Data Sheet

safety - control - motion - interface

Signal converter 7085.5010 / 7386.5010 / 8086.5010 / 9085.5010

Frequency (7085.5010)
SSI absolute value (7386.5010)
Start-Stop (8086.5010)
Pulse counter (9085.5010)

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Analog (current / voltage)
Serial (RS232 / RS485)

Product features:

- Multifunctional unit with several operating modes for incremental encoders or SSI absolute encoders
- For incremental encoders:
  Operating modes as frequency converter or position transducer (pulse counter)
  Universal incremental inputs (HTL/TTL/RS422) for NPN/PNP/NAMUR encoders and sensors
  Functions such as linkages (eg. A+B), scaling, filters, start-up bridging, …
  Input frequencies up to 1 MHz
- For SSI absolute encoders:
  Master or Slave operation with clock frequencies up to 1 MHz
  For single turn and multi turn encoders with SSI formats from 10 … 32 Bit
  Functions such as bit suppression, round-loop function, scaling, …
- For absolute and magnetostrictive position encoder with Start-Stop-Interface:
  Operating modes for master or slave, for position, angle and speed measurement
- 16 bit analog output, configurable for voltage or current operation
- USB interface and RS232/RS485-interface for configuration and serial readout
- RS232/RS485-interface for configuration and serial readout
- Extremely short conversion times
- Linearization with 24 control points
- Auxiliary voltage output 5 and 24VDC for encoder supply
- Numerous connection options via 6 control inputs and 6 control outputs
- Compact rail housing to EN60715
- Easy parameterization via user interface OS (Freeware)

Technical Specifications		
Connections:	Connector type:	screw terminal, 1.5 mm² / AWG 16
Power supply (DC)::	Input voltage:	18 … 30 VDC
	Protection circuit:	reverse polarity protection
	Consumption:	approx. 50 mA (unloaded)
	Fuse protection:	extern: T 0.5 A
Encoder supply:	Output voltage:	5 VDC and 24 VDC (approx.1 V lower than the power supply)
	Output current:	max. 250 mA
Incremental inputs:	Number of inputs:	A, /A, B, /B
	Configuration::	RS422, TTL, HTL differential, HTL PNP oder HTL NPN
	RS422:	max. 1 MHz (RS422 differential signal > 0,5 V)
	HTL differential	max. 500 kHz (HTL differential signal > 2 V)
	TTL/ HTL PNP / NPN:	max. 250 kHz
	Load:	max. 6 mA / Ri > 5 kOhm / 10 pF
	Frequency measurement accuracy:	+/- 50 ppm, +/-1 Digit
SSI interface:	Number (channels):	Clock, /Clock, Data, /Data
	Configuration:	Master or Slave
	Format:	Binary or Gray code
	Frequency:	max. 1 MHz
	Resolution:	10 … 32 Bit
	Load:	Max. 3 mA / Ri > 10 kOhm / 10 pF
Start/Stop-interface:	RS422 input:	1 x (Start_Stop, /Start_Stop); 1x (ext. Init_In, ext. /Init_In)
	RS422 output:	1 x (Init_Out, /Init_Out)
	Pulse width Init-pulse:	1…9 µs (adjustable)
	Frequency Init-pulse:	62,5 Hz - 5000 Hz (adjustable)
	Clock frequency time measurement:	48 MHz
	Resolution:	Depending on the waveguide velocity of the encoder. (z.B. 0,059mm / Schritt bei v = 2850 m/s)
Control inputs:	Number of inputs:	6
	Format:	HTL, PNP (10 … 30 V)
	Frequency:	max. 10 kHz
	Load:	max. 2 mA / Ri > 15 kOhm / 470 pF
Analog-output:	Configuration:	current or voltage operation
	Voltage output:	-10…+10 V (max. 2mA)
	Current output:	0/4 … 20 mA (burden: max. 270 Ohm)
	Resolution:	16 Bit
	Accuracy:	± 0,1 % 0°C … +45°C ± 0,15 % -20°C … 0°C und +45°C … +60°C
	Reaction time:	< 1 ms
Control-Outputs:	Number of outputs:	6
	Format / level:	5 … 30 V (depends on the Com+ voltage), PNP
	Output current:	max. 200 mA
	Reaction time:	< 1 ms
Serial interface:	Format:	RS232 oder RS485
	Baudrate:	9600, 19200 oder 38400 baud
USB interface:	Mini-USB:	115200 Baud, Data Format 8 none 1
Display:	LED:	green status LED
Housing:	Material:	Plastic housing
	Mounting:	35 mm DIN rail (EN 60715)
	Dimensions (w x h x d):	23 x 102 x 102 mm
	Protection class:	IP20
	Weight:	approx. 100 g
Ambient temperature:	Operation:	-20°C … +60°C (not condensing
	Storage:	-25°C … +75°C (not condensing)
Failure rate:	MTBF in years:	59,1 a (Continuous operation at 60 ° C)
Conformity and standards:	EMC 2014/30/EU:	EN 61326-1: 2013 for industrial location EN 55011: 2017 / CISPR11: 2017 Class A
	RoHS (II) 2011/65/EU RoHS (III) 2015/863:	EN IEC 63000: 2018