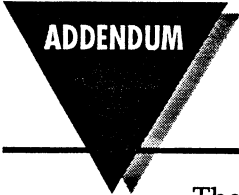




INFLDTA Linear Displacement Transducer Indicator/Controller



The INFLDTA is based on the P5000/P6000 meter. The INFLDTA uses a dedicated signal conditioner/controller board and a different power supply to work with LDT probes. The INFLDTA provides excitation power and interrogation pulses for the LDT probes and makes a Time Interval measurement.

INFLDTA Features

The INFLDTA uses a dedicated micro controller to provide features needed for LDT probes. The following is a list of new features:

Function	Display Prompt	Comments
Frequency	FrEq	Measures the A input frequency in Hz (pulses/sec)
Period	PEriod	Measures the A input frequency in milliseconds
Time Interval	Ldt	Measures time between pulse on A to B inputs in milliseconds. Use this mode to interface with Ldt probes.
Totalize	Total	Totalizes A input pulses

The measurement speed is improved for Time Interval (Ldt) and Period modes, when the gate time is zero.

The ADVANCE button (center pushbutton) now becomes the zero button while in the operating mode. This is achieved by storing the negative of the reading as the offset in the operating memory.

The SET button (second pushbutton from the left) will now cause the meter to save the immediate reading in the operating memory as Setpoint High.



For the ADVANCE or SET button features, press and hold the applicable button down for at least one measurement (Gate Time)

Configuring the Main Board

The P5000/P6000 meters have 3 levels of display brightness, but use only medium (typical factory setting) or low brightness.



High Display brightness may cause damage to your instrument!



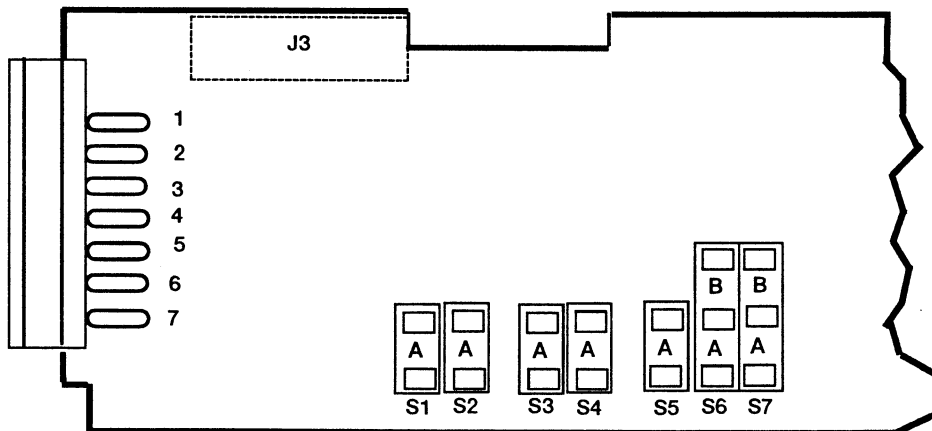
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Configure your meter as follows:

1. Install S7-B and S8-A on the display board (typical factory settings). Installing these jumpers enable programming pushbuttons.
2. Install SA-I, SA-F, SB-I and SB-F (all typical factory settings) on the main board.
3. Set Function (Func) to Time Interval (Ldt).
4. Set Scale Factor (SCALE) to read in engineering units (refer to the Section on Scaling in this addendum).
5. Use Range (rAnGE) to select the decimal point location.
6. Set Trigger Slopes (SLOPE) to negative for both A and B inputs (A nEG) and (b neG).
7. Set the Setpoints (SP HI and SP LO) to any value.
8. Set the Gate Time (GAtE t) to any value. The Gate Time controls the update time.
9. Set Configuration 1 (CnFG 1) software switches to enable or disable different features. This menu item contains 6 bits.
10. Set Configuration 2 (CnFG 2) software switches to enable or disable different features. Make sure the first position from the right is a 1 to select low to medium display brightness.
11. After configuring your meter, save the new setup information in nonvolatile memory. Do this by changing the no store (noStor - meter default) to store (StorE).

Configuring the Signal Input Board

1. Install S1-A and S2-A jumpers (default setting) for +/- 12.5 V excitation to work with LDT probe (S1 and S2 jumpers are for power supply selection).
2. Install S23-A and S4-A (default setting) to connect the matching impedance resistors. For non-standard cables, remove S3 and S4 and install a resistor equivalent to your cable characteristic impedance (not less than 100 Ohms) between pins TB3-1 and TB3-2.
3. Install or remove S5 and S6 jumpers to select the number of interrogation pulses sent to the probe per time interval. The factory default is S5 removed and S6-A installed for 17 interrogation pulses.





Jumper	Description	Required Position for LDT Probe	Required Position for LP Probe
S1 & S2	Selects power supply voltage	S1-A Installed S2-A Installed	S1-A Removed S2-B Installed
S3 & S4	Connects the matching impedance resistors	S3-A Installed S4-A Installed	S4-A Installed S4-A Installed
S5 & S6	Selects number of interrogation pulses sent to the LDT probe per Time Interval (see table below)	S5-A Removed S6-A Installed	S5- Removed S6-A Removed
S7	Determines how often Time Intervals are repeated.	S7-A Installed	S7-B Installed

Number of Interrogation Pulses	S5	S6
1	Remove A	Remove A
5	Insert A	Remove A
17*	Remove A	Insert A
21	Insert A	Insert A
33	Remove A	Insert B

* This denotes the typical factory setting

4. Install or remove the S7 jumper to determine how often Time Intervals are repeated. Refer to the following table.

Time Interval Repetition	S7-A	S7-B
1mS	Removed	Installed
10mS*	Installed	Removed
70mS (only needed for long probes, >48")	Removed	Remove

* This denotes the typical factory setting

Connection Wiring

The following figure shows the LDT probe connector.

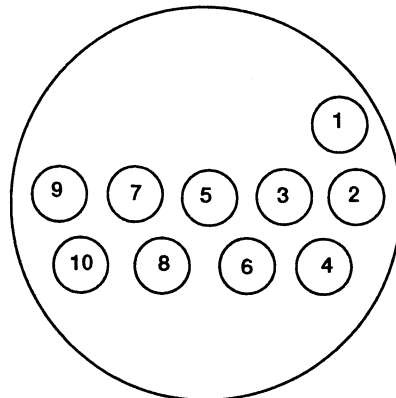


Figure 2. LDT Probe



Connection Wiring (Continued)

The following table describes the connections of the LDT probe to an INFLDTA meter using a standard cable and connector.

LDT Probe	Current Color Code	New Color Code	Description	TB3#
1	White/Blue Stripe	White	DC Ground	TB3-3
2	Blue/White Stripe	Brown	Frame	AC or DC Gnd
3	White/Orange Stripe	Gray	-Gate Out	TB3-2
4	Orange/White Stripe	Pink	+Gate Out	TB3-1
5	White/Green Stripe	Red	VCC (+Vdc)	TB3-7
6	Green/White Stripe	Blue	VEE (-Vdc)	TB3-6
7	White/Brown Stripe	Black	Amp Return (Gnd)	
8	Brown/White Stripe	Violet	Amp Out (Return)	
9	White/Gray Stripe	Yellow	+Interrogation	TB3-5
10	Gray/White Stripe	Green	-Interrogation	TB3-4

LP Probe Color Code	TB3#
Open	TB3-3
Blue	TB3-2
Green	TB3-1
Red	TB3-7
Black	TB3-6
Yellow	TB3-5
Orange	TB3-4

Scaling

The INFLDTA indicator/controller is supplied with a default scaling in inches (millimeters for Europe). If you require scaling different than the typical factory setting, you must follow the preceding steps:

1. Calculate your new scale factor:

$$\text{SCALE} = 1000 / (\text{INT} \times \text{GRADIENT})$$

INT is the number of interrogation pulses per time interval. The default setting is 17.

GRADIENT is a characteristic of the probe and shows the ratio of the time interval to distance in inches (millimeters in Europe).

NOTE

The gradient number of probe is stamped on the head of each probe.

2. Select Multiply (A.SC) scale factor and enter the calculated scale factor according to the above formula.