



LEOPARD FAMILY

DL-40H

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



Large display option
0.8" red or green LED



An economically smart temperature meter relay for J, K, R, and T type thermocouples and RTD inputs.

General Features

- Thermocouple (J, K, R and T types) or RTD (Pt-100, 385 and 392 curves. 3 wire/4wire). Digitally Linearized.
- 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).
- Standard red or optional green or super bright red 4-digit LED
- 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 relay, or optionally four 5 Amp Form A relays are available.

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

There are 2 different Plug-in Modular Input Signal Conditioners for this specialized temperature only member of the Leopard Family. IT10 is for J, K, T and R thermocouples. IT11 is for 3 wire/4 wire Pt-100 RTD inputs.



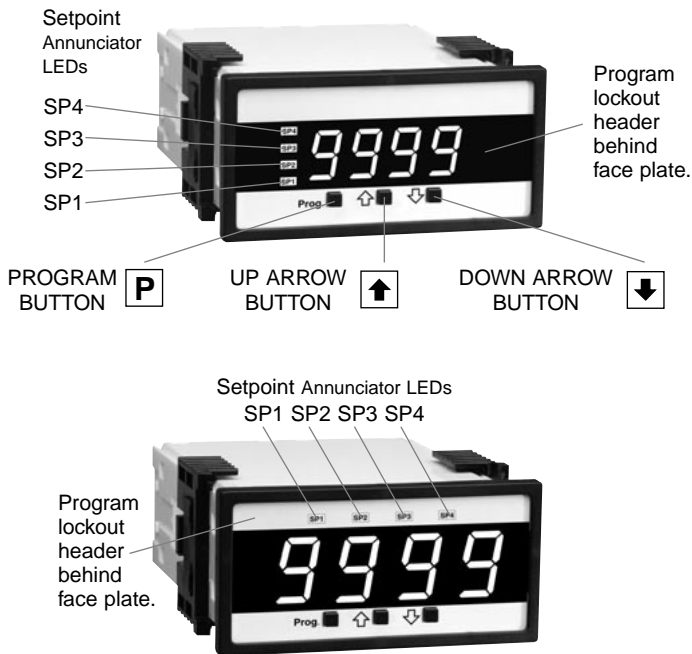
LEOPARD

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:.....Automatic by resolution select XXX•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**
PS215-48 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 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

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Front Panel Buttons

Program Button

The **[P]** button is used to move from one program step to the next. When pressed at the same time as the **[↑]** button, it initiates the **calibration mode**. When pressed at the same time as the **[↓]** button, it initiates the **setpoint setting mode**.

Up Button

When in the operational display, pressing the **[↑]** button alone allows you to view, but not change, the setting of **setpoint 1**.

When in the **calibration mode** or the **setpoint setting mode** the **[↑]** button is used to increase the value of the displayed parameter.

Down Button

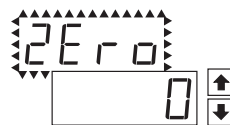
When in the operational display, pressing the **[↓]** button alone allows you to view, but not change, the setting of **setpoint 2**.

When in the **calibration mode** or the **setpoint setting mode** the **[↓]** button is used to decrease the value of the displayed parameter.

Glossary of Programming Symbols

To explain software programming procedures, logic diagrams are used to visually assist in following the programming steps. The following symbols are used throughout the logic diagrams to represent the buttons and indicators on the meter:

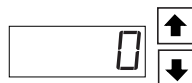
Symbol	Explanation
	This symbol represents the OPERATIONAL DISPLAY.
	This is the PROGRAM button.
	This is the UP button.
	This is the DOWN button.
	When a button is shown, press and release it to go onto the next step in the direction indicated by the arrow. When two or more buttons are shown, each with an arrow, this indicates that there is a number of programming choices.
	When two buttons are shown side by side and enclosed by a dotted line, they must be pressed at the same time then released to go onto the next programming step.
	If the display is shown with XXXX it means the value displayed will be the previously set value. When a number is shown it indicates the initial factory default setting or a specific "example number".



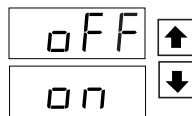
When two displays are shown together with bursts, this indicates that the display is toggling (flashing) between the name of the function and the value.



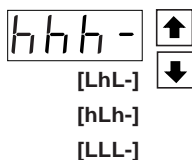
Text or numbers shown between square brackets in a procedure indicate the programming code name of the function or the value displayed on the meter display.



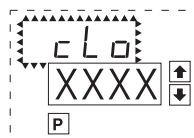
When the **[↑]** and **[↓]** buttons are shown together, the display value can be increased by pressing and releasing the **[↑]** button or decreased by pressing and releasing the **[↓]** button.



When the **[↑]** and **[↓]** buttons are shown with two displays, either display can be selected by pressing and releasing the **[↑]** or **[↓]** buttons.



When there are more than two display selections they are shown in brackets below the first display and are also selectable by pressing and releasing the **[↑]** or **[↓]** buttons.

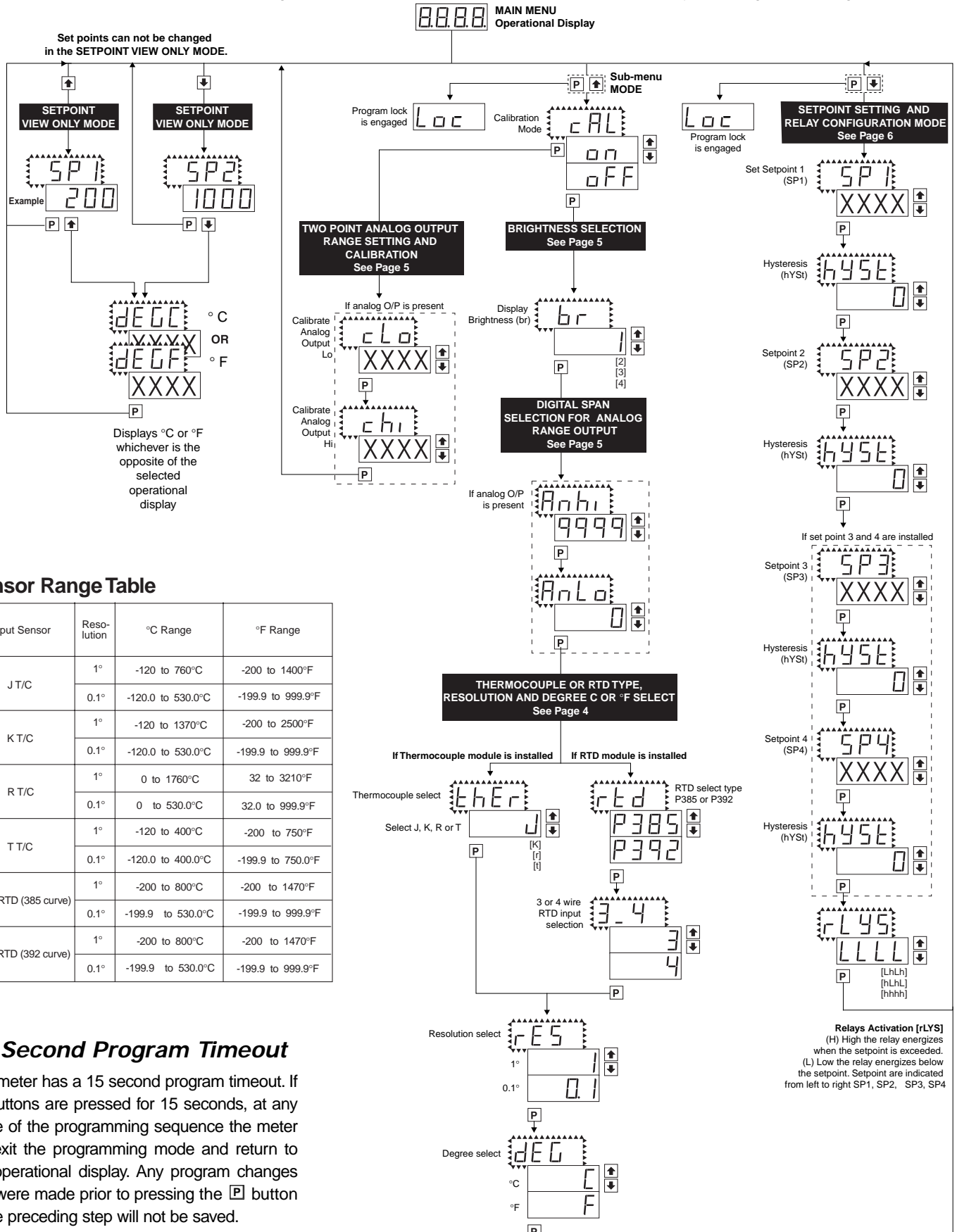


A dotted box indicates these functions are omitted or bypassed when the related hardware is not present.

Software Logic Tree

The DL-40H is an intelligent meter with a hierarchical software structure designed for easy programming and operation, as shown below in the software logic tree.

After the meter has been powered up, the four digits light up for three seconds and then settle to the operational display indicating the input signal.



Sensor Range Table

Input Sensor	Resolution	°C Range	°F Range
J T/C	1°	-120 to 760°C	-200 to 1400°F
	0.1°	-120.0 to 530.0°C	-199.9 to 999.9°F
K T/C	1°	-120 to 1370°C	-200 to 2500°F
	0.1°	-120.0 to 530.0°C	-199.9 to 999.9°F
R T/C	1°	0 to 1760°C	32 to 3210°F
	0.1°	0 to 530.0°C	32.0 to 999.9°F
T T/C	1°	-120 to 400°C	-200 to 750°F
	0.1°	-120.0 to 400.0°C	-199.9 to 750.0°F
100Ω RTD (385 curve)	1°	-200 to 800°C	-200 to 1470°F
	0.1°	-199.9 to 530.0°C	-199.9 to 999.9°F
100Ω RTD (392 curve)	1°	-200 to 800°C	-200 to 1470°F
	0.1°	-199.9 to 530.0°C	-199.9 to 999.9°F

15 Second Program Timeout

The meter has a 15 second program timeout. If no buttons are pressed for 15 seconds, at any stage of the programming sequence the meter will exit the programming mode and return to the operational display. Any program changes that were made prior to pressing the [P] button in the preceding step will not be saved.

Thermocouple or RTD Sensor Type Selection

STEP A Enter the Sensor Type Selection Mode Through the Sub Menu [cAL] [oFF]

- 1) Press the **[P]** and **[*]** buttons at the same time. Display toggles between [cAL] and [oFF].
- 2) Press the **[P]** button. Display toggles between [Br] and the previous [Br] setting.
- 3) Press the **[P]** button. Display toggles between [AnLo] and the previous [AnLo] setting (if analog output option is installed).
- 4) Press the **[P]** button and depending on the module installed the display will either toggle between [thEr] and the thermocouple selected [J], [K], [R] or [T] or [RTD] and the RTD type selection [P385] or [P392].

STEP B Sensor Type Selection

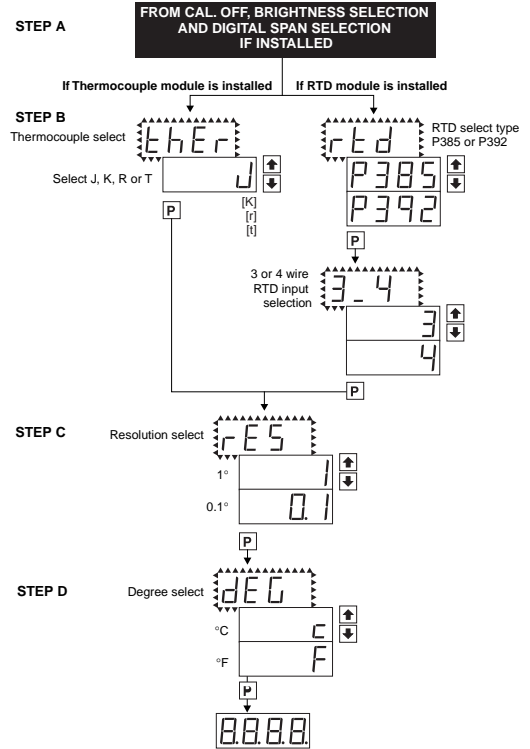
- 1) Using the **[*]** and **[*]** buttons, adjust the display to the desired sensor type.
- 2) Press the **[P]** button. Display toggles between [rES] resolution select and previous [rES] setting.

STEP C Set the Resolution

- 1) Using the **[*]** and **[*]** buttons, adjust the display to the desired resolution [rES] value.
- 2) Press the **[P]** button. Display toggles between [dEG] and previous [dEG] selection.

STEP D Selection of Degree C or Degree F

- 1) Using the **[*]** and **[*]** buttons, adjust the display to either °C or °F.
- 2) Press the **[P]** button. The meter exits the sensor type selection mode and returns to the operational display.



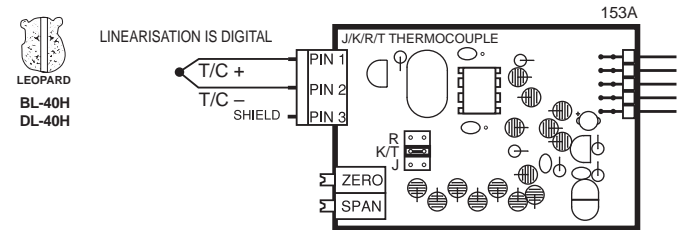
Calibration Procedure

IT10 Thermocouple Input Signal Conditioner installed.

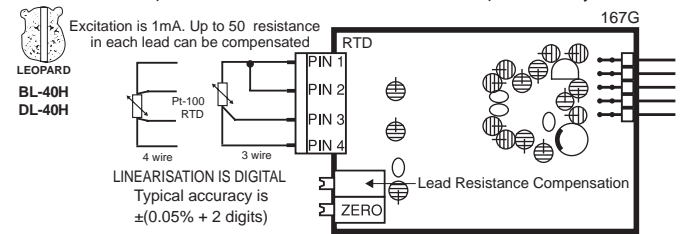
1. Unplug the connector plugs from the meter. Remove the case back panel and slide the PCB out of the case.
2. Select the appropriate header jumper position depending on which thermocouple is to be used. Thermocouple types J, K, R and T are supported. This sets up the correct cold junction compensation.
3. Insert the PCB back into the case. Snap the back panel back into the case. Apply power to the meter.
4. Enter the program mode and select the type of thermocouple (J, K, R, T), the resolution (0.1° or 1°) and the display units °C or °F). See the Software Logic Tree on Page 3 of the data sheet for details.
5. Connect a thermocouple simulator to the meter inputs. Apply an input corresponding to 0° and adjust the ZERO Potentiometer to make the display read 0.
6. Apply an input corresponding to the maximum reading of the thermocouple and adjust the SPAN Potentiometer to make the display read correctly.
7. The DL-40H is now calibrated and ready for use. Calibration will have to be performed again if the thermocouple type is changed.

Symbols Indicate Module Compatibility Within Meter Families		
	TIGER Family	
	LEOPARD Family	
	LYNX Family	
ALL MODELS	SOME MODELS	MODEL SPECIFIC

IT10: Thermocouple, J/K/R/T, Selectable °C/°F, 1°/0.1°



IT11: RTD, 100 Pt. Select 3/4-wire, °C/°F, 1°/0.1° IT15: RTD, 1000 Pt. Select 3/4-wire, °C/°F, 1°/0.1°



Two Point Analog Output Range Setting and Calibration

STEP A Enter the Calibration Mode

- 1) Press the **[P]** and **[↕]** buttons at the same time. Display toggles between [cAL] and [oFF].
- 2) Press the **[↕]** or **[↔]** button. Display changes from [oFF] to [on].
- 3) Press the **[P]** button. Display toggles between [cAL] and [out] input calibration.

Note: If at this point the display skips directly to toggle between [Br] and the previous [Br] setting (STEP D) then the software is detecting that the optional analog output hardware is NOT installed.

STEP B Enter the Analog [oUT] Output Mode

- 1) Press the **[P]** button. Display toggles between [cLo] and an internal scale factor.

STEP C Set or Calibrate the [cLo] Low Analog Output Range

- 1) Select the voltage or current loop output header position on the output module. (See Component Layout on page 9).
- 2) Connect a multimeter to pins 16 and 17 on the output module. (See Rear Panel Pinouts on page 8). Using the **[↕]** and **[↔]** buttons, adjust the analog output to the desired low value as shown on the multimeter display.
cLo may be adjusted to any value from -0.3 mA to 17 mA (mA output selected) or from -0.6 V to 8 V (volt output selected)
- 3) Press the **[P]** button. Display toggles between [Chi] and an internal scale factor.

STEP D Set or Calibrate the [chi] High Analog Output Range

- 1) Using the **[↕]** and **[↔]** buttons, adjust the analog output to the desired high value as shown on the multimeter display. chi may be adjusted to any value from 17 mA to 21 mA (mA output selected) or from 8 V to 10.3 V (volt output selected)
- 2) Press the **[P]** button. The display exits the calibration mode and returns to the operational display.

Note: Having established the Low and High range of the analog output, the digital span can now be selected which will set the two digital points between which the analog output will occur. (See Digital Span Selection below).

Brightness Selection

STEP D Enter the Brightness Mode Through the Sub Menu [cAL] [oFF]

- 1) Press the **[P]** and **[↕]** buttons at the same time. Display toggles between [cAL] and [oFF].
- 2) Press the **[P]** button. Display toggles between [Br] and the previous [Br] setting.

STEP E Set the Display Brightness

- 1) Using the **[↕]** and **[↔]** buttons, adjust the display to the desired brightness setting (4 is the brightest setting).
- 2) Press the **[P]** button. Display brightness changes to new setting and display toggles between [Anhi] and the previous [Anhi] setting.

Digital Span Selection for Analog Range Output

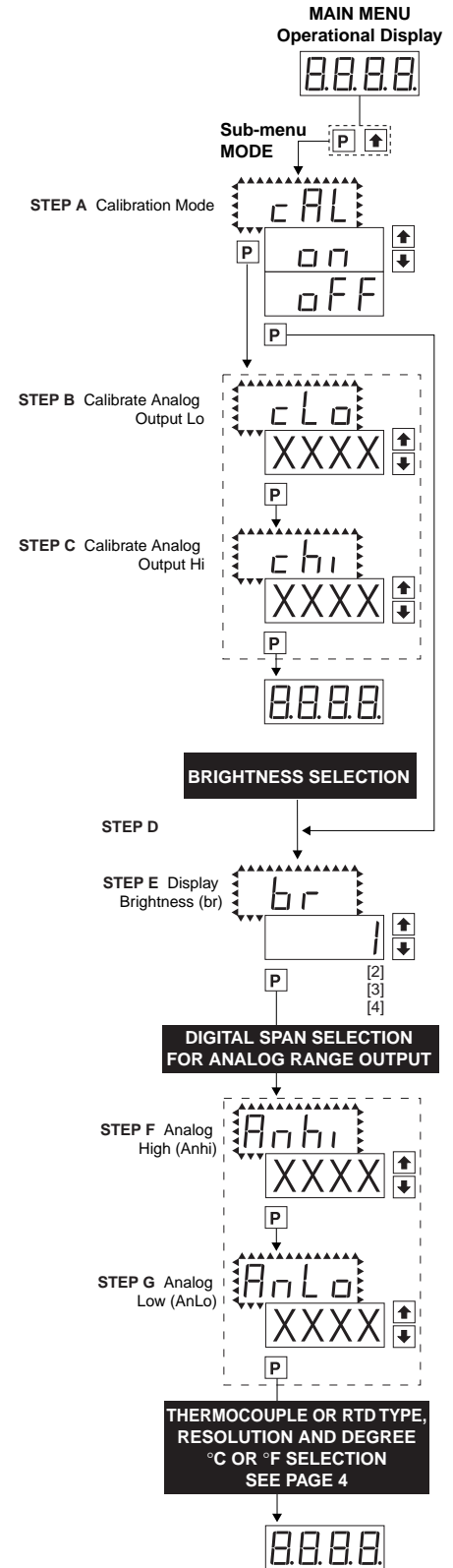
STEP F Setting the Digital Span Point for Analog High Output

- 1) Using the **[↕]** and **[↔]** buttons, adjust the display to the desired digital value which sets the point at which the selected analog high output range will occur.
- 2) Press the **[P]** button. Display toggles between [AnLo] and previous [AnLo] setting.

STEP G Setting the Digital Span Point for Analog Low Output

- 1) Using the **[↕]** and **[↔]** buttons, adjust the display to the desired digital value which sets the point at which the selected analog low output range will occur.
- 2) Press the **[P]** button. The display exits the calibration mode and returns to the operational display.

Note: Any two digital scale points from -1999 to 9999 can be selected. The digital scale points for analog high and analog low can be reversed for reversed 20-4 mA output. The span of the digital scale can be as small as two counts however small spans cause the 16 bit D to A to increment in stair case steps.



Setpoint Setting and Relay Configuration Mode

The following programming steps are required to enter the setpoint values and configure the relay functions in a meter with four relays using four setpoints. Generally if less than four relays are installed the software auto detects missing relays and deletes reference to them from the menu. In some cases setpoints without relays are operational for display only purposes.

STEP A Enter the Setpoint Mode

- 1) Press the **P** and **↓** buttons at the same time.
Display toggles between [SP1] and the previous [SP1] setting.

STEP B Set Setpoint 1 (SP1)

- 1) Using the **↑** and **↓** buttons, adjust the display to the desired SP1 value.
- 2) Press the **P** button. Display toggles between [hYSt] and the previous [hYSt] setting.

STEP C Set the Hysteresis Setting for Setpoint 1

- 1) Using the **↑** and **↓** buttons, adjust the display to the desired hysteresis [hYSt] value.
- 2) Press the **P** button. Display toggles between [SP2] and the previous [SP2] setting.

NOTE: Half of the Hysteresis value selected is applied above and below the setpoint.

STEP D Set Setpoint 2 (SP2)

- 1) Using the **↑** and **↓** buttons, adjust the display to the desired SP2 value.
- 2) Press the **P** button. Display toggles between [hYSt] and the previous [hYSt] setting.

STEP E Set the Hysteresis Setting for Setpoint 2

- 1) Using the **↑** and **↓** buttons, adjust the display to the desired hysteresis [hYSt] value.
- 2) Press the **P** button. Display toggles between [SP3] and the previous [SP3] setting.

STEP F Set Setpoint 3 (SP3)

- 1) Using the **↑** and **↓** buttons, adjust the display to the desired SP3 value.
- 2) Press the **P** button. Display toggles between [hYSt] and the previous [hYSt] setting.

STEP G Set the Hysteresis Setting for Setpoint 3

- 1) Using the **↑** and **↓** buttons, adjust the display to the desired hysteresis [hYSt] value.
- 2) Press the **P** button. Display toggles between [SP4] and the previous [SP4] setting.

STEP H Set Setpoint 4 (SP4)

- 1) Using the **↑** and **↓** buttons, adjust the display to the desired SP4 value.
- 2) Press the **P** button. Display toggles between [hYSt] and the previous [hYSt] setting.

STEP I Set the Hysteresis Setting for Setpoint 4

- 1) Using the **↑** and **↓** buttons, adjust the display to the desired hysteresis [hYSt] value.
- 2) Press the **P** button. Display toggles between [rLYS] and the previous relay setting.

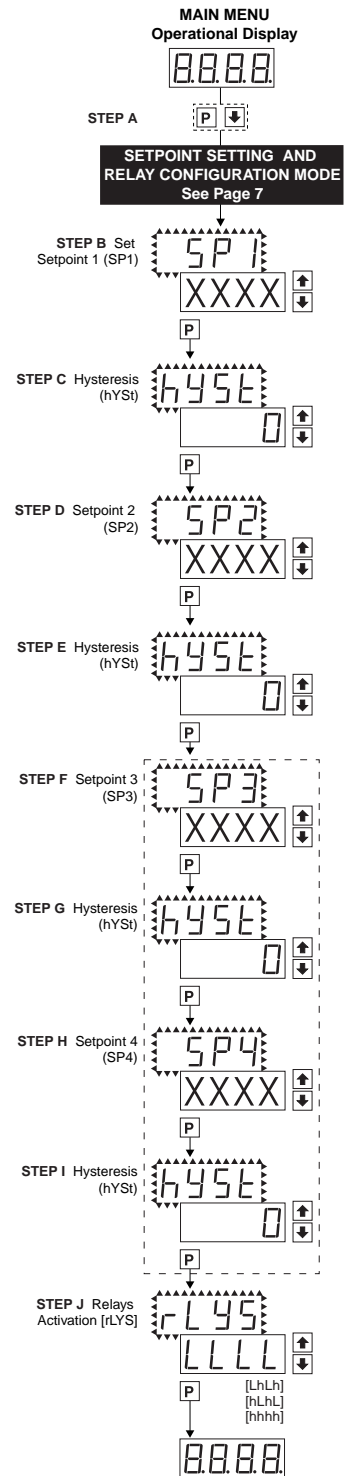
STEP J Set Relay Activation mode [rLYS]

(h) High the relay energizes when the setpoint is exceeded. (L) Low the relay energizes below the setpoint. The setpoint is indicated from left to right SP1, SP2, SP3, SP4.

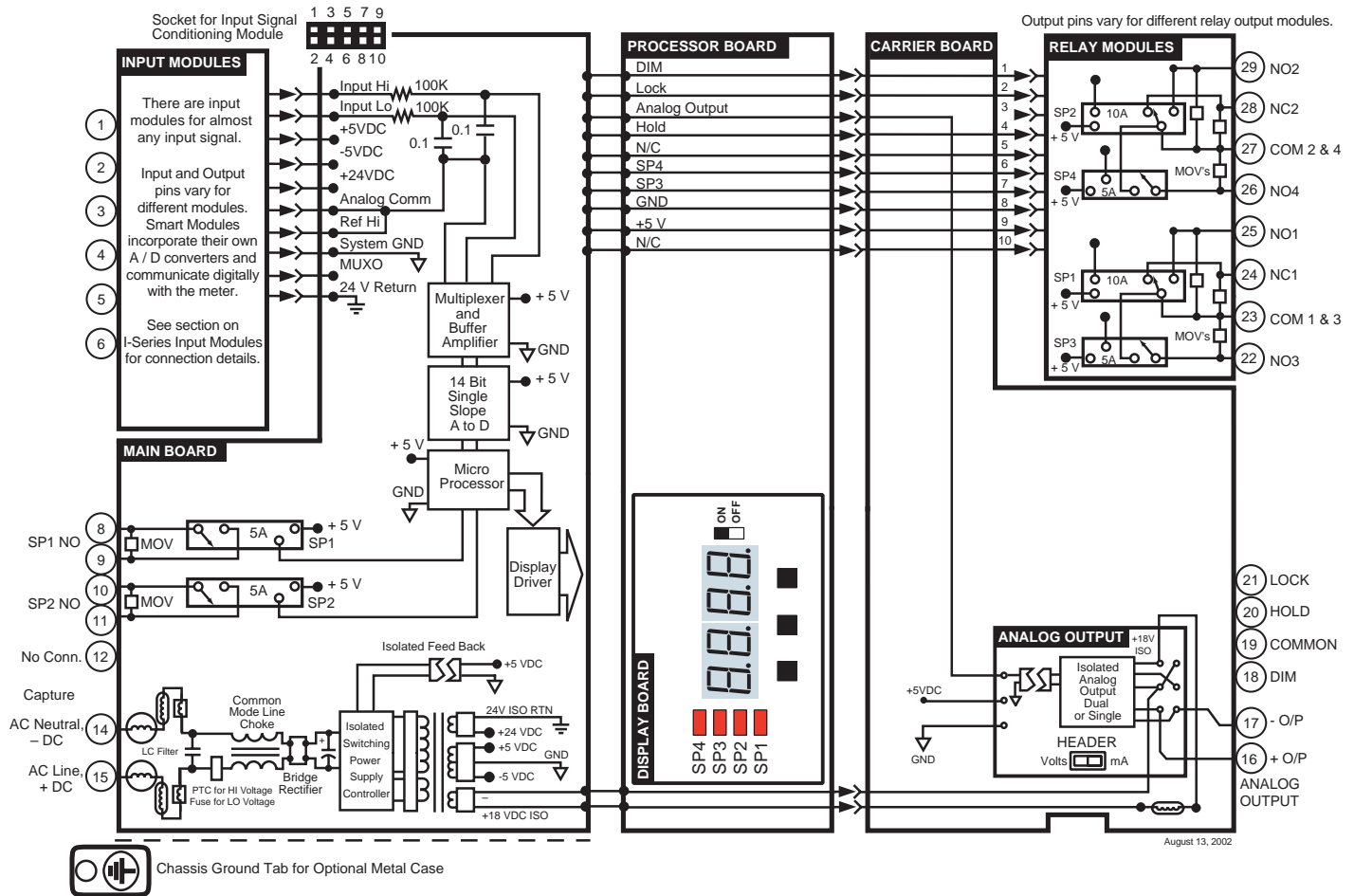
- 1) Using the **↑** and **↓** buttons, adjust the reading on the display to the desired relay settings: [LLLL], [LhLh], [LLhh], [hhhh].
If only 2 relays installed [Lh] [hL] [hh] [LL].
- 2) Press the **P** button.

The meter exits the setpoint mode and returns to the operational display.

The Setpoint Relay programming mode is now complete.



Functional Diagram



Connector Pinouts

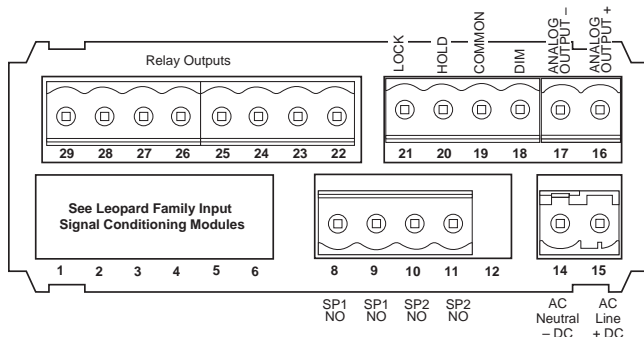
Pinout Diagram

The Rear View of the Meter diagram shows the meter with the relay configuration: dual 10 Amp Form C and dual 5 Amp Form A relays. An analog output module is also shown as installed.

The DL-40H 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 and input signal conditioner use right-angled connectors as standard. The output module uses straight-thru connectors as standard.

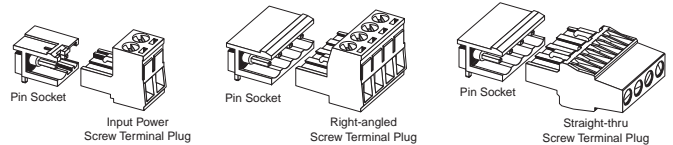


WARNING: AC and DC input signals and power supply voltages can be hazardous. Do Not connect live wires to screw terminal plugs, and do not insert, remove or handle screw terminal plugs with live wires connected.



Auto-sensing AC/DC power supply. For voltages between 85-265 V AC / 95-370 V DC (PS1) or 18-48 V AC / 10-72 V DC (PS2).

Standard plug-in screw terminal connectors provided by Texmate:



Input Signal – Pins 1 to 6

Pins 1 to 6 are reserved for the input signal conditioner. See the data sheet for the selected input signal conditioner.

Pins 8 to 12 – Relay Output Pins

Note: If relays for setpoints 1 & 2 are installed on the main board, and a relay output module is used that also has relays in the setpoints 1 & 2 positions, the duplicate relays will operate in unison.

- Pin 8 SP1 NO. Normally Open 5 Amp Form A.
- Pin 9 SP1 NO. Normally Open 5 Amp Form A.
- Pin 10 SP2 NO. Normally Open 5 Amp Form A.
- Pin 11 SP2 NO. Normally Open 5 Amp Form A.
- Pin 12 NO CONNECTION.

Pins 14 and 15 – AC/DC Power Input

Auto-sensing AC/DC power supply. For voltages between 85-265 V AC/95-370 V DC (PS1) or 18-48 V AC/10-72 V DC (PS2).

- Pin 14 AC/DC Neutral. Neutral power supply line.
- Pin 15 AC/DC line. Live power supply line.

Optional Carrier Board Output Pins

Pins 16 and 17 – Analog Output

Pins 16 and 17 are the analog output pins on the optional output module. Their pin definitions are:

- Pin 16 Positive (+) analog output.
- Pin 17 Negative (-) analog output.

Connector Pinouts continued

Pins 18 to 21 – Rear Panel Function Pins

Pins 18 to 21 provide functions that can be implemented with an external switch. Their pin definitions are:

Pin 18 DIM. By connecting the display dim (DIM) pin to the COMMON pin, the display brightness setting is halved.

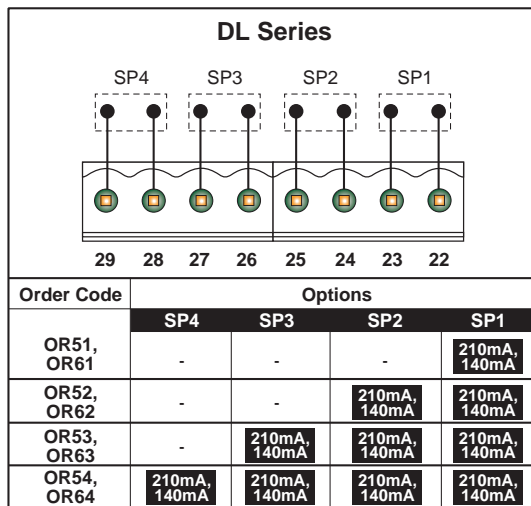
Pin 19 COMMON. To activate the LOCK or DIM functions from the rear of the meter, the respective pins have to be connected to the COMMON pin. This pin is connected to the internal power supply ground.

Pin 20 HOLD. By connecting the HOLD pin to the COMMON pin, the displayed reading is frozen, however, A/D conversions continue. When the HOLD pin is disconnected from the COMMON pin, the correct reading is displayed.

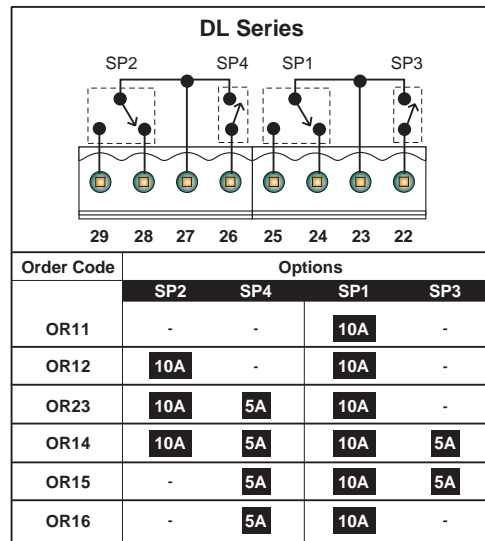
Pin 21 LOCK. By connecting the LOCK pin to the COMMON pin, the meter's programmed parameters can be viewed but not changed.

Pins 22 to 29 – Output Module Pins

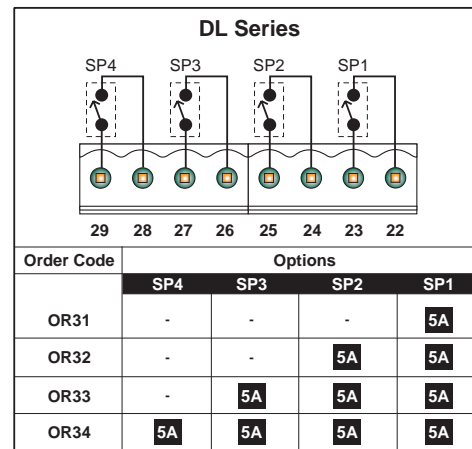
Relay Modules with 4 Independent 400V (210mA DC only) or (140mA AC/DC) SSRs



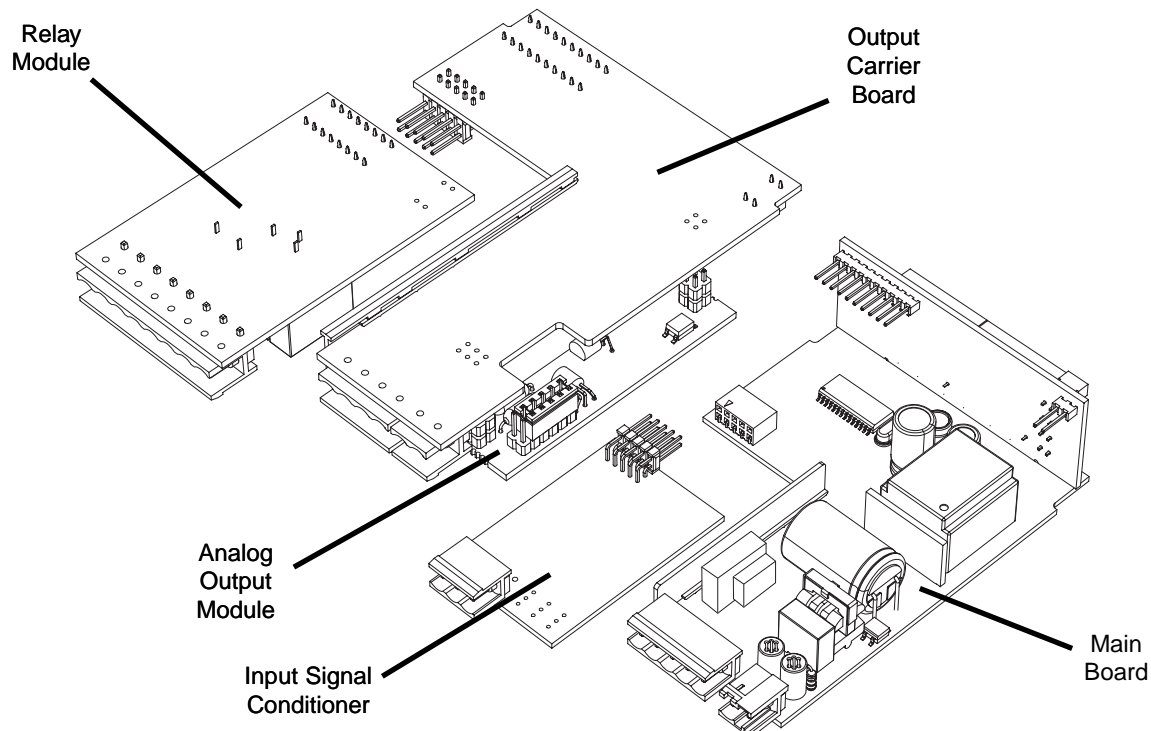
Relay Modules with 2 Non-Isolated 5A Form A Relays, and 2 Non-Isolated 10A Form C Relays



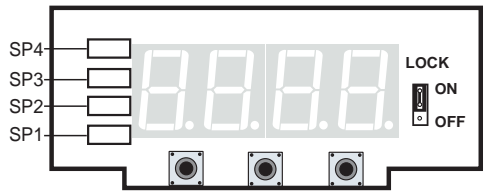
Relay Modules with 4 Isolated 5A Form A Relays



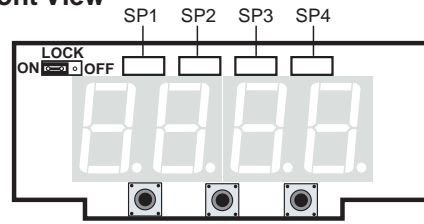
Component Layout



Display Board – Front View

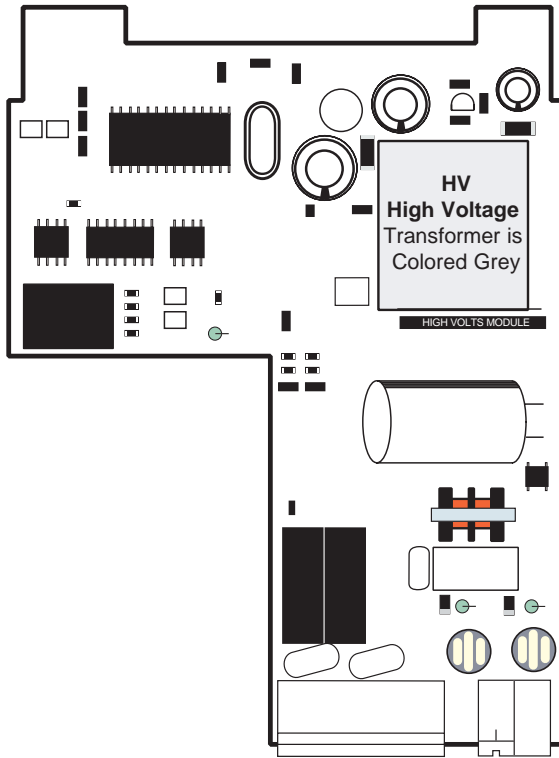


0.56" LED Display Board - Front View

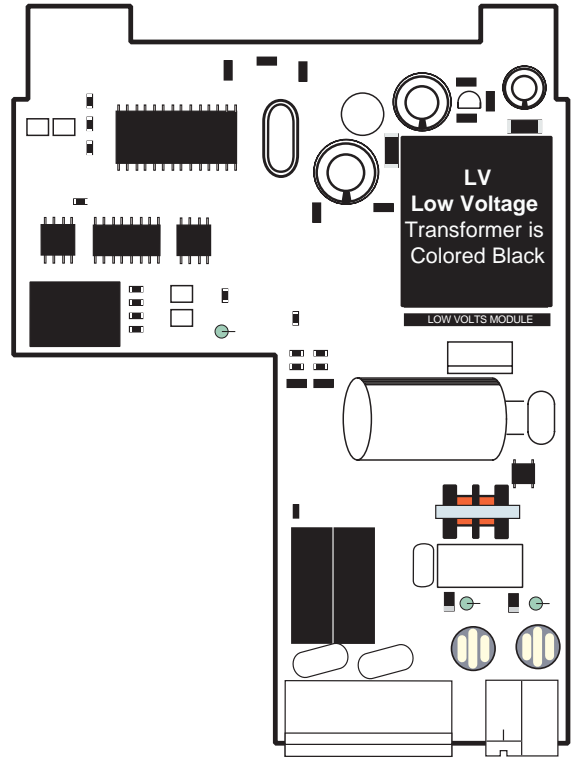


0.8" LED Display Board - Front View

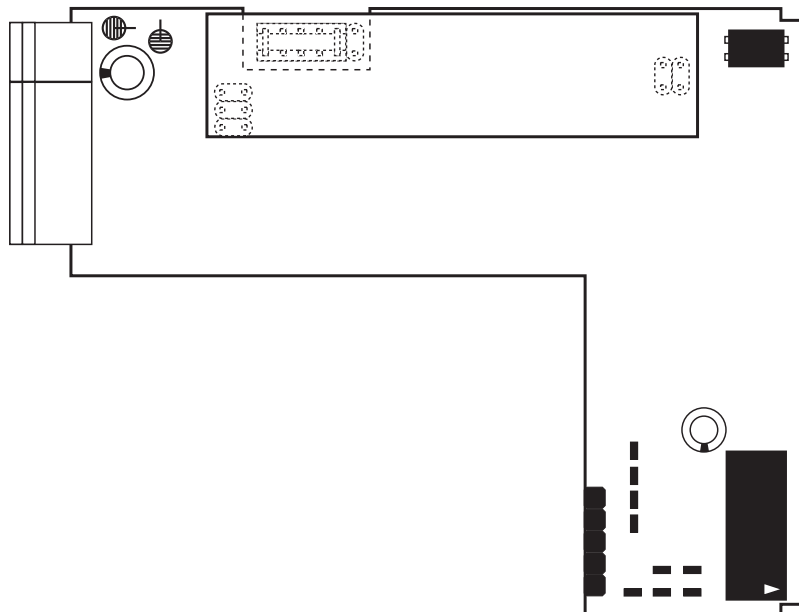
High Volt Main Board



Low Volt Main Board












Output Module Carrier Board



I-Series Input Signal Conditioning Modules

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

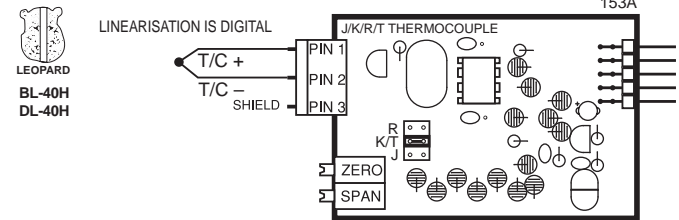
Pre-calibrated **I-Series** input modules, that have span or zero potentiometers, can be interchanged between any **I-Series** compatible meter, without recalibration, because all of the analog scaling and reference circuitry is self-contained within the module.

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

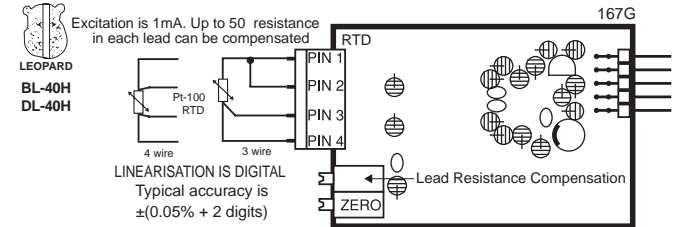


WARNING: AC and DC input signals and power supply voltages can be hazardous. Do Not insert, remove or handle modules with live wires connected to any terminal plugs.

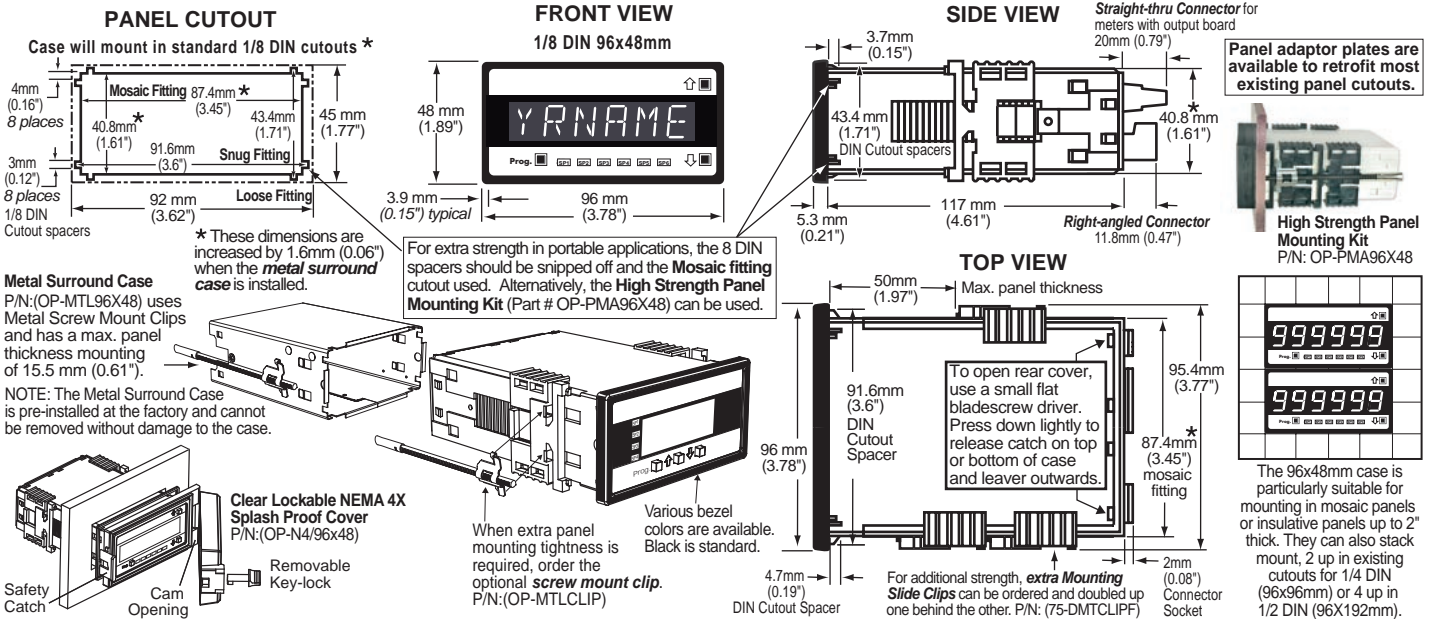
IT10: Thermocouple, J/K/R/T, Selectable °C/°F, 1°/0.1°



IT11: RTD, 100 Pt. Select 3/4-wire, °C/°F, 1°/0.1°
IT15: RTD, 1000 Pt. Select 3/4-wire, °C/°F, 1°/0.1°



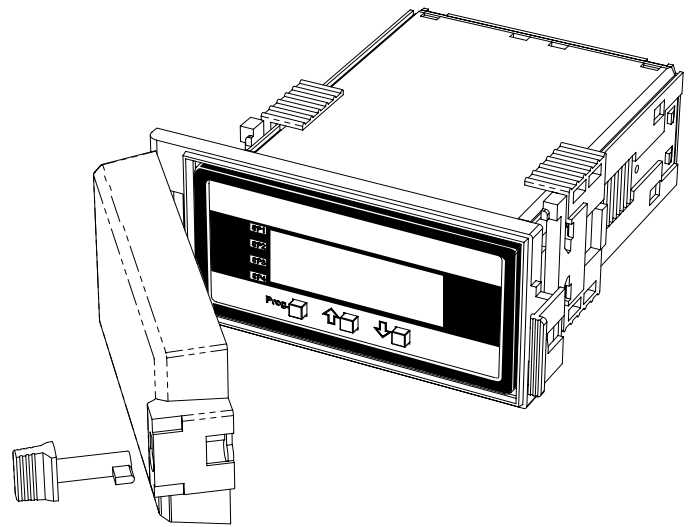
Case Dimensions



Lens Cover OP-N4X/96X48

The lens cover is designed to be dust and water proof to NEMA-4 standards. The lens cover consists of a base and cover with a cam hinge and key-lock locking device.

An O-ring, or neoprene gasket forms a seal between the base and the panel. The cam hinge prevents the cover from closing when opened until pushed closed. The cover has a tapered recess that, when closed, forms a capillary seal with a tapered ridge on the base. Turning the key-lock tightens the cover to the base, ensuring seal integrity. A safety catch keeps the cover closed even when the key is turned to the open position and removed. The keyhole can also be used to attach a safety seal clip, preventing unauthorized opening.

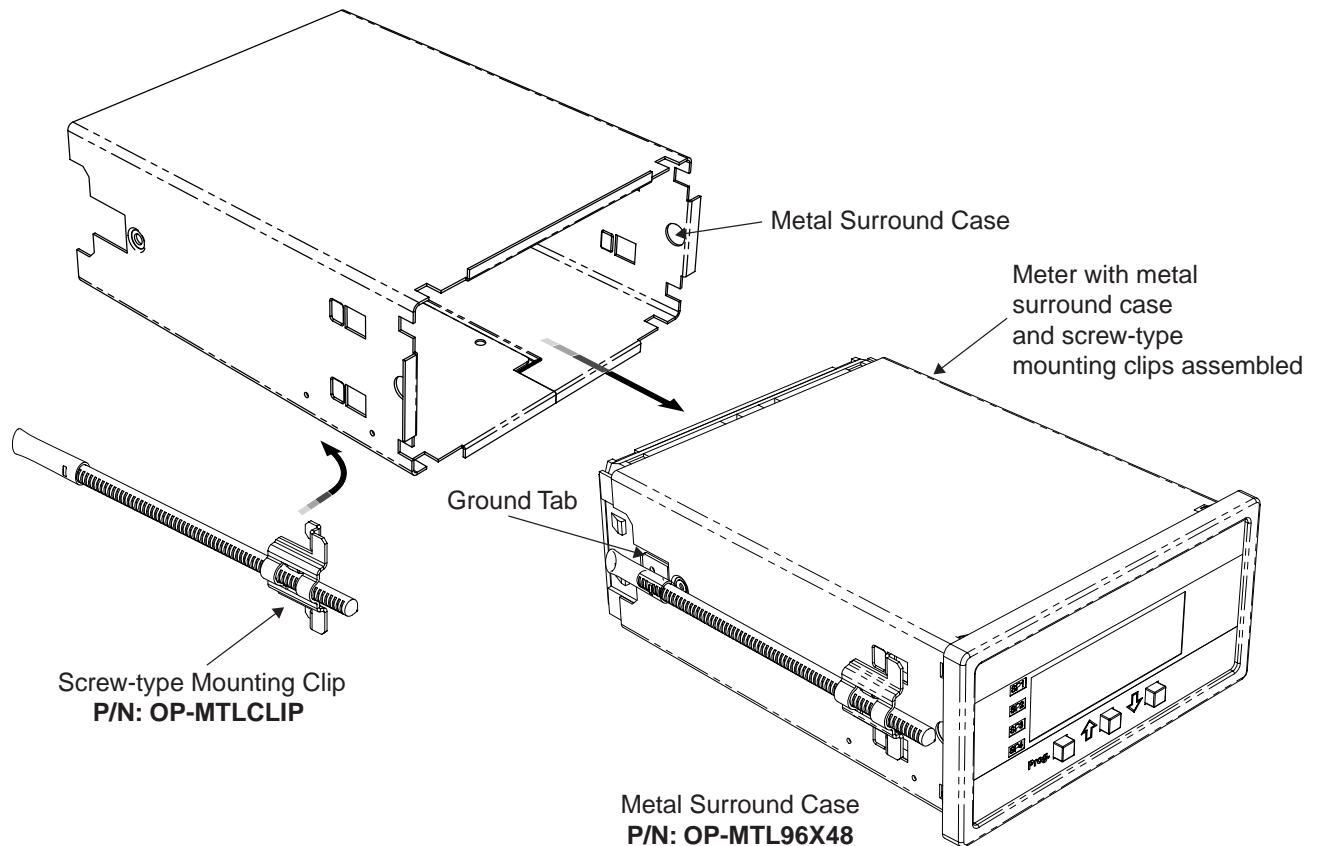


Metal Surround Case OP-MTL96X48

The meter's plastic case is made from fire retardant polycarbonate. A metal surround case can be ordered to enhance the meter's fire retardant capabilities and also provide shielding against electromagnetic interference (EMI). The metal case slides over the polycarbonate case and is held firmly in place by spring-type non-return clips. Once the metal case has been fitted to the polycarbonate case it cannot be removed.

With the metal case in place, the meter's plastic ratchet-type mounting clips can no longer be used. A pair of screw-type mounting clips are inserted into holes on the side of the metal case and used to mount the meter in the panel. A ground tab on the metal case provides a ground connection between the meter's main board and the metal case.

* Metal Surround Case must be factory installed.



Ordering Information

BASIC MODEL #	DISPLAY	POWER SUPPLY	INPUT MODULES	ANALOG OUTPUT*	RELAY OUTPUT*	OPTIONS / ACCESSORIES
DL-40H						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-40H-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-40H . . . 96x48mm, Leopard, 4 Digit, Temperature \$110

Standard Options for this Model Number

Order Code Suffix	Description	List
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► DISPLAY

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

► POWER SUPPLY

PS1	.85 - 265VAC / 95 - 370VDC	N/C
PS2	.15 - 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.

IT10	Thermocouple, J/K/R/T, Selectable °C/°F, 1°/0.1°	\$35
IT11	RTD, 100Ω Pt. Selectable 3/4-wire, °C/°F, 1°/0.1°, 385/392	\$35

► 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

► 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
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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	\$7
CR-CHANGE	Range Change from Standard Range shown in BOLD 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	Side Slide Brackets (2 pc) - extra set, extra strength	\$2
76-DL40G-N4	"Touch" Green LED Faceplate, NEMA 4, Factory install	\$8
76-DL40LG-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.

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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Texmate has facilities in Japan, New Zealand, Taiwan, and Thailand. We also have authorized distributors throughout the USA and in 28 other countries.

For product details visit www.texmate.com

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