

We make industrial automation control easy



Temperature controller I Humidity controller I digital Counter I digital Timer I Frequency/Tacho/Line-speed meter I Power energy meterI Sensor I Proximity sensor I Hall sensor I Safety light curtains I Optic fiber sensor I Pressure transmitter I Loadcell

COMPANY PROFILE

About us

Established in 2017, APOSUN Meter & Electronics Co., Ltd is specialized in manufacturing and selling automatic control panel meters. With excellent product quality, efficient technical support, good sale & logistic service, APOSUN has won good reputation worldwide.

Production line

- Temperature controller
- Humidity controller
- digital Counter
- digital Timer
- Frequency/Tacho/Line-speed meter
- Sensor (Proximity switch, Photoelectric sensor, Optical fiber sensor, Safety light curtain, Pressure transducer, Load cell)
- Solid state relay
- Rotary encoder

Warranty

All the APOSUN brand products come with a manufacturer's 12-month warranty. If you encounter any problems with your product during this time period, simply return it to where it was purchased for a brand new replacement. If you cannot contact your retailer, then please email us at sale@aposunmeter.com for assistance.

Shipping

- By Sea
- By Air
- By Express(including DHL, TNT, FEDEX, UPS, EMS, arriving at your doorsteps within an average of 3-7 days.)

Our Values

- Professionalism
- Customer's satisfaction
- Good and prompt after-sale support

Temperature controller LCD type

CHFT200 series temperature controllers feature easy-to-read LCD display with large white PV characters. The 11-segment displays used for PV and SV are useful for displaying alphanumeric characters. The temperature controllers also ±0.3% measure accuracy. Widely used in Plastic processing machinery, Packaging machinery, Furnace & Boilers, Laboratory testing machinery, Ovens & Incubators, Food industry, Extrusion Machinery(Plastic/Rubber).



CHFT200

♦ Dual 11-segment LCD display in 3 colors

- ♦ TC/RTD,Analog Universal Input
- Realizes ideal temp. controlling with PID control. Auto/manual control, ON/OFF control, cooling/heating control
- Built-in relay output or SSR output,: Enables to phase control and cycle control with SSR drive output (SSRP function)
- Mounting space saving with compact design,size 48*48*64.8mm
- various output options including current output, transmission output and RS485 communication output for application in various environment settings

Series no.	CHFT200
Display	Dual 4 digits,11-segment LCD display
Dimension	48*48*64.8mm 1/16DIN Cutting output:45*45mm
Power supply	85~265Vac / 24VAC/DC optional
Power Consumption	Approx. 5VA/3W(12~24VAC/DC)
Measuring accuracy	0.2%F.S max resolution 0.1℃
Temp Unit	Celsius or Fahrenheit display selectable
Output	Built-in Relay/SSR Drive/4-20mA/0-10VDC Max. 2 alarms
Communication	RS485 Modbus RTU Communication
Mounting	Flush mounting and screw terminals
Environmental Conditions	0∼50℃(no icy or condensation) 0-80% RH
Weight	0.4KG
Warranty	1 Year

Application

Accurate temperature control of commercial coffee roasters



PID Temperature controller LED type

General PID temperature controller

CHCD100/CHCD401/CHCD900, employs 11 replacable output modular structure to facilitate field application. The all-purpose temperature controllers are available in various sizes and input/output options, for stable and precise temperature control with newly developed PID control algorithm.





- ✤ 8 times/ sec. sampling rate and ±0.3% display accuracy.
- Newly developed PID control algorithm makes the temperature control more stable and precise without overshooting.
- TC / RTD / Analog input, more than 10 replacable output modular structures to facilitate variety of field application. Easy maintenance.
- RS485 communication, AIBUS / MODBUS protocol optional
- ✤ Regular 85-265V AC power supply. 24V DC customized.

Economic PID temperature controller



CHCD900



SSR modular

Single SCR modular



3-line SCR







Single SCR phase-shifted

Relay modular Relay modular small capacity large capacity



SCR module large capacity RS485

RS485 module

CHTA4 is a economic type auto tuning temperature controller that supports various thermocouple & resistance input. It can be powered by 85-265V AC/DC, Consumption: 5VA. DIN 1/16.
3 build-in Auto-Tuning Time proportion PID Algorithms to choose for different applications or environments to be controlled. (for variety of industries or home projects heating or cooling applications.)



♦ 48*48mm size, bright LED display

modular

- Universal input: TC(K,J,E,S) / RTD(PT100, Cu50) , 0/4-20mA, 0-5/10VDC should be indicate when ordering
- Auto-tuning PID control, easy to operate. Special cold junction compensation makes the temperature reading more accurate
- ♦ Regular 85-265V AC power supply. 24V DC customized.

PID Temperature controller LED type

PID temperature controller & Timer

CHCT100 has the combined function of PID temperature controller and timer. The built-in timer works when the output active. The timer trigger ways and output modes are configurable by software. Additional relay alarm is available. Compact size, easy operation interface, simple wiring connection makes it a best seller.

Normally the item is used in general heat press machine, zipper machine, shoe machine, heat transfer device, stamping machine, printing machine, molding machine.



CHCT100

Application

- Auto tune PID control with fuzzy logic enable the CHCT100 item to keep the temperature stable, even during fast mound closing process;
- 3 press button only, easy to set the output temperature and time value;
- 4 output modes for timing and relay (buzzer) configurable by software to meet user's different application;
- 2 stage parameter lock to protect important values from wrong key operation.



General Heat press machine



When open

CHCT meter will heat the plate with accurate PID control during both heating process and machine closing process.



When close

CHCT meter will trigger the timer to count the closing time. When meets the preset time, the relay or buzzer actives.

LED Digital Display Temperature & Humidity Controller



CHCRH400

- ♦ 4 digits 7-segment .LED display.
- ♦ Temperature / Humidity display resolution: 0.1 or 1.
- Multi-input options: K, PT100, NTC, 0-3V, AM2305, SHT10, AM2322B.
- Relay / SSR Drive output: Relay contact: AC250V/3A AC(resistive load) / AC 250V/0.3A (inductive load) SSR: drive solid state relay 12V DC 30mA
- ♦ 4 control modes, ON/OFF switch control (heating /Cooling / humidifying con/dehumidifying).
- ♦ Soft-start function for analog 4-20mA output.
- ♦ Power supply:85~265Vac or 24VAC/DC.
- ♦ Environment: 0-50°C / <85%RH (non-corrosive no dew).</p>
- ♦ 1 year warranty.

Application

Widely used in Breeding/Planting industry (such as green housing, fishing/turtle raising, egg incubator), warehousing/storage equipment (such as shipping warehouse, medical cabinet, commodity storage), dryer, or other temp & humidity monitoring system.



Digital Programmable Counter/Timer/Frequency/Tachometer

CHCN48 is a most powerful panel meter that configurable for operation as a digital <u>Counter</u>, digital <u>Timer</u>, digital <u>Frequency/Tachometer</u>. 48*48 compact size, <u>4 digits / 8 digits</u> display. Up to <u>32 FUNCTION</u> configurable by software It's a great save in space and inventory. 85-265V AC switch power.

COUNT	 0-99999, 0-999999999 range, 4/8 digits display Count up / count down Proportion coefficient setting Input signals: contact signal, photoelectric, proximity sensor, encoder
TIMER	 ♦ Single loop delay timer ♦ Dual loop delay timer ♦ digits totalizer timer (9999H59M59S / 9999D23H59M) ♦ Time unit: S, M, H, D ♦ Auto reset / Manual reset
Hz/RPM	 Frequency reading, 1-9999Hz, 0.1-999.9Hz Tacho reading, 60-9999RPM Depending for setting





CHCN48

Function List(up to 32 modes configurable)

Code	Description	Setting range	Code	Description	Setting range
01	Single delay timer (count up)	0.01s~99.99s	02	Single delay timer (count down)	0.01s~99.99s
03	Single delay timer (count up)	1m~9999m	04	Single delay timer (count down)	1m~9999m
05	Single delay timer (count up)	1s~9999s	06	Single delay timer (count down)	1s~9999s
07	Single delay timer (count up)	1s~99m59s	08	Single delay timer (count down)	1s~99m59s
09	Single delay timer (count up)	1m~99h59m	10	Single delay timer (count down)	1m~99h59m
11	Dual delays timer (count up)	1m~99h59m	12	Dual delays timer (count down)	1m~99h59m
13	Dual delays timer (count up)	1s~99m59s	14	Dual delays timer (count down)	1s~99m59s
15	Dual delays timer (count up)	1s~9999s	16	Dual delays timer (count down)	1s~9999s
17	Dual delays timer (count up)	1m~9999m	18	Dual delays timer (count down)	1m~9999m
19	8-digit accumulated timer (Instant reset)	0~99H59M59.9 9S	20	8-digit accumulated timer (reset after 8 seconds)	0~99H59M59.99S
21	8-digit accumulated timer (Instant reset)	0~9999H59M5 9S	22	8-digit accumulated timer (reset after 8 seconds)	0~9999H59M59S
23	8-digit accumulated timer (Instant reset)	0~9999D23H59 M	24	8-digit accumulated timer (reset after 8 seconds)	0~9999D23H59M
25	Frequency meter	1Hz~9999Hz	26	Frequency meter	1.0Hz~999.9Hz
27	Tachometer	60-9999rpm	28	Frequency/Tachometer	0~9999
29	Up/down counter	0-9999	30	Up/down counter with ratio	0~9999
31	8-digit up/down counter	0~99999999	32	8-digit up/down counter with ratio	0~99999999

LED display 6 digital Counter / Batch counter / HZ /RPM meter

CHCMF402 / CHCMF802 pulse counter accepts NPN/PNP proximity sensor, switch contact, encoder input. With power-failure protection function, up to 3 relay outputs and 4 output modes optional.

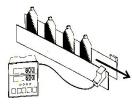
- ♦ CHCMF802 can use as ?
- ✤ 1.Counter meter
- ♦ 2.Tacho / Frequency / Linear speed meter
- 3.Batch counter(count the quantity of objects in a single batch and the number of batches)
- ♦ 4.Shift counter(A,B input signal): Under mode E –input A is positive count input B is minus count Under mode F – both input A and B are positive count



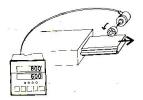
CHCMF402



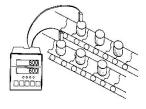
Series no.	CHCMF402 / CHCMF802
Display	Dual 6 digits,7-segment LED display
Dimension	CHCMF402: 48*96*90mm
	CHCMF802: 72*72*90mm
Power supply	85~265V AC
Aux. power	DC 24V /50mA (power for sensor)
Output	Relay / 4-20mA
Contact capacity	220V AC /3A
Pulse Level	Low level: -30V~0.5V, High level: 4V~30V
Trigger mode	High/Low level effective(NPN / PNP)
Counting frequency	1-5KHz
Environmental Conditions	0∼40 °C (no icy or condensation) 0-80% RH
Weight	0.4KG



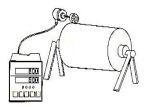
Simple count no.s for production line (with switch)



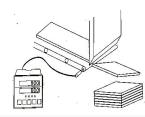
Extrusion length control (with angle encoder)



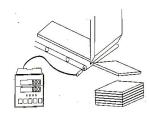
Displacement count/totalizer



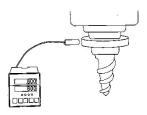
Film length control (with angle encoder)



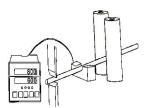
Ration filling(with flow meter



Preset wood length cut and batch control



Speed control for machine using high/low limit setting



Cut cable at certain length(with encoder)

6 digital Programmable Counter / Length / Height / Position meter

CHCV4 has a lightweight, high impact plastic case with a clear viewing window. The sealed front panel with silicone rubber reset button meets IP65 specifications for wash-down and /or dusty environment when properly installed.

Except numbers / Length / Height / Position counting function, the CHCV4 model can set the count start point (counting initial value), which is widely used for Position control in many occasions. Counting speed 10 / 200 / 5K /10K optional.



Features

- ♦ 6 digits display in 48*48 size (1/16 din)
- Count Start Point (counting initial value) setting function, easy for position control
- ✤ 5 input modes/8 output modes
- ♦ 2 relay outputs max, with delay time setting
- ♦ Up to 10K counting speed
- ♦ Power failure protection. Date saved for 10 years.
- ♦ Panel button lock /Parameter setting lock function
- ♦ RS485 or analog output Optional

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Series no.	CHCV4
Display	Dual 6 digits,7-segment LED display
Dimension	48*48*90mm
Power supply	85~265V AC 50/60Hz
Aux. power	DC 24V/80mA (max)
Output	Relay, capacity: 220V AC /3A or 30V DC /3A
Optional output	4-20mA / RS485
Insulation impedance	ΩMOOT≤
Dielectric strength	2KV/0.5mA(1munite)
Anti-interference	Power: ±2KV Input: ±400V
Anti-shake	10~55Hz, 0.75mm
Anti-jamming	>10ΚΩ
Count speed	10 /200 /5K /10K Hz
Proportion coefficient	0.0001 ~99.999999
Output time	0.01 ~ 99.99s
Count range	0.0001 ~ 999999

Application

- Accepting the signal from an encoder to measure film length over a conveyor and cut at a preset scale. Similar occasion is Textile, Leather, Film, Cable, Wood-cutting, Printing etc..
- Connect a proximity switch/optical sensor and use the CHCV4 counter to convert the pulsed signal to count the commodity numbers in production line. Similar applications is used in parking lot, shopping mall, production ageing testing, etc..

Din Railed Digital Timer Relay

CHTH series is Din railed digital timer relay. It adopts 8 digits Microcontroller Integrated Circuit to realize stability. 3 different types that meet up to various users' application: CHTH100A is 2 digits display in 48*48 size, CHTH200 is 3 digits display with delay time / output time setting. CHTH300 is 3 digits display with delay time setting only.

CHTH100A LED digital Timer

- ♦ 48mm*48mm, 1/16 DIN size
- ♦ Time unit:S,M.
- ♦ 4 timing base: 0.1s, 1s, 0.1m, 1m
- ♦ Delay time setting range: 0.1s ~99m
- ♦ Count up or DOWN
- ♦ Panel button lock function





- ♦ 57.3mm*87mm size
- ✤ Time unit:S, M, H
- Up to 7 timing base:0.01s, 0.1s, 1s, 0.1m, 1m, 0.1h, 1h
- ♦ Output time setting range: 0.01s ~ 999h
- ♦ Delay time setting range: 0.01s ~ 999h
- ♦ Count up or DOWN
- \diamond Panel button lock function



CHIHZ

CHTH300 LED digital Timer

- ♦ 49mm*60mm size
- ♦ Time unit:S, M, H
- ♦ Up to 7 timing base:0.01s, 0.1s, 1s, 0.1m, 1m, 0.1h, 1h
- ♦ Delay time setting range: 0.01s ~ 999h
- ♦ Count up or DOWN
- ♦ Panel button lock function





CHTH300

Model no.	CHTH100A CHTH200 CHTH300
Power supply	220V AC
Output	Relay 2 no.s (instantaneous +delay or double delay output)
Contact capacity	220V AC /3A or 28V DC /5A (resistance load)
Electrical life	> 1, 000, 000 times
Accuracy	±0.3%
Installation	Panel / Din rail mounted
Environment	Temperature: -10 ~ 60℃ humidity: 0~85% RH

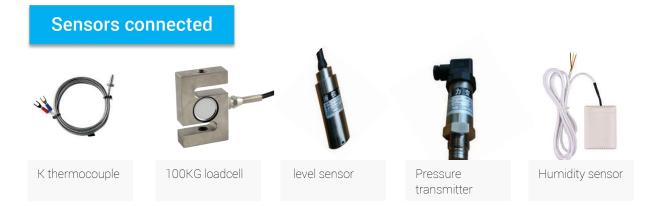
Programmable Sensor Panel Meter

CHDS8B series LED programmable sensor panel meter is the cost-effective and high performance tools for the display and control of the signals such as 4-20mA, 0--10V, 0-75mV, TC/RTD, Load cell, resistance. It is widely used in many industrial applications in temperature, pressure, weight, resistance, current and voltage. The input, output and power supply are isolated. 20-segments no-linear input can be customized.



- ♦ Large inch 4 digits LED display.
- Simple menu and easy wiring, user friendly
- Max 1 analog & 4 relay/SSR alarm to meet up to different user's application
- RS485/RS232(MODBUS RTU) communication support optional
- ♦ Universal 85-265V AC/DC power supply

Series no.	CHDS8B
Display	Dual 4 digits,7-segment LCD display
Dimension	48*96*80mm 1/8 DIN Cutting output:45*45mm
Power supply	85~265V AC / 24V DC optional
Power Consumption	Approx. 5VA/3W(12~24VAC/DC)
Measuring accuracy	0.3%F.S ±2digits
Output	Built-in Relay/SSR Drive/4-20mA/0-10VDC Max. 4 alarms
Communication	RS485/RS232 Modbus RTU Communication
Mounting	Flush mounting and screw terminals
Environmental Conditions	0 \sim 50 ℃(no icy or condensation) 0-80% RH
Weight	0.34KG



LCD display 3 Phase Power Quality Analyzer

CHD9001 is a simple & reliable 3 phase power quality analyzer power monitor for current, voltage, power, power factor, KWH, frequency etc.. CT/PT input, Real-time KWH, 8 tariffs KWH reading. 4 buttons operation, user friendly. It is widely used in electric power system, low-voltage distribution, environment monitor, etc..

- Measure for 3 phase AC current, phase/line voltage, active/reactive/apparent power, active/reactive KWH, power factor, frequency. etc..
- Up to 31 voltage and current harmonics measurement
- ♦ Standard CT(1A/5A), PT input
- Real-time KWH and Internal clock for setting of 8 hourly tariffs
- ♦ Universal 85-265V AC/DC power supply

Primary Electric Parameters Reading

3 phase line voltage / phase voltage /current Total power & 3 phase power, total reactive power & 3 phase reactive power Total apparent power & 3 phase apparent power

Total power factor & 3 phase power factor Frequency

Power Quality Reading

Voltage deviation Total harmonic distortion (THD) Voltage/current harmonic percentages(2-31)

Communication(optional)

RS-485 communication interface Standard MODBUS RTU protocol 5 speed 2400, 4800, 9600(factory default), 19200, 384000bps for choice



CHD9001

Energy Reading

Total KWH Total reactive KWH 3 phase input/output KWH 3 phase input/output reactive KWH Internal clock for setting of 8 hourly tariffs Date / Time

Data Recording

50 no.s of SEO record DI action record DO action record

Output(optional)

2 no.s of passive soft-switch input 2 nos of relay output 2 no.s of 4-20mA output

Sensor

Sensors are the most basic, commonly used components in automation. APOSUN provides a wide variety of sensors including proximity sensors, photoelectric sensors, fiber optic sensors, safety light curtain and pressure sensors, for maximum user efficiency.

Proximity sensor & Hall sensor

Proximity sensors are the most common and affordable solution fro no-touch object detection. The most commonly used proximity sensors are the inductive type which usually the easiest sensing technology to apply in applications where the metal target is within an inch or two from the sensor face. Aposun offers 21 products of 5 different types of proximity sensors and hall effect sensor for your choice.

Model number	Transistor	Power supply	Detect distance	Picture	Dimension	
Q5MC1	NPN, NO		Standard:5mm Custom:2-8mm		17mm	
Q5MC2	NPN, NC	DC 10-30V			28mm 17.2mm 17mm 03 0 0 10mm 28mm 28mm 28mm 28mm 28mm	
Q5MB1	PNP, NO	3-wire				
Q5MB2	PNP, NC					
SN04-N1	NPN, NO		Standard:5mm Custom:2-8mm	O	18.3mm 14.1mm 36.3mm	
SN04-N2	NPN, NC	DC10-30V 3-wire				
SN04-P1	PNP, NO	3-wire			17.7mm 36.3mm	
SN04-P2	PNP, NC				11mm	
X5MC1	NPN, NO				21.3mm	
X5MC2	NPN, NC	DC 10-30V	Standard:5mm Custom:2-8mm		19.5mm 19.5mm 12mm 5mm 42mm 62mm	
X5MB1	PNP, NO	3-wire				
X5MB2	PNP, NC					
12X4YD1	NO	AC 90- 220V 2-wire	Standard:5mm Custom:2-8mm			
12X4YD2	NC	- 220V 2-wire			diametre: 120	
18X8YDC1	NPN, NO				24mm 30.1mm	
18X8YDC2	NPN, NC	DC 10-30V 3-wire	Standard:8mm Custom:2-8mm	×Ò		
18X8YDB1	PNP, NO	J WITE			27.5mm 14mm	
18X8YDB2	PNP, NC				18mm	
18X8YD1	NO	AC 45-	Standard:8mm Custom:2-8mm		6mm 34mm	
18X8YD2	NC	220V 2-wire			^{64mm} diametre: 18Ф	
hall effect switch HC-X1215NC	NPN,NO	DC 10~30V 3-wire	Standard 8~15mm	The	12.5mm 12.5mm 12.5mm 12.5mm 42mm 62mm	

Safety Light curtains

QA06/10-50 AA Safety Light curtains is supplied as a pair with a transmitter and receiver. The transmitter projects an array of parallel infrared light beams to the receiver which consists of a number of photoelectric cells. When an object breaks one or more of the beams, a stop signal is sent to the guarded equipment.



QA06/10-50 AA

Technical details:

- ♦ 06 beam
- ♦ Distance: 10mm
- ♦ Protection height: 50cm
- ♦ Voltage: DC12-24V
- ♦ Output: NPN NC
- ♦ Induction distance: 0.3-3m

QA06/10-50AA is generally connected to a safety relay to remove power in the event that an object is detected, in order to protect hazardous areas

Popular applications include:

- Power driven machines
- Power presses
- Brake presses
- Punching machines
- Robot cells
- Printing machines
- Palletizer
- Packing equipment
- Material handling

Optic Fiber Sensor

CHA4R-N A Fiber Sensor is a type of Photoelectric Sensor that enables detection of objects in narrow locations by transmitting light from a Fiber Amplifier Unit with a Fiber Unit .

Fiber sensor(probe)

Through beam, diffuse reflection, L type, window type, hightemperature type etc. From diameter of φ 1.5mm to over M6 can be customized. High temperature type can be resistant to high temperature of 350 °C.

Fiber sensor(amplifier)

- Output:NPN/PNP
- Operating voltage: 12~24V DC
- Protection degree: IP64
- Ambient temperature: -50~70°C
- Flexible deployment, accurate detection, economic preference, competitive price with fiber optic cable, realize more extensive measurement application.





CHA4R-N

Pressure Transducer & Transmitter

Aposun brand pressure transducer and transmitter utilizes a pressure sensor packaged in a SST316L housing. Pressure is transferred from a stainless steel diaphragm to the sensor. A broad compensated temperature range of -20 to 85℃ and excellent temperature compensation make this transducer/transmitter very stable fluctuating temperatures.

We can custom design this product to meet your needs in different pressure fittings and electrical connections.

General Purpose Pressure Transducer & Transmitter

CHAP4 general purpose pressure transmitter is designed for a wide range of applications, including process control system, liquid level measurement, gas compressors, lubrication systems, etc.. Cable, Hirschmann socket, Aerospace plug available for choice.

- ♦ Range: -0.1MPa-0 ~ 200MPa
- ♦ Output: 4mA ~ 20mA 0/4mA ~ 10/20mA
- ♦ 0/1.0V ~ 5.0/10.0V 1.0mV/V, 1.5mV/V, 2.0mV/V
- ♦ Total Accuracy: ≤1.0%FS, 0.5%FS, 0.25%FS, 0.1%FS
- ♦ Cycling Life: In excess of 10⁶ cycles at full scale pressure
- ♦ Excitation voltage: 9~33VDC



CHAP4



Level Pressure Transmitter

CHAP5 level transducer/transmitter is liquid level gauge, designed for .iquid level measurement and processing and others.

- ♦ Range: 0.5mH20 ~ 200mH20
- ♦ Output: 4mA ~ 20mA 0/4mA ~ 10/20mA
- ♦ 0/1.0V ~ 5.0/10.0V
- ♦ Total Accuracy: ≤1.0%FS, 0.5%FS, 0.25%FS, 0.1%FS
- ♦ Cycling Life: In excess of 10⁶ cycles at full scale pressure
- ♦ Excitation voltage: 9 ~ 33VDC

Flat mode Pressure Transducer / Transmitter

CHAP7 pressure transducer/transmitter is flat diaphragm type, designed for a wide range of applications, including process control system, liquid level measurement, gas compressors, lubrication systems, natural gas production, chemical processing, waste water treatment, pulp & paper processing, oil production, recovery and others.

- ♦ Range: 1KPa ~ 200MPa
- ♦ Output: 4mA ~ 20mA 0/4mA ~ 10/20mA
- ♦ 0/1.0 V ~ 5.0/10.0 V 1.0mV/V, 1.5mV/V, 2.0mV/V
- ♦ Total Accuracy: ≤1.0%FS, 0.5%FS, 0.25%FS, 0.1%FS
- ♦ Cycling Life: In excess of 10⁶ cycles at full scale pressure
- ♦ Excitation voltage: 9 ~ 33VDC



ApoSun

NEW PRODUCTS COMING SOON!

Question? Shoot us an email at: sale@aposunmeter.com

