

Universal Digital Tachometer



One instrument for multiple functions

Features

- 5 digit 7 segment LED display
- Period measurement principle
- Operation down to 0.1Hz
- 2 frequency inputs
- 4, 8 or 16 different parameter sets
- Panel mounted
- Integrated sensor supply
- Optional relay, RS 232 data or current output
- Optional function selector switch input
- Wide tolerance AC/DC power supplies

DFP 951/952 Advantages

- Measurement of absolute speed CA or CB
- Ratios and percentage difference
- Field programmable parameters
- Leading zero suppression
- Selectable single shot and external synchronisation
- Display in machine units with machine factor setting
- Programmable measurement time from 10ms
- Optional process time measurement e.g. oven baking time
- Under / Over range displays
- Input for proximity, electromagnetic or 3 wire sensors

Typical applications

- Paper mill roller speed ratios
- Accurate display of low speed dryers
- Textile machine slip control
- One display for 2 turbochargers
- Oven baking time



DFP 952



DFP 951

Measured Values and Ranges

DFP 951	With hidden push buttons for programming
DFP 952	Front panel push buttons

Options

I	Current output 0/4...20mA, = display range, max 500 Ohm load, potential free, resolution 10 bit, 9-pole Sub-D connector
D5	Serial interface RS 232, 9-pole Sub-D connector
R	2 relay outputs 220 Vac, 1A, 50W, 9-pole Sub D connector
K4	External switch selection of 1 from 4 parameter sets
K16	External selection of 1 from 16 parameter sets
S3	Turbocharger sensor input
s4	Process time measurement

The options I, D5 and R are mutually exclusive.

Measured Values and Ranges

Absolute value (A)	CA oder CB	0...9.9999	CA-CB	-9.9999...0...9.9999
		0...99.999		-99.999...0...99.999
		0...999.99		-999.99...0...999.99
		-9999.9...0...9999.9		-99999...0...99999
Ratio (R)	CA/CB	0...9999.9	CB/CA	0...99999
Percentage Difference (%)	(CA-CB)/CB-100.00...0...+999.99%		(CB-CA)/CB	-999.99...0...+100.00%
		-100.0 ...0...+9999.9%		-9999.9...0...+100.0%
		-100 ... 0... +99999%		-99999 ...0...+100%

Parameters

	Standard 8 parameter sets configured via two push buttons
	Select currently effective parameter set
	Trigger level (V) for channel A and channel B
	Measured quantity, measuring range
	Machine factor A and B
	Fix-time (measurement time)
	Option settings e.g. limit values, analogue range.

Power supply

UC 2	93...264 Vac / 45...450 Hz / 130...375 Vdc
UC 3	18...58 Vac / 45...450 Hz / 18...60 Vdc
DC 0	9...18 Vdc

Operating modes

Automatic update	Repetitive update of measured quantity based on the „Fix time“
External synchronisation	Measuring cycle is reset via an external 0V clock pulse. The display is then blanked. A new measuring cycle starts when the clock goes high with the measured value being displayed as normal.
Single measurement	Following an external reset signal, the instrument calculates the measured quantity once. The display is maintained until the falling edge of the next reset pulse.

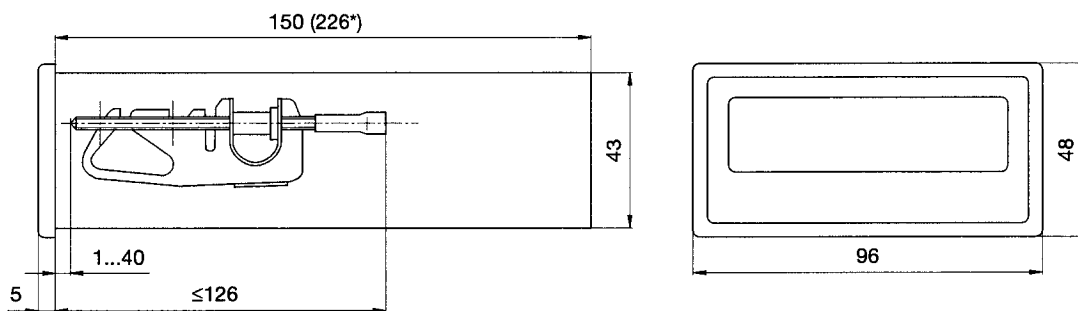
The modes "external synchronisation" and "single measurement" are not possible with options K4 and K16.

Machine factor	Input in exponential notation
	Mantisse: 0.001...9.999 Exponent: -4...0...+4

Technical Data

Display	5 digit, 7 segment red LED, height 14mm, leading zero suppression
Frequency range	0,1 Hz...50 kHz
Accuracy	Better than $\pm(4 \times 10^5) \pm 1$ unit
Frequency inputs	Grounded on one side, input impedance approx. 200 kOhms
Input voltage	50 mV...80 Vrms
Trigger level	Adjustable between ± 50 mV and $\pm 4,55$ V
Signal input	Facility for connecting electromagnetic, Ferrostat, HF transmitters & proximity switches
Sensor supply	12 V, max. 120 mA
Measuring time	Adjustable between 10 ms and 9.6 seconds in binary multiples or fractions of 0,6 s
(Fix time)	
Environment	Operating temperature: 0...55 °C Storage temperature: -25...+65°C

Dimensions



Full technical details can be seen in the detailed technical specification.



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