



LEOPARD FAMILY

DL-40PSF

**Leopard Panel Meter
4 Digit 0.56" or 0.8" LEDs
in a 1/8 DIN CASE**



NOW FEATURING
OPTIONAL PLUG-IN
RELAY OR SSR
OUTPUT MODULES



Large display option
0.8" red or green LED

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 45 Plug-in Input Signal Conditioners that include:
 - AC/DC Current – Pressure – Resistance
 - AC/DC Voltage – Process – *Temperature
 - Load Cell – Prototype – 4 to 20 mA
- *See models DL-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).
- Red or green 0.8" LED large display option
- Four annunciator LEDs provide front panel alarm status indication for up to four setpoints.
- Two 10 Amp Form C and two 5 Amp Form A relays, or optionally four 5 Amp Form A relays are available.
- Automatic intelligent averaging smooths noisy signals, while providing a fast display response to real input signal 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.
- Four programmable setpoints.
- Relay activation can be selected to occur above (HI) or below (LO) each setpoint.
- Hysteresis setting for all four 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 45 different Plug-in **I-Series** Input Signal Conditioners are approved for Texmate's Leopard Family of meters. Some examples are shown on pages 10 - 12. See 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/ $^{\circ}$ 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" or 0.8" 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: Two 5 Amp Form A relays and two 10
Amp Form C, or 5 Amp form A relays.
Analog Output: Isolated 16 bit user scalable mA or V
AIC (mA out) 4-20 mA @ 0 to 500 Ω max loop resistance
AIV (volts out) 0-10 V DC @ 500 Ω or higher resistance
Power Supply: AC/DC Auto sensing wide range supply
PS1 (std) **85-265 VAC / 95-370 VDC @ 2.5W max 3.5W**
PS2 15-48 VAC / 10-72 VDC @ 2.5W max 3.5W
Operating Temp.: 0 to 60 $^{\circ}$ C
Storage Temp.: –20 $^{\circ}$ C to 70 $^{\circ}$ C.
Relative Humidity: 95% (non condensing)
Case Dimensions: 1/8 DIN, Bezel: 96x48 mm (3.78"x1.89")
Depth behind bezel: 117 mm (4.61")
Plus 11.8 mm (0.47") for Right-angled
connectors, or plus 20 mm (0.79") for
Straight-thru connector.
Weight: 6.5 oz., 8.5 oz when packed

Ordering Information

BASIC MODEL #	DISPLAY	POWER SUPPLY	INPUT MODULES	ANALOG OUTPUT*	RELAY OUTPUT*	OPTIONS / ACCESSORIES
DL-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. *Except when when R1 or R2 relay output is selected, a meter ordered with an analog output or a relay output module requires an Output Module Carrier Board which should be automatically included with the order, with an additional charge. (See special Options and Accessories section)

Ordering Example: DL-40PSF-DR-PS1-IA01-AIC-R1-OA2, the 2 OA's are, CR-CHANGE and a OP-N4X/96X48

BASIC MODEL NUMBER
DL-40PSF . . . 96x48, Leopard, 4 Digit

Standard Options for this Model Number

Order Code Suffix	Description
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► DISPLAY

- DR . . . Red LED, 0.56 inch high
- DB . . . Super-bright Red LED, 0.56 inch high
- DG . . . Green LED, 0.56 inch high
- LG . . . Large Green LED, 0.8 inch high
- LR . . . Large Red LED, 0.8 inch high

► POWER SUPPLY

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

► INPUT MODULES (Partial List. See 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 2/20/200V/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 1KΩ min (0-F.S.)
 - IR03 . . . Linear Potentiometer, 3-wire, 1KΩ min
 - IR05 . . . Resistance 2KΩ
 - 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, 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 (**-199.0 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**)

► ANALOG OUTPUT

AIC . . . Isolated 16 Bit Current Output, 0-20mA and 4-20mA, pls. specify

AIV . . . Isolated 16 Bit Voltage Output, 0-10VDC

► RELAY OUTPUT

Note: R1 and R2 are located on the main board, and are generally used when only two Form A Relays or less are required and an Analogy Output is not required.

- R1 . . . Single 5A Form A Relay
- R2 . . . Dual 5A Form A Relays

► RELAY OUTPUT MODULES

Note: If a meter is ordered with a Relay Output Module, but without Analog Output, an Output Module Carrier Board should be automatically added to the order.

- OR11 . . . One 10 Amp Form C Relay, Isolated
- OR15 . . . One 10 Amp Form C and Two 5 Amps Form A Relays
- OR16 . . . One 10 Amp Form C and One 5 Amp Form A Relays
- OR12 . . . Two 10 Amp Form C Relays, Isolated
- OR14 . . . Two 10 Amp Form C and Two 5 Amps Form A Relays
- OR23 . . . Two 10 Amp Form C and One 5 Amp Form A Relay, Isolated
- OR31 . . . One 5 Amp Form A Relay, Isolated
- OR32 . . . Two 5 Amp Form A Relays, Isolated
- OR33 . . . Three 5 Amp Form A Relays, Isolated
- OR34 . . . Four 5 Amp Form A Relays, Isolated

Solid State Relay (SSR) Output Modules DC Only

- OR51 . . . One 400V DC Solid State Relay (SSR) 210mA
- OR52 . . . Two 400V DC Solid State Relays (SSR) 210mA
- OR53 . . . Three 400V DC Solid State Relays (SSR) 210mA
- OR54 . . . Four 400V DC Solid State Relays (SSR) 210mA

Solid State Relay (SSR) Output Modules AC/DC

- OR61 . . . One 400V AC/DC Solid State Relay (SSR) 140mA
- OR62 . . . Two 400V AC/DC Solid State Relays (SSR) 140mA
- OR63 . . . Three 400V AC/DC Solid State Relays (SSR) 140mA
- OR64 . . . Four 400V AC/DC Solid State Relays (SSR) 140mA

Special Options and Accessories (OA's)

Part Number	Description
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► SPECIAL OPTIONS (Specify Inputs or Outputs & Req. Reading) Output Module Carrier Board

*One carrier board must be ordered with any meter that includes any one or more of the following options: Analog Output and/or Relay Output Modules.

- SA-DL/OM-CB Output Module Carrier Board, DL series
- CR-CHANGE Range Change from Standard Range shown in **BOLD** type
- CS-3/3,5/4 Custom display scaling within standard ranges
- COA-3/3,5/4 Custom scaling of analog output for digital meters & bargraphs
- CCL-SETUP NRC to set-up Custom Configuration file and issue serial #
- CCL-INSTL Installation of custom configuration, specify serial #CCL-CSR-SETUP NRC to set-up custom selectable range
- CSR-INSTL Factory installation - custom configuration, specify serial # CSR-CSS-SETUP NRC to set-up custom special scaling
- CSS-34/INSTL Installation - for 3.5 and 4.0 meters, specify serial # CSS-COR-SETUP NRC to set-up Relays in non-standard locations
- COR-INSTL Installation - Relays in non-standard locations , specify serial # COR-

► ACCESSORIES (Specify Serial # for Custom Artwork Installation)

- 75-DBBZ9648F Black Bezel for 96x48mm Case
 - 75-DMTCLIPP Side Slide Brackets (2 pc) - extra set, extra strength
 - 76-DL40G-N4 "Touch" Green LED Faceplate, NEMA 4, Factory install
 - 76-DL40LG-N4 "Touch" Large Green LED Faceplate, NEMA 4, Factory install
 - 76-DL40LR-N4 "Touch" Large Red LED Faceplate, NEMA 4, Factory install
 - 76-DL40R-N4 "Touch" Red LED Faceplate, NEMA 4, Factory install
 - ART-FS-S/D/C NRC for artwork & set-up Faceplate/Desc/Co.Logo
 - ART-FS-S/D Install Custom Faceplate per meter - 1 color
 - ART-FS-001 NRC for artwork & set-up Faceplate/Desc
 - OP-MTLCLIP Screw Mounting Clips (2 pc) - to screw tighten slide brackets
 - OP-MTL96X48 Metal Surround Case, includes screw mounting clips
 - OP-N4X/96X48 96x48mm clear lockable front cover-NEMA 4X, splash proof
- 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

We are pleased to offer suggestions on the use of our various products either by way of printed matter or through direct contact with our sales/application engineering staff. However, since we have no control over the use of our products once they are shipped, **NO WARRANTY WHETHER OF MERCHANTABILITY, FITNESS FOR PURPOSE, OR OTHERWISE** is made beyond the repair, replacement, or refund of purchase price at the sole discretion of Texmate. Users shall determine the suitability of the product for the intended application before using, and the users assume all risk and liability whatsoever in connection therewith, regardless of any of our suggestions or statements as to application or construction. In no event shall Texmate's liability, in law or otherwise, be in excess of the purchase price of the product.

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