

# T500 DUALTACH

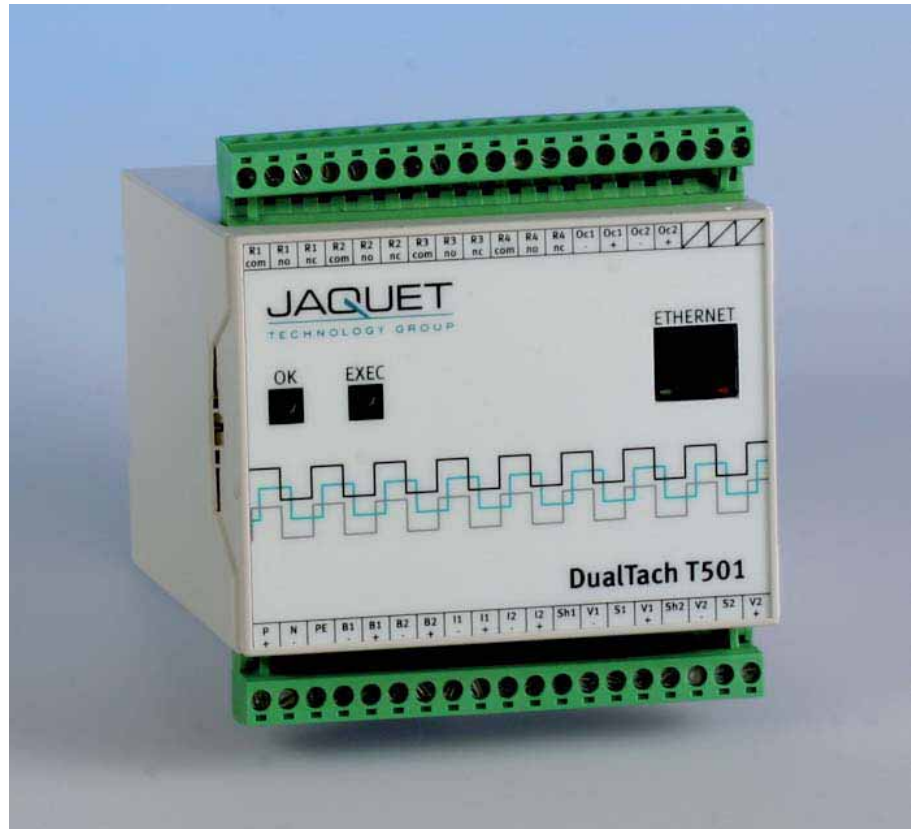
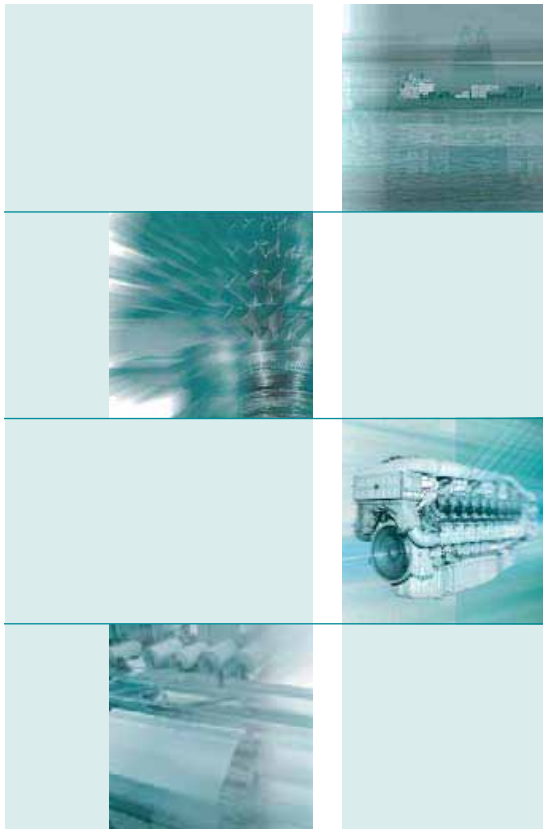
## 2 CHANNEL TACHOMETER

überreicht durch / presented by :

**SCHRIEVER & SCHULZ** & Co. GmbH  
Vertriebsbüro für Mess- & Regeltechnik seit 1958

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**JAUQUET**  
TECHNOLOGY GROUP



## JAQUET T500 DualTach – 2 Channel Measurement, Display and Monitoring Instruments

### JAQUET T500 DualTach

2 CHANNEL MEASUREMENT, DISPLAY AND  
MONITORING INSTRUMENT FOR DEMANDING  
MACHINE PROTECTION APPLICATIONS

### FEATURES

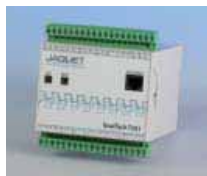
- High accuracy speed measurement: 0.002% for limits and 0.25% on the Analogue output.
- 2 frequency + 2 binary inputs
- 2 analogue, 4 relay and 2 Open Collector outputs
- Sensor monitoring for all sensor technologies
- Ethernet interface - configuration via Windows software
- Extensive parameter and limit setting possibilities
- Programmable logical, diagnostic and measurement functions
- Supply 18..36 VDC or 90..264 VAC
- Plug in terminals

### THE T500 ADVANTAGE

- Fast reaction time on overspeed
- 4 parameter sets each with 6 System Limits for almost limitless applications
- Logical limit combinations save relays & wiring
- Acceleration measurement as standard
- x1, x2 or x4 frequency outputs
- Compatible with all popular sensor types -
- Fulfills demanding safety requirements - GL approval for marine use

### TYPICAL APPLICATIONS

- Micro turbine speed measurement and overspeed protection
- Diesel engine start control and protection
- Dual turbocharger speed measurement
- Equipment in safety critical applications
- Universal tachometer and display unit



# T500 DUALTACH

## 2 CHANNEL TACHOMETER

### 2 Channel Tachometer with 4 Relays, 2 Open Collector and two 0/4-20mA Outputs:

<b>Type:</b>	T501 (without Display)
<b>Article Number:</b>	384Z-05600 (AC-Version) and 384Z-05601 (DC-Version)
<b>Type:</b>	T511 (with Display) NOTE: AVAILABLE IN JULY 2007
<b>Article number:</b>	384Z-05602 (AC-Version) and 384Z-05603 (DC-Version)

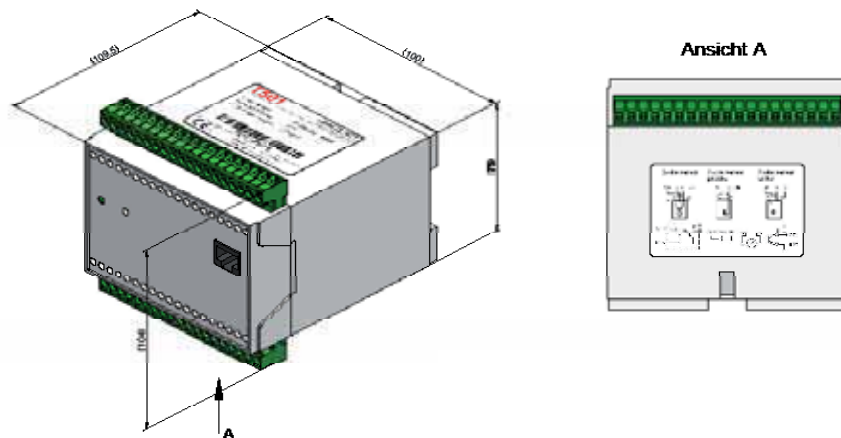
### Common Technical Data

<b>Measurement range:</b>	0.025 Hz... 50.00 kHz programmable
<b>Accuracy:</b>	0.002 % for Limits; 0.25% referenced to 20mA or the max value
<b>Analogue outputs:</b>	Two; 0/4...20mA Programmable rising or falling characteristic
<b>Load:</b>	Max. 500 Ohm corresponding to a maximum of 10V
<b>Maximum open circuit voltage:</b>	14.6 V
<b>Resolution:</b>	14 bit corresponding to 1:16384 (actual resolution: 1.36 $\mu$ A)
<b>Maximum linearity error</b>	0.015 %
<b>Temperature drift:</b>	Typ. $\pm$ 50 ppm/K, max $\pm$ 250 ppm/K
<b>Limits:</b>	4 Parameter sets each with 6 System limits (absolute or AND / OR combined values)
<b>Hysteresis:</b>	Freely programmable upper and lower set-points for each limit
<b>Change-over contacts:</b>	230 VAC - max. 0.45 A 125 VAC - max. 1 A 30 VDC - max. 2 A
<b>Data I/O:</b>	Ethernet interface
<b>Reaction / settling time:</b>	Configurable min. measurement time (Fixtime): 2/5/10/20/50/100/200/500 ms, 1/2/5s. For input frequencies having period $<$ Fixtime: Analogue output: Fixtime + 4.1ms Relays: Fixtime + 6ms For input frequencies having period $>$ Fixtime: Analogue output: Maximum: Input period + 4.1ms Relays: Maximum: Input period + 6ms
<b>Sensor inputs (Qty 2)</b>	
Frequency range:	(-3 dB): 0.025Hz/50kHz
Input impedance:	$>$ 11.5kOhm
Analogue Trigger level:	Fixed at 3V Or software selectable - Adaptive Trigger level from 20mVrms Or Adaptive Trigger level from 180mVrms
<b>Sensor Supply (Qty 2)</b>	
Integral Sensor Supply:	+14V $\pm$ 0.5V, max 35mA, short circuit proof
Integral Pull Up:	(+14V), 1KOhm for connecting active 2 wire or NAMUR sensors
<b>Sensor monitoring:</b>	2 and 3 wire sensors: Programmable current consumption limits of 0.5...35mA. Outside the selected range the sensor is signaled as faulty. Electromagnetic sensors: Continuity checked. Open circuit signaled as a fault. Both sensor monitoring functions may be disabled via software.
<b>Open Collector Outputs (Qty 2)</b>	Isolated outputs of sensor frequencies: Programmable x1, x2 or x4 (subject to 2 channel phase shift)
<b>Binary inputs:</b>	For external selection of parameters sets or combination in System Limits Low: $<$ +5V High: $>$ +15V (software selection of active Low or High)
<b>Climatic immunity:</b>	In accordance with DIN 40 040

<b>Operating temperature:</b>	DC Version: -40°...+70°C AC Version: -25°...+50°C
<b>Storage temperature:</b>	-40°...+85°C
<b>Relative Humidity:</b>	75% averaged over 1 year; up to 90% for 30 days max.
<b>Supply:</b>	18...36VDC, power consumption max 6.8W or for the AC version 90...264VAC max 13.5W
<b>Isolation:</b>	<b>AC Version:</b> AC/DC power supply: 3000VAC. <b>DC Version:</b> DC/DC converter: 1500VDC Binary inputs: 1500V Analogue outputs: 1000 V Relays: 1500VAC between coils and contacts 1000VAC between open contacts Open Collector: 1500VAC
<b>EMC:</b>	Emissions in accordance with international standards and EN 50081-2. Immunity to EN 50082-2 Conducted emissions: CISPR 16-1, 16-2 Electrostatic discharge: IEC 61000-4-2 Fast transients: IEC 61000-4-4 RF common mode: IEC 61000-4-6 Pulse mode electric field: ENV 50140 Magnetic fields: IEC 1000-4-8 Radiated emissions: EN 55011 Electromagnetic fields: IEC 61000-4-3 Slow transients: IEC 61000-4-5

**Other standards:** EN 50155  
GL / Germanischer Lloyd  
UL – on request

**Dimensions:**



<b>DIN Rail:</b>	DIN 4622713 (EN 50022) or Mounting plate DIN 43660 (46121)
<b>Housing:</b>	Material ABS, color RAL 7035
<b>Terminals:</b>	Plug in style. Please see instruction manual for connections
<b>Weight:</b>	T501 AC: 510gr T501 DC 400gr

**Complete technical data is contained in the instruction manual.**

T500's are delivered with complete documentation on CD-ROM. The Software is implemented in the unit and can be configured via Ethernet connection.

The Software allows:

- Fast and user friendly parameter set up
- Access to stored parameters
- PC display of measurement, relay and alarm status
- Normal file handling and printing of parameter details

JAQUET TECHNOLOGY GROUP offers the world's most versatile and advanced range of solutions for the detection, measurement, diagnosis and management of rotational speed.

Our industry and application specific expertise ensures that you will achieve an optimum solution. Completely matched to your individual requirements, meeting key industrial standards and certifications, our products help boost the performance of your machinery while reducing cost of ownership.

#### TYPICAL INDUSTRIES SERVED

- Automotive and truck
- Diesel / Gas engines
- Hydraulics
- Railway
- Turbines
- Turbochargers
- Industrial machinery

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#### PRODUCTS – SPEED SENSORS

- Various technologies
- Standard, custom and OEM models
- For demanding applications, e.g. 300,000 rpm, temperature up to 320 °C / 600 °F, high vibration, shock to 200 g, etc.
- GreenLine speed sensors for general applications
- Ex models for hazardous areas
- Pole bands and target wheels available where needed

#### PRODUCTS – SYSTEMS

- Multi-channel overspeed protection systems
- 1–2 channel measurement, protection and control modules
- Engine diagnostic systems
- Redundant speed measurement and indication

#### SPECIAL PROJECT EXAMPLES

- An automotive linear movement sensor
- Integrated power and torque measurement for display and gearbox control
- Naval spec. turbine protection for nuclear submarines
- Speed measurement in turreted, tracked vehicles

#### QUALITY MANAGEMENT AND STANDARDS

- Quality management: TS 16949 and ISO 9001, ZELM ATEX 1020, KWU
- Sensors: GL, KWU, TÜV, ATEX, EN 50155 ,NF F 16-101 102 , ABS, EMC
- Systems: IEC 61508 SIL 2 and SIL 3, API 670, GL, TÜV, KWU, EX
- Environmental: RoHS - EU directive 2002/95/EC

#### JAQUET – YOUR PARTNER

- Efficient and professional service - JAQUET TECHNOLOGY GROUP is headquartered in Basel, Switzerland and has subsidiaries in Belgium, China, Germany, the Netherlands, United Kingdom and United States along with a worldwide distributor and end-user service network.
- Flexible production quantities; from 1 to millions per project
- Reduction of total costs by intelligent and cost-effective solutions
- Fast turn around time