

BIG DISPLAY!

THE MEGA METER



INPUT FUNCTIONS

- Serial Remote Display
- Counter, Timer, Clock
- 4-20mA Current Loop
- V/mA/RMS
- Temperature TC
- Temperature RTD
- Strain Gage
- Resistance
- Pressure
- pH
- Flow

OUTPUTS

- RS/RS-32/422/485
- Alarms (4)
- 4-20mA
- 0-5VDC
- Open Collector XTTR (8)
- Power 24V/30mA For XMTR

APPLICATIONS

- Serial Remote Display
- DCS/SCADA-PLC Interface
- Message Center
- Temperature •Time
- Pressure •Lap
- Flow •Speed
- Volume •Distance
- Events •Process
- Events •Process

**DISCONTINUED
NO REPLACEMENT**

FAX: 520-748-2800
E-MAIL: sales@otekcorp.com

520-748-7900

O TEK™
CORP.

SINCE 1974

4016 E. TENNESSEE ST.
TUCSON, AZ. 85714 U.S.A.

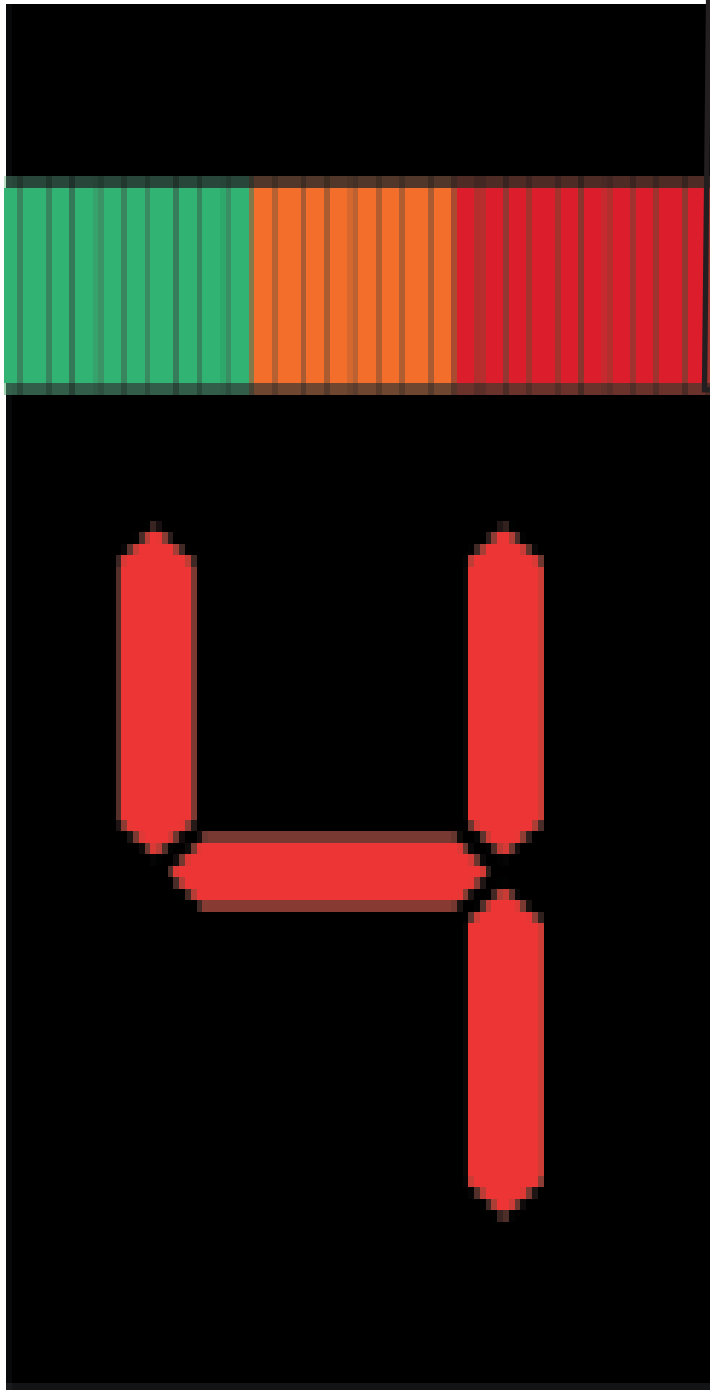
MADE
IN
USA



COMMON FEATURES OF THE HI-QMEGA METER

- 6 Full Digits •101 Segment Automatic Tricolor Bargraph •Sanitary NEMA4X (IP65) •Math Functions: +, -, x, ÷, √ and More • Isolated 16-bit A/D w/Signal Conditioners • Isolated Analog Outputs (4-20mA & 0-5VDC) • 30V/DC Isolated Output for Your Transmitter • Four 10A SPDT Relays for On-Off Control • 8 O.C.T. (250mA/24VDC) for Fast On-Off Control • Isolated 24VDC Power Input • Isolated 190-260VAC Power Input • Look Up Tables for Thermocouples/RTDs
- Programmable Baud Rate & Address • Real Time Clock with 10-Year Battery Back Up • Isolated RS-232C/422/485 Transistor
- Automatic Tricolor LED Bargraph with Dimming Blinking & Pointers • ZERO • TARE • SPAN • AVERAGE
- Polynomials to the 9th Order, Customer's Tables • All ASCII Characters for Open Protocol

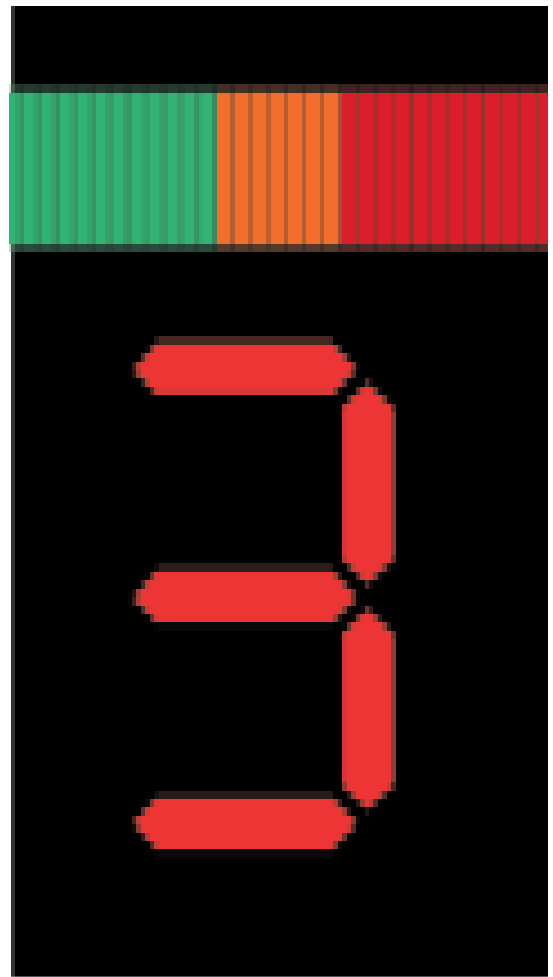
**NOTE:
DISPLAY & AUTOMATIC TRICOLOR
BARGRAPH SEEN ACTUAL SIZE**



DISCONTINUED

DESCRIPTION: OTEK's New Series **MEGA METER™** is a by-product of its highly successful "**HI-Q**" Series of Programmable Intelligent Controllers and Bargraphs. The "**MEGA**" Series are medium and giant bargraph digital displays that give you trend and present representation of your process. The Automatic Tricolor LED Bargraph (an OTEK innovation) changes color upon reaching programmable set point(s), either a portion of the bargraph, the complete section, or just the pointer. In addition, you can make the display blink or flash via simple serial commands or pre-configure them with OTEK's Navigator (G.U.I.). Use them as simple **REMOTE DISPLAYS WITH RS232/422/485 I/O** or as **STAND ALONE Indicator/Controllers**, or as **PLC, DCS, SCADA Peripheral**. Either indoor or outdoor, they all have heavy duty NEMA4X (IP65) **SANITARY** (important), double gas steel and powder coated that can be wall or pipe mounted (2 1/4" "U" Bolt Included). All connections are made through watertight 1/2" NPT port. A screw terminal connector on the bottom (not watertight) is available on request.

NO MORE PLACE-MENT



1.5" Model Shown

1/2 Actual Size



ORDERING INFORMATION 11-6-08

Model: MEGA- 1 2 3 4 5 6 7 8 9

DIGIT'S SIZE (Red Standard)

- 150.....1.5" Without Bargraph
- 151.....1.5" With Bargraph
- 300.....3.0" Without Bargraph
- 301.....3.0" With Bargraph
- 400.....4.0" Without Bargraph
- 401.....4.0" With Bargraph

SERIAL COMMUNICATIONS

- 1.....Isol. RS232C & RS485
- 2.....Isol. RS232C & RS422
- 4.....Isolated USB
- 5.....Isolated RS232 Only
- 9.....Custom (Factory #)

POWER INPUT & CASE RATING (2)

- 1.....90-260VAC NEMA 4X
- 3.....24VDC & NEMA 4X
- 9.....Custom

ON-OFF CONTROL OUTPUTS

- 0.....None
- 1.....Relays(4)
- 2.....Open Collector Transistors (8)
- 9.....Custom

NOTES:

1. See Power Consumption Table
2. Isolated Compliance For External Transmitters/Transducers
3. Multilevel Input Debounced For 100Hz Max.
4. V & mA (DC & RMS) Internal Jumper Selectable For ± 1, 20 & 50mA, .5, 5 & 50VDC. Shipped with .5V or 1mA Unless Specified When Ordering.

SIGNAL & DIGITAL INPUTS (2Inputs) (4)

- 00.....None (Remote Display)
- 01.....Multilevel(100Hz Max.)
- 02.....TTL High Speed
- 03.....Clock 24:00:00
- 04.....Clock 12:00:00
- 09.....Custom (Factory #)

ANALOG INPUTS (1 Channel)(5)

- 10.....VDC (1MW)
- 11.....mADC
- 12.....4-20mA Current Loop (25W)
- 14.....VRMS (1MW)
- 15.....mARMS
- 17.....Strain-Gage(>200<400W)
- 20.....Strain-Gage (>1K<5KW)
- 20.....Resistance (50KW)
- 21.....Temperature RTD
- 22.....Temperature Thermocouple
- 25.....mVDC (1MW)
- 29.....Custom (Factory#)

ANALOG INPUTS (2 Channels)(4 & 5)

- 30.....VDC (1MW)
- 31.....mADC
- 32.....4-20mA Current Loop (25W)
- 33.....Watts DC (1M-0.1W)
- 34.....VRMS (1MW)
- 35.....mARMS
- 36.....Watts RMS (1M-0.1W)
- 42.....Temperature TC
- 47.....mVDC (1MW)
- 49.....Custom (Factory #)

ANALOG & POWER OUTPUTS (3)

- 0.....None
- 1.....4-20mA (1 ea.)
- 2.....0-5VDC (1 ea.)
- 3.....4-20mA (2 ea.)
- 4.....0-5VDC (2 ea.)
- 5.....4-20mA & 0-5VDC,(1ea.)
- 6.....4-20mA & 30V Compliance (1 ea.)
- 7.....0-5VDC & 30V Compliance (1 ea.)
- 8.....30V Compliance (1 ea.)
- 9.....Custom

FAX: 520-790-2808
E-MAIL: sales@otekcorp.com

520-748-7900

OTTEK™
CORP.

SINCE 1974

4016 E. TENNESSEE ST.
TUCSON, AZ, 85714 U.S.A.

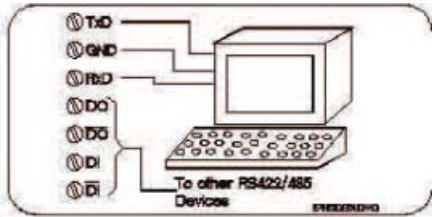
MADE
IN
USA



COMMON SPECIFICATIONS

SERIAL COMMUNICATIONS

- Isolation to Power Inputs: 500VDC
- Baud Rate: to 19.2K Baud
- Protocol: Full ASCII
- Concurrent Use of RS-232C & 422 or RS-232C & RS-485 I/O



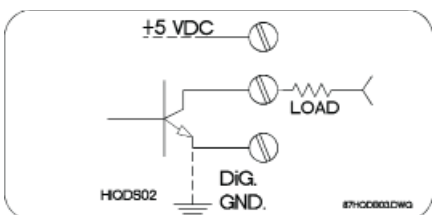
ON-OFF CONTROL OUTPUTS RELAYS

- Type: S.P.D.T. (1C)
- Max. Switching Current: 10A Res.
- Max. Switching Voltage: 30VDC/ 240VAC@Rated Current
- Contact Protection: Included
- Life Expectancy: 10,000,000 Cycles
- Contact Isolation: 1000VRMS
- Initial Contact Resistance: $0.1\ \Omega$



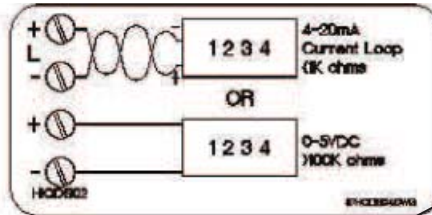
OPEN COLLECTOR TRANSISTORS (8)

- Type: Sink Driver (Transistor)
- Isolation to 5V Power: None
- Max. Current Sink: 250mA
- V_{sat} @250mA: .8V
- Standard VC: 5VDC
- External VC: <35VDC
- Switching Speed: 1 μ S



ANALOG CONTROL OUTPUTS

- Accuracy & Linearity: $\pm 0.01\%$ F.S.
- Resolution: 16 Bits
- Outputs: 0-5VDC(>100K Ω)
4-20mA (<1K Ω)
- Custom Output: 0-20
- Compliance Output: 30VDC
- Isolation: 500VDC



MEASURING INPUTS

DIGITAL DISCRETE INPUTS

Functions Selectable:

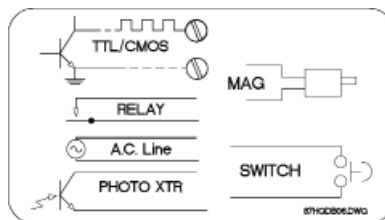
Event, Timer, Period, Frequency, RPM and SPH

Multilevel (Option 01): (Low Speed)

- Dry Contact to 24VDC
- Isolation to 5V Power: None
- Response: DC to 100Hz
- Input Impedance: 1M Ω /27pF
- Power Consumption: 250mW

TTL Level (Option 02): (High Speed)

- 0<.8V; 1=>2.4V
- Response: DC-50KHz
- Isolation to 5V Power: 500VDC



MISCELLANEOUS

- Math Functions: +, -, X, \div , \sqrt
- X-Y Tables: 25 Points
- Polynomials: to 9th Order
- Dimming: 0 (Blank) to 9 Max.
- Blinking 0 (None) to 5 (5/Sec.)
- Pointers: One or None

A/D CONVERTER

- 16-Bit Plus Sign A/D(50K Counts)*
- Display Resolution: $\pm 0.002\%$ of F.S.*
- Accuracy: $\pm 0.01\%$ of Full Scale
- Linearity: $\pm 0.01\%$ of Full Scale
- Zero: Automatic/Programmable
- SPAN: Programmable
- F.S.Input Ranges: Jumper Select-able, $\pm 5, 5, 10$ & 50VDC
- F.S. Input Current Ranges: $\pm 1, 20$ & 50mADC
- Sampling Rate: 16/sec. \div by Channels
- Input Type: Single Ended/Diff.
- Input Bias: 50mA
- C.M.V.: ± 2 VDC
- CMR: ± 60 dB
- Averaging (Weighted): None to 40
- Input Impedance: See Ord. Info.

ANALOG SIGNAL CONDITIONERS

OPTIONS: (See Ord. Information), 10, 11, 12, 30, 31, 32, 50, 51 & 52
* Same Specifications As A/D

STRAIN-GAGE:

(Options 17, 18, 37 & 38)

- Accuracy and Lin.: $\pm 0.1\%$ of F.S.
- V Excitation(1): ± 2.5 VDC $\pm 0.5\%$
- I Excitation(2): 1mADC $\pm 0.5\%$
- Stability of Excitation: $\pm 0.05\%$ / $^{\circ}$ C
- Maximum Current of VE: 30mA
- Maximum Voltage of IE: 5VDC
- (1) Typical for S-G of 200-400 Ω
- (2) Typical for Monolithic S-G to 5K Ω
- (3) Tare, Range, Zero Span Are User Programmable

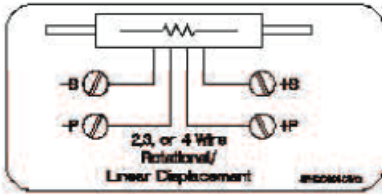
mVDC (Options 25 & 47)

- Accuracy & Lin.: $\pm 0.1\%$ of F.S.
- Full Scale Input: ± 10 mVDC
- Typical Gain: 50(see A/D Sec.)
- Common Mode Voltage: ± 2 VDC

DISCONTINUED
NO REPLACEMENT

RESISTANCE (Options 20 & 40)

- Accuracy & Lin.: ±0.1% of F.S.
- Full Scale Input: 50KΩ
- Excitation Current: 0.01mA
- Stability of Excitation: ±0.05%/°C



TRUE RMS VOLTS, AMPS & WATTS
(Options 14, 15, 34, 35, 36, 53, 54, 55, 60 & 61)

- Accy. & Lin.: ±1.0% of F.S. DC-50.0Hz Sine Wave
- Accy. & Lin.: ±0.5% of F.S. 50.0- 10KHz Sine Wave
- Accy. & Lin.: ±2.0% of F.S. 10KHz - 100KHz Sine Wave
- Resolution: ±0.01% of F.S.
- Common Mode Voltage: 2V rms
- Overvoltage Protection: 500V
- Overcurrent Protection: 200%
- Input Impedance: See Cnd.Info.
- Drift vs Temperature: 150 PPM/°C
- Input Bias Current: 10pA

RTD (Options 21 & 41)

- Din ($\alpha=0.00385$):-200° to+800°C
- ANSI ($\alpha=0.003923$):-200 to+600°C
- Accuracy: ±0.1°C
- Resolution: ±0.1°C
- Scale: User Selectable °F or °C
- Linearization: Polynomial to 9th
- Open Sensor:+Overrange/Flash
- Connections: 2 Wire (3 or 4 Wire On Request)
- Excitation: 0.1mA or 1mA (Cu)

THERMOCOUPLE (Opt. 22, 42 & 50)

- Thermocouple Type: Specify When Ordering J, K, T, R, S, B, C, E
- Accuracy: ±0.1% of F.S. (Resolution 0.1°)
- Full Scale: Same as Thermocouple
- Open TC:(Burn Up)
- Input Impedance: >100MΩ
- Scale: User Selectable °C
- Lead Resistance Effect: 0.001% / 100Ω
- Linearization: Polynomial to 9th

pH (Acidity)

- Input Impedance: 10¹⁵
- Range 0.00 - 14.00 pH
- Accuracy: Linearity ±0.05pH
- Temperature Compensation: None unless 2nd Channel is used for RTD input. Consult OTEK

HUMIDITY (% RH)

- Consult OTEK for the Sensor (Yours or Ours) Interface and Type

FLOW

- Use any 4 channel option V or mA Input and implement the Flow V Configuration.

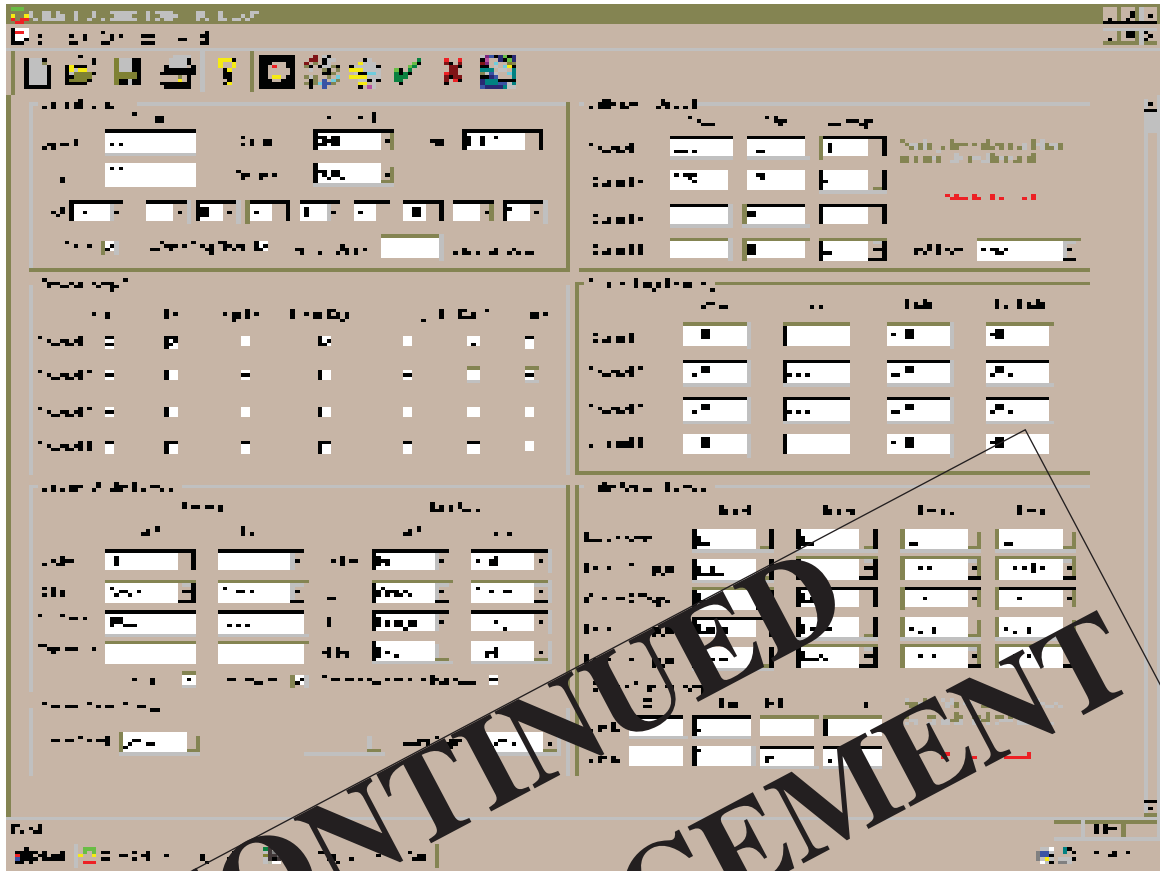
ENVIRONMENTAL (TO SPECS)

- Operating Temperature: -10 to 55°C
- Storage Temperature: -20 to 65°C
- Humidity: 10-90%RH, N.C.
- MTBF: >100,000 Hrs.
- NEMA 4X (IP65) (Metal)

**ELECTRICAL SPECIFICATIONS FOR EACH SIZE
(ALL AT 90-260VAC, 50-60Hz INPUT)**

Digit Height	4"	3"	1.5"	
Luminous Intensity Digits (Digit)	125mC	150mC	50mC	
Luminous Intensity Bargraph (DOT)	20mC	20mC	10mC	
Power Consumption (W): Digits/Bar/Total	6/14/20	6/14/20	3/7/10	
Typical Viewing Distance Ft. (M)	130 (40)	100 (30)	50 (15)	

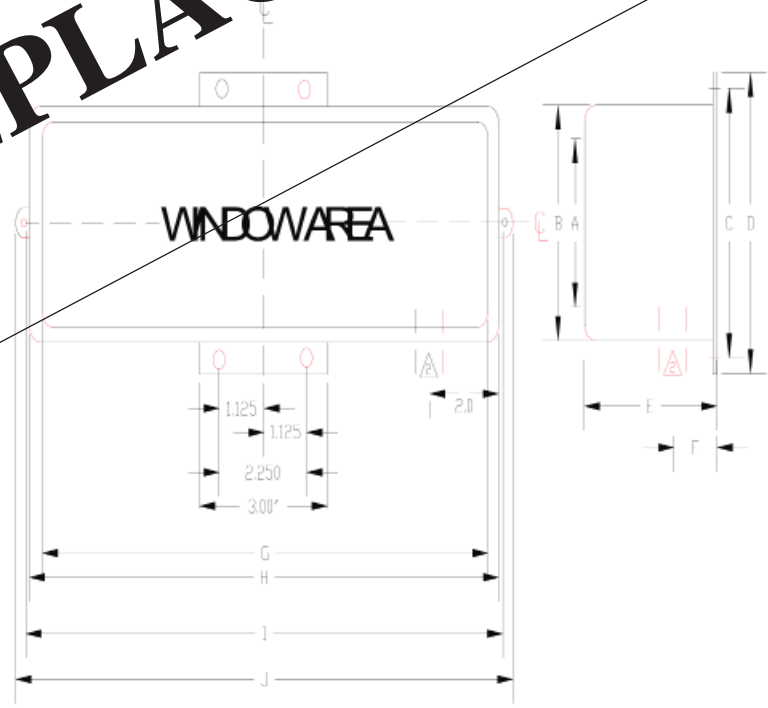
With OTEK's New **WINDOWS NAVIGATOR™** (PC G.U.I) configuration is so fast & easy that no Instruction Manual (other than connections is required! Just plug in your PC Terminal, upload our Free Program and start selecting your configuration. Within minutes you will be done and you can even email



**DISCONTINUED
NO REPLACEMENT**

MECHANICAL SPECIFICATIONS

MODEL:	MEG15	MEG30	MEG40
A	3.00	6.00	7.50
B	3.80	7.50	8.00
C	4.55	7.75	8.75
D	5.30	7.50	9.00
E	3.50	3.50	3.50
F	1.75	1.75	1.75
G	9.20	17.00	23.00
H	10.00	18.00	24.00
I	NONE	18.75	24.75



NOTES:
 1. All mounting holes are 0.375" diameter for 1/4"-20 screws.
 2. Conduit knock out 1.03" diameter for 3/4" NPT