Netzer

USER GUIDE

EVL Evaluation Encoder

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1. Precision with Flexibility, Engineered for Early Design Implementation

Designing mechanical systems with integrated controls requires precise and adaptable feedback solutions, especially during prototyping. That's why we developed the EVL Evaluation Encoder: a configurable tool that puts you in control of key encoder parameters from day one.

Fully configurable from your workbench

- Resolution - Adjustable Bits per Revolution
- Interface - BiSS-C or SSi
- Software Multi-Turn Counter
- Built-in Test (BIT)

The EVL comes in the standard VL form factor (Ø13–247 mm) and are supplied with a 750 mm cable terminating in a female D-type connector, ready for immediate evaluation.

Encoder Explorer software provides full parameter control, plus

- Limits View - to avoid out-of-spec operation
- Mapping View - to understand protocol behaviour and system impact

When ordering EKITs, you receive two additional cables and a rotating jig

- One with an adapter (Blue box) for connecting to a computer (male D-type to USB)
- One with flying leads for connecting to your system (male D-type to flying leads)

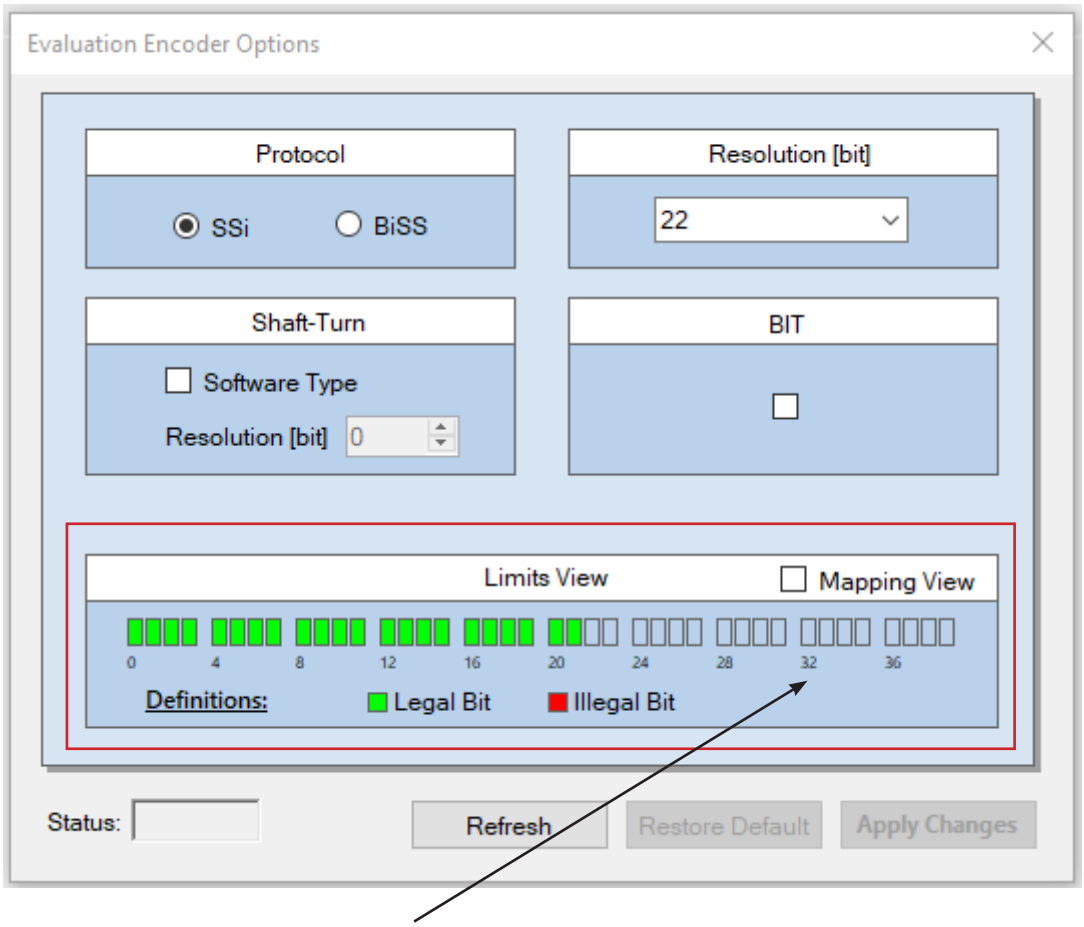
By experimenting with different parameter combinations during evaluation, you'll discover the optimal configuration for your system, resulting in a precise encoder part number you can confidently carry forward to production.

2. How do you configure an EVL encoder?

The EVL encoder can configure 4 parameters:

Parameters	Range	Required
Protocol	SSI/ BiSS	Must
Resolution	16-23	Must
Shaft turn	A-B	Optional
BIT (built in Test)	Enable/Disable	Optional

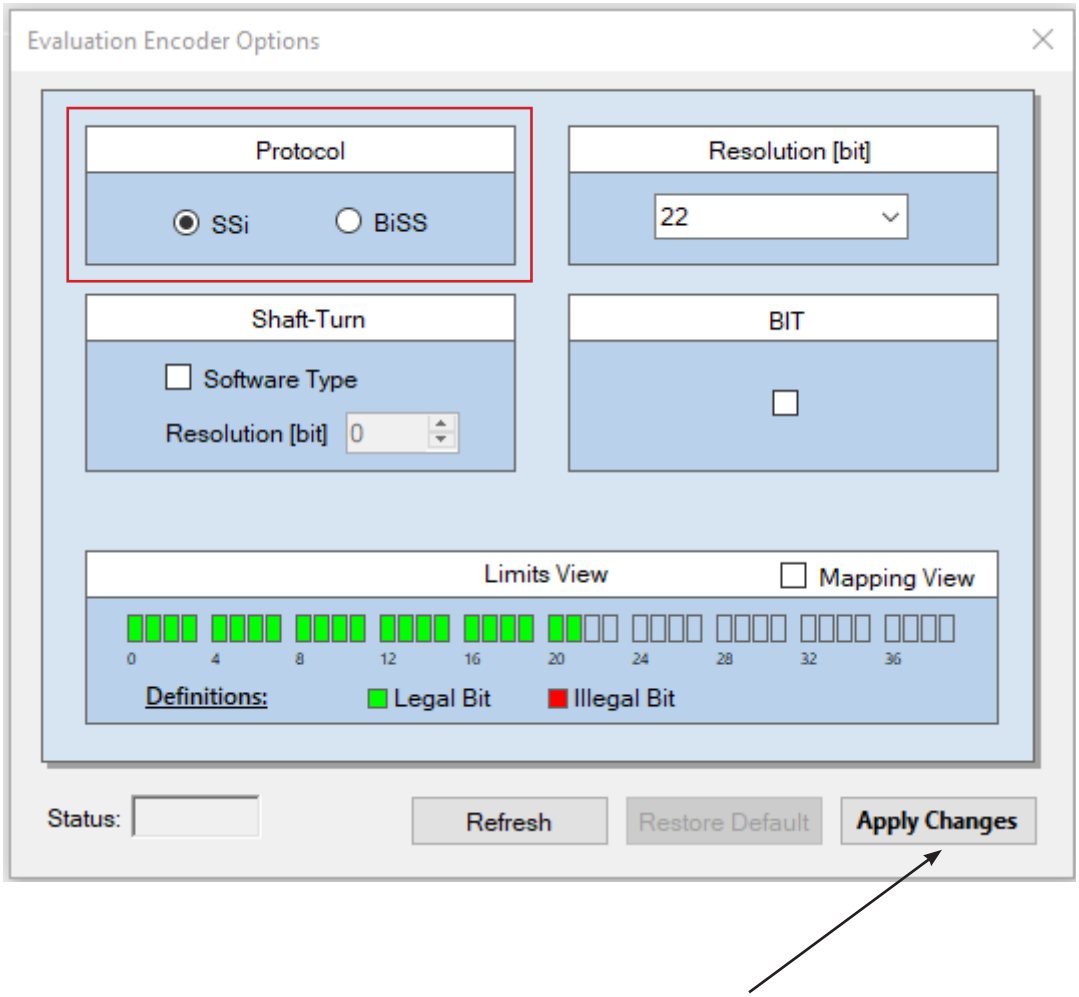
*For your attention, changing the parameters does not require a new calibration, and the initial calibration remains valid.



Note: The maximum bits for the encoder is 32. Therefore, we made a visual Light bar that helps to understand how many you can add.

3. Communication Protocol – BiSS or SSi

- SSi Protocol: 23 bits available
- BiSS Protocol: 20 bits available, with BIT functionality provided separately



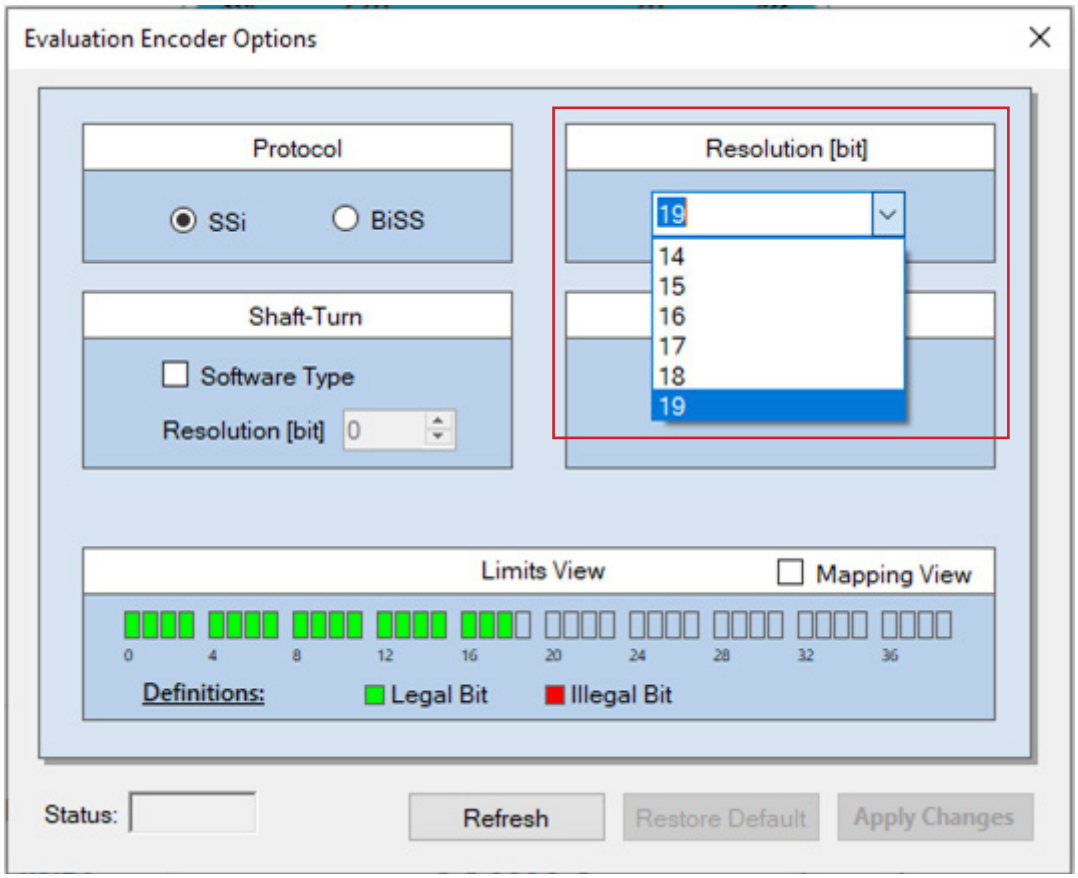
Make sure to click on "**Apply Changes**" so that the modification will be applied to the encoder.

4. Resolution (in bits)

For each encoder, the native bit count may vary, as there is an option to enable a distinct capability.

In noisy environments, using the native bit value is recommended for better performance.

Please refer to the native bit table below.



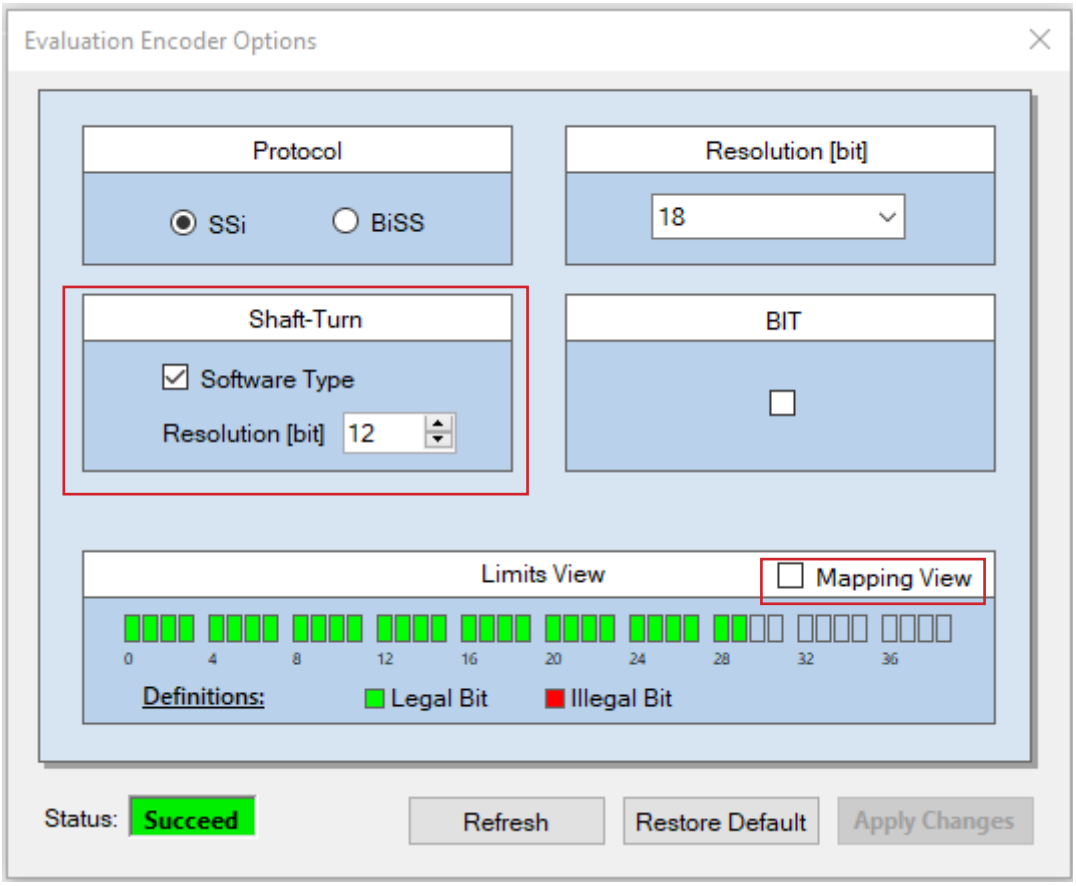
FAMILY	NATIVE
VLP-13	15
VLP-25	17
VLP-35	17
VLP-60	18
VLP-80	19
VLP-100	18
VLP-140	19
VLP-170	19
VLP-247	18

5. Software Shaft Turn Counter

This option is not mandatory and is intended only for applications that require shaft counting.

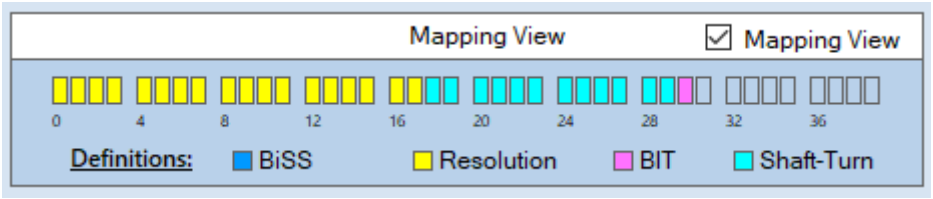
The Software Type box [√] must be enabled before selecting the Resolution [bit].

The calculation of the number of rotations is determined by the number of bits you select. For example, if you choose 12 bits, the number of possible rotations will be 4096 (2^{19}).



The "Mapping View" can be accessed by clicking on the box.

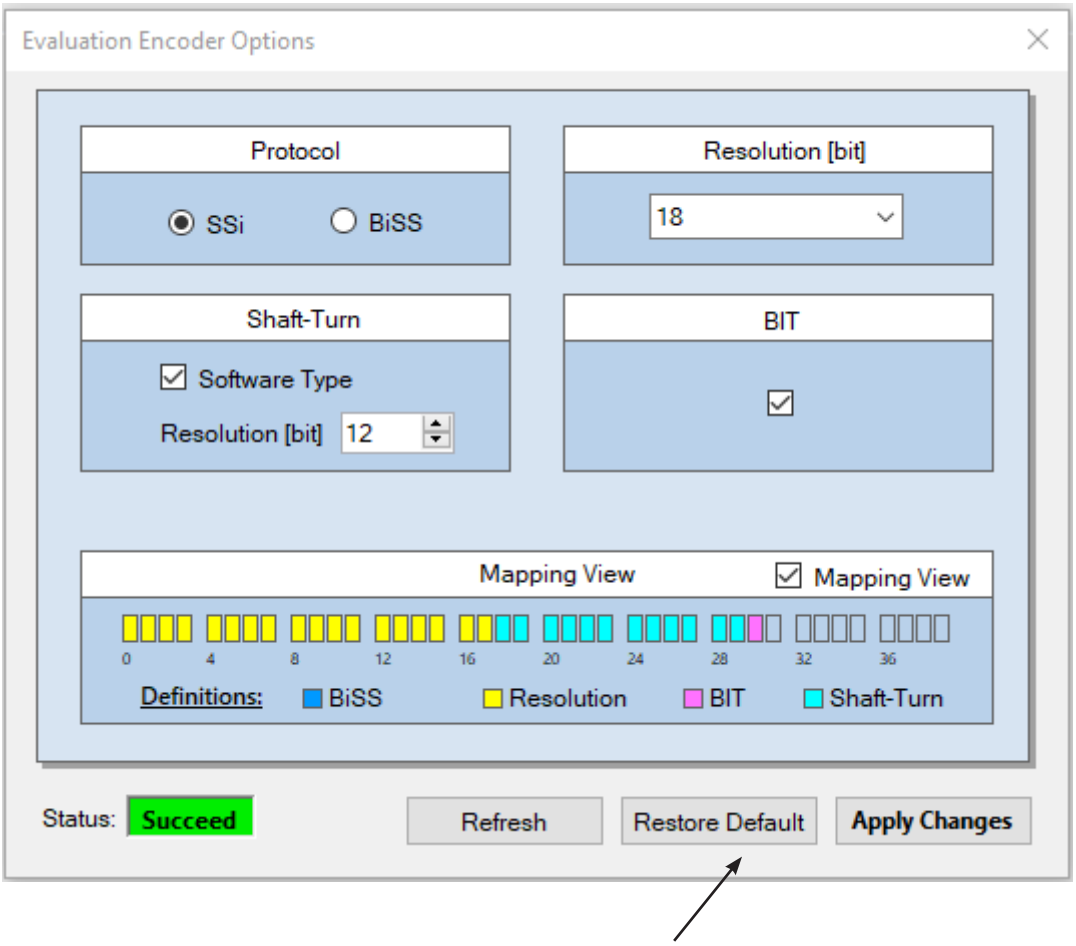
In this view, you can see how the bits have been allocated according to the requirements you defined for the encoder.



6. Built-in Test (BIT)

This option is also not mandatory.

If you would like to perform a BIT (Built-In Test) on the encoder's operation, you should enable this option.



For your information, you can always click the "RESTORE DEFAULT" button to revert the encoder to the factory default settings as it was shipped from our plant.

Netzer

ISRAEL

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