#### DIGITAL

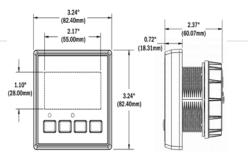
## **M2 Monitoring**

#### DC Meter

- Accurately measures and monitors State-of-Charge of 1 bank
- Measures 3 voltages and 1 current
- Supports programmable shunt ratios
- External relay activation



DC METER1830



Item Number	Description	Includes Shunt	Price
	DC Meter		
1830	DC State-of-Charge meter that monitors state-of-charge on one battery bank and	500A	\$324.99
	voltage on three battery banks. Voltages are 12V, 24V, 36, 48V, Range is –500A to 500A.		
	The Alarm/ Relay Activation is High and Low Voltage, High Current, and Low Battery.		
1832	DC Ammeter that monitors current on two circuits, the Alarm/ Relay Activation	500A	\$324.99
	is High and Low Voltage, High Current, and Low Battery.		
1833	DC Voltage meter that monitors the voltage on up to four battery banks,	—	\$289.99
	the Alarm/ Relay Activation is High and Low Voltage		
1834	DC Voltage meter that monitors the voltage of three battery banks and the current on one	500A	\$324.99
	circuit. The Alarm/ Relay Activation is High and Low Voltage, High Current, and Low Battery		

#### AC Meter

- Auto-dimming, bright OLED display
- is easy to read
- Easy to adjust
- 80dB alarm on all models
- Isolated MOSFET relay



AC METER

Item Number	Description	Includes Shunt	Price
	AC Meter		
1836	DC Ammeter monitors current on two circuits, the operating voltage is	150A	\$293.99
	7V- 70VDC and the Alarm/ Relay Activation is High Current		
1837	Monitors voltage on two circuits or both legs of 120/240V, the operating	—	
\$324.99			
	oltage is 7V- 70VDC, its range is 50V-250VAC (RMS). The Alarm/ Relay Activation is		
	High and Low Voltage.		
1838	Monitors voltage, current, frequency, and power on two circuits or	150A	\$342.99
	both legs of 120/240V, the operating voltage is 7V- 70VDC its range is		
	50V-250VAC (RMS). The Alarm/ Relay Activation is High and Low Voltage, Current.		

#### Images are representative of products listed and may not be actual product.

## **Blue Sea Systems AC**

- Large, bright LED characters
- Splash-proof front
- Multimeter, high and low voltage and high amperage alarms, both audio and visual
- Panel or surface mount
- Sleep mode on all units
- Input voltage 80-294 volt AC
- Blue Sea Systems AC meters are only compatible with Blue Sea Systems current transformers
- Surface mount in 2" round hole
- Dimensions: Height 2.4"(61.8mm) Width 2.6"(66.7mm)
- Must use Blue Sea Systems current transformers
- calibrated with sine wave input



Item Number	Transformer	Volt Range	Frequency	Watt Range 1 & 2	Price
		Volt Meter			
8237	_	80-249VAC	_	_	\$282.99
		Frequency Meter			
8239	_	_	40-90Hz	_	\$282.99
		Ammeter			
Includes Current Transformer					
8238	150/50mA		_	_	\$344.99
		Multimeter with Alarr	n		
Includes Current Transformer					
8247	150A/50mA	80-249VAC	40-90	0-9990 & 10-45kW	\$401.99

#### DIGITAL

## **Blue Sea Systems DC**

- Large, bright LED characters
- Splash-proof front
- Multimeter, high and low voltage, both audio and visual
- Easy to panel mount with a removable bezel, or surface mount
- Input voltage 8-60 volt DC
- Blue Sea Systems DC meters are only compatible with Blue Seas Systems shunts
   Applicable for 8-50 volt DC
- Dimensions:
  Width 2.896" (73.56mm)
  Height 2.43" (61.72mm)
  Depth 3.38"(85.85mm)
- 3 levels of brightness
- Display character size 9/16"Easy to surface mount in a 2" round hole
- Must use Blue Seas Systems Shunt



Item Number	Volt	Sleep Mode	Shunt	Alarms	Shunt Range	Price
		Ν	Aultimeter with Alarm			
Includes Shunt						
8248	0-60	Programmable	500A/50mV	High and low voltage	+/-500A DC	\$364.99
Item Number			Volt Range			Price
			Volt			
8251		Manual	0-60 (with alarm)	High and low voltage		\$267.99
8235	0-60	Manual				\$238.99
Item Number			Shunt Range			Price
			Ammeter			
Includes Shunt						
8236		Manual	+/- 500A DA , 50mV	High and low voltage		\$282.99

## DEIF



#### Multi-instrument, MIB

The MIB multi-instrument is a microprocessor-based measuring unit providing measurement of most electrical quantities on a 3-phase electric energy distribution network. The measurements are shown on the built-in display. The product family includes the basic MIB 7000, MIB 7000C Basic Plus RS485 modbus communication. A large number of standard analogue instruments can be replaced by the MIB in all electrical measuring applications. The MIB contains all necessary measuring circuits and presents all values on a display with white backlight. The display has 4 digits resolution for all measurements. The backlight on-time is selectable.



MIC-2 MK11

#### Multi-instrument, MIC-2

Versatile and intuitive, DEIF's multi-instrument MIC-2 MKII is perfectly suited for monitoring and analysis of all types of power systems.

Capable of logging all applications from single low voltage to multiple high voltage applications, the sturdy unit offers a complete overview of your SCADA system.

A microprocessor-based measuring unit for most electrical quantities on 2-phase or 3-phase electric energy distribution networks, readings are displayed on a large built-in LCD screen.

Fitted with the Ethernet TCP/IP module, the unit offers direct access to modbus data and is easy to access remotely via standard browsers.

KWh counter reset and change of settings can be password protected, and using DEIF's free utility software it is a simple and fast job to configure and adapt the unit to fit most applications

Item Number	Description	Price
	MIB	
100-415VAC, 100-300VDC, 50/60Hz.		
MIB7000	Multi-instrument (basic)	\$211.87
MIB7000C	Multi-instrument (modbus)	\$237.71
	MIC-2	
MIC-2	Multi-instrument	\$627.73

ANALOG

## DEIF 72 MM

- Scale 90 degree
- (+/-)1.5% accuracy
  Dimensions: Width 2.83" (71.9mm) Height 2.61" (66.3mm) Depth 3.42" (86.9mm)
- All meters also available 96 mm
- IP 52 rating
- Panel cut out dimensions: 68x68mm +/-0.4



Item Number	Range	Price
	AC Ammeter	
Must order scale separ (input from Current Tra	-	
PM72-ACA-5	5 Amp	\$47.62
	AC Amp Scale	
72SAC-50	0-50	\$15.38
72SAC-100	0-100	\$15.38
72SAC-150	0-150	\$15.38
72SAC-200	0-200	\$15.38
72SAC-300	0-300	\$15.38
72SAC-400	0-400	\$15.38
	AC Volt Meter	
*Other scales available	special order	
PM72-ACV-150	0-150	\$52.31
PM72-ACV-300	0-300	\$52.31
	Kw. Meter	
PM72-KW-100	20-0-100	\$94.79
Gr	ound Fault Meter	
Both items needed to c	omplete Ground Fault M	eter
PM72-GFM-10A (Meter)	0-50mA	\$194.20
ASK 31.3 (Transformer is REQUIRED for meter to work	100/1A 2.5V :)	\$66.62
	Hz. Meter	
+ /5% Accuracy		
PM72-HZ-120/240	45-65 (85-265VAC)	\$158.86

Item Number	Range	Price			
	DC Ammeter				
Must order scale separate to complete meter (input from Shunt)					
PM72-DMV-50	50mV input from Shunt	\$93.07			
]	DC Amp Scale (Scale Only)				
72SDC-50	0-50	\$15.38			
72SDC-100	0-100	\$15.38			
72SDC-150	0-150	\$15.38			
72SDC-200	0-200	\$15.38			
DC Volt Meter					
PM72-DCV-15	0-15	\$105.63			
PM72-DCV-40	0-40	\$105.63			

#### ANALOG

## **DEIF 96MM**





#### Insulation Monitor, ADL-111Q96

The ADL is used for supervision of the insulation resistance between an isolated voltage distribution network and an earth/ safety cable. The insulation monitor is applicable with DC networks for voltages of 24, 110 or 220VDC. The ADL is equipped with a relay output with adjustable set point. By means of a built-in switch, the relay can be configured to either NE (normally energized) or ND (normally de-energized).

### Check Synchronizing Relay, CSQ-3

The CSQ-3 integrates synchroscope and check synchronizing relay into a microprocessor-controlled, easy-to-install package with no moving parts, making it a superior solution with four obvious advantages.

**Safe:** the CSQ-3 unit is operated from the front using pushbuttons behind the removable front cover, protecting users from the near hazardous voltages during set point programming: an innovative DEIF feature usually seen in similar products where switchboards have to be opened to operate the synchroscope.

Accurate: pushbuttons, rather than potentiometers, are used for programming the unit, and exact settings are clearly visible on an LED scale.

**Flexible:** the standard CSQ-3 can be calibrated on-site for virtually all possible settings, eliminating the need to buy customized versions to fit the unit to your specific application.

**Robust:** effectively solving problems with broken and reflective glass, the unit's front has been protected with an extremely robust front cover.

#### \*Call for pricing and more information



- Compact Q96 design
- Extremely easy pushbutton programming
- Individual programming of each input: N/O or N/C, time delay, alarm inhibit, output and cable supervision
- Up to five units connected in master/ slave configuration

#### Alarm Panel, AL8-2

- Clear identification of first alarm received in case of successive alarms
- Approved by classification societies, call for more details.



With eight digital alarm inputs, three relay outputs, and many flexible features, the AL8-2 alarm panel is suitable for alarm monitoring at industrial and marine plants.

**Alarm inputs:** the alarm panel is provided with eight alarm inputs to facilitate external mechanical alarm contact connections. The inputs are individually programmable for N/O or N/C alarm contacts.

**Time delay:** the alarm inputs are individually programmable with a time delay to allow alarm condition registration at pre-set times within the 0.40 s range in steps of 1 s.

**Alarm indicators:** the AL8-2 is equipped with eight LEDs marked 1 to 8 for precise indication of alarm conditions for the individual alarm inputs. When an alarm condition occurs, the LED for the relevant input channel will flash with a red light. If more than one alarm occurs before the pushbutton "LAMP RESET" is activated, the first alarm LED will flash ahead of the others.

**Alarm outputs:** the alarm panel is provided with three relay outputs, one of which is used for connection to an audible/visual alarm. The remaining two relay outputs are individually programmable by the user to follow certain alarm inputs.

#### \*Call for pricing and more information\*

\*Items are special order\*

ANALOG

## Hoyt 2.5 Inch

• Industrial style; high impact plastic

- +/- 2% accuracy
- Full scale, spring loaded pivot and jewel movement
- Window mount option requires part#3100-WMC (special order)
- Dimensions:
- Width 2.9" (73.7mm) Height 2.28" (58mm) Depth 2.10" (53.3mm)

Item Number	Range	Price
item number	AC Ammeter	TILE
PM25-ACA-5 (separate scale required)	5A (input from CT)	\$67.50
The state state scale required)	AC Amp Scale (Scales only)	φο, ισο
ST75-50AAC-SO	0-50	\$8.13
ST75-100AAC-SO	0-100	\$8.13
ST75-150AAC-SO	0-150	\$8.13
ST75-200AAC-SO	0-200	\$8.13
ST75-300AAC-SO	0-300	\$8.13
	AC Volt Meter	
PM25-ACV-150	0-150	\$67.50
PM25-ACV-300	0-300	\$67.50
PM25-ACV-500	0-500	\$67.50
	DC Ammeter	
PM25-DCA-30SC (self contained does not require se	eparate shunt/scale)	\$67.50
PM25-DMV-50 (separate scale required)	50mV (input from Shunt)	\$67.50
	DC Amp Scale (Scales only)	
ST75-50ADC-SO	0-50	\$8.13
ST75-80ADC-SO	0-80	\$8.13
ST75-100ADC-SO	0-100	\$8.13
ST75-150ADC-SO	0-150	\$8.13
ST75-200ADC-SO	0-200	\$8.13
ST75-300ADC-SO	0-300	\$8.13
	DC Volt Meter	
PM25-DCV-8/16	8-16	\$67.50
PM25-DCV-20/34	20-34	\$67.50
PM25-DCV-26/44	26-44	\$67.50
PM25-DCV-150	0-150	\$67.50
	Hz. Meter	
Range 45-65 Hz.		
PM25-HZ-120	120	\$125.00
PM25-HZ-230	230	\$125.00



# **Blue Sea Systems**

#### **Micro Meters**

- Backlit meter face for low light conditions
- Separate wire provided for 12 or 24 volt DC connection
- Dimensions: Height 2.0" (50.8mm) Width 2.0" (50.8mm) Depth 1.35" (34.3mm)

- 16m amp @ 12 volt DC, 20m amp @ 24 volt DC
- AC voltmeter: operating amp for meter only 1mA @ full scale, with back light
- AC ammeter: operating amp for meter only 50mA@ full scale
- DC voltmeter: operating amp for meter 1mA @full scale
- DC ammeter: external 50mV @full scale







DC VOLT METER





BACK MICRO

AC VOLT METER

AC AMMETER



Item Number	Range	Price
	AC Volt Meter	
Connection: 2 wire to AC hot and neut	ral, 3 connections for backlighting	
8244	0-150VAC	\$57.42
8245	0-250VAC	\$57.42
	AC Ammeter	
Connection: 2 wire from coil slipped o	ver wire to be measured 3 connections for backlighting	
8246	0-50A AC	\$88.99
	DC Volt Meter	
Connection: 2 wire to DC positive (+) a	nd negative (-) 3 connections for backlighting	
8028	8-16VDC	\$48.99
	DC Ammeter	
Connection: 2 wire from shunt, no oth	er power required 3 connections for backlighting	
8041	0-50A DC	\$104.99

CURRENT TRANSFORMERS

## **AC Current Transformers**



UNIVERSAL DONUT



UNIVERSAL FOOTED



BLUE SEA DONUT



FOOTED BLUE SEA

Item Number	Dimensions in "(mm)	Description	Current Ratio	Туре	Price
		Blue Sea Systems			
8256	I/S: .60(15.24), O/S:1.38(35.05)	Use with Digital M2 Ammeter	150A AC/ 50mA AC	donut	\$31.29
8073	I/S: .60(15.24), O/S:1.38(35.05)	Use with Analog Ammeter	50A AC/ 50mA AC	donut	\$27.49
BS1829	I/S: 1.25(31.75), O/S: 2.68(68.07)	Use with Digital AC Ammeters	300A AC/ 50mA AC	footed	\$42.59
Item Number	Ratio		Power Rating VA	@ 60hz.	Price
		Universal Donut			
Donut Style 1.05	' (26.67mm) inside diameter				
2RL-50-5	50:5		2.0		\$45.77
2RL-100-5	100:5		2.0		\$45.77
2RL-150-5	150:5		4.0		\$45.77
2RL-200-5	200:5		4.0		\$45.77
2RL-300-5	300:5		8.0		\$45.77
2RL-400-5	400:5		10.0		\$37.67
Donut Style 1.56	' (34.7mm) inside diameter				
5RL-300-5	300:5		12.5		\$60.75
5RL-400-5	400:5		12.5		\$60.75
		Universal Footed			
Footed style 1.13	"(28.7mm) inside diameter				
2SFT-50-5	50:5		2.0		\$54.12
2SFT-200-5	200:5		4.0		\$54.12
2SFT-300-5	300:5		8.0		\$54.12

SHUNTS

## **50MV**



BASE MOUNT SHUNT

Item Number		Current Ratio		Price
		Base Mount		
Dimensions LxW	xH in (mm) 3.25(82.7) x 1.75(44.45) x	: 1.75(44.45)		
TMC-50-50		50A:50mV		\$50.65
TMC-100-50		100A:50mV		\$50.65
TMC-150-50		150A:50mV		\$50.65
TM-200-50		200A:50mV		\$72.78
Item Number	Description	Current Ratio	Dimensions W x L x H in " (mm)	Price
	Bl	ue Sea Systems DC Shur	nt	
8255	For use with Digital Ammeter	500 DC/50mVDC	1.26(32) x 3.27(83) x 1.69(43)	\$77.99
9228	For use with Analog Ammeter	50A DC/50mVDC	1.26(32) x 2.01(51) x 1.53(39)	\$49.29