

# TEXMATE



LEOPARD FAMILY

## DL-40

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

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

CE

Large display option  
0.8" red or green LED

### 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    – 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 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.
- 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 38 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](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/ $^{\circ}$ 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 Overage:** ..... Top segments of digital display flash  
**Negative Overage:** ..... 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 $\Omega$  max loop resistance  
AIV (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 3.5W**  
**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-40						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 of \$7. (See special Options and Accessories section)

**Ordering Example: DL-40-DR-PS1-IA01-AIC-R1-OA2, the 2 OA's are, CR-CHANGE and a OP-N4X/96X48, \$110 + N/C + N/C + 35 + 35 + 30 + 5+ 20 = \$235**

### ► BASIC MODEL NUMBER

DL-40 . . . . .96x48, Leopard, 4 Digit . . . . . \$110

### Standard Options for this Model Number

Order Code Suffix	Description	List
<b>► DISPLAY</b>		
DR	Red LED, 0.56 inch high	N/C
DB	Super-bright Red LED, 0.56 inch high	\$25
DG	Green LED, 0.56 inch high	\$10
LG	Large Green LED, 0.8 inch high	\$45
LR	Large Red LED, 0.8 inch high	\$35
<b>► POWER SUPPLY</b>		
PS1	.85 - 265VAC / 95 - 370VDC	N/C
PS2	.18 - 48VAC / 10 - 72VDC	\$35

### ► 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	\$35
IA02	AC-Volts Scaled RMS, 200mV/2V/20V AC	\$35
IA03	AC-mA Scaled RMS, 2/20/200mA AC	\$40
IA04	AC-Amps Scaled RMS, <b>0-1 Amp AC (0-100.00)</b>	\$40
IA05	AC-Amps Scaled RMS, <b>0-5 Amp AC (0-100.00)</b>	\$40
IA06	AC-Volts True RMS, 200/600V AC	\$55
IA07	AC-Volts True RMS, 200mV/2V/20V AC	\$55
IA08	AC-mA True RMS, 2/20/200mA AC	\$55
IA09	AC-Amps True RMS, <b>0-1 Amp AC (0-100.00)</b>	\$55
IA10	AC-Millivolt, Scaled RMS, <b>100mV AC</b>	\$55
IA11	AC-Amps True RMS, <b>0-5 Amp AC (0-100.00)</b>	\$55
IA12	AC-Millivolt, True RMS, <b>100mV AC</b>	\$55
ID01	DC-Volts, 2/20/200V/Custom w/24V DC Exc	\$25
ID02	DC-Millivolt, 20/50/ <b>100/200mV DC w/24V DC Exc</b>	\$35
ID03	DC-Milliamp, 2/20/200mA DC w/24V DC Exc	\$25
ID04	DC-Amps, <b>5A DC</b>	\$50
ID05	DC-Volts 2/20/200/Custom V DC w/Offset and 24V Exc.	\$45
ID07	DC-Milliamp, 2/20/200mA DC w/Offset and 24V Exc	\$35
ID09	DC-Amps, <b>1A DC</b>	\$50
IF02	Line Frequency, 50-500VAC, 199.9Hz, or optional 400Hz	\$45
IGYZ*	Universal Direct Pressure	\$100

\*View the IG- Ordering Code on page 11 to determine the value for Y & Z (IGAZ to IGKZ)

IP01	Process Loop, <b>4-20mA(0-100.00)</b>	\$35
IP02	Process Loop, <b>4-20mA(0-100.00)</b> w/24VDC Exc	\$45
IP03	Process Input, <b>1-5V DC(0-100.00)</b> w/Offset, 24V Exc	\$45
IP07	Universal Process 2V/5V/ <b>10V/20V/200V/2mA/20mA/Custom</b>	\$30
IP11	Prototype Board for Custom Design	\$15
IR02	3-Wire Potentiometer 1KΩ min (0-F.S.)	\$40
IR03	Linear Potentiometer, 3-wire, 1KΩ min	\$40
IR05	Resistance 2KΩ	\$40
IS01	Strain Gage 5/10VDC Exc., 20/2mV/V, 4/6-wire	\$55
IS02	Pressure 5/10VDC Exc., 20/2mV/V, 4/6-wire	\$55
IS04	Pressure Ext Exc., 20/2mV/V, 4/6-wire	\$45
IS05	Pressure/Load Cell 20/2mV/V, 5/10V Exc 4-wire	\$55
IS06	Pressure/Load Cell Ext Exc., 20/2mV/V, 4-wire	\$55
IS07	Pressure 20/2mV/V with High Impedance and External Excitation	\$65
IT03	RTD, 100Ω Pt. 2/3/4-wire ( <b>-200 to 800°C</b> )	\$40
IT04	RTD, 100Ω Pt. 2/3/4-wire ( <b>-200 to 1470°F</b> )	\$40
IT05	RTD, 100Ω Pt. 2/3/4-wire ( <b>-190.0 to 199.0°F</b> )	\$40
IT06	Thermocouple, J Type ( <b>0-1400 °F</b> )	\$40
IT07	Thermocouple, K Type ( <b>0-1999°F</b> )	\$40
IT08	Thermocouple, J Type ( <b>0-760 °C</b> )	\$40
IT09	Thermocouple, K Type ( <b>0-1260°C</b> )	\$40
IT14	RTD, 100Ω Pt. 2/3/4-wire ( <b>-199.0 to 199.0°C</b> )	\$40

### ► ANALOG OUTPUT \*Add \$7 for an Output Module Carrier Board

AIC	Isolated 16 Bit Current Output, 0-20mA and 4-20mA, pls. specify	\$35
AIV	Isolated 16 Bit Voltage Output, 0-10VDC	\$35

### 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.

### ► 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	\$30
R2	Dual 5A Form A Relays	\$55

### ► RELAY OUTPUT MODULES

Note: If a meter is ordered with a Relay Output Module, but without Analog Output, an Output Module Carrier Board for \$7 should be automatically added to the order.

OR11	One 10 Amp Form C Relay, Isolated	\$30
OR15	One 10 Amp Form C and Two 5 Amps Form A Relays	\$75
OR16	One 10 Amp Form C and One 5 Amp Form A Relays	\$55
OR12	Two 10 Amp Form C Relays, Isolated	\$60
OR14	Two 10 Amp Form C and Two 5 Amps Form A Relays	\$105
OR23	Two 10 Amp Form C and One 5 Amp Form A Relay, Isolated	\$85
OR31	One 5 Amp Form A Relay, Isolated	\$25
OR32	Two 5 Amp Form A Relays, Isolated	\$50
OR33	Three 5 Amp Form A Relays, Isolated	\$70
OR34	Four 5 Amp Form A Relays, Isolated	\$90

### Solid State Relay (SSR) Output Modules DC Only

OR51	One 400V DC Solid State Relay (SSR) 210mA	\$25
OR52	Two 400V DC Solid State Relays (SSR) 210mA	\$50
OR53	Three 400V DC Solid State Relays (SSR) 210mA	\$70
OR54	Four 400V DC Solid State Relays (SSR) 210mA	\$90

### Solid State Relay (SSR) Output Modules AC/DC

OR61	One 400V AC/DC Solid State Relay (SSR) 140mA	\$25
OR62	Two 400V AC/DC Solid State Relays (SSR) 140mA	\$50
OR63	Three 400V AC/DC Solid State Relays (SSR) 140mA	\$70
OR64	Four 400V AC/DC Solid State Relays (SSR) 140mA	\$90

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

Part Number	Description	List
<b>► SPECIAL OPTIONS (Specify Inputs or Outputs &amp; Req. Reading)</b>		
<b>Output Module Carrier Board</b>		
*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	\$7
CR-CHANGE	Range Change from Standard Range shown in <b>BOLD</b> type	\$7
CS-3/3.5/4	Custom display scaling within standard ranges	\$12
COA-3/3.5/4	Custom scaling of analog output for digital meters & bargraphs	\$12
CCL-SETUP	NRC to set-up Custom Configuration file and issue serial #	\$40
CCL-INSTL	Installation of custom configuration, specify serial #CCL-	\$10
CSR-SETUP	NRC to set-up custom selectable range	\$30
CSR-INSTL	Factory installation - custom configuration, specify serial # CSR-	\$10
CSS-SETUP	NRC to set-up custom special scaling	\$30
CSS-34/INSTL	Installation - for 3.5 and 4.0 meters, specify serial # CSS-	\$20
COR-SETUP	NRC to set-up Relays in non-standard locations	\$15
COR-INSTL	Installation - Relays in non-standard locations, specify serial # COR-	\$10

### ► ACCESSORIES (Specify Serial # for Custom Artwork Installation)

75-DBBZ9648F	Black Bezel for 96x48mm Case	\$2
75-DMTCLIPF	Slide Slide Brackets (2 pc) - extra set, extra strength	\$2
76-DL40G-N4	"Touch" Green LED Faceplate, NEMA 4, Factory install	\$8
76-DL40L-N4	"Touch" Large Green LED Faceplate, NEMA 4, Factory install	\$8
76-DL40LR-N4	"Touch" Large Red LED Faceplate, NEMA 4, Factory install	\$8
76-DL40R-N4	"Touch" Red LED Faceplate, NEMA 4, Factory install	\$8
ART-FS-S/D/C	NRC for artwork & set-up Faceplate/Desc/Co.Logo	\$75
ART-FS-S/D	NRC for artwork & set-up Faceplate/Desc	\$35
ART-FS-001	Install Custom Faceplate per meter - 1 color	\$10
OP-MTLCLIP	Screw Mounting Clips (2 pc) - to screw tighten slide brackets	\$6
OP-MTL96X48	Metal Surround Case, includes screw mounting clips	\$16
OP-N4X/96X48	96x48mm clear lockable front cover-NEMA 4X, splash proof	\$20

Prices subject to change without notice.

### 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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