



## LEOPARD FAMILY

# BL-40PSF

## Leopard Panel Meter 4 Digit 0.56" LEDs in a 1/16 DIN CASE

CE

**An economically smart meter relay with programmable scale factor and offset with isolated 4 to 20 mA output retransmission capability for measurement and control applications in a 96x48mm case.**

## General Features

- External transmitters or signal conditioners can be eliminated by direct connection of the sensor output to more than 38 Plug-in Input Signal Conditioners that include:

- AC/DC Current
- AC/DC Voltage
- Load Cell
- Pressure
- Process
- Prototype
- Resistance
- \*Temperature
- 4 to 20 mA


\*See model BL-40H for higher accuracy digitally linearized thermocouple and RTD

- Optional isolated 16 bit analog output. User or factory scalable to 4 to 20 mA, 0 to 20 mA or 0 to 10 V across any desired digital span from  $\pm$  one count to the full scale range of -1999 to 9999 (12000 counts).
- Auto-sensing AC/DC power supply. For voltages between **85-265 V AC / 95-370 V DC (PS1)** or 15-48 V AC / 10-72 V DC (PS2).
- 24 V DC excitation is available to power external transmitters and 5 or 10 V DC excitation is available for resistance bridge type sensors such as Load Cells and Pressure Transducers.
- Standard red or optional green or super bright red 4-digit LED with display range -1999 to 9999 (12000 counts).
- Three annunciator LEDs provide front panel alarm status indication for up to three setpoints.
- One 10 Amp Form C and one 5 Amp Form A relay, or up to three 5 Amp Form A relays are available.
- When analog output is installed, one 10 Amp Form C or two 5 Amp Form A relays can be supported.
- Automatic intelligent averaging smooths noisy signals, while providing a fast display response to real level changes.

## Software Features

- Three-button programming from the front panel (UP, DOWN and PROGRAM buttons).
- Three front panel selectable ranges.
- Front panel selectable four-level brightness control of digital display, and setpoint LEDs.
- Three programmable setpoints.
- Relay activation can be selected to occur above (HI) or below (LO) each setpoint.
- Hysteresis setting for all three setpoints. Delay on make and delay on break for SP1 and SP2.
- Peak and Valley, View and Reset.

### ***Input Module Compatibility***

-  **LEOPARD FAMILY:** More than 38 different Plug-in **i-Series** Modular Input Signal Conditioners are approved for Texmate's Leopard Family of meters. Some examples are shown on pages 10-12. See [www.texmate.com](http://www.texmate.com) for an up to date listing.



**LEOPARD**

## Specifications

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

**A/D Converter:** ..... 14 bit single slope

**Accuracy:** .....  $\pm(0.05\%$  of reading + 2 counts)

**Temp. Coeff.:** ..... 100 ppm/ $^{\circ}\text{C}$  (Typical)

**Warm up time:** ..... 2 minutes

**Conversion Rate:** ..... 5 conversions per second (Typical)

**Display:** ..... **4 digit 0.56" Red LED display (std),**  
0.56" Red, Green or Super Bright Red  
(optn). Range -1999 to 9999 counts.

**Polarity:** ..... Assumed positive. Displays - negative

**Decimal Selection:** ..... Front panel button selectable, X•X•X•X•

**Positive Overrange:** ..... Top segments of digital display flash

**Negative Overrange:** ..... Bottom segments of digital display flash

**Relay Output:** ..... Three 5 Amp Form A relays or one 10 Amp  
Form C, and one 5 Amp Form A relay.

**Analog Output:** ..... Isolated 16 bit user scalable mA or V  
OIC (mA out) ..... 4-20 mA @ 0 to 500 $\Omega$  max loop resistance  
OIV (volts out) ..... 0-10 V DC @ 500  $\Omega$  or higher resistance

**Power Supply:** ..... AC/DC Auto sensing wide range supply  
**PS1 (std)** ..... **85-265 VAC / 95-370 VDC @ 2.5W max 3.2W**  
PS2 ..... 15-48 VAC / 10-72 VDC @ 2.5W max 3.2W

**Operating Temp.:** ..... 0 to 60  $^{\circ}\text{C}$

**Storage Temp:** ..... -20  $^{\circ}\text{C}$  to 70  $^{\circ}\text{C}$ .

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

**Case Dimensions:** ..... 1/16 DIN Bezel 96x24mm  
Depth behind bezel 122.2mm (4.83")  
Plus 12.7mm (0.5") for Right-angled  
connectors

**Weight:** ..... 7 oz, 9 oz when packed

## Ordering Information

| BASIC MODEL # | DISPLAY | POWER SUPPLY | INPUT MODULES | ANALOG OUTPUT | RELAY OUTPUT | OPTIONS / ACCESSORIES |
|---------------|---------|--------------|---------------|---------------|--------------|-----------------------|
| BL-40PSF      | —       | —            | —             | —             | —            | 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: BL-40PSF-DR-PS1-IA01-OIC-R1-OA2, the 2 OA's are, CR-CHANGE and a 75-DMT96X24**

### ►BASIC MODEL NUMBER

BL-40PSF . . . 96x24mm, Leopard, 4 Digit, Programmable Scale Factor

### Standard Options for this Model Number

| Order Code Suffix | Description |
|-------------------|-------------|
|-------------------|-------------|

#### ►DISPLAY

DR . . . Red LED, 0.56 inch high  
DB . . . Super-bright Red LED, 0.56 inch high  
DG . . . Green LED, 0.56 inch high

#### ►POWER SUPPLY

PS1 . . . 85 - 265VAC / 95 - 370VDC  
PS2 . . . 18 - 48VAC / 10 - 72VDC

#### ►INPUT MODULES (Partial List. See [www.texmate.com](http://www.texmate.com))

Unless otherwise specified Texmate will ship all modules precalibrated 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 11 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  
IP07 . . . Universal Process 2V/5V/**10V**/20V/200V/2mA/20mA/Custom  
IPT1 . . . Prototype Board for Custom Design  
IR02 . . . 3-Wire Potentiometer 1K $\Omega$  min (0-F.S.)  
IR03 . . . Linear Potentiometer, 3-wire, 1K $\Omega$  min  
IR05 . . . Resistance 2K $\Omega$   
IS01 . . . Strain Gage 5/10VDC Exc., 20/**2mV/V**, 4/6-wire  
IS02 . . . Pressure 5/10VDC Exc., 20/**2mV/V**, 4/6-wire  
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

IS07 . . . Pressure 20/2mV/V with High Impedance and External Excitation  
IT03 . . . RTD, 100 $\Omega$  Pt. 2/3/4-wire **(-200 to 800°C)**  
IT04 . . . RTD, 100 $\Omega$  Pt. 2/3/4-wire **(-200 to 1470°F)**  
IT05 . . . RTD, 100 $\Omega$  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, 100 $\Omega$  Pt. 2/3/4-wire **(-199.0 to 199.0°C)**

#### ►ANALOG OUTPUT\*

OIC . . . Isolated analog 4-20mA (with a Max. Two-5A Form A Relays)  
OIV . . . Isolated analog 0-10VDC (with a Max. Two-5A Form A Relays)  
\*Note: When either of the Analog Output options is installed, only the R1, R2 and R11 Relay Output options can be co-installed (see below).

#### ►RELAY OUTPUT

R1 . . . Single 5A Form A Relay  
R2 . . . Dual 5A Form A Relays  
R3 . . . Three 5A Form A Relays; SP1 & SP2 common\*\*  
R11 . . . Single 10A Form C Relay  
R16 . . . Single 10A Form C & Single 5A Form A Relays\*\*  
\*\*R3 & R16 cannot be co-installed with Analog Output options.

### Special Options and Accessories (OA's)

| Part Number | Description |
|-------------|-------------|
|-------------|-------------|

#### ►SPECIAL OPTIONS (Specify Inputs or Outputs & Req. Reading)

CR-CHANGE . . . Calibrated Range Change to another Standard Range  
CS-L/40 . . . Custom Scaling within any Stnd. or Custom Selectable Range  
CSR-L/40 . . . Custom Selectable Range Installation or Modification  
CSS-L/40 . . . Custom Special Scaling beyond the Standard Range  
COA-L/SINGLE . . . Custom Output - Special Scaling of Analog Output  
COR-L/RELAY . . . Custom Output - Relays Installed in Non-Standard Locations  
CCP-L/SETUP . . . NRC to Set-up Custom Configuration - Functions, Codes  
CCP-L/INSTL . . . Factory Installation - Custom Configuration

#### ►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-FS-S/D/C . . . NRC for artwork & set-up Faceplate/Desc/Co.Logo  
ART-FS-S/D . . . NRC for artwork & set-up Faceplate/Desc  
ART-FS-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 . . . Extra Complete 96x24mm Case with bezel  
OP-MTLCLIP . . . Screw Mounting Clips (2 pc) to screw tighten slide brackets  
75-DTP96X24 . . . Black Metal Trim Plate (96x24mm Case) 1 Meter  
75-DTP2X9624 . . . Black Metal Trim Plate (96x24mm Case) 2 Meters  
75-DTP3X9624 . . . Black Metal Trim Plate (96x24mm Case) 3 Meters

Many other options and accessories are available. See full price list for more details.

Prices subject to change without notice.

### WARRANTY

Texmate warrants that its products are free from defects in material and workmanship under normal use and service for a period of one year from date of shipment. Texmate's obligations under this warranty are limited to replacement or repair, at its option, at its factory, of any of the products which shall, within the applicable period after shipment, be returned to Texmate's facility, transportation charges pre-paid, and which are, after examination, disclosed to the satisfaction of Texmate to be thus defective. The warranty shall not apply to any equipment which shall have been repaired or altered, except by Texmate, or which shall have been subjected to misuse, negligence, or accident. In no case shall Texmate's liability exceed the original purchase price. The aforementioned provisions do not extend the original warranty period of any product which has been either repaired or replaced by Texmate.

### USER'S RESPONSIBILITY

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