Tiger 320 Series
Programmable Meter Controllers

CE

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LISTED
E469078

▸ **Easier to Program than a PLC**
▸ **Faster than a Process Controller**
▸ **Smarter than Modular or Remote I/O**
▸ **Better reliability than Micro PCs or SBCs**
▸ **Outperforms most Recorders and Data Loggers**
▸ **Eliminates external Counters, Timers and Tachometers**
▸ **Greater Integration than Racks of Transmitters**
▸ **Plug and Play - over 140 signal conditioners**
▸ **More Communication Options than Dedicated Field Bus Devices**
▸ **faster implementation for a much lower cost**

Compact
Versatile
Custom
Automation

DI-802XAE/T

DI-60XE/T

DI-60AE/T

DI-60E/T

DI-60AT5C

DI-B101D50E/T

DI-503E/T

DI-50E/TAN6

DI-50E/TB51

GI-50E/TB101

The Tiger 320 Series of Programmable Meter Controllers incorporates, in one instrument, all the different functions required by today's automation and process control applications.

1 Tiger 320 Operating System

A virtual toolbox of selectable and programmable application software functions are embedded in the Tiger 320 Operating System. They integrate seamlessly with a truly vast array of modular input and output hardware options.

Embedded Application Software Includes:

- Multi-channel Inputs In Many Combinations
- Full Floating-point Maths
- Cross Channel Math (A+B, A-B, AxB, A/B)
- Square Root, Inverse and Log of Input
- 4 x 32 Point Or 1 x 125 Point Linearization Table
- Smart Auto Zero with Programmable Capture Band, Rate of Change and Aperture Window for Weighing Applications
- Set Tare, Reset Tare for Batching
- Smart Quick Response Averaging
- Smart Timer and Time Integration Functions
- Time and Event-based Sequencing
- Polynomial Calculations
- Remote Reset of Any Function
- Dual Totalizers
- Dual PID

## 4 Powerful Custom Macro Programming

Texmate's BASIC to Tiger 320 Macro-language Compiler can quickly Convert your special metering, control and automation ideas into reality.

This powerful easy to use development system enables programs to be written in BASIC utilizing any combination of the hundreds of functions and thousands of registers embedded in the Tiger 320 Operating System. When your BASIC program is compiled into the Tiger 320 Macro-language it is error checked and optimized. There are also numerous off-the-shelf application specific programs available. Many only need the blanks to be filled in to use them and this does not require any knowledge of BASIC.

5 Programmable Front Panel Controls

Programmable Front Panel Controls

The front panel buttons can be used to control or program any standard functions.
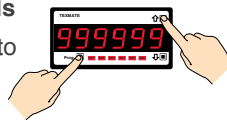
They can also be programmed to only access and display specifically designated functions, such as Tare, Auto-Cal or Print on Demand.

2 Data Logging and Flash Card Memory Options

The Tiger 320 Operating System has built-in, sophisticated data logging software. Data logging can be triggered from the PROGRAM button, digital inputs, time or alarm functions.

Tiger PMCs can be configured to log in an endless loop, overwriting the oldest data first and utilizing the maximum amount of memory available. Similar to the Black Box on an aircraft, the data can be downloaded for analysis after a problem event occurs.

Data logging can be combined with an Ethernet converter to provide an individual Web Page with data that can be accessed by a browser over the internet.

Flash Cards are available from 4 to 128 meg. They can be removed and read by a standard card reader, or the data can be downloaded through the serial port or over the internet with an Ethernet converter. The module also has an SSR setpoint output to trigger an external event.

3 Real-time Clock

15 year lithium battery for printing and data logging and activating a setpoint or control action at fixed times of the hour, day, week, month or year.
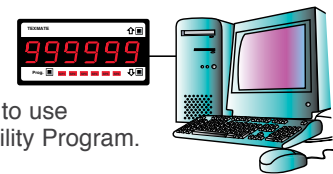
Scrolling annunciator messages can be programmed to appear with any setpoint activation, selected events or logic inputs.

6 Configuration & Programming from a PC

PC Programming

Program the meter from a PC with Texmate's easy to use Tiger 320 Configuration Utility Program.

7 A Wide Selection of Display Formats & 8 Case Sizes to Suit any Application
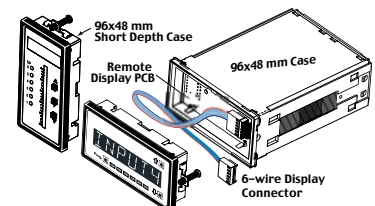
36x144mm 9/64 DIN

144x72mm 9/32 DIN

48x96mm1/8 DIN

96x48mm1/8 DIN

648x144mm 4"LED Remote Display 5 or 6 digit Driven by RS485 from any Tiger 320

96x48 mm Short Depth Case

Remote Display PCB

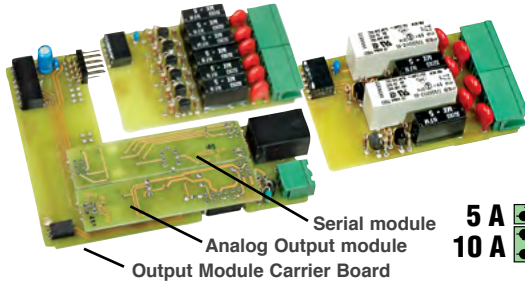96x48 mm Case

6–wire Display Connector

8   22 Opto-Isolated I/Os on Plug-in Module & 6 Onboard Programmable I/O Logic Ports

- 6 Inputs & 6 Outputs or 6 Inputs & 16 Outputs
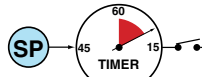- Fully Programmable

Rear Pins   Module

CodE_9
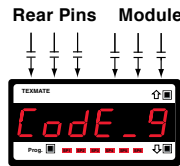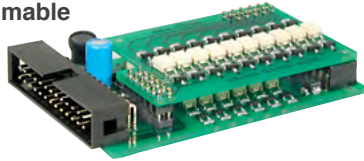
Three logic level inputs are provided on the module input header and three rear input pins are provided that can be programmed to STOP/START/RESET almost any function including: set tare, reset tare, relays, totalizers, print output, data logging, peak, valley, or any register from an external contact closure.
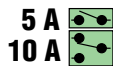
9   6 Super Smart Setpoints - 8 Selectable Functions - 7 Programmable Timer Modes

7 Multi Function Interval Timers on all 6 setpoints

Normal .... Adjustable Delay On Make / Adjustable Delay On Break
1-Shot ON .... Adjustable Delay On Make / Adjustable Min ON-Time
1-Shot OFF .... Adjustable Delay On Break / Adjustable Min OFF-Time
Pulse ON .... Adjustable Delay On Make / Adjustable Max ON-Time
Pulse OFF .... Adjustable Delay On Break / Adjustable Max OFF-Time
Repeat ON .... Adjustable ON-Time / Adjustable OFF-Time
Repeat OFF .... Adjustable OFF-Time / Adjustable ON-Time

SP TIMER — 60 45 15 30

Single & Multiple Activation Timers

Serial module
Analog Output module
Output Module Carrier Board

5 A
10 A

5 Amp and 10 Amp Relays or optional SSR Outputs can be energized above or below setpoints.

SP Deviation   **SP** Hysteresis   **SP** Dual PID

SP Can RESET → (Any Register)

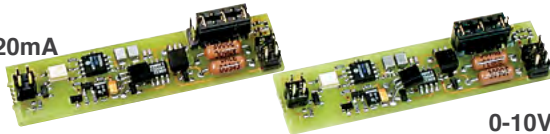**SP-B**   SETPOINT TRACKING   **SP-A**

10   Scrolling Annunciator

Scrolling Annunciator up to 99 Characters long is available on all 6 setpoints for Alphanumeric Displays with Fill-in-the- blanks Macro.

Above **SP** → Latched OFF Reset
Or Below **SP** → Reset Latched ON

Activation   **Relay Latching**

*99 CHARACTER SCROLLING DISPLAY ON ALL SETPOINTS

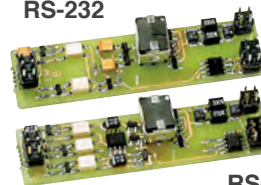## 12   16-bit Isolated Analog Outputs

4-20mA

0-10V

Single and Dual
Programmable 0/4 to 20 mA or 0 to 10 V for retransmission, 4-20 mA loops, drive valve actuators, remote controllers & displays, multi-loop feedback and PID output.

11   Serial Communications and Printer Output

RS-232

RS-485

Selectable Communication Modes include:

- **ASCII** • **Modbus**
- **Ethernet (TCP/IP)**
- **DeviceNet** (provided on special DeviceNet output module carrier board)

Interface directly with PCs (using Window's terminal program), PLCs, or any Epson compatible serial printer.
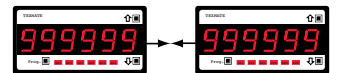
Serial Printer Output
Smart printer driver makes simple serial printers look intelligent.

999999
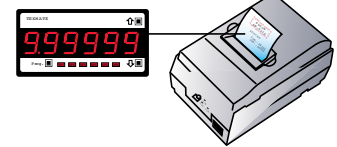
Meter to Meter Communication
Direct meter to meter communication enables two meters to share data and resources.

999999 ← → 999999

13   Auto-sensing AC/DC Power Supply

- High Efficiency CE tested Auto Sensing AC/DC power supplies
- Standard 85-265 Volt AC / 95-370 Volt DC
- Low Voltage 15-48 Volt AC / 10-72 Volt DC
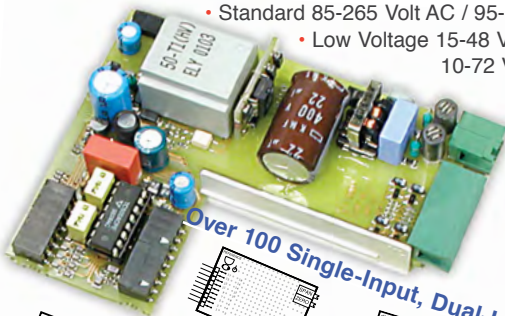
14   Over 100 Different Input Signal Conditioning Modules

- Choose from over 100 different single, dual, triple and quad input signal conditioners.
- Mixed function and smart modules with their own A/D's, co-processors, SSR's and I^2C Bus outputs are available to suit almost any application.
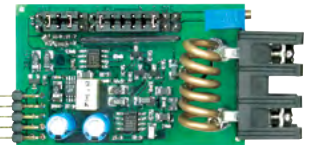
AC-Amps True RMS 0-5Amp AC

Over 100 Single-Input, Dual-Input, Triple Input and Quad-Input signal conditioners work with the Tiger 320

Prototype Board for Custom Design

Dual UP/DOWN Counter

16 Bit, 960 conversions per sec w/dual High Speed SSRs

pH with Automatic Temperature Compensation

Single Phase AC Power Watts, Amps, Volts, Hz WattHr, Var, AmpHr, Power Factor

Triple Input T/C, T/C and 4 to 20mA

Triple Input two 4 to 20mA's and Thermocouple, J/K/R/S/T/B or N

Dual Resistance Input, 0.2/2/20KΩ

Dual Pressure Input, 4 wire 2mV/V, 20mV/V

Quad RTD Platinum 100Ω RTD 4 wire connection

Quad 4 to 20 mA

24 Bit Smart Strain Gage, 1,000,000 count res.

Super-Intelligent Tiger 320 Programmable Meter Controllers
Enable All Types of Sensors to Accurately Outperform Themselves

Infrared Emissivity Compensation and Linearization

Conductance and pH with Chemical and Biological Linearization and Compensation

LVDT, LDT & MDT Position & Displacement Measurement with Linearization and Temperature Compensation

Flow Calculation and Compensation BTU, Viscosity, and Mass

Torsion Load Measurement with Linearization

Strain and Weight with Linearization, Autotare, and Smart AutoZero Maintenance

LOAD CELL Temperature and Non-Linearity Compensation

CT or Shunt Linearization and Temperature Compensation with patented True RMS Conversion for Precision AC or DC Watts

Pressure Transducer Compensation and Linearization for Complex Volume Measurement

Semiconductor Near-Vacuum Precision Sensor Compensation

Ultrasonic Sensor Compensation

Hygrometer 3D Linearization for Precision Dew Point

Quadrature Inputs from Encoders for Up/Down and Position

Mass Air Flow and Velocity

Environmental Emission Gas Sensor Linearization

Measure, count, time, digitize, linearize, compensate, calculate, compare, accumulate, integrate, annunciate, display, control, record, report and automate any process, in any industry, from any sensor, with the fantastic Texmate Tiger 320 Series of Programmable
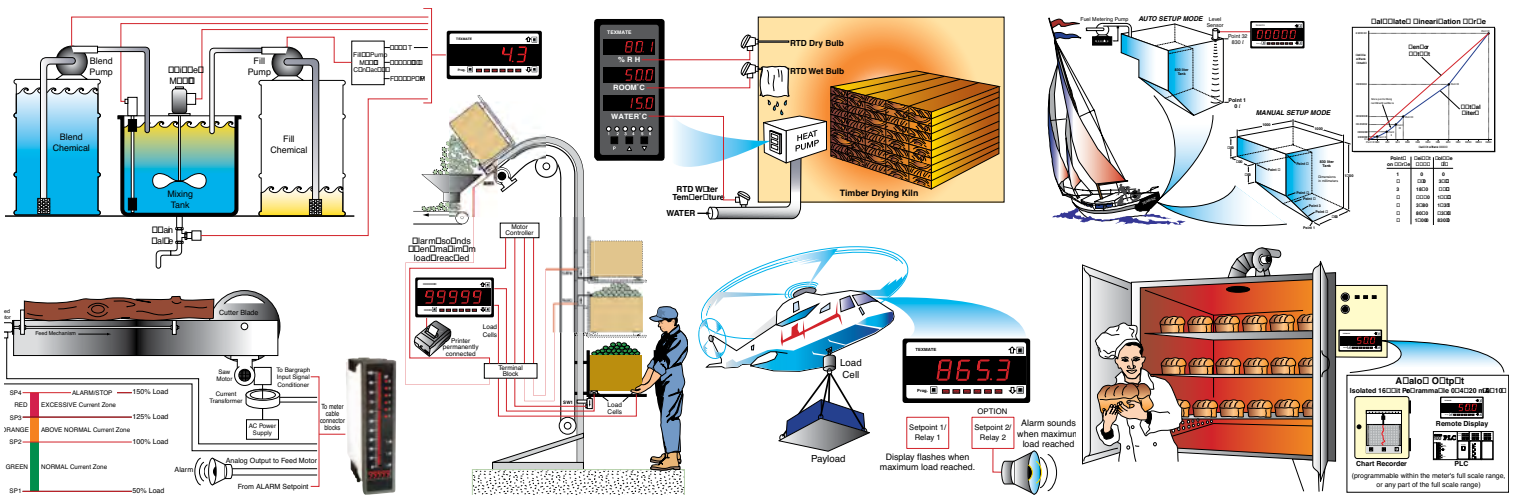
Local Distributor Address

TEXMATE — Smart Process Measurement & Control

450 State Place, Escondido, CA 92029

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- 24 Hours Fax: .... (760) 598-9828 • Email: orderss@texmate.com
- Pricing and detailed data sheets are available online at www.texmate.com