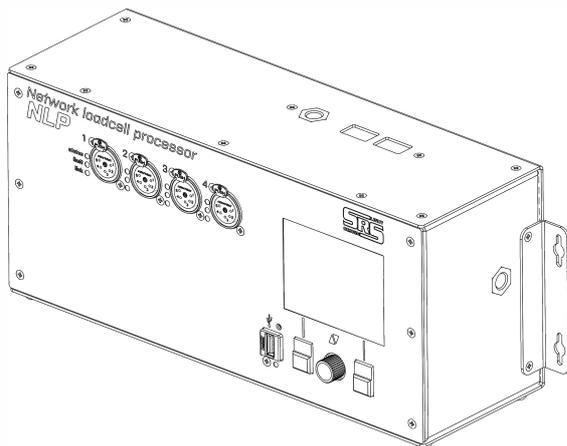
Do not operate this equipment near water or in areas with wet floors, or in high humidity atmosphere, where condensation forms on the equipment. It should never be placed near or over a heat register or other source of heated air. It should not be installed or operated without proper ventilation.

Power connections

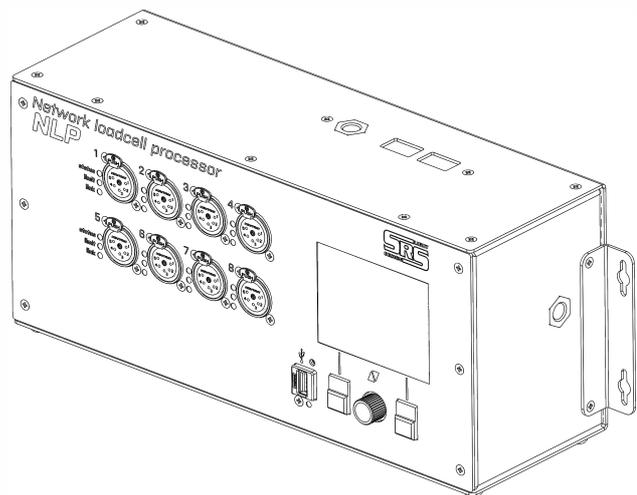
This equipment must be earthed.

Let the equipment adapt the environment for at least 10 minutes after unpacking. **MODELS**

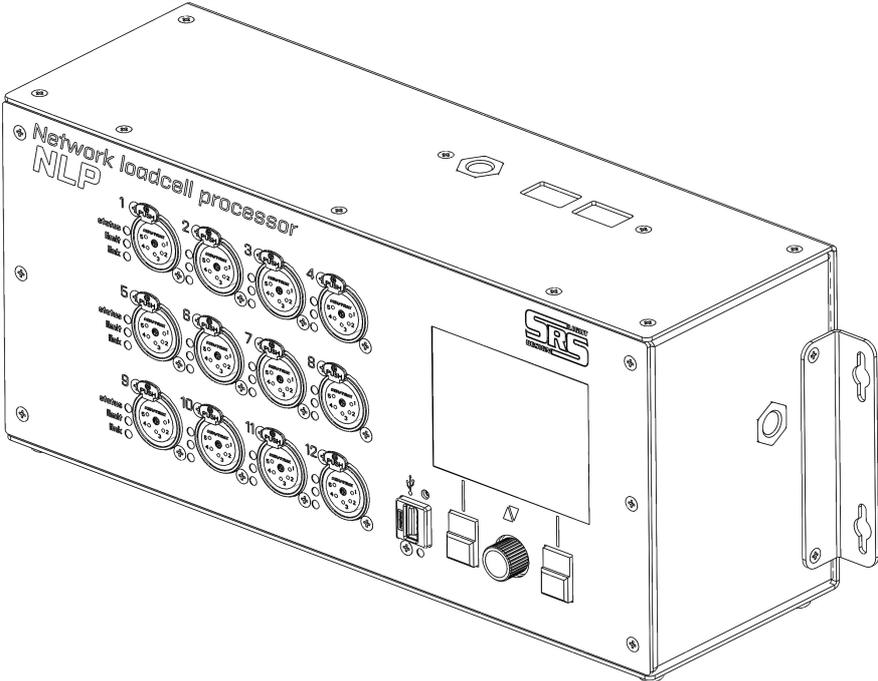
NLP4



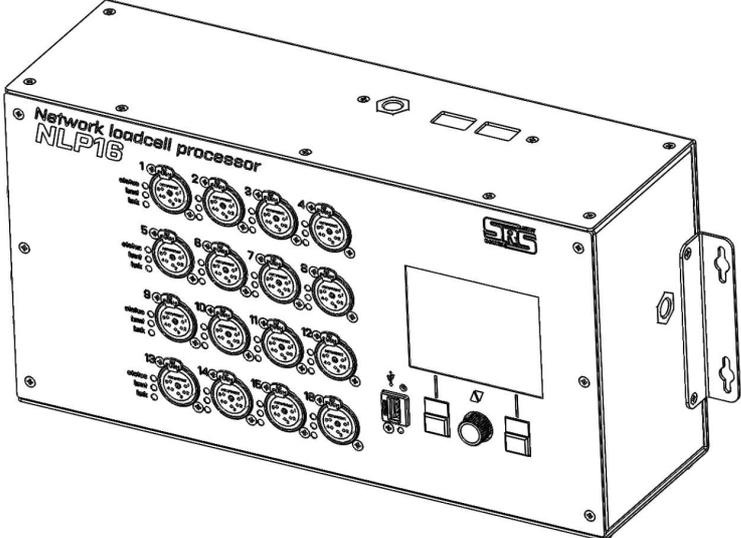
NLP8



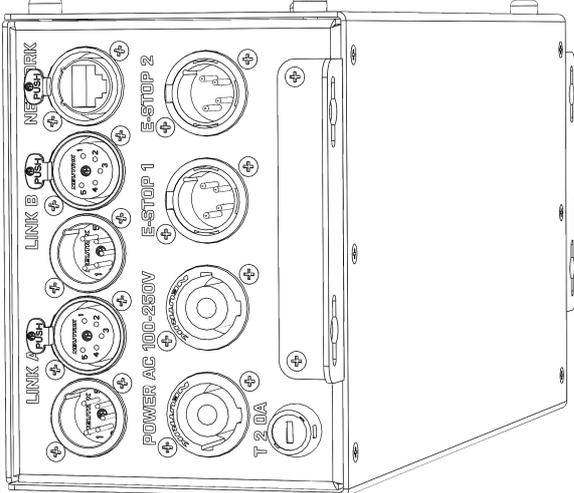
NLP12



NLP16



NLP BACK SIDE PANNEL

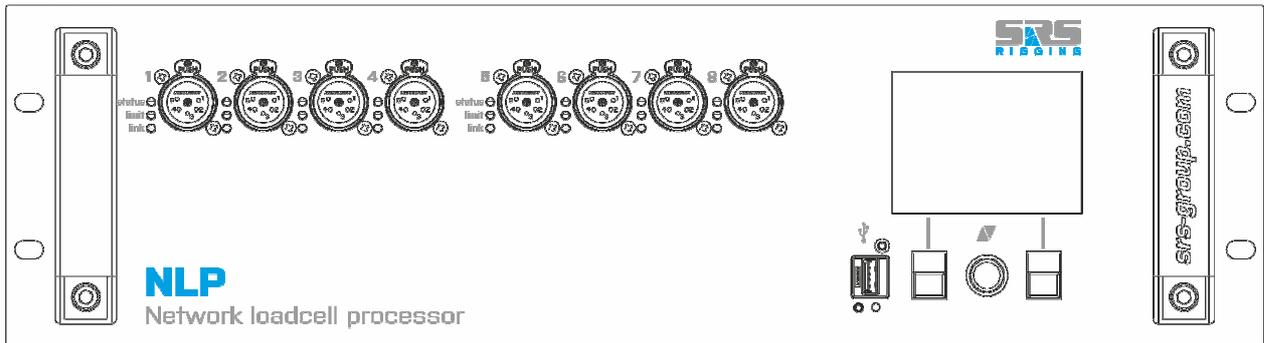


MODELS 3U:

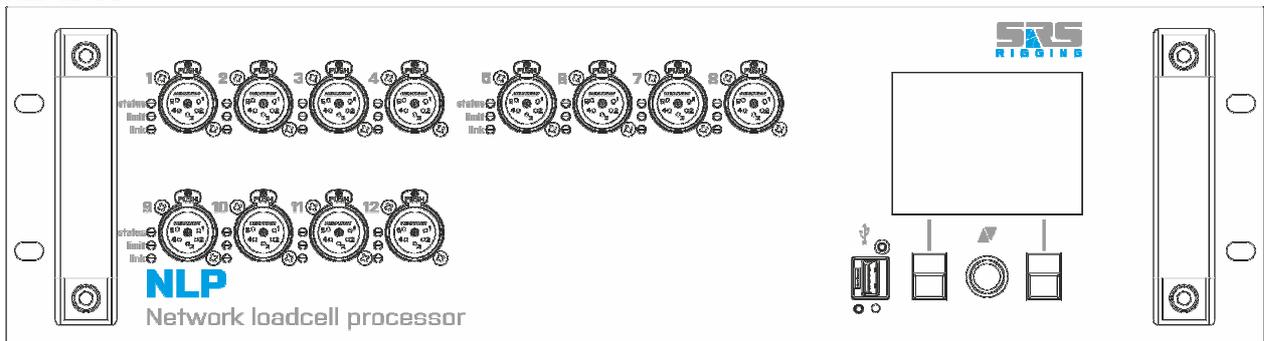
NLP4-3U



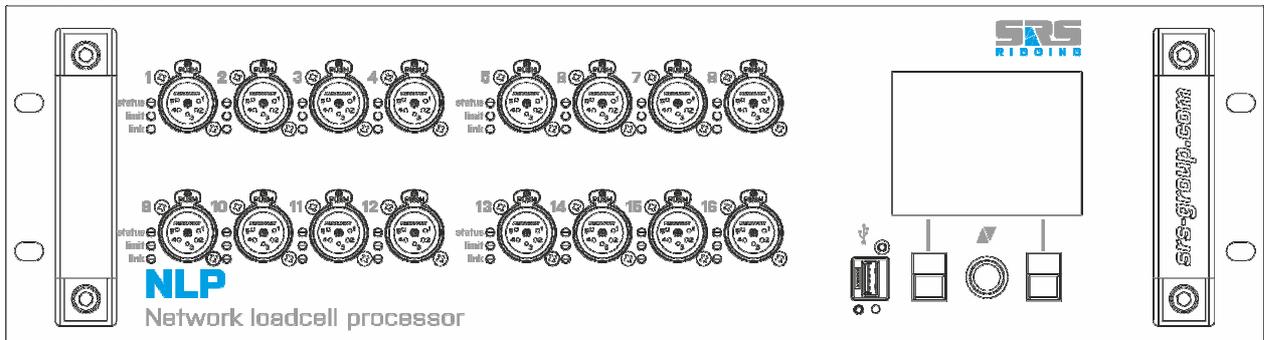
NLP8-3U



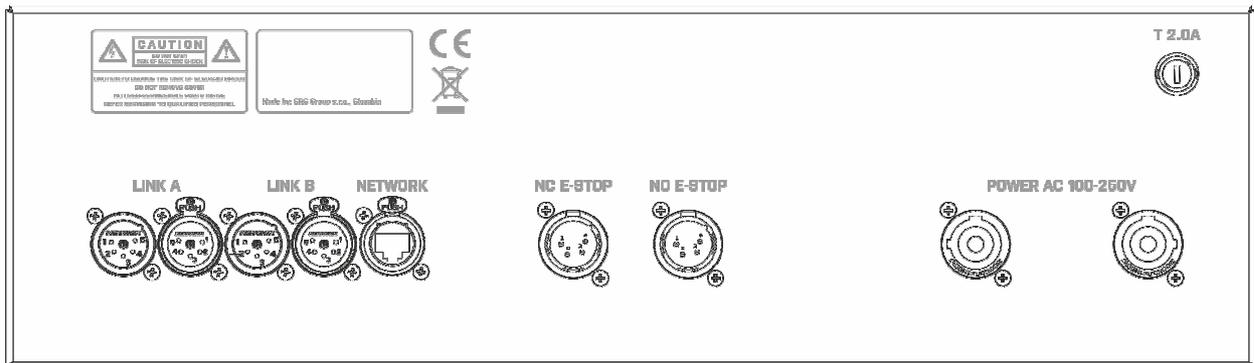
NLP12-3U



NLP16-3U



NLPxx-3U BACK PANNEL



On the front panel of device is located a 4-16x 4-20mA input port for the loadcell connection. There is also large TFT full color display. Unit is controlled by 2x button + encoder with button function. USB port located on front side is for uploading the firmware and later software developments including the storage function for off-line use without computer.

On top side of device is located a M10 thread for C-CLAM and also hole for safety wire.

All communication ports are located on left side of device. Power in is made via PowerCon connector. There is also thru out for power out from the NLP interface.

Unit is also equipped with 2x E-STOP interface. The E-STOP1 is equipped with NC4MDL connectors for dry contact which is sent to other system. For incorporating to the SRS and OEM partners controller network the unit is equipped also with LINK A and LINK B interfaces. Both are fully isolated RS485 lines.

There is also Ethernet connection for the connection of NLP to the computer running JAVA application of NLP for complete remote setup.

DATA input/output connection

RS485 standard 3-pin and 5-pin XLR connectors are located on the rear panel of NLPxx. All DATA inputs are optically isolated.

Ethernet connection

Ethernet standard RJ45 input connector is located on the front panel of unit.

USB connector

There is a USB-A connector located on the front panel of the unit. It is used for DATA storage and firmware update purposes.

Navigating menu

NOTE: All pictures are from NLP12, The 4,8 and 16 way unit differs only in number of modules accessible from main menu.

The navigation of NLPxx is done using two buttons and the Encoder. Initial menu indicates the user defined name of unit, working mode, Network IP address and local TIME



DESCRIPTION of status

- **Not configured = GRAY TEXT**
 - Channel was not configured in menu 1
- **Disconnected = RED TERXT**
 - **Channel was configured but loadcell has been disconnected from NLP**
- **Low weight = RED TEXT**
 - There is low weight on channel detected = usually is case when measuring weight is lower than 1% of FSD
- **Reading in GREEN**
 - Normal reading of values, NOT in limit mode, NOT in warning mode
- **Reading in Yellow**
 - Reading of values but IN WARNING MODE
- **Reading in RED**
 - Reading of values but in LIMIT MODE

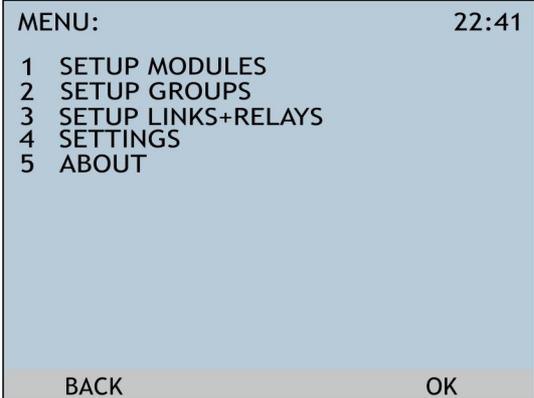
Relay = OFF, ON

Indicates status of relay on selected channel

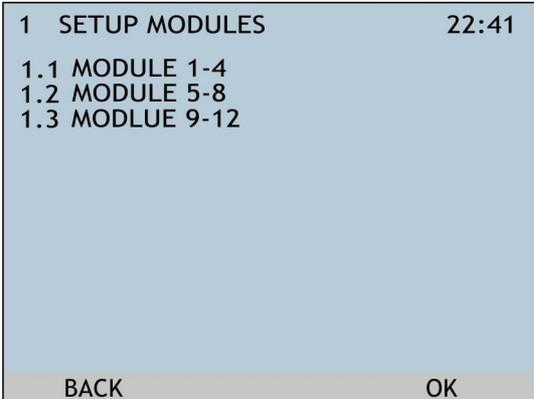
Equal settings are valid for the GROUP status



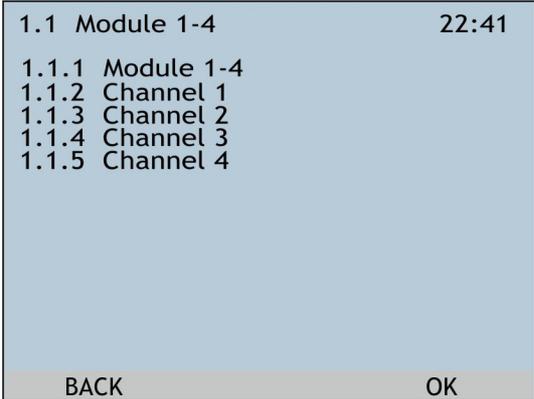
To enter the menu, unlock the device by pressing both buttons at the same time and press the Encoder. Rotate the Encoder to highlight the desired option and press the Encoder to enter:



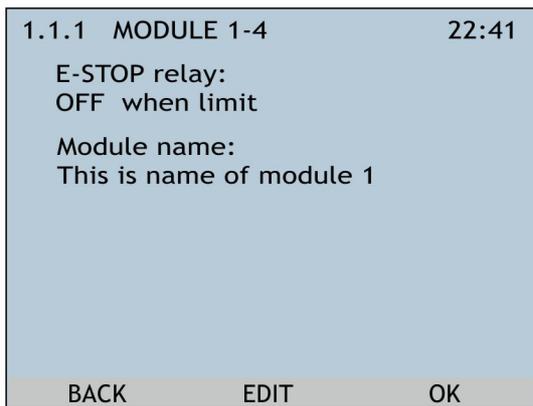
1. SETUP MODULES



In this menu you can do a setup of setting per each module of four measuring inputs. To keep the manual short we'll describe settings only for Module 1-4. Other channels are equal.



When you enter 1.1.1 Module 1-4 settings menu you're able to setup these values:



You can change the values with press of encoder and rotate to the right option.

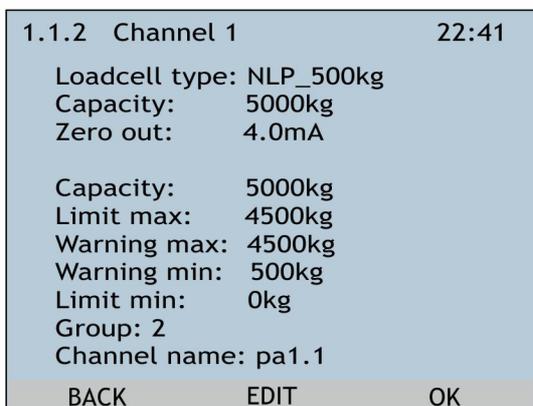
E-STOP relay options:

- Always OFF
- Always ON
- OFF when limit
- ON when limit
- OFF when warning
- ON when warning

Module name:

Here you can setup the own name for module.

1.1.2 Channel 1 setup



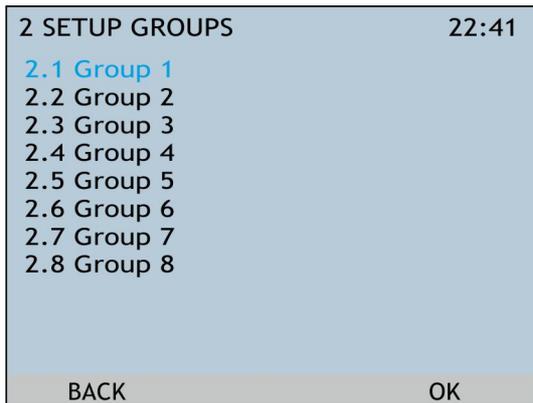
Loacell type:

- Not configured
- User defined
- NLP-5000kg
- NLP-300kg

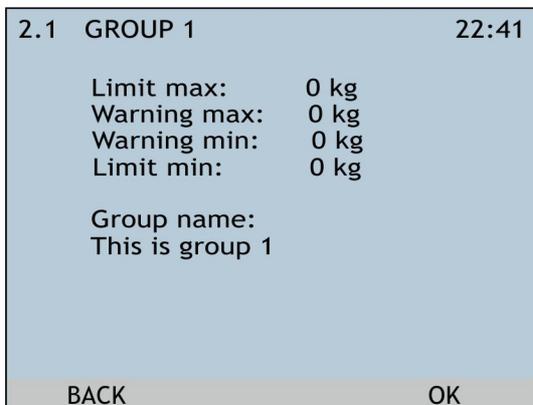
Capacity: You can override setup of capacity
Limit max: maximum limit – usually FSO -10%
Warning max: warning for maximum – usually FSO-10%
Warning min: warning for minimum load
Limit min: minimum limit
Group: assign of channel to the group measurement
Channel name: Name of channel

2. SETUP GROUPS

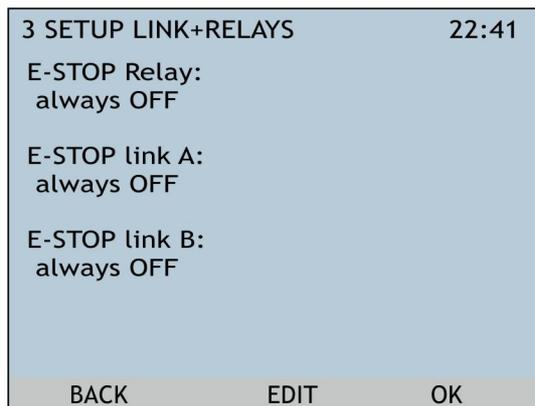
You can select group for settings change:



You can setup these parameters of group, you can also rename the group



3. SETUP LINK+RELAYS



E-STOP relay options:

- Individual
- Always OFF
- Always ON
- OFF when limit
- ON when limit
- OFF when warning
- ON when warning

E-STOP Link A options:

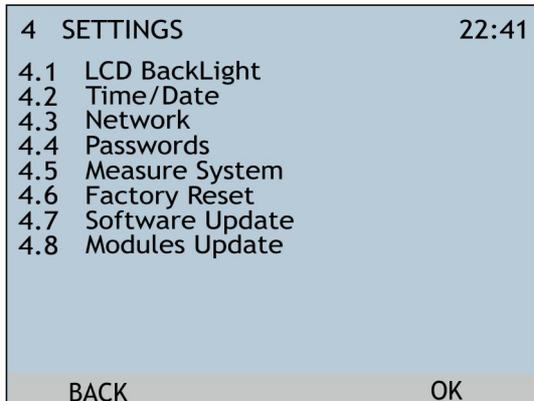
- Always OFF
- Active when limit on module
- Active when warning on module
- Active when limit on group
- Active when warning on group
- Active when limit
- Active when warning

E-STOP Link B options:

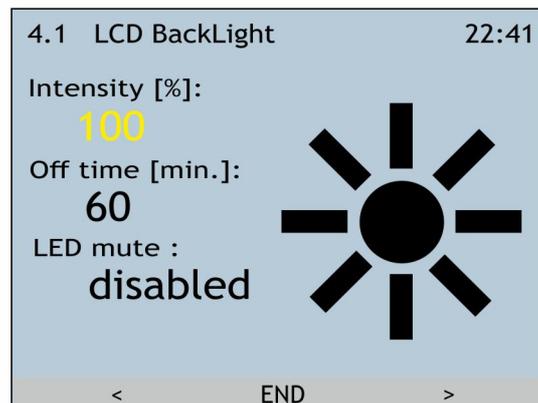
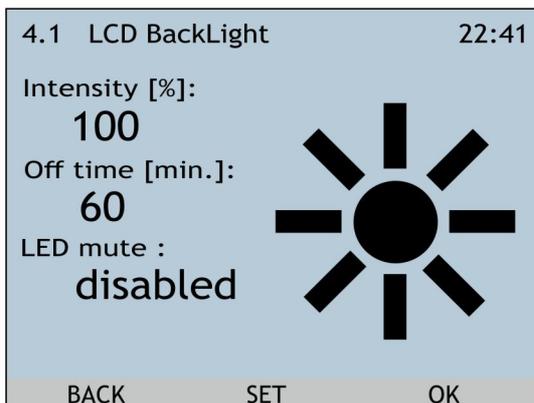
- Always OFF
- Active when limit on module
- Active when warning on module
- Active when limit on group
- Active when warning on group
- Active when limit
- Active when warning

4. Settings

Access to settings of NLP. Rotate the Encoder to desired subsection and press the Encoder or OK to enter. Every subsection is described in detail below.



4.1 LCD backlight



Rotate the Encoder to set desired backlight intensity value of LCD. Press OK to save the changes or press BACK to discard changes.

Intensity:

Setup of display intensity 0-100%

Off time:

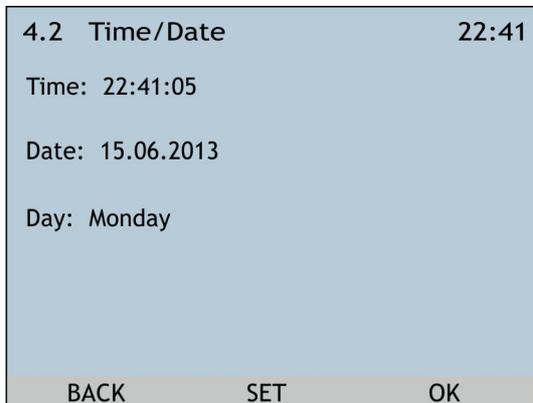
Display will be turned off after desired time, maximum settings is 240minutes

LED mute:

LED indications on port will be turned off when the OFF time is active

4.2 Time/Date setup

To access this setting, press the Encoder, enter the
Press the Encoder to enter the editing mode. Use left and right button to navigate to value to be changed. Set proper value by rolling the Encoder. Press the Encoder to quit the editing mode. Press OK to save changes or BACK to discard changes.



4.2 Time/Date 22:41

Time: 22:41:05

Date: 15.06.2013

Day: Monday

BACK SET OK



4.2 Time/Date 22:41

Time: 22:41:05

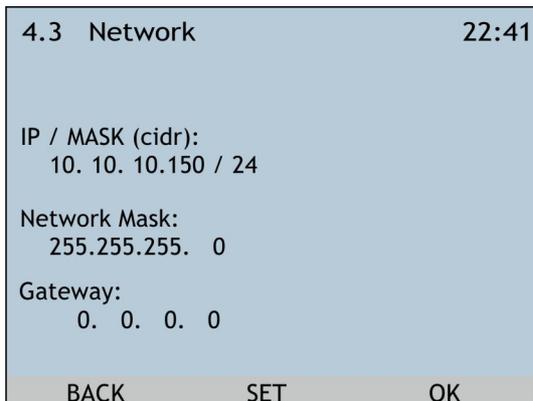
Date: 15.06.2013

Day: Monday

< END >

4.3 Network settings

Network setup submenu is available now.



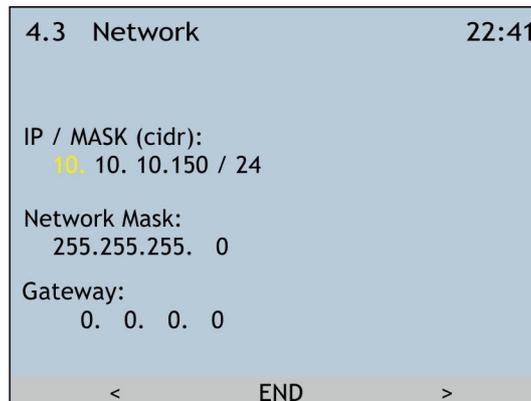
4.3 Network 22:41

IP / MASK (cidr):
10. 10. 10.150 / 24

Network Mask:
255.255.255. 0

Gateway:
0. 0. 0. 0

BACK SET OK



4.3 Network 22:41

IP / MASK (cidr):
10. 10. 10.150 / 24

Network Mask:
255.255.255. 0

Gateway:
0. 0. 0. 0

< END >

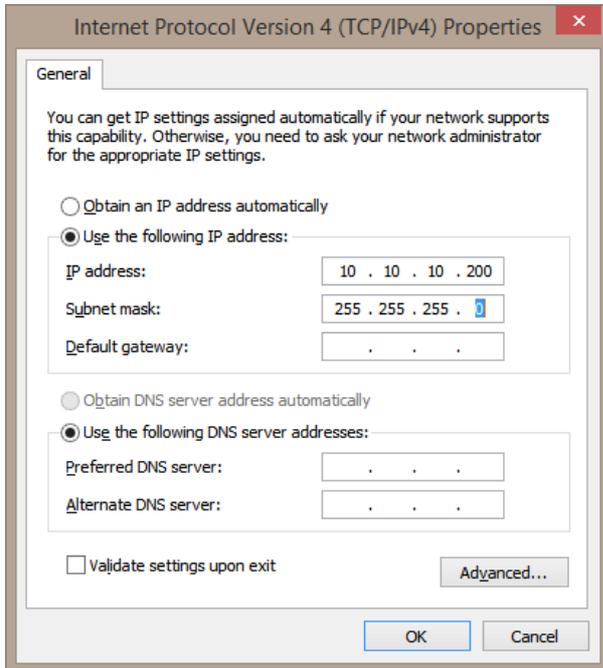
Enter the editing mode by pressing the Encoder. Use left and right button to navigate to the value to be changed. Enter correct IP address. To set the network mask, insert the CIDR value after the slash. Press OK to store value or press BACK to discard changes.

Default IP settings

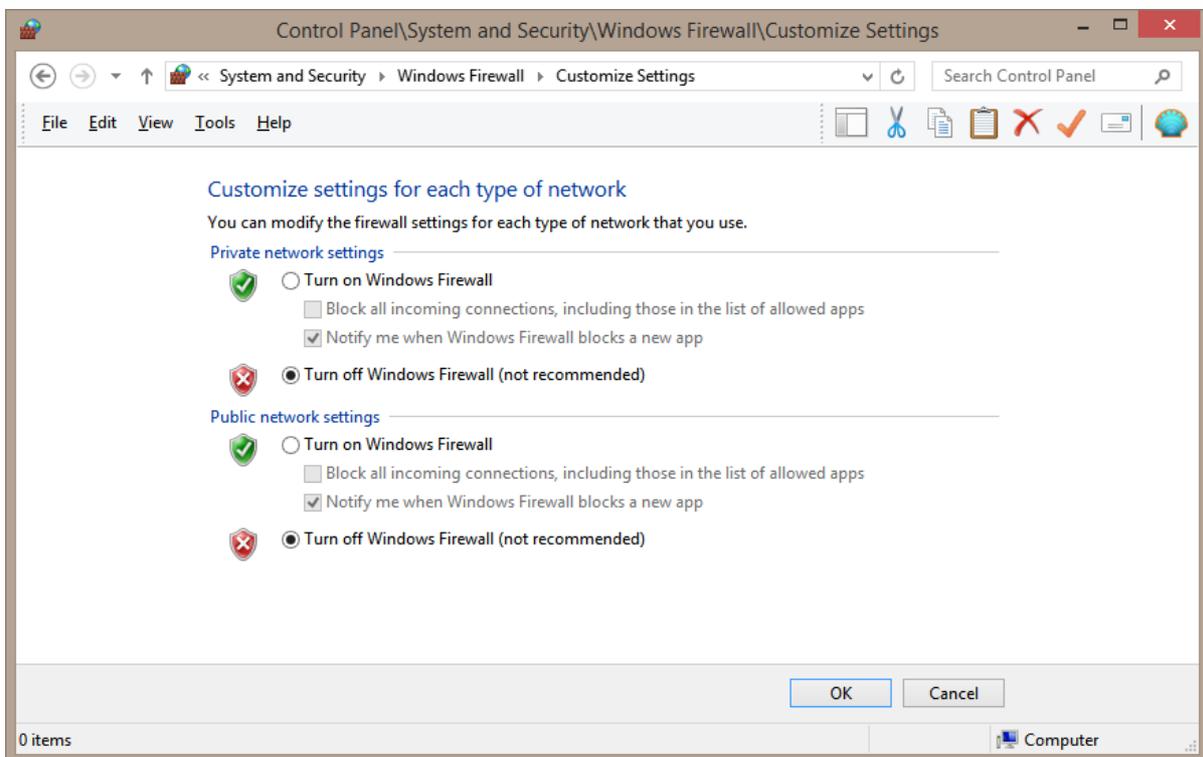
IP: 10.10.10.199 /24
Network mask: 255.255.255.0
Gateway: 0.0.0.0

Windows notes for connection for NLP

The IP address of computer need be setup like: or similar



Firewall settings:



For data communication over Ethernet please allow software for NLP on windows firewall or disable windows firewall.

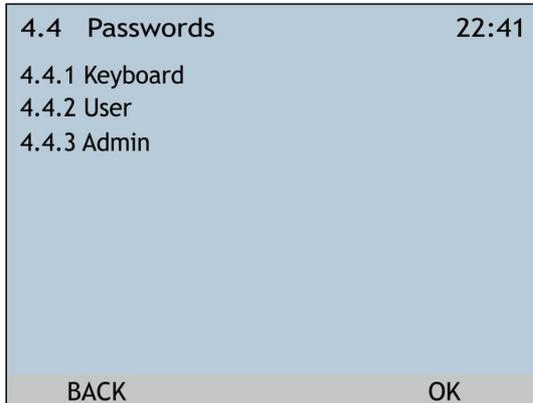
4.4 Passwords

Section Passwords includes three submenus for passwords in order of their level priority.

4.4.1 Keyboard

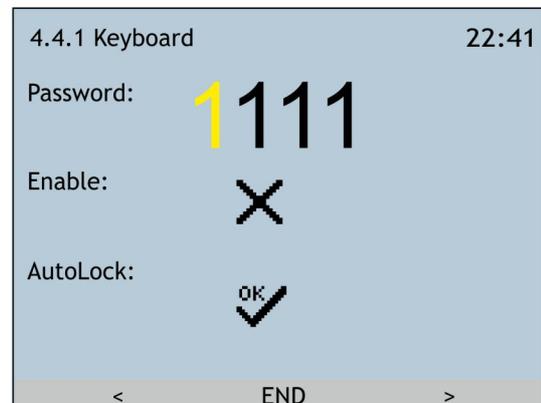
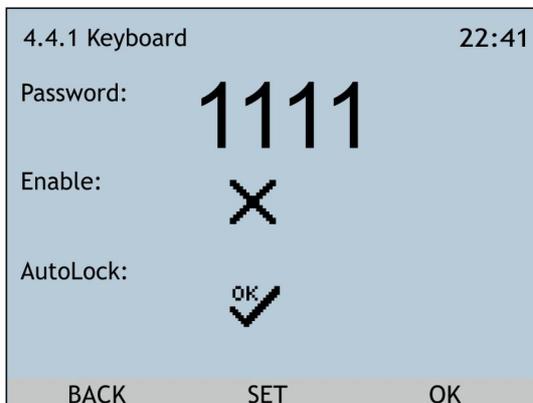
4.4.2 User

4.4.3 Admin



4.4.1 Keyboard password is the first level of NLP security. If Keyboard password option is enabled, correct Keyboard password must be entered to unlock the NLP device. Default password is: 1111

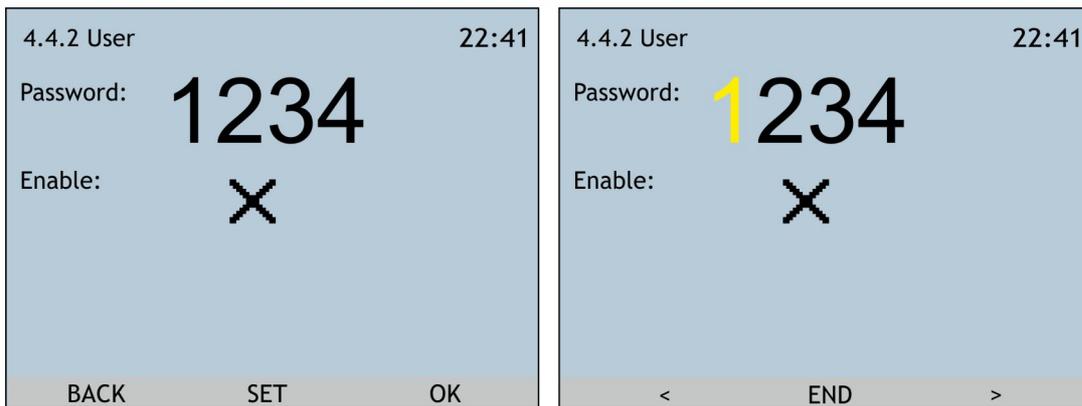
If user password option is enabled, it must be entered; otherwise this menu can be accessed directly.



Enter the editing mode by pressing the Encoder. Use left and right button to navigate to the value to be changed. Password consists of 4 integers. To activate the Keyboard password, select Enable and rotate the Encoder to change the cross icon to OK icon. Now the Keyboard password is active. Auto-lock function provides automatic lock option in case of inactivity for more than 10 seconds. To enable this function, navigate to AutoLock and enable it by rolling the Encoder. To quit the editing mode, press the Encoder. To save changes press OK, to discard changes press BACK.

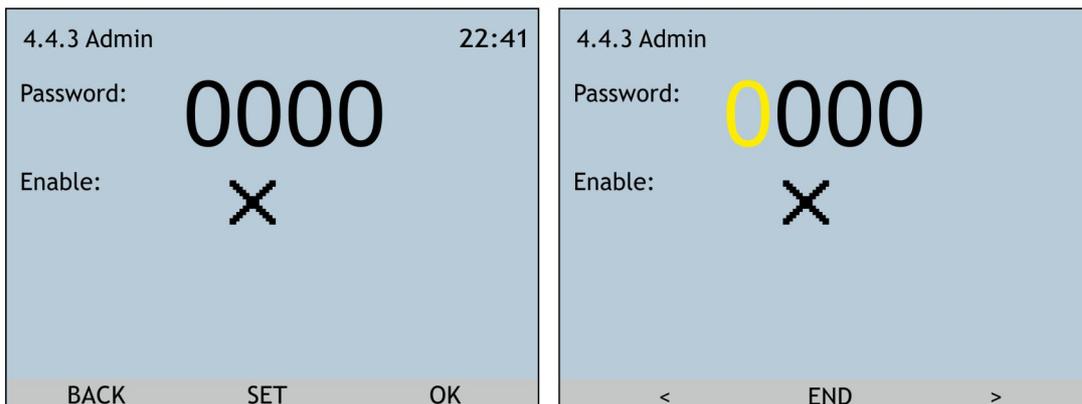
In case of forgotten Keyboard password, User or Admin password can be used to change the keyboard password.

4.4.2 User password is the second level of NLP security.



To enter this menu, User password must be entered first. By default, it is set to **1234** and **is not enabled**. Enter the editing mode by pressing the Encoder. Navigate to the value to be changed. Rotate the Encoder to set the value. To activate this password, navigate to Enable and rotate the Encoder to change the cross icon to OK icon. Press the Encoder to quit the editing mode. Press OK to save changes or BACK to discard changes.

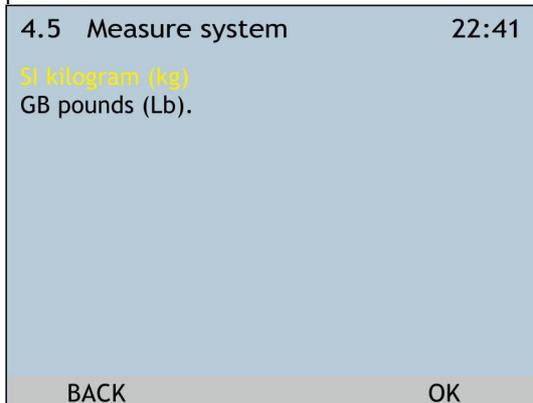
4.4.3 Admin password is the highest level of NLP security.



To change the settings, navigate to 7.5.3 Admin. To enter this menu, Admin password must be entered first. By default, it is set to **0000** and **is enabled**. Enter the editing mode by pressing the Encoder. Navigate to the value to be changed. Rotate the Encoder to set the value. To activate this password, navigate to Enable and rotate the Encoder to change the cross icon to OK icon. Press the Encoder to quit the editing mode. Press OK to save changes or BACK to discard changes.

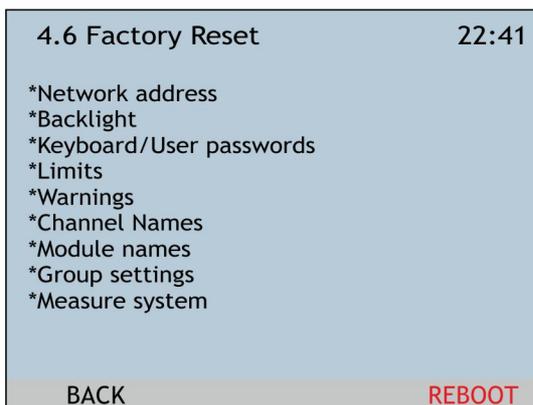
4.5 Measure System

In menu 4.5 you can select measuring system. You can select in between of SI kilogram and GB pounds



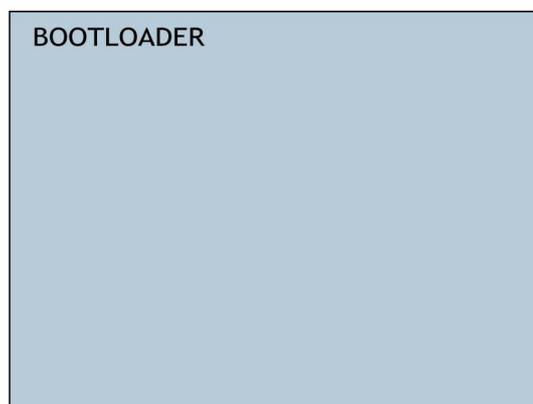
4.6 Factory Reset

Factory reset sets the whole NLP to factory defaults. To enter this function, Hard reset menu is similar to the Soft reset one, but will set factory defaults for:



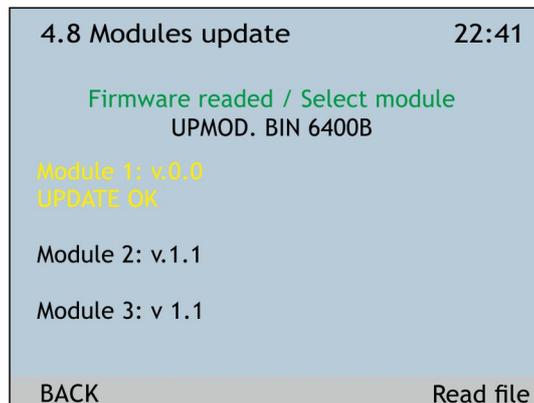
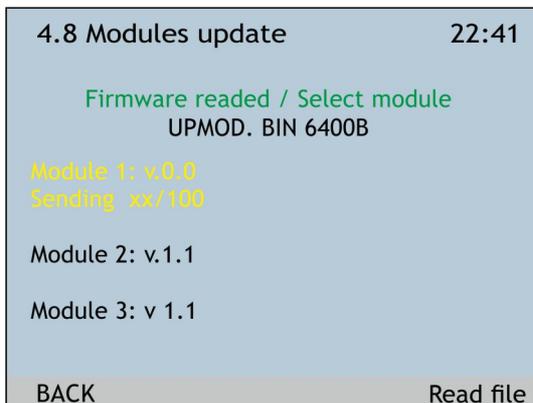
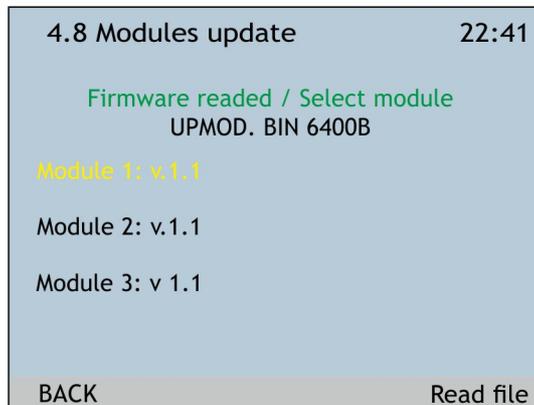
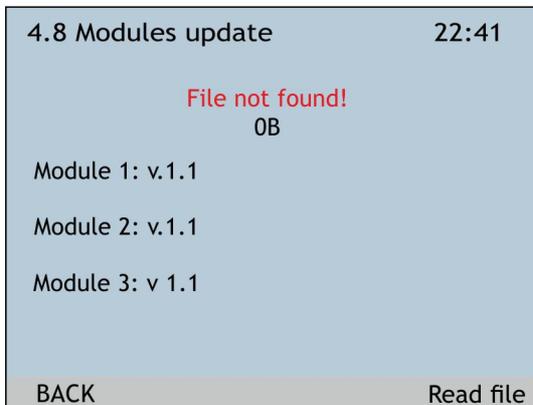
4.7 Software update

Software update for updating a main software of NLP unit. Please plug the USB key with up.bin to the front panel USB first. Then hold both left+right button till BOOTLOADER is displayed on display.



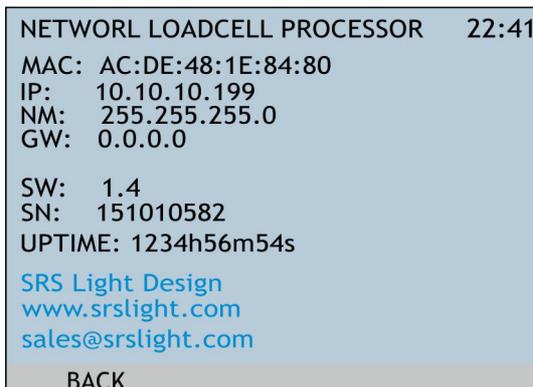
4.8 Modules Update

Software update for updating a module boards software of NLP unit. Please plug the USB key with upmod.bin to the front panel USB first. Then navigate to the module and make update of software if needed.



5. About

This screen provides overall information about current NLP dimmer pack. It shows:



1. NAME of the unit
2. MAC Address
3. IP Address
4. Network Mask
5. Gateway
6. Software version
7. Serial Number
8. Overall UP Time

Device details:

Power supply:

AC85-265V, 50-60Hz, 35W

Neutrik PowerCon in + Thru connection

Housing:

Steel housing with black powder coating

482.5 x 132 x 420 mm

3U Steel housing with black powder coating

Weight:

NLP4: 3,09kg

NLP8: 3,12kg

NLP12: 3,16kg

NLP16: 3,16kg

NLP4-3U: 3,09kg

NLP8-3U: 3,12kg

NLP12-3U: 3,16kg

NLP16-3U: 3,16kg

Pin out for the NLP-Shackle

Pin 1 VCC 20V

Pin 2 GND

Pin 3 4-20mA signal input

Pin 4, 5 Not connected

Pin out for the RS485 LINK A and LINK B:

Pin 1 Data CMN (not connected to earth)

Pin 2 Data -

Pin 3 Data +

Pin 4, 5 Not connected

The DMX Input and Outputs are connected in ratio 1:1

Pin out for the E-STOP1:

Pin 1 CMN

Pin 2 NO

Pin 3 Not connected

Pin 4 Not connected

Pin out for the E-STOP1:

This connector is not fitted by default

DECLARATION OF CONFORMITY

According to the specification of Low Voltage Directive 2014/35/EC, Annex IV:



Name of producer: SRS Group s.r.o.
Address of producer: Rybníčná 36/D
83106 Bratislava
Slovakia

Declares that the product

Name of product: NLP 4-20mA network loadcell processor
Type: NLP4, NLP8, NLP12, NLP16
NLP4-3U, NLP8-3U, NLP12-3U, NLP16-3U

Year of construction: **2015-2020**

Corresponds with the following harmonized standards:

Safety: EN 60065:2014 EN 61800-5-2:2007

EN 60950 EN 13849-1:2008

EN 60204-1:2006 EN 13849-2:2012

EN 60204-32:2008 EN 12100-2:2009

EN 13850:2015 EN 61508-2:2010

EMC: EN55103-1, resp. EN55103-2

And is in compliance with following Directives:

Low Voltage directive: 2014/35/EC

Electromagnetic compatibility directive: 2014/30/EC

Restriction of the use of certain hazardous substances: 2011/65/EU

Bratislava, 24.01.2020

SRS Group s.r.o.



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