

# NEW GENERATION TACHOMETER

The new generation **TACHPAK** (TP) and **TACHTROL** (TT) series tachometers have been designed with all of the function and durability embodied in the previous tachometer series as well as improvements to extend performance, accuracy and function. Both **TACHPAK** and **TACHTROL**, now share a common processing platform. This commonality allows both to perform identical tachometry functions, streamlines programming, and minimizes the learning curve. The main physical difference between the two is the characteristic integrated display function found in all **TACHTROL** series tachometers.

## TACHPAK<sup>30</sup> Key Features:

- Wide range of AC or DC power (12-30Vdc, 80-264Vac 50-60Hz)
- Greatly improved instrument accuracy, processing speed and response time
- Frequency, period or counter modes
- User-defined inputs for logic level, averaging, alarm set points and hysteresis
- Signal normalization and math functions allow mathematical manipulation of input signals. Results can be displayed along with user-defined units
- Accepts sinusoidal and square wave inputs as found in variable reluctance and digital output speed sensors
- Accepts bi-directional sensor inputs and will decode quadrature or direction signal logic
- 2 solid state relays (fast response time) and 2 mechanical relays (high power)
- Analog output: 0-20mA, 4-20mA, -20-0-(+) 20mA (can be used with bi-directional sensor)
- Two programming methods: Front panel on display or USB2.0 connectivity to PC/Windows-based GUI (Graphical User Interface)
- Utility RS485 communication allows full GUI function over longer distances (up to 8000 ft)
- Drives up to 8 remote displays (TT plus). A single display can be up to 1000 ft away with a simple RJ11 (phone jack) connection. Longer runs, cable type and number of displays will affect distance
- Security mode protects unauthorized access for programming or alarm resets (through display or GUI)
- Mounts to DIN rail. Power can be applied through special DIN bus when used with AI-TEK power supply (TP only)
- Environmentally hardened for temperature, vibration and shock. EMC/CE compliant to current BS/EN directives
- Designed and manufactured compliant with RoHS

## TACHPAK<sup>10</sup> Key Features:

- Same as TP30 but excludes solid state relays, analog output, and utility RS485

## TACHTROL<sup>10</sup> & <sup>30</sup> Key Features:

- All the same features as TP10 & 30
- Has integrated display and will mount in same panel opening as TACHTROL<sup>3</sup>
- Display capabilities include two independent output channels for speed, count period or equation results, alarm status/security, mode, user defined units for each channel, 128 x 64 LCD graphics display with backlight

## TACHTROL<sup>plus</sup> Key Features:

- An extension of the TACHPAK and TACHTROL lines. While this device has no intrinsic tachometer function, it is used as a remote display for TP10 & 30 and TT10 & 30
- Serves as a gateway with both TT and TP instruments for secure, remote programming and alarm reset
- Used as a hub for multiplexing additional displays

**Programming Features:** Programming has been greatly simplified and can be accomplished by 2 different methods. Many configurable attributes have been added to improve flexibility and function.

- Display front panel: TACHTROL<sup>10</sup> and <sup>30</sup> can be programmed through the integrated display/membrane panel. TACHPAK<sup>10</sup> and <sup>30</sup> can also be programmed in the same manner with the addition of a TACHTROL<sup>plus</sup> remote display. In either case, programming is accomplished by navigating through a series of nested menus. In the case of tachometer instruments embedded in explosion proof or NEMA 4X enclosures, remote access solves the problem of programming by making use of an IR link to allow full front panel control via a hand-held remote
- PC/Windows-based GUI (Graphical User Interface): Custom software allows the user to program all configurable attributes of TACHPAK and TACHTROL by PC via a USB2.0 or RS485 connection. In addition, the PC can be used to display data, perform security functions, diagnostics, analog output calibration and real-time data logging, all available through the GUI.



# TACHOMETERS

Reliable, Predictable, Cost Effective

New Generation Tachometer Cross Reference	
NEW	OLD
<b>TACHPAK 10</b>	<b>TACHPAK 1</b>
T77510-10 80-264Vac, 12-30Vdc, Standard	T77130-11 120 Vac / 24Vdc, Standard
T77510-40 80-264Vac, 12-30Vdc, NEMA 4X	T77130-12 240 Vac / 24Vdc, Standard
T77510-70 80-264Vac, 12-30Vdc, Explosion Proof	T77130-41 120Vac / 24Vdc, NEMA 4X
	T77130-42 240Vac / 24Vdc, NEMA 4X
	T77130-71 120Vac / 24Vdc, Explosion Proof
	T77130-72 240Vac / 24Vdc, Explosion Proof
<b>TACHPAK 30</b>	<b>TACHPAK 3</b>
T77530-10 80-264Vac, 12-30Vdc, Standard	T77430-11 120Vac / 24Vdc, Standard
T77530-40 80-264Vac, 12-30Vdc, NEMA 4X	T77430-12 240Vac / 24Vdc, Standard
T77530-70 80-264Vac, 12-30Vdc, Explosion Proof	T77430-41 120Vac / 24Vdc, NEMA 4X
	T77430-42 240Vac / 24Vdc, NEMA 4X
	T77430-71 120Vac / 24Vdc, Explosion Proof
	T77430-72 240Vac / 24Vdc, Explosion Proof
<b>TACHTROL 30</b>	<b>TACHTROL 3</b>
No Cross Reference Offered	T77310-01 120Vac / 24Vdc, Less Enclosure
T77630-10 80-264Vac, 12-30Vdc, Standard Panel Mount	T77310-02 240Vac / 24Vdc, Less Enclosure
No Cross Reference Offered. Use T77630-40 for closest match.	T77310-11 120Vac / 24Vdc, Standard Panel Mount
T77630-40 80-264Vac, 12-30Vdc, NEMA 4X	T77310-12 240Vac / 24Vdc, Standard Panel Mount
T77630-70 80-264Vac, 12-30Vdc, Explosion Proof	T77310-21 120Vac / 24Vdc, Splash Proof Panel Mount
	T77310-22 240Vac / 24Vdc, Splash Proof Panel Mount
	T77310-41 120Vac / 24Vdc, NEMA 4X
	T77310-42 240Vac / 24Vdc, NEMA 4X
	T77310-71 120Vac / 24Vdc, Explosion Proof
	T77310-72 240Vac / 24Vdc, Explosion Proof
<b>TACHTROL 10</b>	No "OLD" Versions. Refer to TACHTROL 3 for closest match.
T77610-10 80-264Vac, 12-30Vdc, Standard	
T77610-40 80-264Vac, 12-30Vdc, NEMA 4X	
T77610-70 80-264Vac, 12-30Vdc, Explosion Proof	
<b>TACHTROL plus</b>	No "OLD" Versions. Refer to old analog meter.
T77810-10 Standard	
T77810-40 NEMA 4X	
T77810-70 Explosion Proof	

New Generation Tachometer Configuration Chart												
	AC Voltage 80-264 Vac	DC Voltage 12-30Vdc	Utility RS485	USB / TACHLINK Compatible	Analog Output	Mechanical Relays (2)	Solid State Relays (2)	Infrared Remote Compatible**	Panel Mount	DIN Rail Mount	NEMA 4X	Explosion Proof / ATEX
<b>TACHPAK 10</b>												
T77510-10	X	X		X		X				X		
T77510-40	X	X		X		X					X	
T77510-70	X	X		X		X						X
<b>TACHPAK 30</b>												
T77530-10	X	X	X	X	X	X	X			X		
T77530-40	X	X	X	X	X	X	X				X	
T77530-70	X	X	X	X	X	X	X					X
<b>TACHTROL 10</b>												
T77610-10	X	X		X		X		X	X			
T77610-40	X	X		X		X		X			X	
T77610-70	X	X		X		X		X				X
<b>TACHTROL 30</b>												
T77630-10	X	X	X	X	X	X	X	X	X			
T77630-40	X	X	X	X	X	X	X	X			X	
T77630-70	X	X	X	X	X	X	X	X				X
<b>TACHTROL plus</b>	TACHTROL plus is a remote display only. It is used to provide display and programming functions. Up to 8 displays can be connected to a single tachometer. ***											
T77810-10									X	X		
T77810-40									X		X	
T77810-70									X			X

\*\* Infrared remote included with TACHTROL -40 and -70 units only.  
 \*\*\* Seven TACHTROL plus displays for TACHTROL 10 & 30 / Eight TACHTROL plus displays for TACHPAK 10 & 30



**AI-TEK Tachometers**  
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