

# Tachometer electronic

## Ratio display, 2 limits, analogue output

### Large 14 mm display LED, 6-digits, programmable

TA202



TA202 - LED-Tachometer

#### Technical data - electrical ratings

Voltage supply	115/230 VAC $\pm 10\%$ (50/60 Hz) 24/48 VAC $\pm 10\%$ (50/60 Hz) 24 VDC $\pm 10\%$
Power consumption	7 VA, 5 W
Sensor supply	12...26 VDC / max. 100 mA
Display	LED, 7-segment display
Number of digits	6-digits
Digit height	14 mm
Unit displayed	1/s, 1/min, 1/h programmable
Function	Tachometer, ratio display
Measuring principle	Period duration measurement
Calculating functions	Difference F1-F2 Ratio F1:F2 Stretch-/shrinking (F2-F1):F1 Flow Pulse rate measurement
Signal inputs	Comparator inputs
Input logic	NPN / PNP
Control inputs	2 Inputs
Control functions	Start, Stop
Counting frequency	F1: 10 kHz / F2: 25 Hz, 40 kHz
Scaling factor	0.0001...9999.99
Data memory	>10 years in EEPROM
Outputs electronic	Optocoupler
Analogue output	2 analogue outputs 0(2)...10 V, 0(4)...20 mA Resolution 12 bit Temp. coeffic. typ. $\pm 20$ ppm/ $^{\circ}$ C
Outputs relay	Potential-free change-over contact
Interfaces	RS232, RS422, RS485
Standard	Protection class II
DIN EN 61010-1	Overvoltage category II Pollution degree 2

#### Features

- Tachometer for 2 rotation speeds/velocities
- Display 6-digits
- Connection: Two one-channel digital sensors or potential-free contact
- Two limits
- Ratio display, peak value memory
- Impulse evaluation programmable
- Input F1 with phase evaluation
- Interface RS232, RS422 or RS485

#### Description

Two limits „P1“/„P2“ that can be assigned at will enable monitoring of production processes. Two tachos to capture and display rotation speed and velocity as “F1” and “F2”. “F3” allows recall and display of a programmed calculating function, for example ratio, difference, stretching/shrinking, flow, time elapsed with start and stop signal, impulse rate measurement, period or impulse duration.

#### Technical data - electrical ratings

Emitted interference	DIN EN 61000-6-3
Interference immunity	DIN EN 61000-6-2
Programmable parameters	Assignment F1, F2 or F3 Calculating functions 2 limits, analogue output Slave pointer
Approvals	UL/cUL, CE conform

#### Technical data - mechanical design

Operating temperature	0...+50 $^{\circ}$ C
Storing temperature	-20...+70 $^{\circ}$ C
Relative humidity	80 % non-condensing
E-connection	Plug-in screw terminals
Core cross-section	1.5 mm <sup>2</sup>
Protection DIN EN 60529	IP 65 face with seal
Operation / keypad	Membrane with softkeys
Housing type	Housing for control panel installation
Dimensions W x H x L	96 x 48 x 124 mm
Cutout dimensions	97 x 45 mm (+0.6)
Installation depth	123.75 mm
Mounting	Front panel installation by clip frame
Weight approx.	350 g (AC), 250 g (DC)
Material	Housing: Makrolon 6485 (PC)

30/10/2008 Subject to modification in technic and design. Errors and omissions excepted.

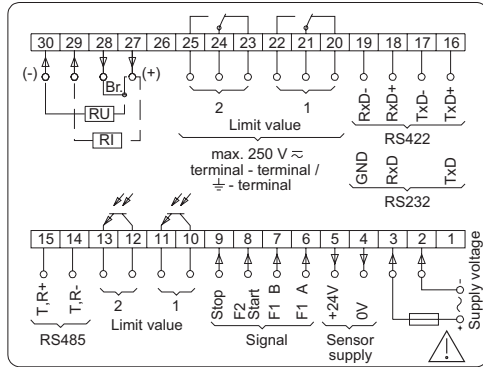
# Tachometer electronic

## Ratio display, 2 limits, analogue output

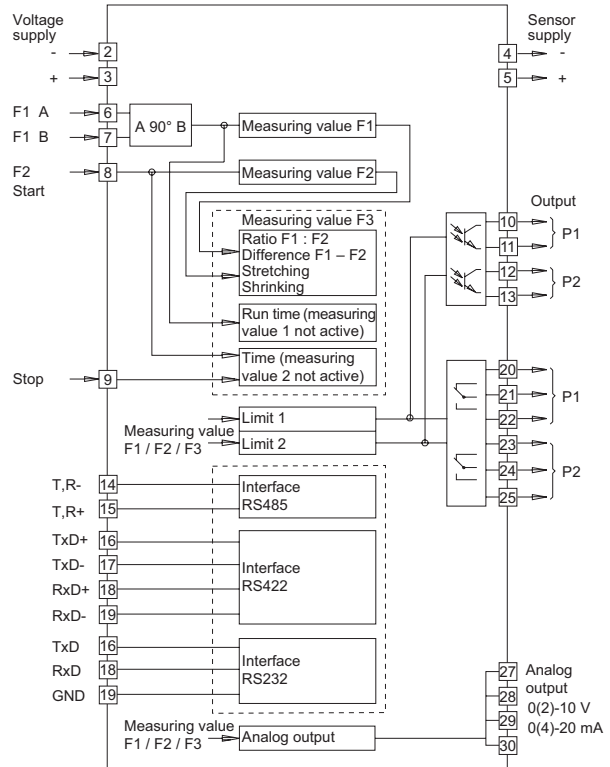
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#### Connection diagram



#### Block circuit diagram



#### Trigger level

Comparator inputs	Input circuit
Inputs	PNP- / NPN-logic
Input level	Programmable
Input level Low	0...2 VDC
Input level High	3...40 VDC
Input resistance	3 kΩ
Relay outputs	Output circuit
Switching voltage max.	250 VAC / 110 VDC
Switching current max.	1 A
Switching capacity max.	150 VA / 30 W
Relay responding time	5 ms
Electronical outputs	Output circuit
	Optocoupler short-circuit proof
Switching voltage max.	40 V
Switching current max.	15 mA
Residual voltage	<1 V

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### Part number

TA202.     **AXA1**

#### Voltage supply

- 1 24 / 48 VAC
- 2 115 / 230 VAC
- 3 24 VDC

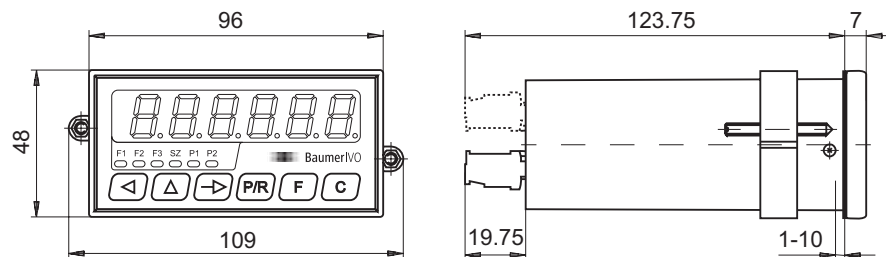
#### Outputs

- 0 Optocoupler outputs
- 1 Relay and optocoupler outputs
- 2 Relay and optocoupler outputs / analogue output

#### Interface

- 0 Without interface
- 1 RS485
- 2 RS422
- 3 RS232

### Dimensions



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