



SI251

Interpolator for SinCos encoders

Product Features:

- With adjustable multiplication rate, for use with sine / cosine encoder systems
- Converts sinus wave inputs with 1 Vss standard level into incremental quadrature output signals
- Outputs A, /A, B, /B, Z, /Z (RS422 / TTL) and A, B, Z (HTL 18 to 30 V)
- Adjustable multiplier for interpolation rates from 1:5 to 1:50
- Adjustable divider from 1:1 to 1:128 to reduce the output frequency
- Sine-input frequency from 0 to 400 kHz
- Square wave output frequency up to 4 MHz
- Adjustable glitch filter
- Power supply 18 to 30 VDC

Technical Specifications:		
Power supply:	Input voltage: Ripple: Consumption: Connections:	18 ... 30 VDC with reverse polarity protection ≤ 10 % at 24 VDC approx. 150 mA (unloaded) screw terminal, 1.5 mm ² / AWG 16
Encoder supply:	Number of aux. Voltages: Encoder supply 1: Encoder supply 2: Output current: Connections:	2 + 5.2 VDC Input voltage minus approx. 4 VDC each max. 150 mA screw terminal, 1.5 mm ² / AWG 16
SinCos input:	Amplitude: DC offset: Channels: Frequency: Differential REF-input signal: Connections:	min. 0.8 Vpp ... max. 1.2 Vpp min. 1.8 V ... max. 3.1 V SIN+, SIN-, COS+, COS-, REF+, REF- max. 400 kHz HIGH 130 mV, LOW 40 mV SUB-D (female), 9-pin
„Error Release“ input:	Signal levels: Internal resistance: Connections:	10 ... 30 V, HTL / PNP, LOW: 0 ... 4 V, HIGH: 10 ... 30 V R _i ≈ 10 kOhm screw terminal, 1.5 mm ² / AWG 16
Incremental output HTL:	Signal level: Channels: Frequency: Output current: Connections:	Input voltage minus approx. 4 VDC A, B, Z (push-pull) max. 100 kHz max. 40 mA screw terminal, 1.5 mm ² / AWG 16
Incr. output TTL / RS422:	Signal levels: Channels: Frequency: Connections:	5 VDC A, /A, B, /B, Z, /Z max. 4 MHz SUB-D (male), 9-pin
„Error“ output:	Signal level (HTL): Output current: Connections:	Input voltage minus approx. 4 VDC max. 40 mA screw terminal, 1.5 mm ² / AWG 16
Housing:	Material: Mounting: Dimensions (w x h x d): Protection class: Weight:	plastic to 35 mm top hat rail (according to EN 60715) 40 x 79 x 91 mm / 1.5748 x 3.1102 x 3.5827 inch IP20 approx. 200 g
Ambient temperature:	Operation: Storage:	0 °C ... +45 °C / +32 ... +113 °F (not condensing) -25 °C ... +70 °C / -13 ... +158 °F (not condensing)
Failure rate:	MTBF in years:	40.2 a (long-term usage at 60 °C / 140 °F)
Conformity and standards:	EMC 2004/108/EC: RoHS 2011/65/EU:	EN 61000-6-2, EN 61000-6-3, EN 61000-6-4 EN 50581