

ACP8340 Polarization Controller



ACP8340 Polarization Controller is a programmable motorized polarization controller, offering a wide range of Auto Scan rates and highly incremental angular resolutions. It improves measurement speed, accuracy, and overall productivity. The four-fiber loop design has been proven to provide excellent control with ultra-low power variations, allowing it to be used in a wide range of applications such as PDL, PMD testing, etc.

PERFORMANCE SPECIFICATIONS

Parameter	Specifications
Model #	ACP8340
Principle	4 Motorized Fiber Knob Loop
Operation Wavelength	850 ~ 1700nm
Insertion Loss	≤0.5dB
Extinction Loss	40dB
PDL	≤0.008dB
Optical Connector	FC/UPC (or FC/APC)
Interface	RS232
Operating Temperature	0 to +40°C
Storage Temperature	- 30 to +80°C
Power Supply	100 ~ 240V
Package Dimensions (HxWxD)	200mm x 105mm x 320mm
Weight	4.5kg

FEATURES

- Single-Fiber Design
- Ultra-low Insertion Loss, PDL, and Back-reflection
- Multi-rate Polarization Scanning
- Auto Scan Operation with a Wide Dynamic Range of Rotational Speed
- RS-232 Communication

APPLICATION

- Component Level PDL Measurements
- Sub-system PDL Testing
- General Purpose in-line Control of the SOP
- Low to Medium-speed Polarization Scrambler
- Polarization Pattern Generator
- Maximize or Minimize Signal Intensity with Feedback from Optical Power Meters
- To be Used in PMD Emulator
- To be Used in PMD Compensator and Polarization Stabilizer

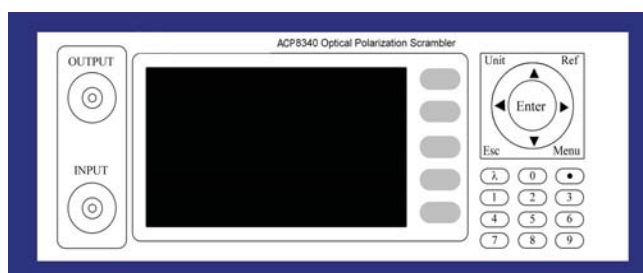
DESCRIPTION OF UC8340 FRONT PANEL AND REAR PANEL

Front Panel

Customer can select FC/PC or FC/APC optical input/output connector when you place order.

Optical Output Connector

Optical Input Connector



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Front Panel



RS232 Port USB Port

AC LINE POWER SUPPLY REQUIREMENTS

Line Power Requirements

The ACP8340 polarization controller complies with over voltage category II and can operate from the single-phase AC power source that supplies between 100V and 240V at a frequency in the range 50 to 60 Hz.

The AC power requirements are summarized on the rear panel of the instrument.

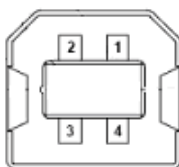
LINE POWER CABLE

In accordance with international safety standards, the instrument has a three-wire power cable. Insert the power cable plug only into a socket outlet provided with a protective earth contact.

COMMUNICATION PORT

USB Port

There is a Type B USB port on the ACP8340 rear panel. It can be connected with PC to control ACP8340.



USB Port

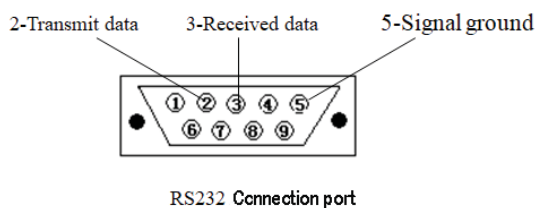
The ACP8340 package will provide with a USB cable as standard accessory.



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RS232 Serial Port

There is a RS232 serial port for communication on the rear panel of the UC8340. The following figure shows the connector and pin assignments.



DB9 Socket		DB9 Cable	
PIN	NOTES	PIN	NOTES
2	Received data	2	Transmit data
3	Transmit data	3	Received data
5	Signal ground	5	Signal ground

The ACP8340 serial port has fixed parameters. The PC serial interface should be configured to match the instrument's fixed parameters.

Fixed Parameters Baud Rate: 115200

Data Bits 8 Parity

None Stop Bits 1

RS232 Cable

The connectors pin assignments on the cable for RS232 Communication.

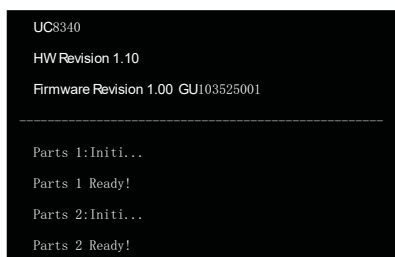
DB9 CONNECTOR DB9 CONNECTOR PIN NOTES PIN NOTES 2 Received data 2 Transmit data 3 Transmit data 3 Received data 5 Signal ground 5 Signal ground

NOTE For serial communication use the null modem cable provided with your instrument.

DISPLAY SCREEN INTERFACE

Front Panel

When the ACP9340 is powered up, the screen will show initial information, such as, the serial number, hardware revision, firmware revision of the ACP8340.

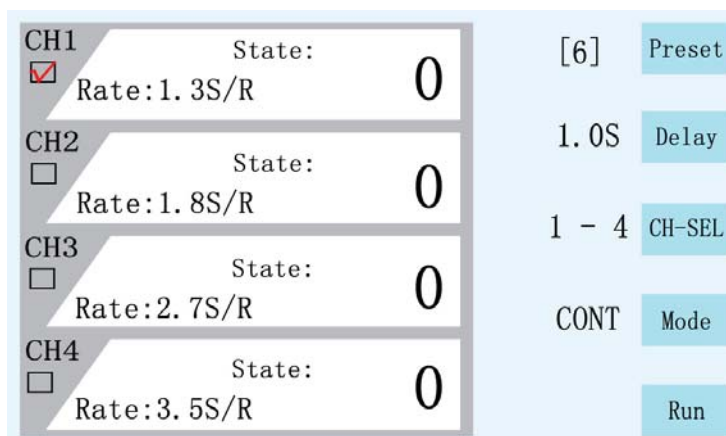


ACP8340 initialization screen

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The Display Screen

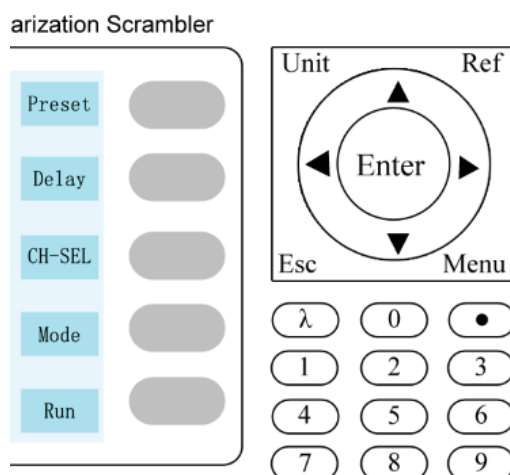
After start-up and self testing, the screen will show immediately the control mode of ACP8340.



ACP8340 Display Screen Interface

Control panel

Customer will see following control panel:



How to use direction key

If you want to change control parameters, [◀] and [▶] keys are used to move the icon to left or right. If user want to change digital number, [▲] and [▼] are used to increase or decrease the number value.

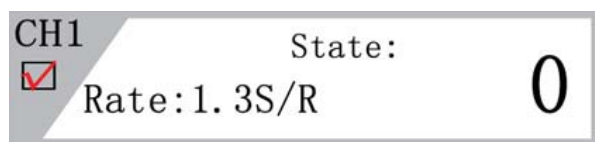
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How to use digital number keys

1. If you want to change parameters value, press [▲] or [▼] key to increase or decrease the number value, or direct to press the digital key to change the value.
2. If you want to use "preset" parameters, press the "preset" number digital key to select the preset value.

How to select the paddle CH [CH-SEL]

There are 4 CH paddles in ACP834. The 4 CH paddles can run independent, or run in the same time. Press [CH-SEL] key, the key left side will show up paddles CH numbers. (The system already preset independent or combination CH operation mode. There are 1,2 ; 1,2,3 ; 1,2,4 ; 1,3,4 ; 2,3,4 ; 1—4 difference operation mode) . User can use [CH-SEL] key to change the operation mode to select any mode user want. The selected paddle CH will be marked mode "✓" as following:



Paddle was selected mark

How to select paddle operation [Mode]

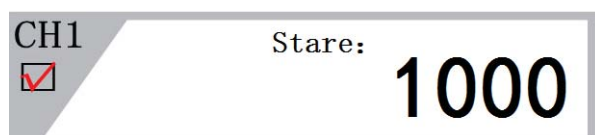
There are 3 operation modes can be selected:

1. Manual mode;
2. Step mode,
3. Continue Auto Mode.

Press [Mode] key to select operation mod. After user selected operation mode, the system will automatic get into self testing status. When the system finished self testing, it will show up [OK]. When you complete the mode selection, press [Run] key, ACP8340 start to work.

Mode setting

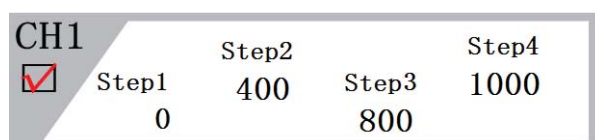
- Manual mode: User can manual set paddle location like show as the following picture.



Manual Setting Paddle Location

After you selected the paddle location, press [OK] or [Enter] Key, the paddle location was set.

- Step Mode: User can set paddle operation as step mode show as the following picture.

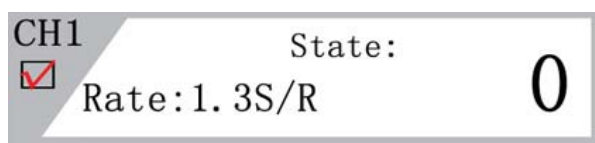


Step Mode

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User can set paddle operation step. Press [◀] or [▶] key to move the icon. Key in the step parameters number you want, Press [Enter] key to completed setting.

- Continue Auto Mode: Press [mode] key to select "Cont" mode, the system switch to continue auto mode:



Continue Auto Mode

How to set Delay time [Delay]

Under continue auto mode, the Delay time is paddle operation running stop time.

Under step mode, the delay time is each step change into next step time. The operation time can be selected from 0.10 to 99.9 second. Press [Delay] key, to set delay time you want. After parameters select, press [OK] or [Enter] key, the delay setting complete.

How to set combination Preset [Preset]

ACP8340 build-in 10 sets difference preset combination paddles mode. User can also set your own Preset paddles combination working mode. Preset combination work mode can be set as step mode or continue mode and save it. User can press [Preset] key to select saved preset combination work mode to run the machine. The preset parameters will be show on the screen.

How to change Preset parameters

If user no long to use current preset parameters, user can change the parameters setting. The procedure as below:

1. Press [mode] key to select the working mode;
2. Press [Preset] key to select the press set number ([0] to [9] can be selected) user want to change;
3. Press [Enter] key to change the preset parameters you want.
4. After new parameters were changed, press [OK] or [Enter] key, the parameters was preset and saved into your selected preset number.

How to use Menu key

- <KeyBeep>: KeyBeep sound on or off OFF close /ON open.
- <Backlight>: Display screen background light setting.

If you want change all above any function, press [Enter] key and start to change the parameters user want. After change the parameters user want, press [OK] key to confirm parameters change and saved. Press [Esc] key to quit Menu.