



FM260

Frequency and pulse multiplier - for signal processing of incremental encoders & sensors

Product Features:

- Universal input for incremental encoder signals
- For asymmetric or symmetric impulses (A, B, Z or A, /A, B, /B, Z, /Z)
- Suitable for input frequencies with TTL, RS422, or HTL input level
- Maximum frequency of 1 MHz (input and output)
- Also suitable for light barriers, proximity switches or NAMUR switches
- Multiplication adjustable with a proportional and a reciprocal factor, both in a range from 0.0005 up to 9.9999
- Error-free and accurate impulse multiplication without cumulative errors, even not with encoder vibration or frequent change of direction of rotation
- Universal frequency output with 5 ... 30 V output level and channels A, /A, B, /B, Z, /Z
- Four programmable control inputs
- Programmable index pulse output
- 11 to 30 VDC power supply
- 5.2 VDC / 200 mA encoder supply
- Serial interface and USB port for communication with remote units and PC

Technical Specifications:	
Power supply:	Input voltage: 11 ... 30 VDC Protection circuit: reverse polarity protection Ripple: $\leq 10\%$ at 24 VDC Consumption: approx. 65 mA at 24 VDC (unloaded)
Connections:	Connector type: screw terminal, 1,5 mm ² / AWG 16
Encoder supply:	Output voltage: approx. 5.2 V Output current: max. 200 mA
Incremental input:	Signal levels: RS422: differential voltage > 1 V TTL: LOW 0 ... 0.5 V / HIGH: 2.5 ... 5.3 V HTL: LOW 0 ... 4 V / HIGH: 10 ... 30 V HTL Characteristic: NPN / PNP Internal resistance: $R_i \approx 4.75$ kOhm Channels: A, /A, B, /B, Z, /Z Frequency: max. 1 MHz at RS422 and TTL symmetrical max. 300 kHz at HTL and TTL asymmetrical
Control inputs:	Number of inputs: 4 Application: connection of inductive proximity switches or control commands LOW < 2.5 V, HIGH > 10 V (max. 30 V), Signal levels: $R_i \approx 3.9$ kOhm Internal resistance: dynamic signals: min. 50 μ s Signal time: static signals: min. 2 ms
Frequency output:	Signal levels: approx. 5 ... 30 VDC (depends on applied voltage at COM+ input) Channels: A, /A, B, /B, Z, /Z Characteristic: push-pull Output current: max. 30 mA / channel Protection: short circuit proof
Serial interface	Format: RS232 Baud rate: 2400 ... 38400 Baud (selectable) Connections: screw terminal, 1.5 mm ² / AWG 14 or USB port (connector type „Mini“, 5-pin)
Display:	Type: Background lightened LCD Characteristic: 2 lines, each 16 characters, 3,5 mm
Housing:	Material: Plastic Mounting: on 35 mm top hat rail (according to EN 60715) Dimensions: 72 x 91 x 76 mm (w x h x d) Protection class: IP20 Weight: approx. 200 g
Temperature range:	Operation: 0 °C ... +45 °C / +32 ... +113 °F (not condensing) Storage: -25 °C ... +70 °C / -13 ... +158 °F (not condensing)
Failure rate:	MTBF in years: 20.9 a (long-term usage at 60 °C / 140 °F)
Conformity & standards:	EMC 2004/108/EC: EN 61000-6-2, EN 61000-6-3, EN 61000-6-4 LV 2006/95/EC: EN 61010-1 Guideline 2011/65/EU: RoHS-conform