

# EXE 501

## EXE with switchable resolution

### Electrical characteristics

- Supply voltage: +5 V +/-5% 140 mA without encoder
- MTBF: 70000 h 50 °C

### Mechanical characteristics

- Dimensions: 175×80×57mm
- Weight: ~ 0.7 kg

### Environmental characteristics

- Operating temperature: +10 °C ... +50 °C
- Storage temperature: -10°C ... +50°C
- Operating relative humidity: max. 95% (no condensation)
- Storage relative humidity: max. 95% (no condensation)
- Sea-level altitude: -300m ... +3000m
- Shock resistance: 15 g/0.33 ms
- Vibration: 1 g/5 ... 2000 Hz

### EMC

- EN 61000-4-2 (ESD)
- EN 61000-4-4 (burst)
- EN 61000-4-10 (voltage drop, interruption, change)

## Operation

The EXE501 interpolation unit is able to receive 1Vpp voltage-sinusoidal encoders.

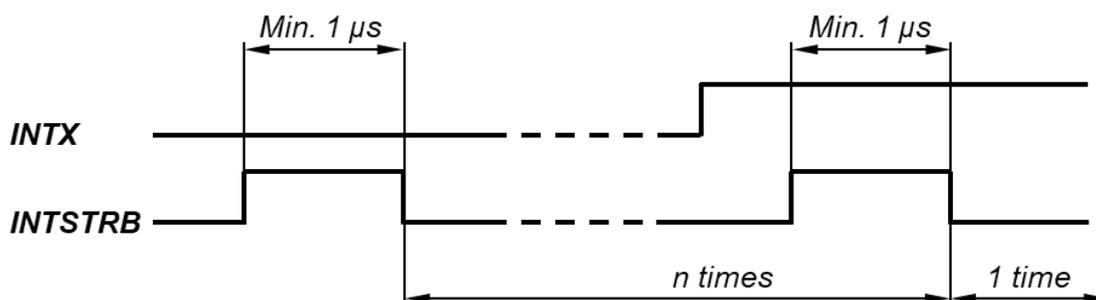
It interpolates sinusoidal signal in 1 time or n time (n=5; 6,25; 10; 12,5; 20; 25; 40; 50) way. The value of n can be set by jumpers (J1-3).

J3	closed	open	closed	open	closed	open	closed	open
J2	open	open	open	open	closed	closed	closed	closed
J1	open	open	closed	closed	open	open	closed	closed
n	5	6,25	10	12,5	20	25	40	50

The sampling tolerance (IT) of sinusoidal signals can be set by the jumpers J4 and J5. Lower maximum input frequency belongs to the higher IT value, but the deviations of the sinusoidal signals from the ideal are managed with higher tolerance.

J5	open	open	closed	closed
J4	open	closed	open	closed
IT	64	16	4	1

One of the two resolutions (1 time or n times) can be chosen by the signals INTX and INTSTRB in the following way:



Operating mode is determined by the value of INTX at the trailing edge of INTSTRB.

INTX and INTSTRB are +24 V interface signals separated by an optocoupler on the card.

On the card, LEDs indicate the selected resolution:

- D17 yellow: 1time
- D18 green: n times

When switched on, the n times interpolation is selected.

**Connector assignments:**

*Input:*

1Vpp Voltage-sinusoidal encoder.

Heidenhain 12-pin female connector with socket:

Ua1	5
/Ua1	6
Ua2	8
/Ua2	1
Ua0	3
/Ua0	4
5V	2,12
GND	11
GND	10

*Output:*

TTL-compatible 3-state outputs.

DSUB 15-pin male connector with NCT signal assignment:

UA1	1
UA1N	9
UA2	10
UA2N	3
UA0	4
UA0N	12
5V	5,14
GND	2,11
Shielding	Connector body

*Controller connector:*

INT1:

INTX	1
INTSTRB	2
I0V	3