

## Single Channel Converters and Speed Switches



### Compact modular solution for speed measurement and control

#### Features

- FTW 113 module for speed = 0/4... 20mA
- FTF 123 module for 1 (2) set points
- 5ms fast measurement system
- 0.5% accuracy
- 18...33Vdc supply
- Configuration and status display via PC
- Sensor fault monitoring
- System watchdog
- DIN rail mounted
- Compatible with all JAQUET sensors

#### The Advantage

- Quick configuration via Windows software
- Programmable scaling and measurement time
- Sensor supply for 3 wire active sensors
- Sensor PSU can be used for DSE sensor line monitoring
- FTF 123 – 1 relay but 1 or 2 set points
- High input impedance – drive 2+ modules from one sensor
- Sensitivity down to 50mVrms
- Proven in land based and marine applications
- Available pre-configured
- Attractively priced

#### Typical Applications

- Diesel engine start control and over speed protection
- Turbocharger speed measurement on ships and trains
- Diesel engine start up control
- Test cells for rotating machinery
- Machine tools
- Textile machines

The FT100 family comprises of:

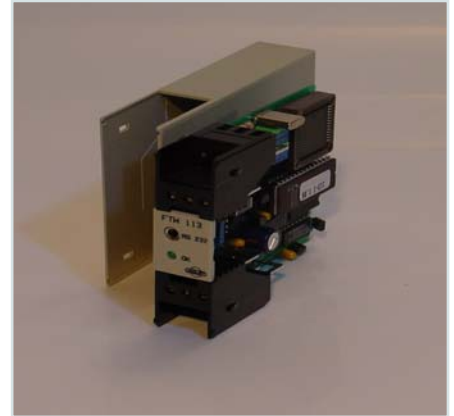
**Frequency to current converter:**

FTW 113 DC24 with either current or voltage output

**Speed switch:**

FTF 123 DC24

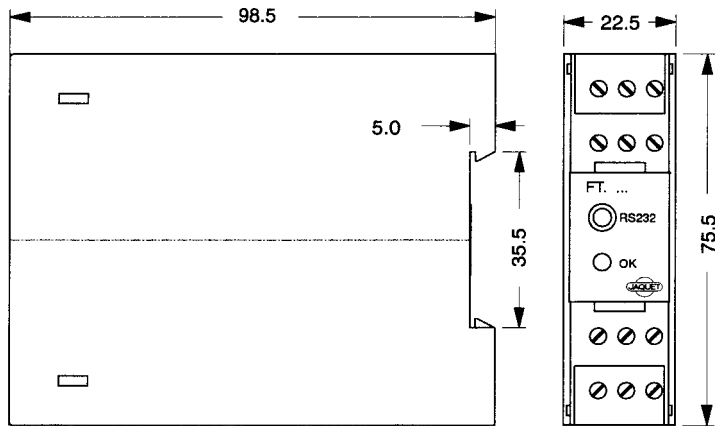
For the full options list, please see the ordering key.



## Technical Data

<b>Measuring range</b>	Lowest: 0...1Hz	Highest: 0...35kHz
<b>Accuracy</b>	0.5% referred to 20mA or full scale value.	
<b>Sensor input</b>	50mV...80Vrms Input impedance 30kOhms	
<b>Sensors</b>	Electromagnetic, Ferrostat/Hall Effect, HF & proximity switches with/without line amplifier. Please see the JAQUET Sensor Catalogue.	
<b>Sensor supply</b>	+12V at max. 25mA. Built-in Pull-up / Pull-down 820 Ohm resistor for connection of two wire HF transmitters, programmable via DIL switch.	
<b>Sensor monitor</b>	FTW 113: Signaled via LED and 0mA current output. FTF 123: Signaled via LED and selectable relay status.	
<b>Output</b>	FTW 113: 0/4...20mA, max. load 500Ohms. Or 0/2....10V DC min. load 7kOhms. Rising or falling characteristic. FTF123: 1 monostable relay, potential free change over contact, max. 250 V; 1 A, 50 W. Normal or inverse mode.	
<b>Hysteresis (FTF 123 only)</b>	Individually programmable High switching and Low reset values 2 parameter sets may be programmed and individually selected.	
<b>Binary Input (FTF 123 only)</b>	For A or B parameter set selection or for relay reset. TTL +5V level with 100kOhm pull up resistor. Active Low= $\leq 1.5V$ (relay control B) High, open = $> 3.5V$ (relay control A)	
<b>Reaction time (FTF 123 only)</b>	Dependent on input frequency, min. 1 period + 10.5 ms	
<b>Measurement time</b>	Programmable between 5ms and 5s.	
<b>Supply voltage</b>	18 ... 33Vdc nominal range (min 16V, max 36Vdc); max 2.5W	
<b>Resolution</b>	12 bit	
<b>Temperature drift:</b>	FTW 113: Typically +/- 150 ppm/K; max +/- 300 ppm/K FTF 123: Typically +/- 50 ppm/K	
<b>Operating temperature</b>	0...60°C	
<b>Storage temperature</b>	-25 ... 70°C, non condensing	
<b>Configuration</b>	Via JAQUET PC interface cable and software; RS232 at 5V level.	
<b>Weight</b>	ca. 150 g	
<b>Housing</b>	Makrolon®	
<b>Protection class:</b>	IP 40 (Housing), 1P20 (Terminals)	
<b>Dimensions:</b>	23 x 75 x 100 mm (W x H x D)	
<b>Mounting:</b>	DIN rail to EN 50 022-35	
<b>Terminals:</b>	Screw terminals for max. 2.5 mm <sup>2</sup> cross section.	

## Dimensions:



Mounting rail to DIN 46277 (EN 50055-35)

## Ordering information

<b>Frequency to current converter</b>	FTW 113 DC24 I
<b>Frequency to voltage converter</b>	FTW 113 DC24 U
<b>Speed switch</b>	FTF 123 DC24
<b>Interface cable &amp; software</b>	PC-FT100
<b>Turbocharger sensor input</b>	Option S10 (decreases input trigger level to 20mV eff.)

Full technical details can be seen in the detailed specification.

The PC-FT 100 includes a 3.5" disk providing full documentation and the FT 100 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



JAQUET TECHNOLOGY GROUP is your speed sensing specialist. We offer high quality, technically advanced speed sensing solutions that boost and protect the high performance and efficiency of our customers' specific applications in wide variety of industries.

### JAQUET Mission Statement

To design, manufacture, market and service both standard and customised products that detect, measure, control and interpret SPEED under any circumstances.

To create a competitive edge to our customers' applications, and secure high quality and reliability standards.

To foster long term OEM and end user customer satisfaction by keeping a finger on the pulse of market trends.

To be dedicated to excellence and continuously developing new innovative solutions

### JAQUET Product Lines

- Speed sensors – standard – custom - intelligent
- Over / under speed protection systems and instruments
- Tachometers / speed measurement and switching instruments
- Application specific, complete speed sensing, measurement & diagnostic systems.

### JAQUET Markets

Our solutions are typically used in

- automotive,
- diesel and gas engines
- energy / power
- turbines & compressors
- hydraulics
- railway
- marine
- industrial machinery markets.

### JAQUET Quality Management

- ISO 9001
- QS 9000

### JAQUET Worldwide

JAQUET is headquartered in Basel, Switzerland and has 5 subsidiaries (Belgium, Germany, Netherlands, United Kingdom, United States) along with a worldwide distributor and end-user service network.