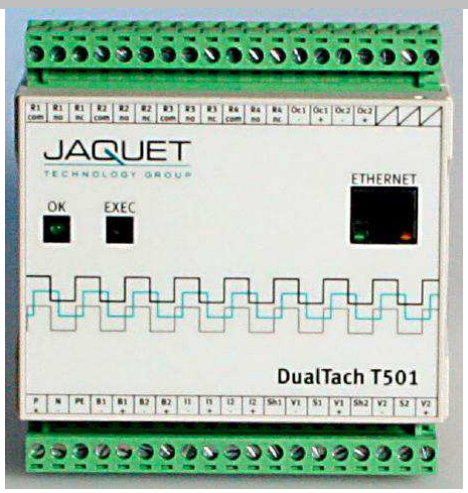


T500 TACHOMETER

DualTach - a measurement & monitoring instrument with 2 frequency inputs

Features

- High accuracy speed measurement: 0.002% for limits and 0.1% referenced to 20 mA
- 2 frequency + 2 binary inputs
- 2 current, 4 relay and 2 Open Collector outputs
- Sensor monitoring for all sensor technologies
- Ethernet interface - configuration via Java™ based software
- Extensive parameter and limit setting possibilities
- Programmable logical, diagnostic and measurement functions
- Plug in terminals

The T500 Advantage

- Fast 8 ms relay reaction time on over speed
- 4 parameter sets each with 6 System Limits for almost limitless applications
- Logical limit combinations save relays & wiring
- Acceleration measurement
- Compatible with all popular sensor types

Typical Applications

- Micro turbine speed measurement and over speed protection
- Diesel engine start control and protection
- Dual turbocharger speed measurement
- Universal tachometer

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

Type and part numbers	AC version:	T501.50	Part number: 384Z-05600
	DC version:	T501.10	Part number: 384Z-05601

Technical Data

Measurement range		0.025 Hz… 50.00kHz		
Measuring time		Configurable min. measurement time (tM): 2/5/10/20/50/100/200/500 ms, 1/2/5s.		
Reaction time		Current output:	Typical tM + 4.1 ms	Maximum Input period + tM + 4.1 ms
		Relays:	Typical tM + 6 ms	Maximum Input period + tM + 6 ms
Accuracy		Limits / inputs	Frequency: 0.002% Current: 0.025% Temperature: 0.5 ˚C	
		Current output	0.1% referenced to 20mA or the end value Max 0.2 % from measuring value + 2 LSB (-40°…+70°C)	
Sensor inputs (2)		To measure frequency signals (speed sensors)		
	Frequency range	0.025 Hz to 50 kHz		
	Trigger levels	Selectable by software:	Fixed at 3 V or adaptive from either 20 mVrms or 180 mVrms	
	Sensor supply	+14 V ±0.5 V, max 35 mA, short circuit proof		
	Sensor monitoring	3 wire sensors:	Programmable current consumption limits of 0.5…35mA.	
		Electromagnetic sensors:	Open circuit detection	
Binary inputs (2)		Isolated inputs for binary signals		
	Levels	Low: < +5 V	High: > +15 V	(software selection of active Low or High)
	Functions	External selection of controls (parameter sets)		
		Combination in System Limit	Reset for relay, creep and memory	
Data I/O		Configuration and monitoring	Ethernet interface	
Supply		AC version:	90...264 VAC max 14 W / 120...370VDC	
		DC version:	18...36 VDC max 6.8 W	
Relays (4)		To treat the status of System Limits and sensor		
	Limits	4 parameter sets each with 6 System Limits (AND / OR combined values)		
	Hysteresis	Freely programmable upper and lower set-points for each limit		
	Function	Latching / inversion (fail safe)		
	Contacts	Change-over: 230 VAC / max. 0.45 A 125 VAC / max. 1 A 30 VDC / max. 2 A		
Open collector outputs (2)		Isolated outputs of sensor frequencies: programmable x1, x2 or x4 (subject to 2 channel phase shift) Can also react on System Limits, see above		
	Function	Latching / inversion (fail safe)		
	Contacts	Umax = 36 Vdc Imax = 30 mA		
Analog outputs (2)		Isolated current output to treat information of sensor 1, 2, analog in or of the math result		
	Range	From - 99999 to + 999999 free programmable start and end value		
	Type	0...20 mA / 4...20 mA		
	Maximum load	500 Ohm corresponding to a maximum of 10 V		
	Resolution	14 bit corresponding to 1:16384 (actual resolution: 1.36 µA)		
	Maximum	linearity error 0.015 %		
Memory		To store important values		
	Max/min values	Sensor 1, sensor 2, analog in		
	Event memory	About 100 values of all status changes stored in either ring buffer or limited memory		
	Security event memory	100 measurements before and after the security event are stored with date and time		
Operating temperature		AC Version: -25°…+50°C	DC Version: -40°…+70°C	
Storage temperature		-40°…+85°C		

Climatic immunity	In accordance with DIN 40 040
Relative humidity	75% averaged over 1 year; up to 90% for 30 days max.
Isolation	Min. 1000 V
EMC	Electrostatic discharge: IEC 61000-4-2 Electromagnetic fields: IEC 61000-4-3 Fast transients: IEC 61000-4-4 Slow transients: IEC 61000-4-5 RF common mode: IEC 61000-4-6 Magnetic fields: IEC 61000-4-8

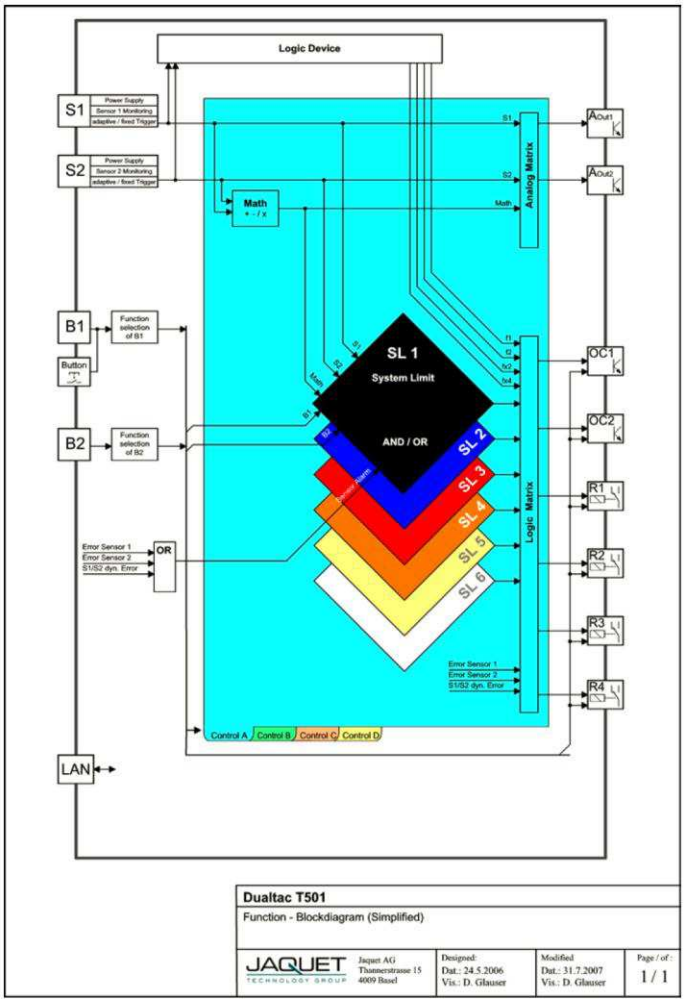
Limits for limitless applications

T500's allow you the freedom to choose the functions or system configuration that best match your application.

As well as being replacements for previous generation tachometers they can process multiple sensors data including frequency and binary inputs.

Want to know when a trip occurred? Could really do with more gear teeth than space allows? Need to swap between different parameter sets? - No problem - the T500 DualTach provides the solution.

Uniquely, the T500's also enable you to logically combine decision parameters from more than one sensor or command to create control signals.



CONTACT US
Tel +41 61 306 8822
jaquet.info@te.com

te.com/sensorsolutions