



FU252

Signal converter: frequency → analog (voltage / current) and serial (RS232 / RS485)

Product Features:

- Conversion of quadrature signals (A, B, 90°) as well as single-channel signals (HTL, TTL or RS422)
- Suitable for conversion of the sum, the difference or the ratio of two frequencies
- Wide input frequency range from 0.1 Hz up to 1 MHz
- Extremely short conversion time of 1 msec. ($f > 2$ kHz)
- Analog output configurable for voltage or current operation
- Polarity of analog signal depending of the direction of rotation
- RS232 or RS485 interfaces for serial readout of the input frequencies
- Programmable digital filters and programmable linearization curves
- Easy to set up by simple TEACH procedure, or by PC operator software

Technical Specifications:		
Power supply:	Input voltage: Protection circuit: Ripple: Consumption:	18 ... 30 VDC reverse polarity protection ≤ 10 % at 24 VDC approx. 75 mA (unloaded)
Connections:	Connector type:	screw terminals, 1.5 mm ² / AWG 16
Encoder supply:	Output voltage: Output current:	+ 5.5 VDC max. 250 mA
Incremental input:	Signal levels: HTL characteristic: HTL internal resistance: Channels: Frequency: Accuracy (frequency measurement):	RS422: Differential voltage > 1 V TTL: LOW: 0 ... 0.5 V / HIGH: 2.5 ... 5.3 V HTL: LOW: 0 ... 3 V / HIGH: 10 ... 30 V NPN / PNP Ri ≈ 4.75 kOhm A, /A, B, /B max. 1 MHz at RS422 and TTL symmetrical max. 200 kHz at HTL and TTL asymmetrical 0.02 % +/- 1 digit
Control input:	Application: Signal levels: Pulse time:	connection of inductive proximity switches or control commands HTL: LOW: 0 ... 3 V / HIGH: 10 ... 30 V min. 5 ms
Analog outputs:	Voltage output: Current output: Resolution: Accuracy: Resolution per bit: Reaction time (standard operation): Reset time (in case of a sudden interruption):	-10 ... +10 V / 0 ... 10 V (max. 2 mA) 0 ... 20 mA / 4 ... 20 mA (burden: max. 270 Ohm) 14 Bit (± 13 Bit) 0.1% 1.25 mV / 2,5 µA depends on sampling time and frequency, approx. 1 ms (fin > 2 kHz); 1/f in (fin < 1 kHz) 5 ms (without average), 700 ms (max. average)
Housing:	Material: Mounting: Dimensions (w x h x d): Protection class: Weight:	plastic 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. 190 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:	75.2 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