London Electronics Limited

Digital Panel Meter

INT4-AH

Ampere Hour Panel Meter

KEY FEATURES

- 6 digit LED display
- Input 0-50mV, 0-60mV, 0-75mV from DC shunts
- Input resistance of 1 Megohm
- 20-bit A/D converter
- Isolated analogue output
- Alarm outputs, 2 or 4 relays
- Data output, RS232, RS422/485 or Modbus RTU
- 95-265V AC or 11-30V DC powered

- **New single layer menu for easier setup**
- **Compatible with existing INT2 series**
- **IP65 front panel sealing**
- **IP67 front panel cover optional**
- **User friendly manuals**
- **95-265V AC or 11-30V DC power**
- **Multi-program memory option**
- **Sensor drift correction**
- **Direct or theoretical calibration**
- **Adjustable display brightness**

DESCRIPTION

The INT4-AH is the fourth generation Ampere Hour meter within our popular 1/8 DIN INTUITIVE panel meter range. It utilises a modular construction technique which enables you to configure it with the exact functionality you require. This flexible approach ensures that you only pay for the features you need. It is ideal for measuring Ampere Hours, Ampere Minutes or Coulombs.

The readout is provided by a 6 digit, 7 segment LED display which is coupled with an ultra-high resolution 20-bit A/D converter to provide your instrumentation with perfect resolution and stability. In addition the easy to use menu navigation allows you to have the indicator set up within minutes.

We offer a wide range of optional outputs including, voltage and current analogue outputs, 2 or 4 alarm relays with a wide range of configuration settings, data interface via RS232, RS422/485 + Modbus ASCII and Modbus RTU.

With backward compatibility with the existing INT2 series and the same front panel design, dimensions and connections it makes transitioning over to the INT4 easy.

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TECHNICAL DATA	
Display	6 digit, 7 segment LED, 14mm high (-199999 to +999999)
Viewing Distance	7m
Digit Colour	Red (standard), green (optional)
Brightness	Variable, 7 levels
Display Range	-199999 to +999999, depending on available signal level.
Integrator Capacity	999999 counts maximum. Total saved on power loss.
Display Calibration	Can accumulate in time bases of minutes, hours or days
Input Signal	0-50mV, 0-60mV, 0-75mV from DC shunts
Excitation Voltage	24V @ 30mA excitation voltage (5V or 10V optional)
Input Resistance	1 Megohm
Power Supply	95-265V AC (standard), 11-30V DC (optional)
Power Burden	10VA max
Resolution	1:400,000 max. (bipolar)
Display Update Rate	10 readings per second
Input Connections	6 screw terminals for current and voltage Inputs
Accuracy	+/- 0.05% of range
Filtering	Adjustable from 0 to 25 seconds. Active filter
Last Digit Round-up	Selectable 1, 2, 5, 10, 20 or 50
Front Panel Controls	Calibration, tare, reset, max/min, alarms
Thermal Stability - Range	+/- 25ppm/ºC
Thermal Stability - Offset	+/- 30ppm/ºC
Logic Inputs	3 x NPN or contact closure
Logic Functions	Tare, view total, reset Hold, nett/gross value, memory page address 1, 2 or 4 (only if multi-memory MEM option is installed)
Unit of Measure Label	Sheet of labels included
ENVIRONMENTAL	
Front Panel Sealing	IP65 (standard), IP67 with optional SPC4 cover
Storage Temperature	-20 to +70ºC, non-condensing
Operating Temperature	0 to 50ºC, non-condensing
ANALOGUE OUTPUT (optional)	
ANI Option	0-20/4-20mA into 0 to 500 Ohms, Resolution 0.4uA
ANV Option	0-10V into loads >600 Ohms, Resolution 0.2mV
ANB Option	+/- 10V into loads >600 Ohms, Resolution 0.4mV
Scalable	Yes
Isolated	Yes
Accuracy	+/- 0.1% of range
Linearity	+/- 0.02% of range
Stability	+/- 50ppm/ºC
ALARM OUTPUTS (optional)	
AL2 Option	2 x SPST mechanical relays, 2A @ 250V AC, resistive load
AL4 Option	4 x SPST mechanical relays, 2A @ 250V AC, resistive load
DSS Option	2 x solid state relays, specify AC or DC, 100mA max @ 250V AC, 500mA max @ 60V DC
QSS Option	4 x solid state relays, specify AC or DC, 100mA max @ 250V AC, 500mA max @ 60V DC
SPCO Option	2 x SPCO mechanical relays, 2A @ 250V AC, resistive load
DATA OUTPUT (optional)	
232 Option	RS232 ASCII
485 Option	RS422/RS485 ASCII + Modbus ASCII
RTU Option	RS485 Modbus RTU

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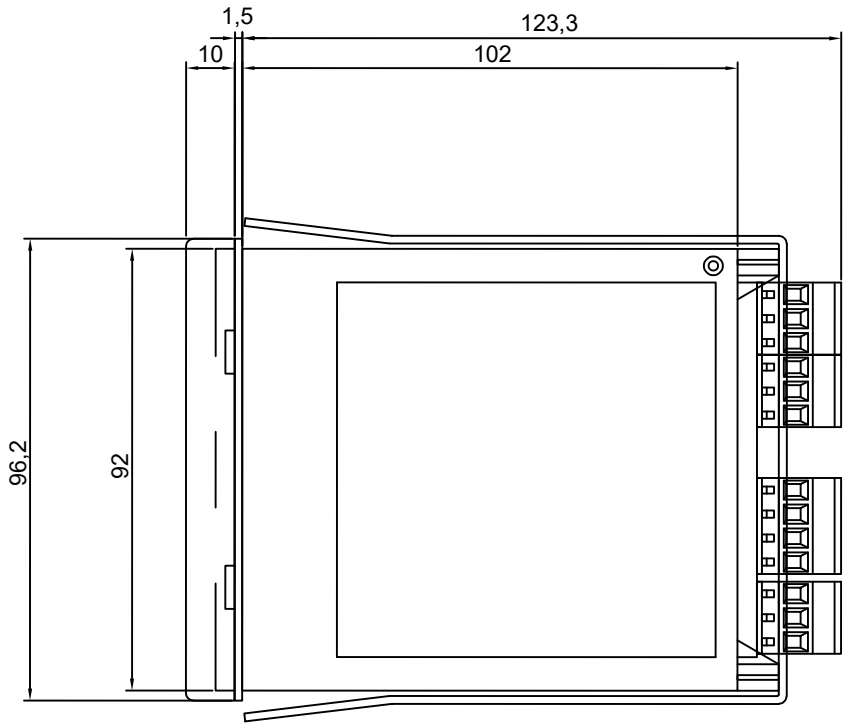
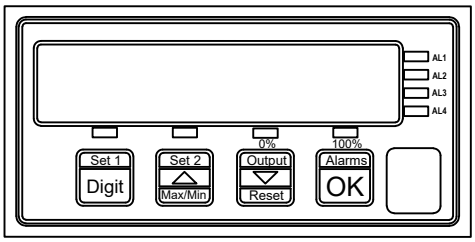
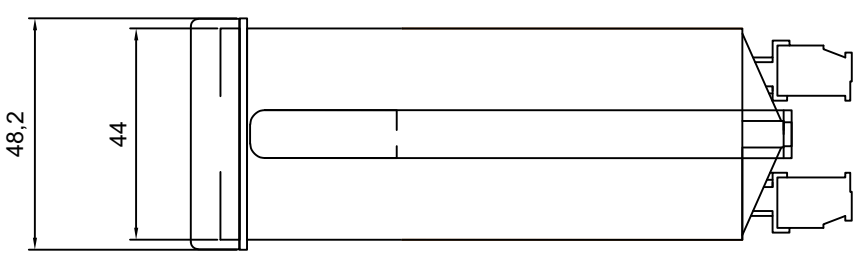
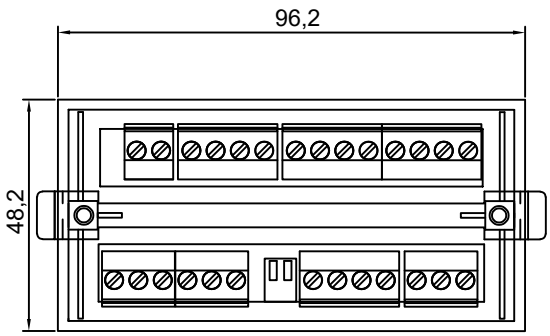
WEIGHTS AND DIMENSIONS	
Bezel Size	96mm x 48mm
Panel Cutout	92±1mm x 45±1mm
Depth Behind Panel	125mm
Case Width	92mm
Case Height	44mm
Case Depth	134.8mm
Typical Weight	300 grams
Individual Packed Weight	800 grams
Individual Packed Dimensions	190mm x 130mm x 65mm
Case Material	Black polycarbonate
Cable Dimensions	Accepts multi strand wires total area from 1mm² to 4mm²
Mounting	Panel (standard), DIN rail mounting (optional), wall mounting enclosure (optional)









ORDERING CODES AND OPTIONS

	INT4	-AH	-X	-X	-X	-X	-X	-X
Input Type:								
Ampere Hour		AH						
Analogue Output:								
None			0					
-10 to +10V			ANB					
4-20mA			ANI					
0-10V			ANV					
Alarm Outputs:								
None				0				
2 x SPST mechanical relays				AL2				
4 x SPST mechanical relays				AL4				
2 x solid state relays (specify AC or DC)				DSS				
4 x solid state relays (specify AC or DC)				QSS				
2 x SPCO mechanical relays				SPCO				
Data Output:								
None					0			
RS232					232			
RS422/485 + Modbus ASCII					485			
Modbus RTU					RTU			
Digit Colour:								
Green						G		
Red						R		
Power:								
95-265V AC							AC	
11-30V DC							DC	
Options:								
USB reader and copier (with CD and cable)								CLONE
Real Time Clock module								H
8 program memory								MEM
Namur pulse input for counters/ratemeters								NAMUR
Connection for 4 external programming buttons								PBEXT
Potentiometer input for process meters (3 wire, 10V)								POT
20mA current loop (TTY) for RS232 systems								TTY
Intuitive cowl								COWL

Ordering Example:

INT4-AH-ANI-AL2-232-R-DC-0

INT4-AH	Ampere Hour panel meter
ANI	4-20mA
AL2	2 x SPST mechanical relays
232	RS232
R	Red display
DC	11-30V DC
0	No option required

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