



Single & Dual Channel Panel Meter

The Digitec **D3700A** series digital panel meters are available as either the **single-channel D3720A** or the **dual-channel D3722A**. These full-featured meters include a 6-digit LED display, a user-friendly configuration menu and high-speed measurement rate for the most demanding applications. Combine all of this with its clean appearance, industrialized aluminum case, NEMA 4X construction and snap-action buttons and you have a meter ready for all applications.

3 TYPES OF CALIBRATION:

USER - calibration allows the entry of the low and high input values and the corresponding low and high display engineering values.

LOAD - calibration allows setup via known input values. Simply apply the low input and set its corresponding display value, then apply the high input and set its value. The low and high values can be programmed at different times and then enabled.

SHUNT - calibration allows setup via an external shunt calibrator resistor. Simply set the display low value and the shunt cal display value, then the meter will automatically measure the unloaded bridge for the zero value; then closes the internal shunt cal relay and measures the shunt calibrated input.

PROGRAM MENU STEPS LOCKOUT: The user can program the majority of the menu steps to not be accessible. This simplifies the programming of the meter allowing only necessary menus to be displayed in the SETUP mode. The meter can initially be configured to the desired setup, and then the user can lockout all the unnecessary menu steps.

AUTOTARE: This function allows the user to set the selected display/input to zero. It can be performed via a front panel key or remote input. Setup is available to switch the display from net to gross.

NET/GROSS: The net value or the gross value can be displayed via a front panel key or remote input. Alarm limits, analog out or peak values may be assigned to the net or gross values.

LINEARIZATION: U-plot 20-point linearization allows the user to program up to 20 known values of non-linear curvature along with the corresponding display readings. Typical uses are for non-linear outputs from transducers, load cells, etc. and for display of volume in non-linear storage vessels.

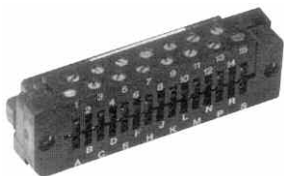
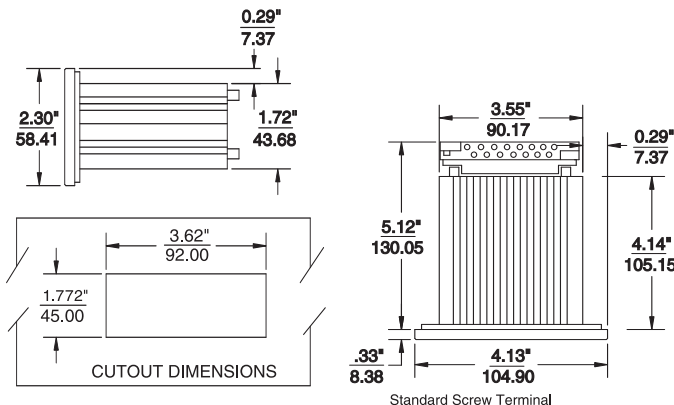
MATH CHANNEL: The D3700A series comes with an extra channel that is a non input channel. This can be used to duplicate an input channel for completely new scaling and alarm setups. The two channel input model D3722A can be used to perform $A + B$, $A - B$ or $A \div B$ math functions. (Consult ATC Digitec for your special equations)

SECOND SCALE: This function allows the user to set a second scaling to the input. The input will then be displayed in two engineering units (typically for English/Metric displays).

PEAK 1 AND PEAK 2: Peak 1 and peak 2 are both assignable to capture the maximum or minimum display value. They are assignable to any channel and the net or gross value. It can be reset through a front panel key or remote input. Capture rate is 20/SEC.

- 6-Digit Red LED Display
- Fast Analog Update
- 1/8 DIN extruded aluminum case
- NEMA 4X Rated Front
- Up to 4 Relay Outputs
- 20-point Linearization
- User Programmable Keys and Remote Inputs
- Math Channel
- Relay for Alarm/shunt Calibration
- 3722A: Two input channels and third math channel
- 3722A: Independent setup and scaling for all 3 channels

DIMENSIONS (INCHES/MILLIMETERS)



STANDARD TERMINAL
30-Pin Double Sided
Screw Terminal (X Option)

PROGRAMMABLE LOCKOUT CODE: A 2-digit code for set-up is programmable. Setup can also be protected via a remote input.

DIGITAL FILTER: This function allows the user to select a digital filter. This is used for noisy, unstable inputs.

ALARMS: Each meter is standard with 4 programmable alarms that control the front panel LED status and the one standard relay (Form A) and optional 3 relay outputs (Form C).

Each alarm is:

- Alternate Hi/Low on alarm 1 & 2
- Assignable to any channel
- Programmable for high or low limit
- Programmable setpoint value
- Programmable hysteresis for complete display range
- Programmable for latching
- Programmable to Flash Display on alarm
- Alarm #1 is programmable for fail safe operation for all the alarms. (Fail safe operation allows the relay to de-energize on loss of power.

NON-VOLATILE MEMORY: All setup data entered by the user is stored in a non-volatile memory. No batteries needed and no need to re-program the meter after power down.

RELAY OUTPUT: 1 Form A relay 240VAC @ 1A, is provided standard for use as an alarm output or shunt cal relay.

DISPLAY: 6 Digit .56" Red LED display for readings of -199999 to 999999 with selectable decimal points.

INPUT: Process inputs of plus and minus inputs of 30mV, 100mV, 200mV, 2V and 10V. 20mA input is solder selectable on main board. Display and outputs are updated at selected resolution.

DISPLAY UPDATE: 30/SEC fixed.

EXCITATION: Optional, 10VDC @ 250mA, 24 VDC @ 150mA. Consult factory for 5 VDC @ 100mA.

MODEL NUMBER >>>>>>	D372	01	
Channel(s)			
SINGLE CHANNEL: 1/8 DIN; 6-Digit LED; NEMA 4X; 20-Point Linearization (switch selectable ±30mV, 100mV, 200mV, 2V, 10V, 20mA)	0A		
DUAL CHANNEL: Dual channel; 1/8 DIN; 6-Digit LED; NEMA 4X; 20-Point Linearization; Third math channel (switch selectable ±30mV, 100mV, 200mV, 2V, 10V, 20mA)	2A		
Options			
3 relays (Form C for Alarms)			C
*Combination of Option C and Option H			CH
Combination of Option C and Option P			CP
Factory Scaling (provide input range, display range)			F
*16 bit analog output			H
Excitation supply (10 VDC, 24 VDC)			P
RS232 Communication			T
*includes Option "P"			

SETUP MODE KEY FUNCTIONS



SELECT KEY: Moves decimal point location, selects the choice of the functions within the current menu or allows the selection of the digit to be changed.

UP ARROW KEY: Increases the current value of the flashing digit by one unit per press.

DOWN ARROW KEY: Decreases the current value of the flashing digit by one unit per press.

EXIT KEY: Returns you to RUN mode when at main menu or returns you to main menu prompt when in programming menu.

ENTER KEY: Enters selected main program branch. Moves you down in the program menus. Enters selected choice to memory.

The F1-F4 front panel run-time keys can be programmed for any of the following:

- ALARM 1 View and Set
- ALARM 2 View and Set
- ALARM 3 View and Set
- ALARM 4 View and Set
- Channel 1 Tare/Auto zero
- Channel 2 Tare/Auto zero
- Channel 3 Tare/Auto zero
- Channel 1 Display
- Channel 2 Display
- Channel 3 Display
- Reset
- Scale 2 select
- Net/Gross select
- Shunt cal display/calibration
- Peak 1 display
- Peak 2 display

REMOTE INPUTS: 2 remote input function selections

- Channel 1 display
- Channel 2 display
- Channel 3 display
- Scale 2
- Decimal point selection
- Peak 1
- Peak 2
- Reset
- Net/gross
- Alarm disable

OPTIONS:

- C** 3 each Form-C, SPDT relays rated at 5A @ 240 VAC, 5A @ 30 VDC
- *CH** Combination of Option C and Option H
- CP** Combination of Option C and Option P
- F** Factory scaling calibration (user provides input range and display range)
- *H** 16 bit analog output-menu selectable for 4-20mA, 0-10V, 0-5V, -5V - +5V
- P** Excitation output voltage supplies 24 VDC @ 150mA, 10 VDC @ 250mA supply
- T** RS232C Bidirectional serial communication @ 9600 baud, no parity, 8 data, 1 stop bit

*Includes Option P

SPECIFICATIONS

INPUT	4-20 mA +/-	30 mV +/-	100 mV +/-	200 mV +/-	2V +/-	10 V
ACCURACY	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%
ZERO DRIFT	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%
SPAN DRIFT	10 ppm/°C	10 ppm/°C	10 ppm/°C	10 ppm/°C	10 ppm/°C	10 ppm/°C
INPUT IMPEDANCE	50 Ohms	10 Mohm	10 Mohm	10 Mohm	10 Mohm	10 Mohm
4-1/2 DIGIT RESOLUTION	1 uA	1 uV	10 uV	10 uV	10 uV	1 mV
OVER-RANGE CAPABILITY, MINIMUM	10%	10%	10%	10%	10%	10%
DISPLAY UPDATE	30/SEC, Dual Channel - 35/SEC					
NORMAL MODE REJECTION RATIO	63 dB					
COMMON MODE REJECTION RATIO	130 dB					
ANALOG RESPONSE TIME	25/SEC Analog Output					
INTERNAL RESOLUTION	22 bits					
RELAY UPDATE	35/SEC					
DIGITAL FILTER	60 Hz					
WARM UP TIME	15 minutes					
OPERATING TEMP. RANGE	-20°C to 85°C					
STORAGE TEMP RANGE	-20°C to 85°C					
HUMIDITY	to 95%, non-condensing					
AC SUPPLY VOLTAGE	115/230 VAC					
POWER CONSUMPTION	15 Watts maximum (all options installed)					
ISOLATION						
Signal Input to Earth Ground	Safety rated to 450 Vms, 2200 Vms, high voltage test					
Option board to Earth Ground	Safety rated to 450 Vms, 2200 Vms, high voltage test					
Option board to Signal Input	400 Vp					
Power to Earth Ground	Safety rated to 500 Vms, 4000 Vms, high voltage test					
WEIGHT	0.84 lbs.					