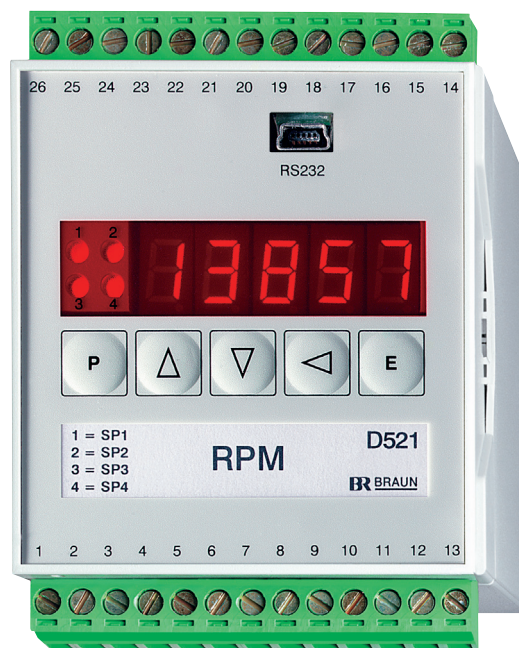




The Compact Speed Monitor



Application Features

- use throughout mechanical and electrical engineering, in the chemical industry, in power plants
- monitoring motors, turbines, pumps, feeders, gears, and rollers
- frequency range 0...300 kHz
- 2 or 4 setpoint alarm outputs
- analog output 20 mA / 10 V
- input monitor
- RS232 data interface
- bright red digital display
- widely programmable
- comprehensive supply range 20...265 V AC/DC

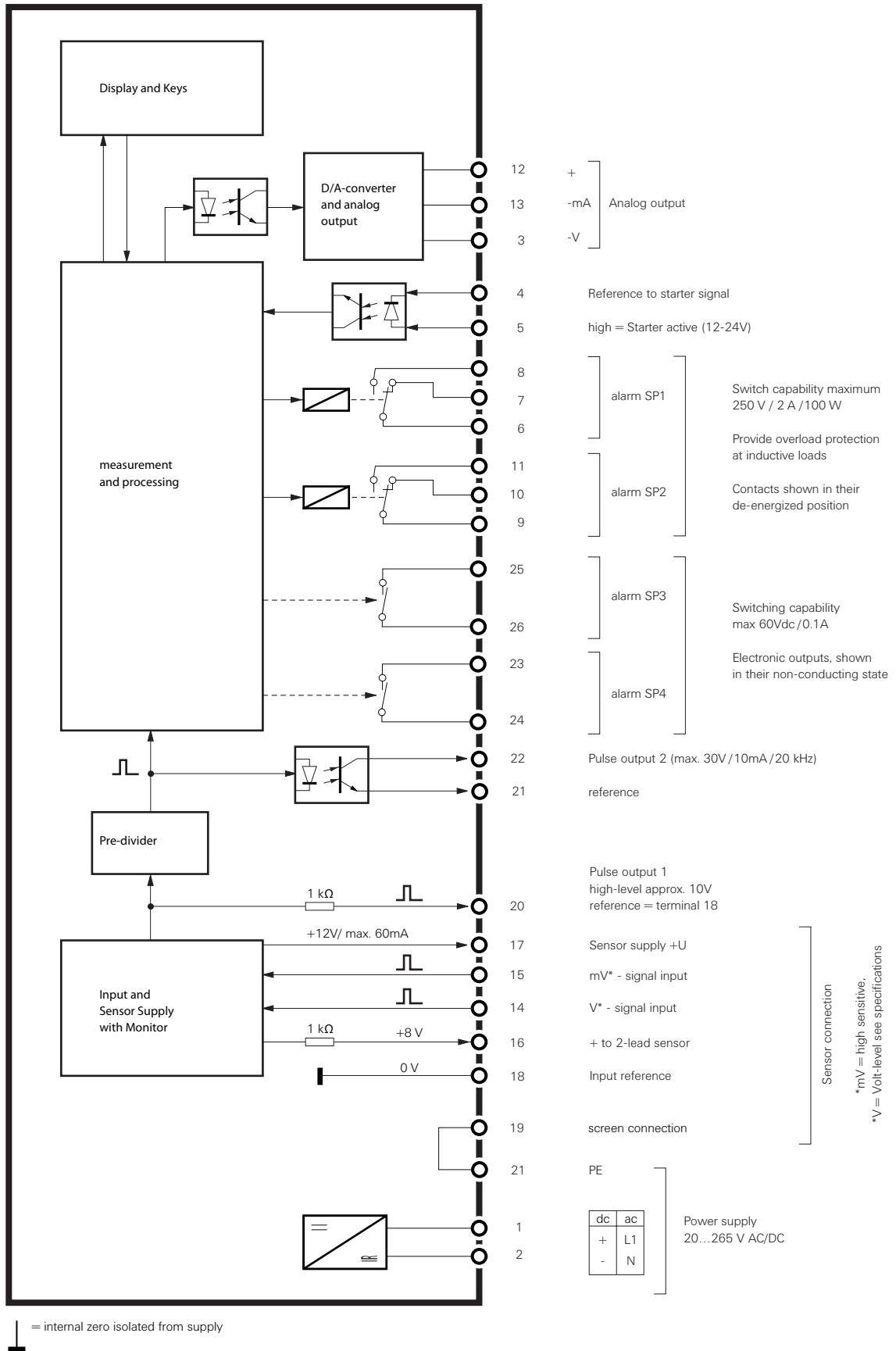
Specifications

Measuring Principle	<p>Frequency measurement, based on the input pulse distance, extended over a minimum period of time, programmable 5 milliseconds ...99 seconds.</p> <p>Accuracy: ±0.01% of value ±1 in last digit.</p>	<p>Response: 1 input pulse interval + programmed minimum time + 5 milliseconds.</p>
Analog output (option)	<p>Isolated and protected against external short circuit. Current 0/4...20 mA with max. load of 500 ohms, convertible to voltage 0/2...10 V with max. load 10 mA.</p> <p>Range: High and low end of span programmable.</p> <p>Resolution: 12 bit (1 : 4096).</p>	<p>Drift by temperature: <0.01 % within 0...40 °C (32...104 °F).</p> <p>Long term stability: <0.25 % during 5000 hours of operation.</p>
Setpoint Alarms	<p>2, both with SPDT contacts, also, as optional extra, further 2 with solid state electronic switch.</p> <p>Setpoints adjustment: Individually programmable from zero speed up to any high speed.</p> <p>Response characteristics: Hysteresis individually programmable in its position and width.</p> <p>Power handling capacity: 2 alarms with relay contacts 250 V, 2 A, 100 W AC, 2 alarms with (solid state) switches 60 V, 0.1 A DC.</p>	<p>Alarm state position: Individually programmable for excess, no power and input failure condition, starter period.</p> <p>Starter function: Released by external 24 V control signal to isolated input. Extension programmable up to 999 sec.</p>
Display	<p>5 digits with red LED figures, 8 mm high. Indicating the variable during operation, parameters during the programming phase.</p>	
RS232 Data Interface	<p>Baud rate programmable, up to 19200 baud.</p> <p>Data output: Measurements and signals state, upon request.</p>	<p>Data input: Programming the parameters (equipment required see below).</p>
Programming	<p>Manually by front keys, alternatively via RS232 (equipment required see below).</p>	<p>Data protection: Parameters safe-guarded against power failure, and code protected against unauthorized access.</p>

Signal input	<p>Isolated circuit, responding to pulse signals of any waveform, and to AC-signals.</p> <p>Frequency range: 0...300 kHz.</p> <p>Signal level range: Response level with step selection. Minimum signal 50 mV RMS, maximum 100 V.</p> <p>Input impedance: 100 kohms.</p> <p>Scaling factor: programmable by 5 digits, considering any relation to the variable.</p> <p>Input frequency divider: programmable 001...255, to balance a periodic pulse fluctuation.</p>	<p>Suitable sensor types: All BRAUN sensors, or equivalent, NAMUR type sensors, tachogenerators, incremental encoders.</p> <p>Sensor failure monitoring: Short-circuit or interrupt of supply (NAMUR types also), signal lead break (with push-pull output only). A detected failure sets any of the alarms into a pre-programmable state.</p> <p>Sensor supply: 12 V/max. 60 mA. Extra output 8 V via 1 kohm load resistor to passive 2 leads sensor types.</p>
Input signal repeater	<p>Direct output: level 10 V, 1 k source impedance.</p> <p>Output subsequent to frequency divider: isolated opto-coupler (to max. 30 V, 10 mA).</p>	
Power supply	<p>Comprehensive supply range 20 V...265 V AC/DC. Power consumption approx. 7 W.</p> <p>Insulation category: Class 1.</p>	
Design	<p>Snap-on-track enclosure for 35 mm rail.</p> <p>Dimensions: Length 70 mm, width (including terminals) 103 mm, height 110 mm.</p>	<p>Protection grade: IP 20 (available in field mounting enclosure as well, with transparent cover IP 65/NEMA 4).</p> <p>Weight: approx. 0.3 kg.</p>
Wiring	<p>2 plug-in terminal blocks, accepting 0.2...2.5 mm² wire cross section. RS232 at USB Mini B front socket.</p>	
Operating conditions	<p>Ambient temperature: -20 °C...+60 °C (-5...+140 °F).</p> <p>Humidity: max. 75 %, without condensation.</p>	
Compatibility to Standards	<p>EMI according to EN 610000-6.2, EN 610000-6-4. Safety according to EN 61010-1.</p>	
Data Interface Accessories (option only)	<p>L3D01: plug-in adapter cable, with 9-pole Sub-D (female) plug to PC.</p> <p>D521-IS-RS232: CD-ROM with software to program parameters.</p>	

Function diagram and connections

Includes all versions. Skip those not required.



Order Information

D521.

02 = no analog output, 2 alarms with SPDT contacts.

04 = no analog output, 2 alarms with SPDT contacts + 2 alarms
with solid state switches.

12 = with analog output, 2 alarms with SPDT contacts.

14 = with analog output, 2 alarms with SPDT contacts + 2 alarms
with solid state switches.