



Signal converter FP210 / IP210 / PP210 / ZP210

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|----------------------------|---|-------------------|
| Frequency (FP210) | → | Parallel (25 Bit) |
| SSI absolute value (IP210) | | Serial (USB) |
| Start-Stop (PP210) | | |
| Pulse counter (ZU210) | | |

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, ...
 - 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
- USB interface for configuration
- Extremely short conversion times
- Linearization with 24 control points
- Auxiliary voltage output 5 and 24VDC for encoder supply
- Compact rail housing to EN60715
- Easy parameterization via user interface OS 6.0 (Freeware)

| Technical Specifications | | |
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| Connections: | Connector type: | screw terminal, 1.5 mm ² / AWG 16 25 pin SUB-D socket for parallel output |
| Power supply (DC):: | Input voltage: Protection circuit: Consumption: Fuse protection: | 10 ... 30 VDC reverse polarity protection approx. 30 mA (unloaded) extern: T 0.5 A |
| Encoder supply: | Output voltage: Output current: | 5 VDC and 24 VDC (approx. 1 V lower than the power supply) max. 250 mA |
| Incremental-inputs: | Number of inputs: Configuration: RS422: HTL differential TTL/ HTL PNP / NPN: Load: Accuracy frequency measurement: | A, /A, B, /B RS422, TTL, HTL differential, HTL PNP or HTL NPN max. 1 MHz (RS422 differential signal > 0,5 V) max. 500 kHz (HTL differential signal > 2 V) max. 250 kHz max. 6 mA / Ri > 5 kOhm / 10 pF +/- 50 ppm, +/- 1 Digit |
| SSI interface: | Input format Number (channels): Configuration: Format: Frequency: Resolution: Load: | TTL differentiell, RS422-Standard Clock, /Clock, Data, /Data Master or Slave (adjustable) Binary or Gray code max. 1 MHz 10 ... 32 Bit Max. 3 mA / Ri > 10 kOhm / 10 pF |
| Start/Stop-interface: | RS422 input: RS422 output: Pulse width Init-pulse: Frequency Init-pulse: Clock frequency time measurement: Resolution: | 1 x (Start_Stop, /Start_Stop); 1x (ext. Init_In, ext. /Init_In) 1 x (Init_Out, /Init_Out) 1 ... 9 µs (adjustable) 62,5 Hz - 5000 Hz (adjustable) 48 MHz Depending on the waveguide velocity of the encoder. (e.g. 0,059mm / step at v = 2850 m/s) |
| Control inputs: | Number of inputs: Format: Frequency: Load: | 3 HTL, PNP (Low 0 ... 3 V, High 9 ... 30 V) max. 10 kHz max. 2 mA / Ri > 15 kOhm / 470 pF |
| Parallel output: | Output format: Resolution: Signal level: Output current: Internal resistance: Protection circuit: Sampling time: | Binary Gray oder BCD 25 Bit Push-Pull, 0 ... 35 V* (can be supplied to terminal COM+) max. 20 mA (at 24 V) Ri ≈ 600 Ohm *) short-circuit proof up to max. 27 V 0,001s ... 9,999s (adjustable) |
| USB interface: | Connector type: Baud rate: Format: | Mini USB 115200 Baud 8none1 |
| Display: | LED: | green status LED |
| Housing: | Material: Mounting: Dimensions (w x h x d): Protection class: Weight: | Plastic housing 35 mm DIN rail (EN 60715) 23 x 102 x 102 mm IP20 approx. 100 g |
| Ambient temperature: | Operation: Storage: | -20°C ... +60°C (not condensing) -25°C ... +75°C (not condensing) |
| Failure rate: | MTBF in years: | 56,4 a (Continuous operation at 60 ° C) |
| Conformity and standards: | EMC 2014/30/EU: RoHS (II) 2011/65/EU RoHS (III) 2015/863: | EN 61326-1 for industrial location EN 55011 / CISPR11 Class A EN IEC 63000 |