



STACKTACH Single Input Industrial Tachometer

(New)
CE Compliant
Part Number Series T77410

Precisely What You Need! AI-Tek's New STACKTACH

AI-Tek is pleased to introduce a new tachometer to meet today's requirements for compact packaging. Using the same highly reliable and quality design customers have come to depend on, AI-Tek now makes a tachometer available in a .9" thick (22.5mm) DIN rail mount package. Easily programmed through a hand held pendant, the STACKTACH's Analog Output can be set for 0-20 or 4-20 mA range for the precise scale you need. The 6 Amp, 300 Vac, C-form relay can be set for the exact speed and hysteresis required for your application.

Features and Advantages

Designed to meet the latest European standards, the STACKTACH is mounted in a rugged IP40 rated enclosure and has been fully tested to the following standards:

- *EMC - Electromagnetic Compatibility:* complies to CE per EMC Directive 89/336/EEC. Immunity per EN 50082-2, 1995. Emission per EN 50081-2, 1995.
- *Vibration:* Meets IEC 68-2-6, 10 to 150 Hz, 2g.
- *Shock:* Meets IEC 68-2-27, 50g half sine.

Powered by 24 Vdc, AI-Tek can also provide a switching power supply, capable of powering as many as three STACKTACHs. This power supply is UL, CSA and DIN VDE listed and CE compliant.

Applications

- Fast response overspeed shutdown
- PLC control input
- Petrochemical production
- Pump or generator alarm
- Low speed tachometer
- Expanding analog scale speed transmitter
- Start-up, over/under speed switching
- Textile production applications
- RPM measurement
- Paper and pulp production
- Turbine speed control input
- Metal production
- Mining applications
- Frequency measurement
- Test labs
- Generator sets
- Food processing
- Conveyor protection
- Printing industry

It is the customer's responsibility to determine whether the product is proper for customer's use and application.

Ordering P/N	Description	Weight
T77410-10	STACKTACH using 24 Vdc supply, (1) Analog Output, (1) 6 Amp Relay	6 oz.
T77410-P	Programming Pendant	8 oz.
T77410-100/240AC	Switching Power Supply - able to convert 100 Vac thru 240 Vac, 50-60 Hz input to 24 Vdc output.	5 oz.

Specifications

Signal Input

Type: Active or passive pickup determined by software settings (jumper required for active pickups)

AC Input (sine wave):

Input Impedance = 2000 ohms
Sensitivity @ 1KHz = 250 mVrms
Max. Voltage Input = 25 Vrms

Pulse Input (TTL compatible):

Input Impedance = 2000 ohms
Min. Pulse Width = 10 micro sec.
Logic 0 = V in < .5V
Logic 1 = V in > 1.5V
(+ 12 VDC @ 50mA supplied for powered sensors)

Frequency Range: Upper limit 30 kHz. Lower limit software selectable from .0625 Hz to 10 Hz.

Input Power *

24 Vdc (24-30 V), std. 600 ohm analog load. 7 watts max. power.

* A switching power supply, P/N T77410 - 100/240 AC, is available. It converts 100 Vac thru 240 Vac, 50/60 Hz input power to 24 Vdc output.

Output

Relay Output: One SPDT relay, rated 6 amps @ 28 Vdc or 300 Vac, 170 W or 1800 VA. Frequency hysteresis selectable from 0.0% to 99.9%, or

latching with remote reset. Relay logic and type selectable. Time hysteresis selectable 000 to 999 data acquisitions or latching with delay of 000 to 999 data acquisitions.

Analog Output: Selectable from 0 to 20 mA or 4 to 20 mA \pm 5%. True current, 600 ohm maximum loop resistance. Full scale and zero scale selectable from 0 Hz to 30 kHz.

Response: 50 millisecond updates above 100 Hz. See manual for updates between 20 and 100 Hz, one cycle below 20 Hz.

Accuracy: \pm 0.05% for relay setpoints in operations over temperature range, \pm 0.5% of full scale for analog outputs.

Environmental

Temperature: -10°C to 55°C operating. -40°C to 80°C storage.

Vibration: Tested to IEC 68-2-6, 10-150 Hz, 2g.

Shock: Tested to IEC 68-2-27, 50g half sine.

Enclosure: IP 40

Humidity: Tested to IEC 654-1, IEC 68-2-3 90% Humidity.

Constant Storage: Retained in EAROM and may be altered 1,000,000 times.

Electrical References: DC power is referenced to digital common. Analog output is referred to analog output common. Passive inputs are balanced. Active pickup inputs are referenced to circuit common. Form C relay contacts are isolated.

Electromagnetic Compatibility: The STACKTACH shall function to the requirements of the European Council Directive 89/336/EEC, the EMC Directive.

IMMUNITY per EN 50082-2 1995:

EN61000-4-2, 1995: ESD: \pm 8kV Air, \pm 4kV contact discharge.

EN61000-4-3, 1997: Radiated R-F: 10 V/m, 80 to 1000 MHz.

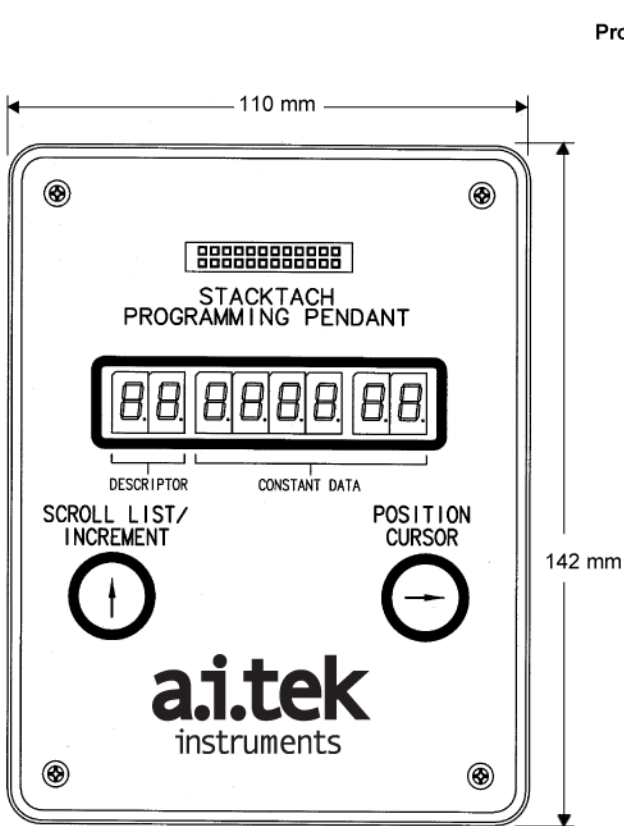
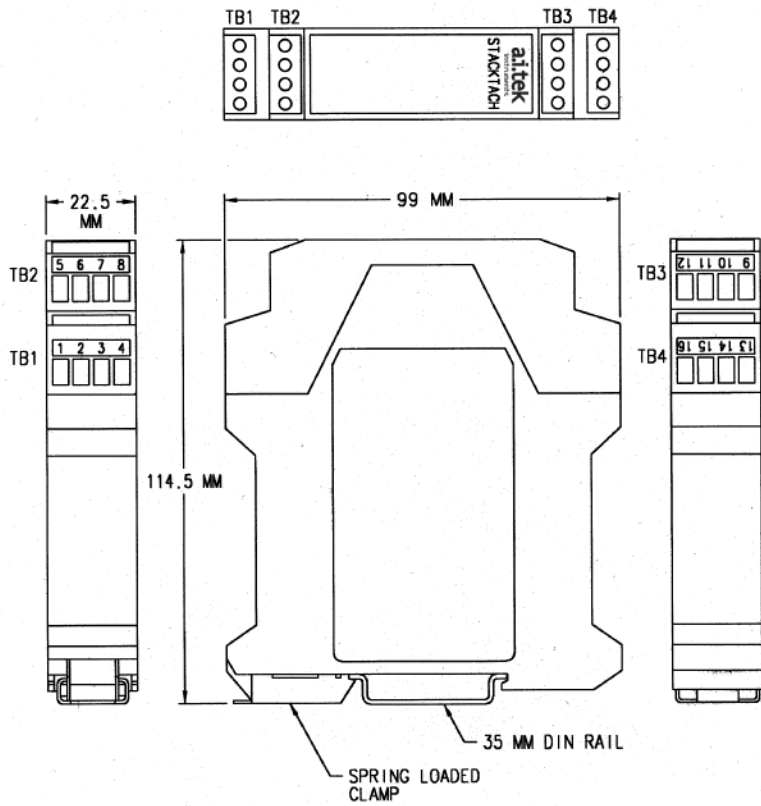
ENV50204, 1995: Radiated pulsed: 10 V/m, 900 MHz.

EN61000-4-4, 1994: EFT/B: 2 kV
ENV50141: Conducted noise: 10V, 150 KHz to 80 MHz.

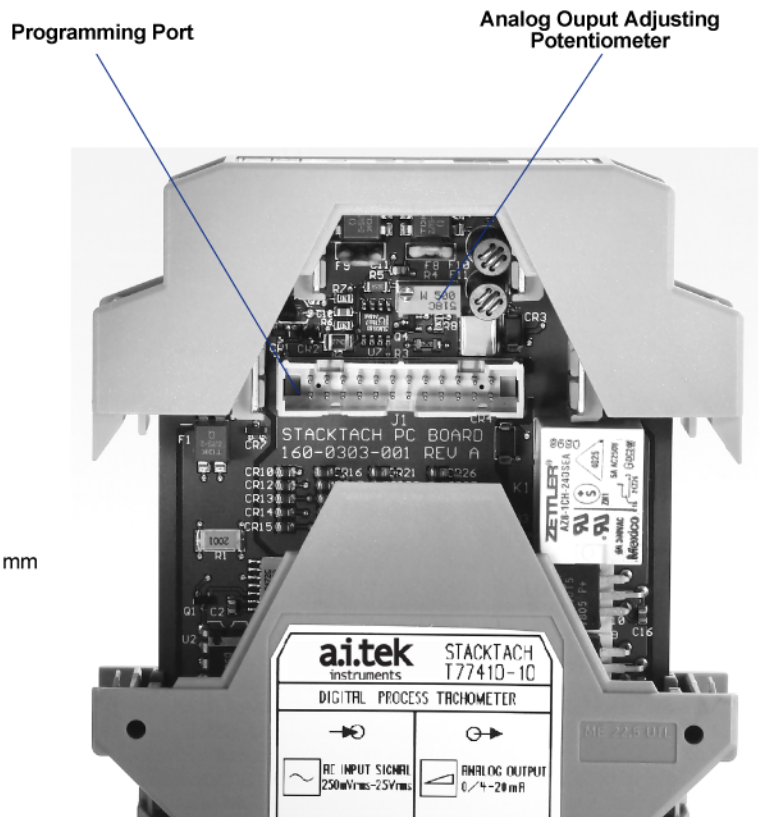
EN61000-4-8, 1994: Power frequency, magnetic field: 1 A/m.

EMISSION per EN50081-2 1995:
EN55011, 1998: Class B radiated emissions.

Terminal Block #	Terminal	Description
TB1	1	Input Signal +
TB1	2	Input Signal -
TB1	3	Shield
TB1	4	+12 Vdc Output (50 mA max.)
TB2	5	0-20/4-20 mA Analog Output (+)
TB2	6	0-20/4-20 mA Analog Output (-)
TB2	7	Verify/Calibrate (when connected to +12 Vdc)
TB2	8	Digital Common
TB3	9	Digital Common
TB3	10	+24 Vdc Input
TB3	11	Relay Reset (when connected to Digital Common)
TB3	12	Earth
TB4	13	K1 Common
TB4	14	No Connection (not used)
TB4	15	K1 Normally Closed
TB4	16	K1 Normally Open



Programming Pendant



Ai-Tek Instruments, Cheshire, CT USA