



SI220

Interpolator for SinCos encoder systems with SinCos output

Product Features:

- Converts sinus wave inputs with 1 V_{ss} standard level into incremental quadrature output signals
- Outputs A, /A, B, /B, Z, /Z (RS422 / HTL)
- Adjustable multiplier for interpolation rates from 1 : 5 bis 1 : 50
- Adjustable divider from 1 : 1 bis 1 : 255 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 at 18 V / approx. 60 mA at 30 V (unloaded) Screw terminal, 1,5 mm ² / AWG 16
Encoder Supply:	Number of auxiliary voltages: Encoder supply 1: Encoder supply 2: Output current: Connections:	2 + 5,2 VDC Input voltage (V _{IN}) minus approx. 2 VDC each max. 150 mA SUB-D (female), 9 pin., switchable via DIL switch
SinCos Input:	Amplitude: DC offset: Channels: Frequency: Differential REF-input signal: Connections:	min. 0,8 V _{pp} ... max. 1,2 V _{pp} 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.
Control Input:	Signal level: Internal resistance: Connections:	10 ... 30 V, HTL / PNP, LOW: 0 ... 4 V, HIGH: 10 ... 30 V R _i ≈ 7 kOhm Screw terminal, 1,5 mm ² / AWG 16
Incremental Output HTL / RS422:	Signal level: Channels: Frequency: Connections:	Supply voltage (V _{IN}) minus 2 VDC, 5 VDC A, /A, B, /B, Z, /Z up to 4 MHz Screw terminal, 1,5 mm ² / AWG 16, switchable via DIL switch
Control Output:	Signal level: Output current: Connections:	HTL, supply voltage (V _{IN}) minus 2 VDC max. 30 mA Screw terminal, 1,5 mm ² / AWG 16
Housing:	Material: Mounting: Dimensions (w x h x d): Protection: Weight:	Plastic to 35 mm top hat rail (according to EN 60715) 34 x 100 x 131 mm / 1.34 x 3.94 x 5.16 inches (without connections) 34 x 118 x 135 mm / 1.34 x 4.65 x 5.31 inches (inclusive connections) IP20 approx. 160 g
Ambient temperature:	Operation: Storage:	0 °C ... +45 °C / 32 °F ... 113 °F (not condensing) -25 °C ... +70 °C / -13 °F ... 158 °F (not condensing)
Ambient conditions:	Altitude: Humidity: Pollution Degree:	max. 2000 m (6560 ft) above sea level max. 80% relative humidity up to bis 30 °C (86 °F) 2
Failure rate:	MTBF in years:	63,3 a (continuous operation at 60 °C / 140 °F)
Conformity & standards:	EMC 2014/30/EU: RoHS (II) 2011/65/EU RoHS (III) 2015/863:	EN 61326-1: 2021 for industrial location EN 55011: 2016 + A1: 2017 + A11: 2020 + A2: 2021 Class A EN IEC 63000: 2018