⊠RLS®

UPRG01
Programming Interface

UPRG01 is a programming interface for use with compatible encoders from RLS. The encoders that support this functionality are the LM10, LM13 and LM15 linear and ring encoders. Note that a special option of the encoders with this programmability must be ordered.

The software allows to change the resolution, the edge separation and the counting direction for both linear and ring encoders. The interface is simply connected to a computer via a USB port.

PROGRAM YOUR ENCODER

WITH EASY TO USE SOFTWARE

LM10/13/15 ENCODER COMPATIBLE

Features and benefits

- ► Easily change encoder preferences
- ► Compatible with programmable LM10/13/15 linear or ring encoders
- ► Connects with your computer via USB
- ► Easy to use software
- ► Downloadable from www.rls.si/uprg

Technical specifications

System data

|	
Power supply	5 V
Current consumption	100 mA
USB connector	USB 2.0 and USB 1.1 Full Speed compatible; USB 5 pin mini-B connector
Drivers	Virtual Com Port (VCP) drivers available for: Win 98, 98 SE, 2000/ME, XP, Vista; MAC OS-8, OSC-9, OS X; Linux For other operating systems, download drivers from here.

Mechanical data

Dimensions	60 x 33 x 16 mm
Cable	Standard A to mini-B USB cable

Environmental data

Temperature	Operating	0 °C to +45 °C
Environmental sealing		IP20 - indoor use only
EMC compliance		EN 61326

Electrical connections
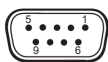
9-pin D type female connector

Pin	Signal
1	0 V
2	-
3	-
4	A+ (SDA)
5	5 V
6	-
7	-
8	A– (SCL)
9	-

For use with LM10, LM13 and LM15 encoders

For the LM10, LM13 and LM15 encoders the programming software allows you to program the following parameters:

- Resolution
- Minimum edge separation
- Counting direction

Installing the programming software

The programming software can be downloaded from www.rls.si/uprg. Unzip the file, run 'setup_LM10_configurator.exe' for LM10, 'setup_LM13_configurator.exe' for LM13 or 'setup_LM15_configurator.exe' for LM15 and install the software on your computer. Then you can connect the UPRG01 interface to the encoder.

How to program

The LM10, LM13 or LM15 can only be programmed when the LED on the readhead is red. This can be achieved in two ways:
1. Remove the readhead from the magnetic scale.
2. Insert a ferrous metal strip between the readhead and the magnetic scale.
   NOTE: The metal strip used should not be magnetised as it could damage the scale.

Once the readhead is connected and the set-up LED is red the software will automatically detect the device. To read the settings press the READ button.

If you wish to reprogram the device, set the required options and press PROG. The device is now programmed to the new settings. The device can be reprogrammed as required.

If more than one device is connected, you can select the port by pressing the Tools button .
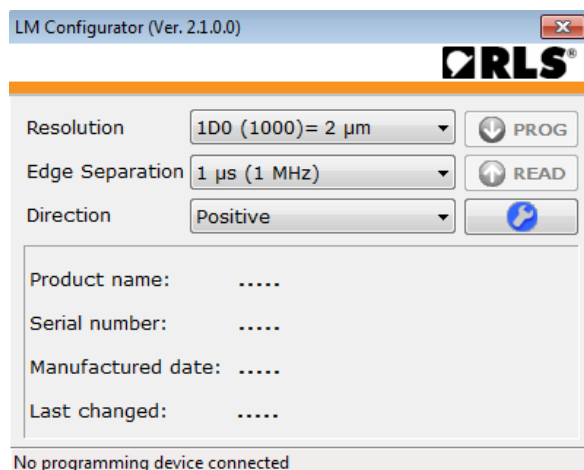
LM10 Configurator screen preview

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Resolution

LM10, LM13 and LM15 can be used for linear and ring applications, so the resolution is defined by the interpolator factor. Please refer to the LM10, LM13 or LM15 data sheet on which interpolation factor to use.

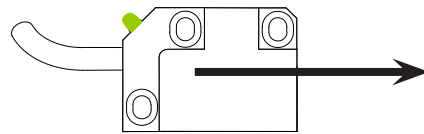## Minimum edge separation (maximum frequency)

Possible settings for LM10, LM13 and LM15 are 0.12 µs, 0.5 µs, 1 µs, 2 µs and 4 µs.

Counting direction
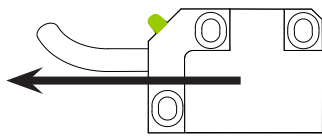
Positive: signal A leads signal B if readhead moves in direction of cable exit

Negative: signal B leads signal A if readhead moves in direction away from cable exit

Head office

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