LYNX FAMILY

CE

BX-B31

Lynx Bargraph Meter
31 LED Segments
in a 1/16 DIN Case

A versatile, modular bargraph with optional single or dual setpoints.

General Features

- 31 segment AC/DC powered modular compact bargraph.
- 1/16 DIN (96 x 24mm) case easily mounts in thin or thick panels (up to 2").
- Red (std), green (optional) or amber (optional) colors.
- Vertical or horizontal formats.
- External transmitters or signal conditioners can be eliminated by directly connecting the sensor to more than 33 **I-Series** Plug-in Input Signal Conditioning Modules that include:

  – AC Current
  – AC Voltage
  – DC Current
  – DC Voltage
  – Load Cell
  – Pressure
  – Process
  – Prototype
  – Resistance
  – Strain-gage
  –Temperature
  – 4 to 20 mA

- Pre-calibrated **I-Series** Input Signal Conditioning modules, that have span or zero potentiometers, can be interchanged between any **I-Series** compatible meter, without recalibration, because all of the analog scaling and reference circuitry is self-contained within the module.
- 24 V DC excitation is available to power external transmitters and 5 or 10 V DC excitation is available for strain-gages, load cells and resistance bridge type sensors.
- High voltage power supply (PS1) 85 - 265VAC / 95 - 370VDC Low voltage power supply (PS2) 15 - 48VAC / 10 - 72VDC
- Optional single or dual setpoints with easy adjustment from the front.
- Dual 5A Form "A" relays or one 5A Form "A" and one 10A Form "C" relays.
- Easy configuration of relays as high or low setpoints.
- Proportional brightness mode for increased effective optical resolution.

Input Module Compatibility

☑ **LYNX FAMILY**: More than 33 different Plug-in **I-Series** Input Signal Conditioners are approved for Texmate's Lynx Family of meters. As shown on pages 4 to 5.

LYNX

See www.texmate.com for an up to date listing.

Specifications

Input Specs: .....Depends on input signal conditioner

A/D Converter: .....31 step flash converter

Accuracy: .....±(0.05% of reading + 3 counts)

Temp. Coeff.: .....100 ppm/°C (Typical)

Warm up time: .....2 minutes

Display:.....Thirty-one 0.2" x 0.06" (5.08 x 1.52mm) LED segments. Red display (std), green (opt) or amber (opt)

Positive Overrange:..All segments flash.

Negative Overrange:..Zero segment flashes

Power Supply: .....AC/DC Auto sensing wide range supply

PS1 (std) .....**85-265 VAC / 95-370 VDC @ 2.5W**

PS2 .....15-48 VAC / 10-72 VDC @ 2.5W

Operating Temp.: .....0 to 60° C

Storage Temp: .....-20° C to +70° C

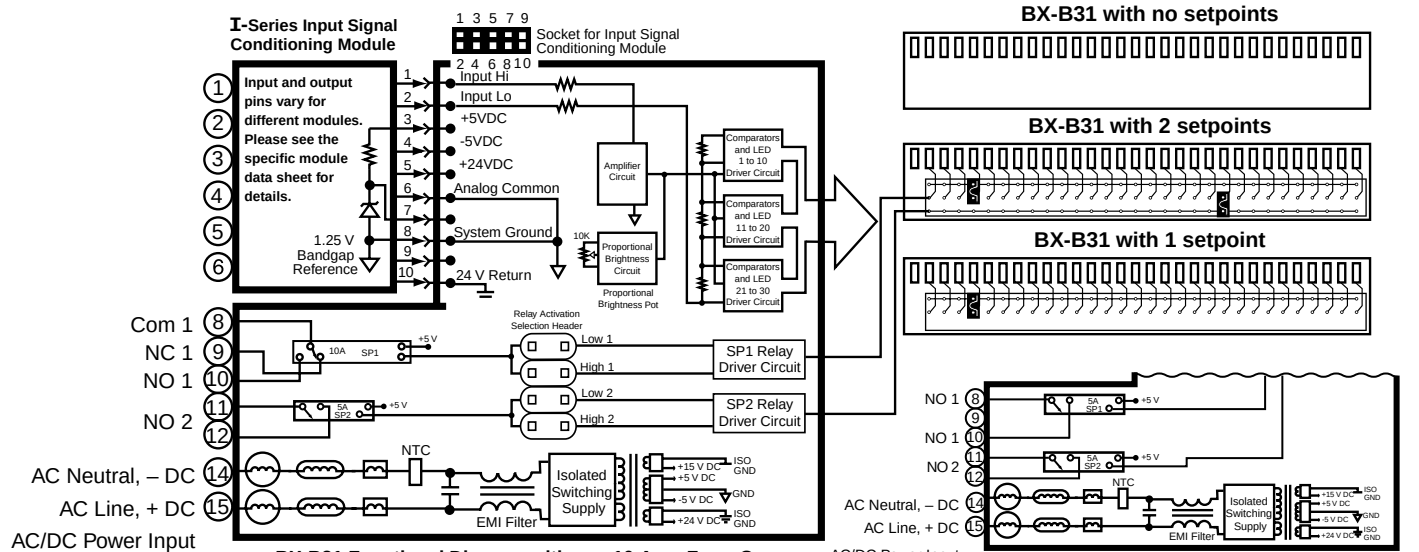
Relative Humidity: ....95% (non condensing)

Case Dimensions: ....1/16 DIN, Bezel: 96x24mm(3.78"x0.95") Depth behind bezel 122.2 mm (4.83") Plus 12.7mm (0.5") for Right-angled connector.

Weight: .....198 gms (7 oz) 255 gms (9 oz) when packed

Index

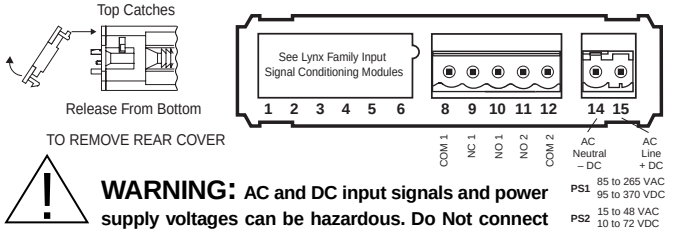
Functional Diagram



BX-B31 Functional Diagram with one 10 Amp Form C and one 5 Amp Form A Relay

Connector Pinouts

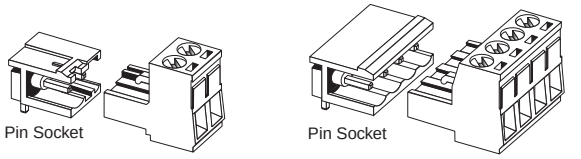
This meter comes standard with screw terminal plug connections.



WARNING: AC and DC input signals and power supply voltages can be hazardous. Do Not connect live wires to screw terminal plugs, and do not insert, remove or handle screw terminal plugs with live wires connected.

Connectors

This meter uses plug-in type screw terminal connectors for all input and output connections. The power supply connections (pins 14 and 15) have a unique plug and socket outline to prevent cross connection. The main board uses standard right-angled connectors.



Pin Descriptions

Pins 1 to 6 - Input Module: See the individual pin out of the input signal conditioning module selected. Usually Pin 1 is the Signal Input High pin and Pin 3 is the Signal Input Low pin. All calibration and scaling functions are performed on the individual input signal conditioner module. See pages 6 and 7.

Pin 8 - Common of 10 Amp Form C or 5 Amp Form A SP1 Relay.

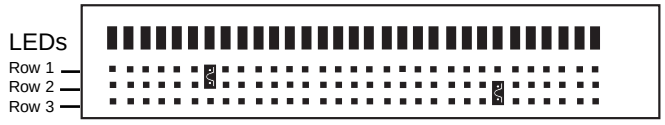
Pin 9 - Normally Closed Contact of 10 Amp Form C SP1 Relay.

Pin 10 - Normally Open Contact of 10 Amp Form C or 5 Amp Form A SP1 Relay.

Pin 11 & Pin 12- Normally Open Contacts of 5 Amp Form A SP2 Relay.

Pin 14 & Pin 15 - AC/DC Power Input: These pins are the power pins of the meter and they only accept a special polarized screw terminal plug that can not be inserted into any other input socket. The standard meter has a auto sensing AC/DC power supply that operates from 85-265 VAC/95-370 VDC (PS1 Std). An optional isolated low voltage power supply that operates from 15-48 VAC/10-72 VDC (PS2) is also available.

Changing the Setpoints From the Front of the Meter

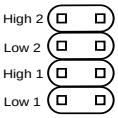


FRONT OF METER WITH BEZEL AND FILTER REMOVED

To adjust the setpoint on the BX-B31 with relays, remove the front bezel and faceplates. Use needlenose pliers to remove and reposition the setpoint jumper clips.

For Setpoint #1: Insert the jumper clip between Row #1 and Row #2, directly below the LED that you wish to activate.

For Setpoint #2: Insert the jumper clip between Row #2 and Row #3, directly below the LED that you wish to activate.



Relay Activation Select Header

Select High to energize the relay when the setpoint is exceeded. Select Low to energize the relay when the display is below the setpoint.

Proportional Brightness Band Potentiometer

The Proportional Brightness Potentiometer superimposes a proportional brightness band to the leading edge of the bargraph which creates the optical appearance of a pointed arrow. This feature produces a display of infinite resolution. The position of the signal in relation to any two adjacent segments and the scale on the faceplate can be accurately ascertained to within 1%. When the amplitude of the proportional band is adjusted counterclockwise to zero, the smooth proportional advance of the display will be replaced by a step by step movement as each bar is either turned full on or full off.

Custom Face Plates

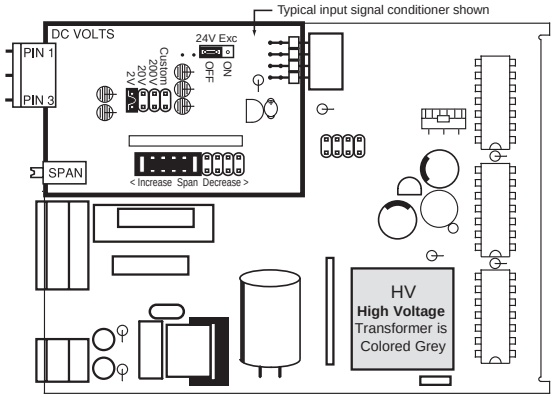
Texmate Produces Thousands of Custom OEM Face Plates

Have Texmate Design and Build a Custom Face Plate to Suit your Next project!

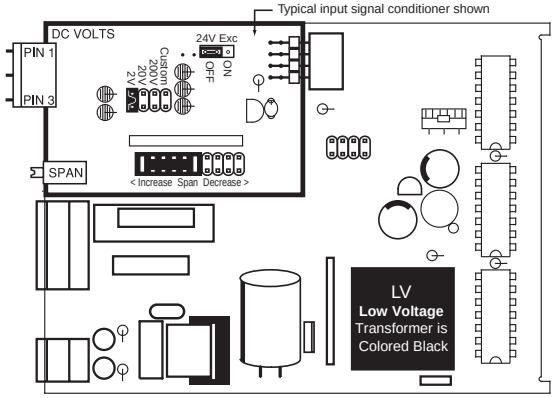
- Custom face plates have a non-recurring artwork charge. A serial number is then assigned to each artwork, to facilitate re-ordering.
- Small Run or One-Off custom face plates incur an installation charge, and are generally printed on a special plastic film, which is then laminated to custom faceplate blanks as required.
- Large Run (250 pieces min): custom face plates are production silk screened, issued a part number, and held in stock for free installation as required by customer orders.
- OEMs may also order Custom Meter Labels, Box Labels Custom Data Sheets and Instruction Manuals.

Component Layout

BX-B31-XX-PS1 (High Voltage)



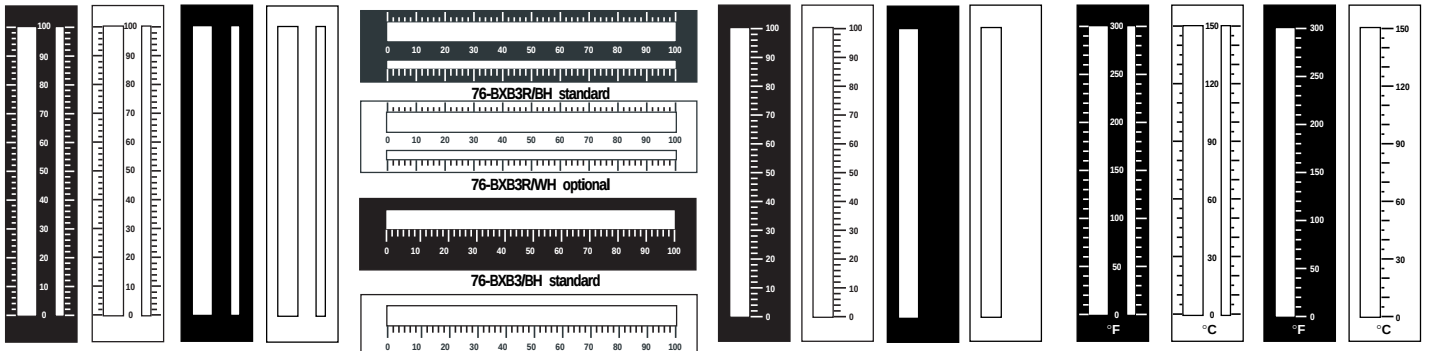
BX-B31-XX-PS2 (Low Voltage)



Standard Face Plates and Scales

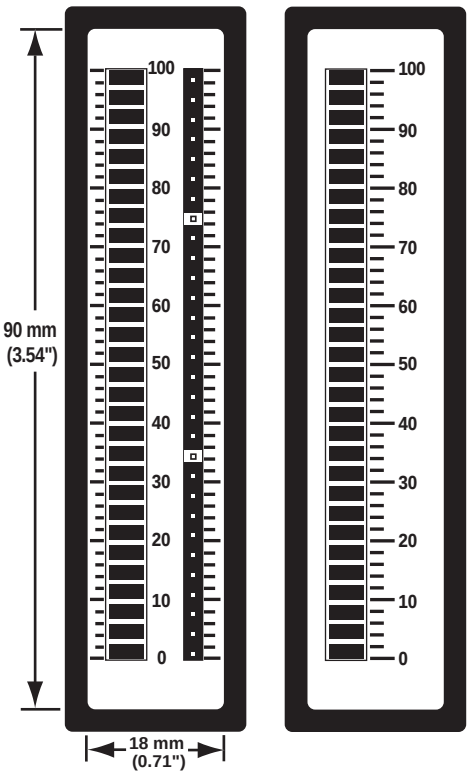
- Unless otherwise specified, a standard 0-100 scaled face plate with white letters on a black background is provided with each meter. In those cases where a temperature modules is ordered, a 0-300 °F (white on black) face plate will be provided as standard.
- Alternatively a face plate with black letters on a white background or a blank, white or black face plate, may be ordered as a no charge substitute. For temperature applications there are also several different optional face plates that may be ordered as a no charge substitute. (See below). Customized face plates with special scaling can also be ordered.

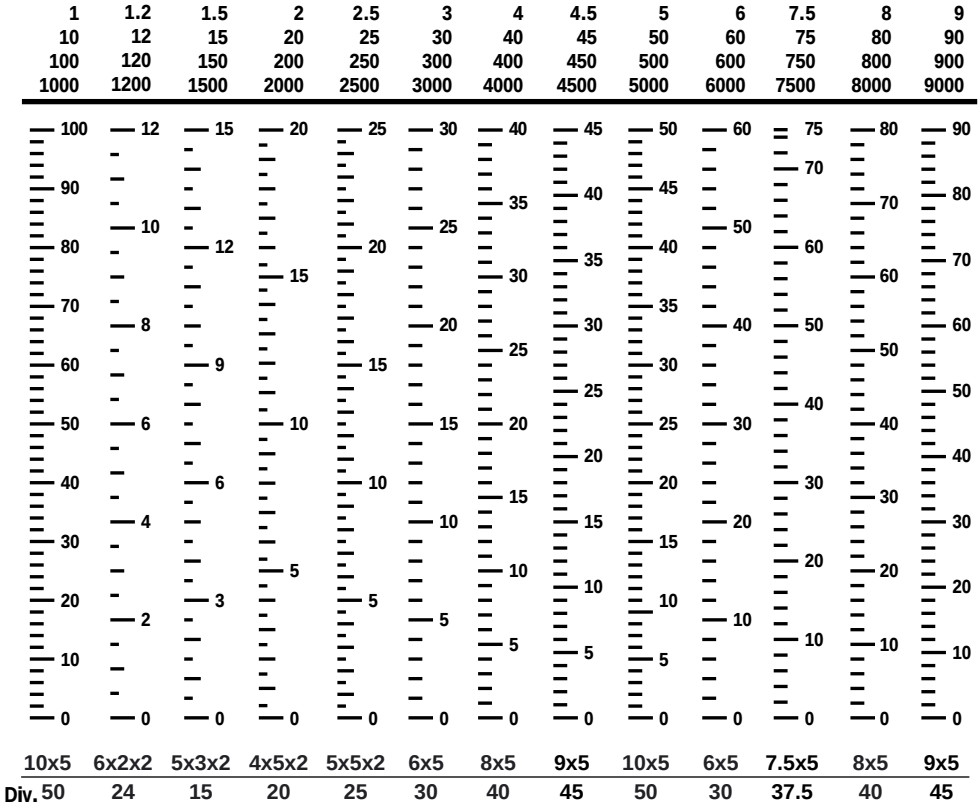
Optional no charge substitute faceplates for Temperature may be ordered scaled 0 to 300°F or 0 to 150°C, Vertical or Horizontal in Black or White background



76-BXB3R/BV standard | 76-BXB3R/WV optional | 76-BXB3R/BX optional | 76-BXB3R/WX optional | 76-BXB3/BV standard | 76-BXB3/WV optional | 76-BXB3/BX optional | 76-BXB3/WX optional | 76-BXB3R/BV2 standard | 76-BXB3R/WV1 optional | 76-BXB3/BV2 standard | 76-BXB3/WV1 optional

Face plate scales and numbers are shown close to actual size





See next page for clear self-adhesive caption sheets, each meter is shipped with standard or optional faceplates.

Standard Caption Sheets *(white or black lettering for do-it-yourself customizing)*

Clear self-adhesive caption sheets with white or black lettering are provided for each meter shipped with a standard or optional faceplate.

AHEAD	AC Vars	AC Amperes	AC Kilowatts	AIR PRESSURE	AC Milliamperes
ALARM	AC Volts	AC Kilovars	AC Millivolts	AC Kiloamperes	Battery Voltage
BOILER	AC Watts	AC Kilovolts	BPH X 1000	AC Megavars	Backup Voltage
Cycles	BEARING	AIR FLOW	CFH x 1000	AC Megawatts	Displacement
Depth	COOLANT	BBLS/HOUR	DC Amperes	AC Watts/Vars	DC Amps to Ground
HEATER	DC Volts	BFM AMPS	DC Kilovolts	CENTIMETERS	DC Microamperes
Height	DC Watts	BHP x 100	DC Kilowatts	DC Kiloamperes	DC Milliamperes
Hertz	Degrees	BLOWER	DC Millivolts	FD FAN AMPS	GALLONS / MINUTE
Hours	ENGINE	DC Current	FPM X 100	IN. H_2O PRESS	GENERATOR AMPS
INCHES	EXHAUST	Dew Point	FPM X 1000	LBS/MINUTE	LBS PER GALLON
Input	Humidity	Degrees C	GPM X 1000	LEVEL INCHES	LOAD LIMIT PERCENT
PORT	METERS	Degrees F	HORSEPOWER	LEVEL GALLONS	MANIFOLD PRESSURE
PUMP	Output	Degrees K	INCHES WC	LEVEL PERCENT	MILL LOAD AMPS
Preset	Percent	Degrees R	INCHES H_2O	MILLIMETERS	MOTOR LOAD AMPS
Reset	Program	FPM X 10	KILOWATTS	Percent Current	Percent Horsepower
SHAFT	Pounds	Frequency	LBS X 1000	Percent Load	OXYGEN PERCENT
SPEED	Pulses	FUEL FLOW	MEGAWATTS	PERCENT OPEN	TEMPERATURE °C
Setup	RUDDER	GALLONS	Power Factor	RATE of TURN	TEMPERATURE °F
TABLE	SPINDLE	IN. WATER	Phase Angle	STEAM TEMP °F	Motor Load Percent
Total	SQ ROOT	LEVEL FT.	RPM X 100	TONS / HOUR	LEFT RIGHT
VALVE	Set Point	LBS X 100	STARBOARD	OIL PRESSURE	FRONT REAR
Valley	THRUST	POSITION	TANK LEVEL	WATER LEVEL	FORWARD REVERSE
WATTS	TURBINE	TONS X 10	VAC MM HG	1000 LBS/HOUR	TOP BOTTOM (L450)

A	AC	E_b	Btu	bars	CFH	BHP	Low	inch/	CosØ	AMPS	BBL/HR	
J	Ah	kJ	bar	cal_{15}	CFM	IPS	High	Kcal	FEET	GALS	BBL/MIN	
K	cd	kV	cal	cm^{-1}	CFS	IPH	MGD	kg/hr	Hold	INHg	DEG/MIN	
l	dB	kW	cm	cm^2	COS	Kg/h	MId	kVAR	Km^3/h	m/min	FT H_2O	
m	DC	ml	FT^3	cm^3	CPH	KPH	MPH	kW/s	MWH	m/sec	In.H_2O	
V	FT	NL	lbs	dm^3	CPM	KPM	MPS	RPM	mWs	Nm^3/h	Kg/cm^2	
α	HP	Pa	IN^2	H_2O	CPS	KPS	N/m^2	MPM	mbar	Ohms	KNOTS	
β	Hz	PF	kg/	kPa	DCA	kWH	ORP	M^3/hr	ml/m^3	PSIA	kg/sec	
ϕ	Kg	pH	mA	l/s	FPH	lb/ft	PPH	Upm	mm/s	PSID	Mvars	
Ω	kA	sin	mS	l/h	FPM	lb/in	PPM	VAC	Peak	PSIG	mmH_2O	
Δ	L^3	t/h	mV	l/m	FPS	LPH	PPS	Vars	PORT	PSIR	mmHg	
μ	m^3	yd^3	Nm	lb/h	GAL	LPM	RPH	VDC	STRB	SCFM	VOLTS	
ϑ	W	μA	oz	MW	GMP	LPS	RPS	w/m^2	TARE	TORR	%LOAD	
γ	°C	μS	RH	min	GPH	m^3/h	phi	YPM	TONS	U/min	%OPEN	
%	°F	μV	1/h	mm	GPM	m^3/m	psi	YPS	X100	x10kN	→	
∠	°K	μΩ	μm	Sm^3	GPS	m^3/S	X10	μPa	%KW	X1000	←	

I-Series Input Signal Conditioning Modules

Many additional input modules are available and others are constantly being developed. Check with your local distributor or www.texmate.com for updated information.

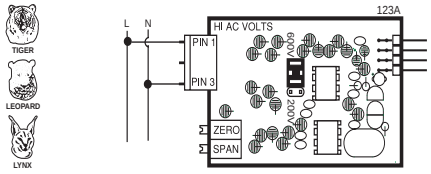
Precalibrated **I-Series** input modules, that have span or zero potentiometers, can be interchanged between any **I-Series** compatible meter, without recalibration, because all of the analog scaling and reference circuitry is self-contained within the module. Where appropriate, all the standard ranges shown are designed to be header selectable by the user, and Texmate's unique SPAN ADJUST Header facilitates scaling to almost any required engineering unit. See Input Module Component Glossary and Calibration on pages 6 and 8.

Unless otherwise specified Texmate will ship all modules precalibrated with factory preselected ranges and/or scalings as shown in **BOLD** type. Other precalibrated standard ranges or custom ranges may be ordered. Factory installed custom scaling and other custom options are also available (see Ordering Information, Special Options on last page).

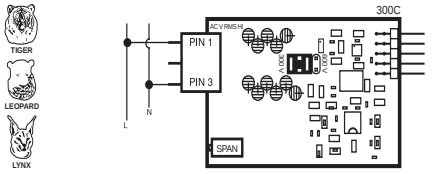
Symbols Indicate Module Compatibility Within Meter Families

TIGER Family	TIGER Family	TIGER Family
LEOPARD Family	LEOPARD Family	LEOPARD Family
LYNX Family	LYNX Family	LYNX Family
ALL MODELS	**SOME MODELS**	**MODEL SPECIFIC**

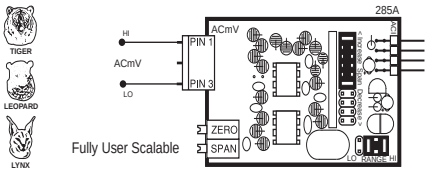
IA01: AC Volts Scaled RMS, 200/**600V** AC



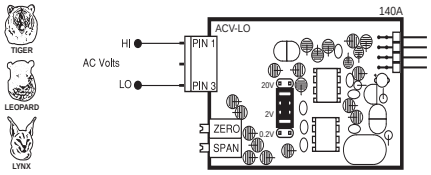
IA06: AC Volts True RMS, **300**/600V AC



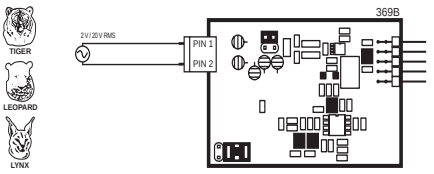
IA10 AC Millivolts, Scaled RMS, **100mV AC**



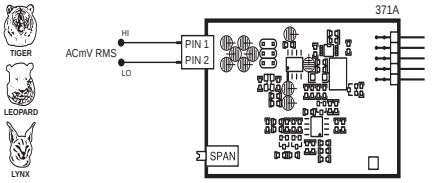
IA02: AC Volts Scaled RMS, 200mV/**2V**/20V AC



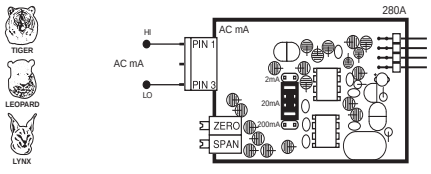
IA07: AC Volts True RMS, 200mV/**2V**/20V AC



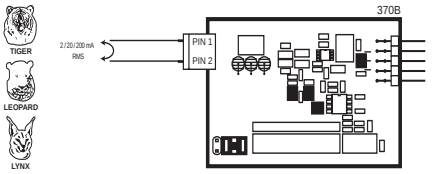
IA12: AC Millivolt RMS Sigma Delta



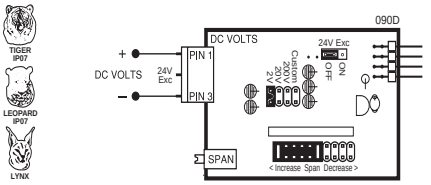
IA03: AC Milliamps Scaled RMS, 2/**20**/200mA AC



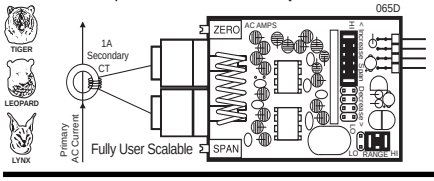
IA08: AC Milliamps True RMS, 2/**20**/200mA AC



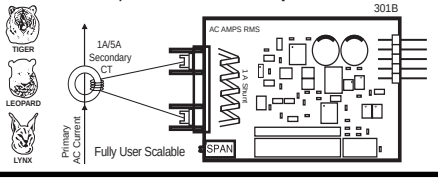
ID01: DC Volts, **2**/20/200V/Custom w/24V DC Exc



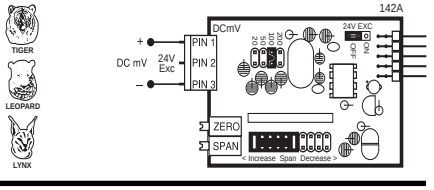
IA04: AC Amps Scaled RMS, **1 Amp AC**
IA05: AC Amps Scaled RMS, **5 Amp AC**



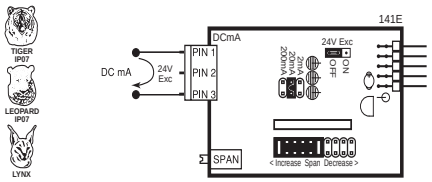
IA09: AC Amps True RMS, **1 Amp AC**
IA11: AC Amps True RMS, **5 Amp AC**



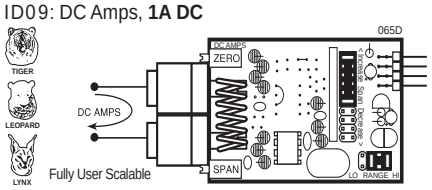
ID02: DC Millivolts, 20/50/**100**/200mV DC w/24V DC Exc



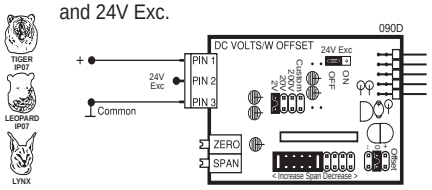
ID03: DC Milliamps, 2/**20**/200mA DC w/24V DC Exc



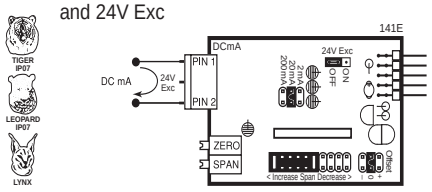
ID04: DC Amps, **5A DC**
ID09: DC Amps, **1A DC**



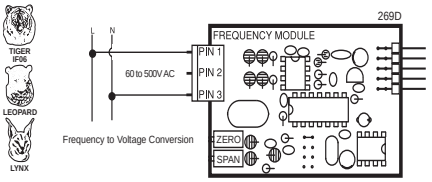
ID05: DC Volts **2**/20/200/Custom V DC with Offset and 24V Exc.



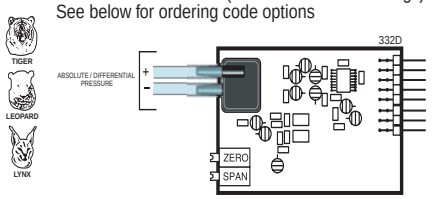
ID07: DC Milliamps, 2/**20**/200mA DC with Offset and 24V Exc



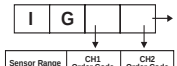
IF02: Line Frequency



IGYZ: Universal Direct Pressure (Absolute or Differential/Gage)
See below for ordering code options



Ordering Code Options for Direct Pressure (IGYX, IGYY & IGYZ)

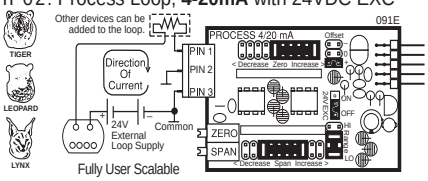


For Single Channel IGYX with two digital inputs, the last digit of order code is always X.

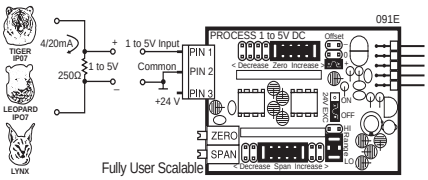
For Universal Direct Pressure IGYZ, the last digit of order code is always Z.

Sensor Range	CH1 Order Code	CH2 Order Code
1 psi Absolute	A	A
1 psi Differential	B	B
5 psi Absolute	C	C
5 psi Differential	D	D
15 psi Absolute	E	E
15 psi Differential	F	F
30 psi Absolute	G	G
30 psi Differential	H	H
100 psi Absolute	J	J
100 psi Differential	K	K

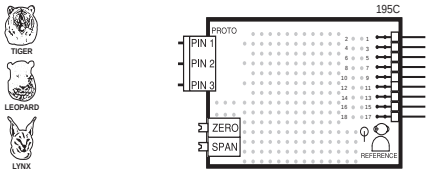
IP01: Process Loop, **4-20mA**
IP02: Process Loop, **4-20mA** with 24VDC EXC



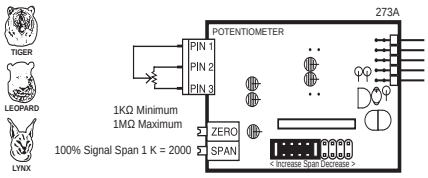
IP03: Process Input, **1-5V DC** with Offset, 24V Exc



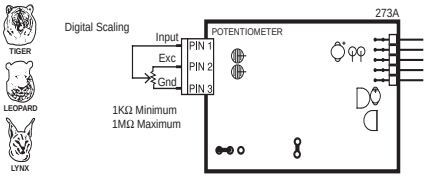
IPT1: Prototype Board for Custom Design



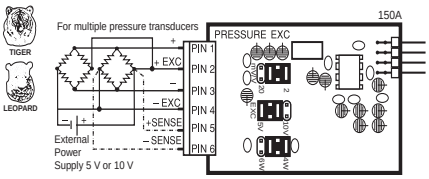
IR02: 3 wire Potentiometer 1KΩ min (0-F.S.)



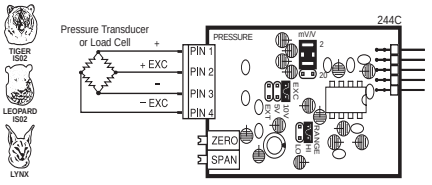
IR03: Linear Potentiometer 1KΩ min



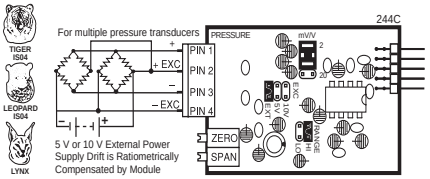
IS04: Pressure/Load Cell Ext Exc., 20/**2mV/V**, **4**/6–wire



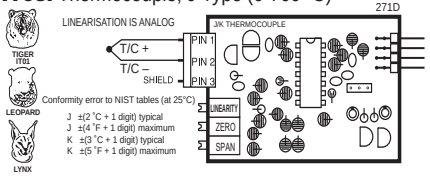
IS05: Pressure/Load Cell 20/**2mV/V**, 5/**10V** Exc 4-wire



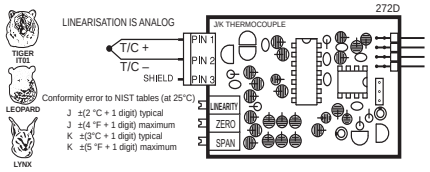
IS06: Pressure/Load Cell Ext Exc., 20/**2mV/V**, 4-wire



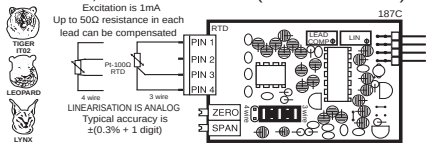
IT06: Thermocouple, J Type (0-1400 ˚F)
IT08: Thermocouple, J Type (0-760 ˚C)



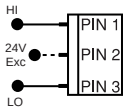
IT07: Thermocouple, K Type (0-1999 °F)
IT09: Thermocouple, K Type (0-1260 °C)



IT03: RTD, 100Ω Pt. 2/**3**/4-wire (-200 to 800°C)
IT04: RTD, 100Ω Pt. 2/**3**/4-wire (-200 to 1470°F)
IT05: RTD, 100Ω Pt. 2/**3**/4-wire (-199.9 to 199.9°F)
IT14: RTD, 100Ω Pt. 2/**3**/4-wire (-199.9 to 199.9°C)

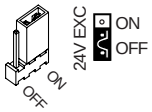


Input Module Component Glossary



Input and Output Pins

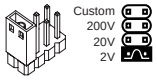
On most modules Pin 1 is the Signal High input and Pin 3 is the Signal Low input. Typically Pin 2 is used for Excitation Voltage output.



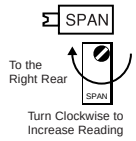
24V DC Output Header

On some modules this header enables a 24V DC 25mA (max) Excitation/Auxiliary output to be connected to Pin 2.

INPUT RANGE Header



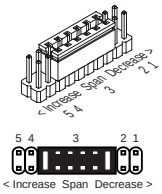
Range values are marked on the PCB. Typically two to four positions are provided, which are selected with either a single or multiple jumper clip. When provided, a custom range position is only functional when the option has been factory installed.



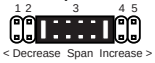
SPAN Potentiometer (Pot)

If provided, the 15 turn SPAN pot is always on the right side (as viewed from the rear of the meter). Typical adjustment is 20% of the input signal range.

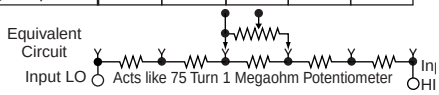
SPAN ADJUST Header



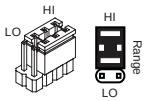
This unique five-position header expands the adjustment range of the SPAN pot into five equal 20% steps, across 100% of the input Signal Span. Any input Signal Span can then be precisely scaled down to provide any required Digital Display span from 19999 counts to 0001 (one count).



SPAN Adjust Header position	1	2	3	4	5
SPAN Pot %	20%	20%	20%	20%	20%
Signal Span %	20%	40%	60%	80%	100%

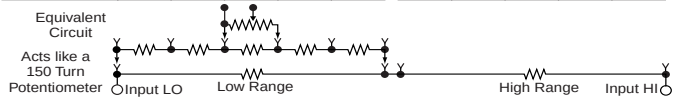


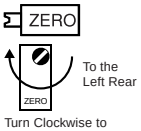
SPAN RANGE Header



When this header is provided it works in conjunction with the SPAN ADJUST Header by splitting its adjustment range into a Hi and a Lo range. This has the effect of dividing the adjustment range of the SPAN pot into ten equal 10% steps across 100% of the input Signal Span.

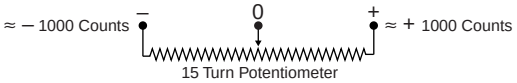
SPAN Adjust Header position	1	2	3	4	5	1	2	3	4	5
SPAN Pot %	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Signal Span %	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%



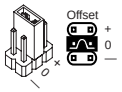


ZERO Potentiometer (Pot)

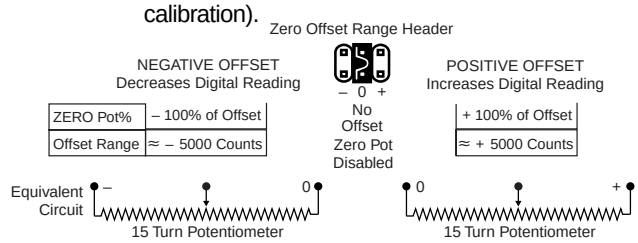
If provided, the ZERO pot is always to the left of the SPAN pot (as viewed from the rear of the meter). Typically it enables the input signal to be offset ±5% of full scale (-1000 to +1000 counts).



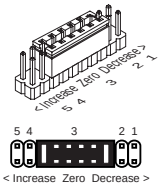
ZERO OFFSET RANGE Header



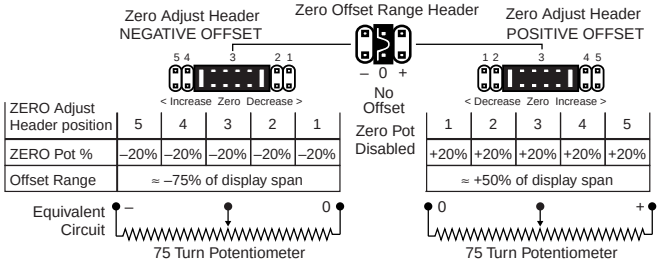
When provided, this three position header increases the ZERO pot's capability to offset the input signal, to ±25% of the digital display span. For example a Negative offset enables a 1 to 5V input to display 0 to full scale. The user can select negative offset, positive offset, or no offset (ZERO pot disabled for two step non-interactive span and offset calibration).



ZERO ADJUST Header



When this header is provided, it works in conjunction with the ZERO OFFSET RANGE Header, and expands the ZERO pot's offset capability into five equal negative steps or five equal positive steps. This enables virtually any degree of input signal offset required to display any desired engineering unit of measure.



Input Module Calibration

WARNING: AC and DC input signals and power supply voltages can be hazardous. Do Not insert, remove or handle modules with live wires connected to any terminal plugs.

Note: I-Series modules with analog calibration and scaling capability can be interchanged between any compatible meter without recalibration. However, meters that also have software scaling and calibration capabilities such as meters in the Leopard and Tiger families or Lynx

Q-Series (Quickset programming), must have their software scaling set to unity gain.

Basic standard range calibration of direct reading modules that utilize either Auto Zero or a ZERO pot, an INPUT RANGE Header and or a SPAN pot.

1 If the module has an INPUT RANGE Header, reposition the jumper clip to select the desired input signal range.

2. Apply a zero input or short the input pins. The display will auto zero, or if the module has a ZERO pot, it should be adjusted until the display reads zero.

3 Apply a known input signal that is at least 20% of the full scale input range and adjust the SPAN pot until the display reads the exact input value. The Lynx family of Q meters can accept negative signals also, and may be scaled for inputs from -50% to +100% of the range selected on the input signal conditioning module.

Wide range scaling, in engineering units not requiring offsets, with modules that utilize auto-zero or a ZERO pot, a SPAN RANGE Header and or a SPAN ADJUST Header.

Input Module Calibration Procedures Continued

Texmate's unique SPAN ADJUST and SPAN RANGE Headers provide the circuit equivalent of an ultra-precision one megohm 75 or 150 turn potentiometer that can infinitely scale down any Input Signal SPAN to provide any Display Span from full scale to the smallest viewable unit.

If the module has an INPUT RANGE Header, and the required full scale Display Span (digital counts or bargraph segments) is to be larger than the directly measured value of the input Signal Span, then the next lower range on the INPUT RANGE Header should be selected. The resulting over range Signal Span is then scaled down, by selecting the position of the SPAN RANGE Header and or the SPAN ADJUST Header, which will reduce the input Signal Span to a percentage, that the required Display Span can be reached by calibration with the SPAN pot.

Example A: Using a BX-B31 bargraph meter

Input signal 0 to 10 V to read zero to full scale.

Signal Span = 10 V, Display Span = 30 segments

1 Select the 2 V INPUT RANGE Header position. The standard direct scaling will provide a display of 30 segments with an input of only 2 V which is (2÷10) =20% of the examples 10 V Signal Span.

2 To scale down the Signal Span to 20% select the 20% Signal Span position on the SPAN ADJUST Header (position 1) or if the module has a SPAN RANGE Header, select (LO Range) and 20% Signal Span position on the SPAN ADJUST Header (position 2).

3 Apply a zero input or short the input pins. The display will auto zero, or if the module has a ZERO pot, it should be adjusted until the display reads zero.

4 Apply 10 V and adjust the SPAN pot until the display reads full scale.

Large offset scaling and calibration of process signal inputs with modules that utilize ZERO ADJUST Headers and or ZERO OFFSET RANGE Headers.

Texmate's unique ZERO OFFSET RANGE Header enables the use of a simple two step scaling and calibration procedure for those process signals that require large offsets. This eliminates the back and forth interaction, between zero and span settings, that is often required to calibrate less finely engineered products.

The first step is to set the ZERO OFFSET RANGE Header to the center position (No Offset) and scale down the Input Signal Span to a percentage that will enable calibration with the SPAN pot to reach the required Display Span.

The second step is to set the ZERO ADJUST and or ZERO OFFSET RANGE Header to provide a positive or negative offset so that calibration with the ZERO pot will offset the Display Span to produce the required display reading.

Example B: Using a BX-B31 Bargraph meter.

Input signal 1 to 5 V to read zero to full scale.

Signal Span = 4 V, Display Span = 30 segments

1 If the module has an INPUT RANGE Header the 2 V position should be selected. This will provide a display of 30 segments for an input of 2 V which is (2 ÷ 4) = 50% of the examples 4 V signal span. To scale down the Signal Span to 50% select the next higher 60% Signal Span position on the SPAN ADJUST Header (position 3).

2 If the module is a Process Input 1-5 V DC type, select the (Hi Range) position on the SPAN RANGE Header and the 100% Signal Span position on the SPAN ADJUST Header (position 5, max increase). This will provide a display of 30 segments for an input of 4 V which is 100% of the examples 4 V Signal Span.

3 Set the ZERO OFFSET RANGE Header to the center position (no offset). Apply 1 V and adjust the SPAN pot until the display reads 8.5 segments . A 4 V input would then read 30 segments.

4 Set the ZERO OFFSET RANGE Header to the negative offset position. If the module has a ZERO ADJUST Header select the position that will provide a negative offset of ≈ 25 segments. Apply 1 V and adjust the ZERO pot until the display reads zero. Apply 5 V and check that the display reads full scale.

Example C: Using a BX-B31 Bargraph meter

Input signal 4 to 20 mA to read zero to full scale

Signal Span = 16 mA, Display Span = 30 segments

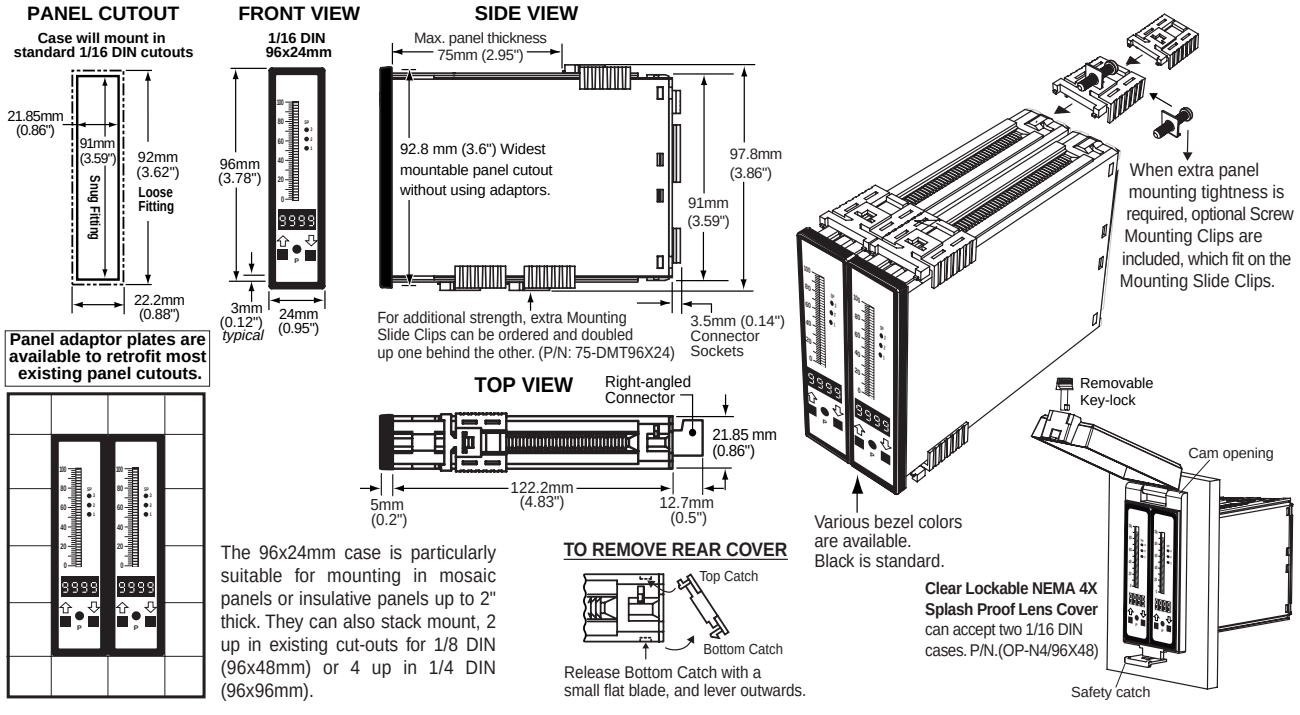
1 The full scale Signal Span of the Process Input 4-20 mA modules is 0 to 20 mA for a full scale Display Span of 0 to 30 segments.

2 Select the (Lo Range) Position on the Span Range Header and the 70% Signal Span position on the SPAN ADJUST Header (position 2).

3 Set the ZERO OFFSET RANGE Header to the center position (no offset). Apply 4 mA and adjust the SPAN pot until the display reads 8.5 segments. A 16 mA input would then read 30 segments.

4 Set the ZERO OFFSET RANGE Header to the positive offset position. If the module has a ZERO ADJUST Header select the position that will provide a negative offset of ≈ –8.5 segments. Apply 4 mA and adjust the ZERO pot until the display reads zero. Apply 20 mA and check that the display reads full scale.

Case Dimensions



The 96x24mm case is particularly suitable for mounting in mosaic panels or insulative panels up to 2" thick. They can also stack mount, 2 up in existing cut-outs for 1/8 DIN (96x48mm) or 4 up in 1/4 DIN (96x96mm).

Ordering Information

BASIC MODEL #	DISPLAY	POWER SUPPLY	INPUT MODULES	RELAY OUTPUT	OPTIONS / ACCESSORIES
BX-B31					OA____

Add to the basic model number the order code suffix for each standard option required. The last suffix is to indicate how many different special options and or accessories that you may require to be included with this product.

Ordering Example: BX-B31-VR-PS1-IA01-OA2, the 2 OA's are, CR-CHANGE and a 75-DMT96X24

▸ BASIC MODEL NUMBER

BX-B31 . . . 96x24mm, Lynx, 31 Segment Bargraph

Standard Options for this Model Number

Order Code Suffix ***Description***

▸ DISPLAY

HG . . .31 Segment Green LED Bargraph, Horizontal
HR . . .31 Segment Red LED Bargraph, Horizontal
VG . . .31 Segment Green LED Bargraph, Vertical
VR . .31 Segment Red LED Bargraph, Vertical

▸ POWER SUPPLY

PS1 . .85-265VAC/95-370VDC
PS2 . . .15-48VAC/10-72VDC

▸ INPUT MODULES (Partial List. See www.texmate.com)

Unless otherwise specified Texmate will ship all modules pre calibrated with factory preselected ranges and/or scalings as shown in **BOLD** type.

IA01 . .AC-Volts Scaled RMS, 200/**600V** AC
IA02 . .AC-Volts Scaled RMS, 200mV/**2V**/20V AC
IA03 . .AC-mA Scaled RMS, 2/**20**/200mA AC
IA04 . .AC-Amps Scaled RMS, **0-1 Amp AC (0-100.00)**
IA05 . .AC-Amps Scaled RMS, **0-5 Amp AC (0-100.00)**
IA06 . .AC-Volts True RMS, 200/**600V** AC
IA07 . .AC-Volts True RMS, 200mV/**2V**/20V AC
IA08 . .AC-mA True RMS, 2/**20**/200mA AC
IA09 . .AC-Amps True RMS, **0-1 Amp AC (0-100.00)**
IA10 . .AC-Millivolt, Scaled RMS, **100mV AC**
IA11 . .AC-Amps True RMS, **0-5 Amp AC (0-100.00)**
IA12 . .AC-Millivolt, True RMS, **100mV AC**
ID01 . .DC-Volts, **2**/20/200V/Custom w/24V DC Exc
ID02 . .DC-Millivolt, 20/50/**100**/200mV DC w/24V DC Exc
ID03 . .DC-Milliamp, 2/**20**/200mA DC w/24V DC Exc
ID04 . .DC-Amps, **5A DC**
ID05 . .DC-Volts **2**/20/200/Custom V DC w/Offset and 24V Exc
ID07 . .DC-Milliamp, 2/**20**/200mA DC w/Offset and 24V Exc
ID09 . .DC-Amps, **1A DC**
IF02 . .Line Frequency, 50-500VAC, 199.9Hz, or optional 400Hz
IGYZ* . .Universal Direct Pressure
***View the IG- Ordering Code on page 5 to determine the value for Y & Z (IGAZ to IGKZ)**
IP01 . .Process Loop, **4-20mA(0-100.00)**
IP02 . .Process Loop, **4-20mA(0-100.00)** w/24VDC Exc
IP03 . .Process Input, **1-5V DC(0-100.00)** w/Offset, 24V Exc
IPT1 . .Prototype Board for Custom Design
IR02 . . .3-Wire Potentiometer 1KΩ min (0-F.S.)
IR03 . . .Linear Potentiometer, 3-wire, 1KΩ min
IR04 . .Resistance 2KΩ
IS04 . .Pressure Ext Exc., 20/2mV/V, **4**/6–wire
IS05 . . .Pressure/Load Cell 20/2mV/V, 5/10V Exc 4-wire
IS06 . . .Pressure/Load Cell Ext Exc., 20/2mV/V, 4-wire
IT03 . .RTD, 100Ω Pt. 2/**3**/4-wire **(-200 to 800°C)**
IT04 . .RTD, 100Ω Pt. 2/**3**/4-wire **(-200 to 1470°F)**
IT05 . .RTD, 100Ω Pt. 2/**3**/4-wire **(-190.0 to 199.0°F)**
IT06 . .Thermocouple, J Type **(0-1400 °F)**
IT07 . .Thermocouple, K Type **(0-1999°F)**
IT08 . .Thermocouple, J Type **(0-760 °C)**
IT09 . .Thermocouple, K Type **(0-1260°C)**
IT14 . .RTD, 100Ω Pt. 2/**3**/4-wire **(-199.0 to 199.0°C)**

▸ RELAY OUTPUT

R1 . . . .Single 5A Form A Relay
R2 . . . .Dual 5A Form a Relays
R11 . . .Single 10A Form C Relay
R16 . . .Single 10A Form C & Single 5A Form C Relays

Special Options and Accessories (OA's)

Part Number ***Description***

▸ SPECIAL OPTIONS (Specify Input & Req. Reading)

CR-CHANGE . . . .Range change from the standard input as shown in BOLD type
CS-BAR . . . . . .Custom Scaling within any Stnd. or Custom Selectable Range
CSR-SETUP . . . .NRC to Set-up Custom Selectable Range
CSR-INSTL . . . .Installation of Custom Selectable Range
CSS-SETUP . . . .NRC to Set-up Custom Special Scaling
CSS-BR/INSTL . .Installation of custom special scaling of bargraph

▸ ACCESSORIES (Specify Serial # for Custom Artwork Installation)

75-DMT96X24 . . . .Side Slide Brackets (2 pc) - extra set, extra strength
75-DBBZ96X24 . . . .Extra Black Bezel for 96x24mm Case
ART-FB-S/L/C . . . .NRC for artwork & set-up Faceplate/Desc/Co.Logo
ART-FB-S/L . . . . . .NRC for artwork & set-up Faceplate/Desc
ART-FB-001 . . . . . .Install Custom Faceplate per meter - 1 color
93-PLUG2P-DP . . . .Extra Screw Terminal Conn., 2 Pin Power Plug
93-PLUG2P-DR . . . .Extra Screw Terminal Conn., 2 Pin Plug
93-PLUG3P-DR . . . .Extra Screw Terminal Conn., 3 Pin Plug
93-PLUG4P-DR . . . .Extra Screw Terminal Conn., 4 Pin Plug
DN.CAS96X24L . . . .Complete 96x24mm Case with bezel
OP-MCLP96X24 . . . .Screw Mounting Clips (2 pc) - to screw tighten slide brackets

Many other options and accessories are available. See full price list for more details.
Prices subject to change without notice.

WARRANTY

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USER'S RESPONSIBILITY

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