



mains supply should be avoided.

- Contactor coils must be linked with spark suppression.

### Power supply

is made via mains connection on rear of the device. The correct supply voltage is indicated in the delivery documentation:

eg.: **24 VDC ±20%**

### Connection of the translation module

Output signals and voltage supply are connected to the 9-poles D-Sub terminal strip. (see fig.9)



**Attention !** Fixing of the D-Sub plug to the socket is to be made by using the screws on the plug. This will guarantee a neat and effective connection.

Pin Nr.	Signal
1	A
2	A/
3	GND (for output signals)
4	B
5	B/
6	0/
7	0
8	+U <sub>B</sub>
9	GND (for power supply)

## 5. Parameter setting

AS510 can be programmed before the operating voltage is applied. The DIP-switches which are accessible from outside allow setting of the following parameters:

- output circuit
- resolution
- index signal length

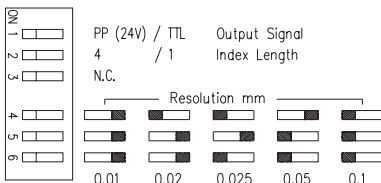


Fig. 2: DIP-switches

Inside the unit is DIP-switch SW\_2 (see fig. 3). For setting the pulse distance, please proceed as follows:

- remove the 4 casing screws (see fig. 1)

- carry out setting of DIP-switch SW\_2 accord. to table 1
- refix casing cap

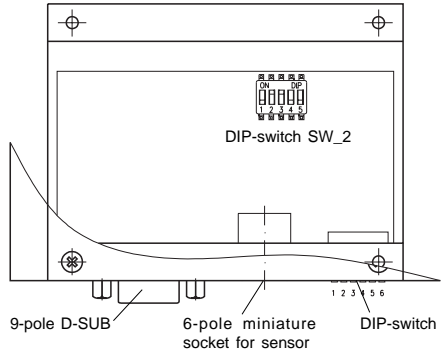


Fig. 3: DIP-switches

**Attention !** Switches SW2\_4 and SW2\_5 must not be changed!



Pulse distances [μs]			
	SW_2.1	SW_2.2	SW_2.3
4μs	off	off	on
2μs	off	on	off
1μs	off	on	on
0,5μs	on	off	off
0,25μs	on	off	on

Tab.1: Parameters of switch SW\_2

Maximum travel speed [m/s]					
Pulse distance [in μs]	0.01	0.02	0.025	0.05	0.1
4μs	1.5	3	4	7,5	15
2μs	3	6	7,5	10	25
1μs	6	12	15	25	25
0,5μs	12	25	25	25	25
0,25μs	25	25	25	25	25

Tab.2: Travel speed depending on pulse distance and resolution

### Basic programming

Unless specified separately, the unit is supplied with the following basic programming:

Output circuit: *PP*  
 Resolution: *0.01mm*

Index signal length: 1 increment

Pulse distance: 1 $\mu$ s

## 6. Output signals

Translation module AS510 converts the magnetic length information supplied by a magnetic sensor into incremental output signals. These signals are issued speed-proportionally. **Please remember that even when the system stands still, there can be impulses of 1 $\mu$ s** (resulting from the internal interpolation method). The pulse distance can be changed by adjusting the DIP-switch 2 (see Tab.1). This change will influence the maximum travel speed directly (see Tab.2).



**Attention!** The follower electronics used together with AS510 should be suitable for the pulse width chosen.

### Signal sequence

The zero reference signal appears every 5 mm, irrespective of the resolution.

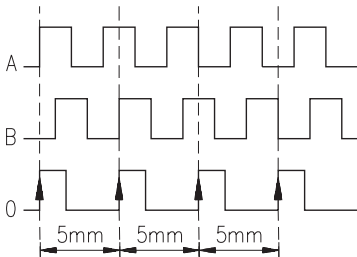


Fig.4 : Output signals A and B with reference signal (1 increment)

### Resolution / pulse distance

Unless specified otherwise the unit is pre-programmed at the factory (see chapter 5, basic setting). Please check whether these values are suitable for your follower electronics (eg. counter card). If parameters need to be changed, eg. to adapt the pulse width, please proceed as described in chapter 5.

## 7. Commissioning

When mounted and connected correctly, translation module AS510 can be switched on.

The unit then carries out an auto-initialization. 'POWER'-LED on top of the unit comes on (see fig.1)

When the magnetic sensor moves, LEDs A and B on top of AS510 come on.

## 8. Calibration

Translation module AS510 is one component of an incremental measuring system. For absolute measuring the system must be adjusted to a defined reference point. This can for example be achieved by linking the reference signal with the signal issued by a reference point source REF (eg. cam switch or proximity switch). If the follower electronic is able to recognize signal edges, the reference value can be adjusted with a repeat accuracy of 0,01 mm.

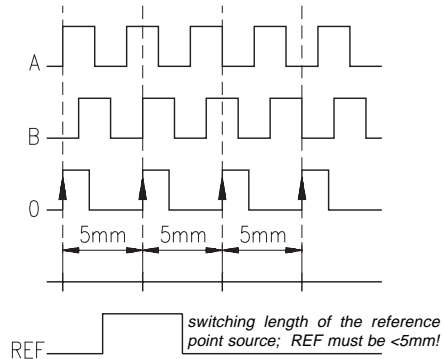


Fig. 5 : Calibration principle

## 9. Trouble shooting

Translation module AS510 is only **one** component of the magnetic strip length measuring system. Error states can be caused by all components. Therefore, you should proceed very systematically during error search:

- First check all supply voltages.
- Are cables, plugs or screwed connectors defective or loose?
- Disconnect the follower electronic and check whether the translation module's output signals are available. The LEDs must light up as soon as the sensor moves.
- Check whether parameter programming is attuned to the follower electronics (counting frequency, resolution, output circuit).

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