

## JAQUET T400 Speed measurement, switching and indicating instruments

### TYPICAL APPLICATIONS

DIESEL ENGINE START CONTROL AND OVER-SPEED PROTECTION

MICRO TURBINE MEASUREMENT AND PROTECTION

TURBOCHARGER SPEED MEASUREMENT

MACHINE PROTECTION IN SAFETY CRITICAL APPLICATIONS

UNIVERSAL SPEED MEASUREMENT AND INDICATION

### FEATURES

- Converts absolute speed into an analog signal
- Including 2 limits (A/B) with programmable hysteresis
- One changeover relay assigned via binary input to limit (A or B)
- T411 and T412 models with display
- Isolated signal input with automatic trigger level adjustment
- Built in isolated sensor supply with sensor monitoring
- Open collector output of sensor frequency
- Accuracy class 0.05% for limits and 0.5% for analog signals
- Configuration and status via Windows® software
- 5 digit machine factor allowing configuration and display in machine units
- Wide tolerance 10...36 VDC power supply

### T400 ADVANTAGE

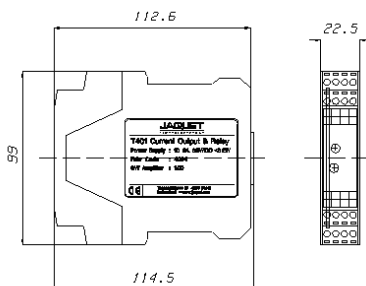
- Fast response to over speed conditions
- Germanischer Lloyd's and ABS approval for marine applications
- Digital display of speed value for the models T411 and T412
- 0/4...20 mA or 0/2...10 V analog output with rising or falling characteristics
- Adaptive trigger provides high noise immunity e.g. with electromagnetic sensors
- Digital input for direct treatment of frequency signals
- 2 possible relay configuration sets e.g. for start up bridging, controlled via binary inputs
- Pluggable terminals
- Integrated 2 or 3 wire sensor monitoring and system watchdog



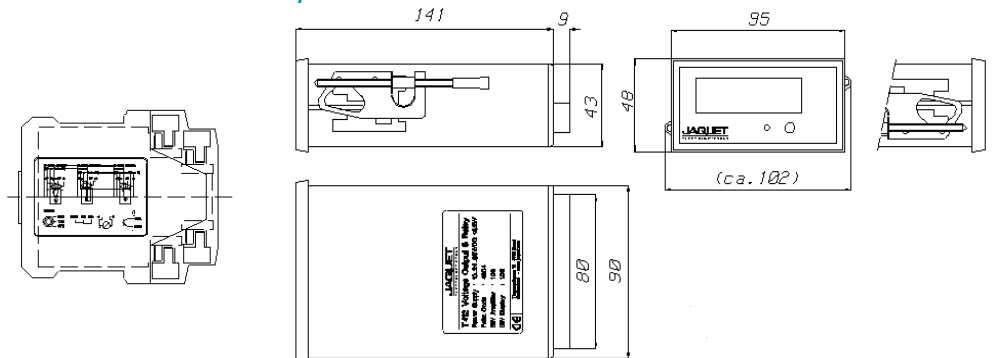
<b>Binary inputs (1)</b>	For external selection between two sets (A/B) of programmable relay control and acknowledge functions: (No external pull up needed) Low active :U < +1.5V                      High (open) :U > +3.5V
<b>Environmental</b>	KUE according to DIN 40 040 Operating temperature: - 40...+85 °C Storage temperature: -40...+90 °C Relative humidity up to 75% average over one year period, up to 90% max. for 30 days
<b>Power supply</b>	10...36 VDC power consumption max. 3 W
<b>Insulation</b>	Galvanic separation between power supply, current output and the sensor power supply. Isolation 700 VDC / 500 VAC. Relay contact isolation: 1500 AC
<b>EMC</b>	Electromagnetic compatibility: Radiation in accordance with international standards and EN 50081-2. Immunity in accordance with international standards and EN 50082-2  Conducted emissions: CISPR 16-1, 16-2                      Radiated emissions: EN 55011 Electrostatic discharge: IEC 61000-4-2                      Electromagnetic fields: IEC 61000-4-3 Conducted fast transients: IEC 61000-4-4                      Conducted slow transients: IEC 61000-4-5 Conducted high frequency: IEC 61000-4-6 Pulse modul. elec. field: ENV 50140 Power frequency magnetic field: IEC 1000-4-8
<b>Standards</b>	EN 50155, GL / Germanischer Lloyd, ABS

## Dimensions

### T401/402



### T411/412



<b>Rail</b>	Rail DIN 4622713 (EN 50022) or mounting plate to DIN 43660 (46121)
<b>Housing</b>	Protection class IP40, terminals IP20
<b>Terminals</b>	Pluggable
<b>Weight</b>	T401/T402: 150 g, T411/T412: 210 g

T400 systems are supplied with a full documentation and the T400 Windows® Software.

The software allows:

- Quick and easy configuration of all operating parameters
- Unit interrogation of identity and parameters
- PC display of current measurement and relay status
- Archiving and printing of the configuration

RS-232 cable not included, see page 2 for optional accessories.

**Please note: Information is subject to change. For more technical information please refer to operating instructions.**

JAUQUET 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.



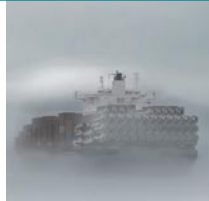
#### TYPICAL INDUSTRIES SERVED

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



#### 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



#### JAUQUET – YOUR PARTNER

- Efficient and professional service - JAUQUET 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