

# Digital Brushed DC Servo Drive **DCS810S**

## (Single-ended input & feedback)

### Features:

- \* Position control mode with opto-isolated pulse and direction inputs
- \* PC-based and handheld tuning tools available
- \* Input voltage: 18 VDC to 80 VDC
- \* Continuous current: 10 A , Peak current:20A ,
- \* Powers 20 W to 400W brushed DC servo motors.
- \* PUL/DIR or CW/CCW inputs
- \* Adjustable position following error lock range
- \* Single-ended encoder feedback and command inputs
- \* Surface-mount technology



Model	Driving Motors
DCS810S	18 to 80 VDC brushed DC servo motors, power up to 400W. Recommended motors DCM50xxx-xxxx and DCM57xxx-xxxx.

### Introduction

The DCS810S is a digital brushed DC servo drive delivering power up to 400 W. The DCS810S is designed to replace the DB810-50V which was widely used in inkjet printers. It offers improved performance with the same electrical connections. There are two DIP switches (SW1 and SW2) can be used to select 4 group servo parameters stored in EEPROM of the drive. Users can select one group of these servo parameters to optimize the performance for different applications, in which using different motors or having different load.

### Applications

Suitable for a wide range of equipment and machines such as inkjet printers, solvent printers, small and medium engraving machines, electronic manufacturing, NC machines, packing machines, and etc. Particularly suited to applications requiring minimal vibration, low noise, high speed, high precision.

### Connectors

#### Power and Motor Connector

Pin.	Name	Description	I/O	Pin.	Name	Description	I/O
1	Motor+	Motor positive connection	O	3	+Vdc	DC power Input (18 to 30 VDC)	I
2	Motor-	Motor negative connection	O	4	GND	Power ground	GND

#### RS232 Communication Interface

Pin.	Name	Description	I/O	Pin.	Name	Description	I/O
1	NC	Not connected	-	4	GND	Signal ground	GND
2	+5V	Power for STU-DCS	O	5	RxD	RS232: Receive	I
3	TxD	RS232: Transmit	O	6	NC	Not connected	-

#### Encoder Connector

Pin.	Name	Description	I/O	Pin.	Name	Description	I/O
1	EB	Encoder Channel B Input	I	4	EGND-	+5V power ground	-
2	EA	Encoder Channel A Input	I	5	ERR	Alarm signal output (OC output)	O
3	E +5V	+5V @ 50 mA max.	O				

## Connectors

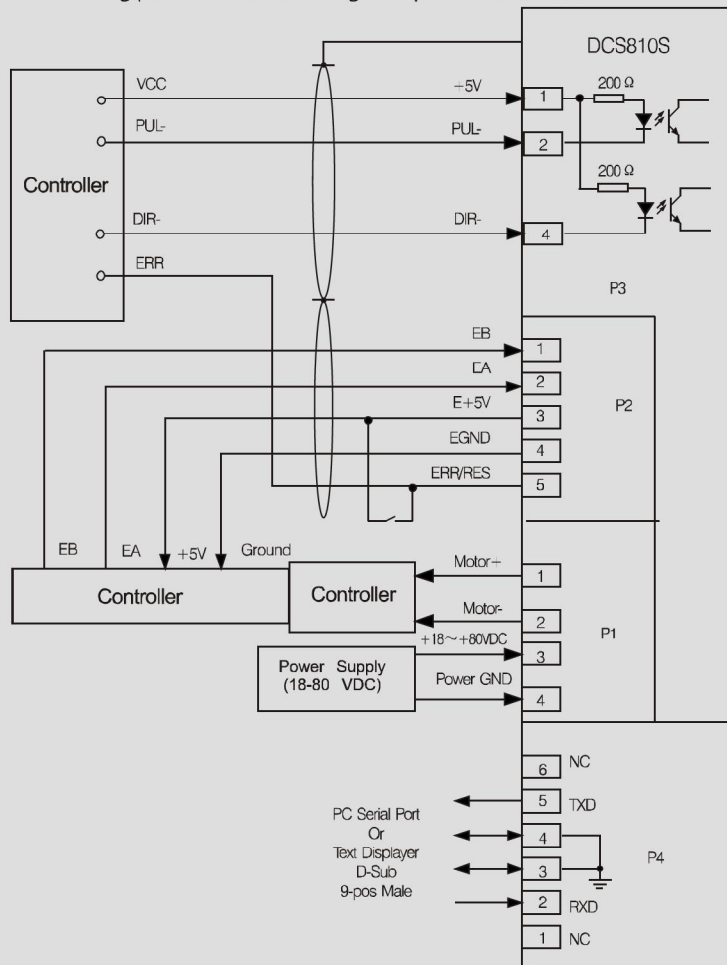
### DIP Switch & Command Signal Connector

Pin.	Name	Description	I/O	Pin.	Name	Description	I/O
1	SW2	SW2 DIP switch for parameter selection	I	4	PUL	Pulse signal input	I
2	SW1	SW1 DIP switch for parameter selection	I	5	DIR	Direction signal input	I
3	+5V	Opto-coupler power input (Normal: +5V)	I	6	EGD	Signal ground	-

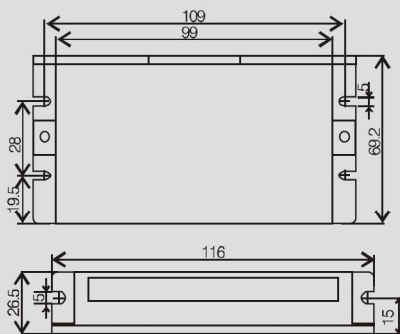
\* There are two DIP switches (SW1 and SW2) can be used to select 4 groups servo parameters stored in EEPROM of the drive. The user can select one group of these servo parameters to optimize the performance for different applications, in which using different motors or having different load. For most applications, these two DIP switches should be both on OFF positions (Factory Default Status), for saving and selecting the user's own servo parameters, **NOT** other 3 groups for dedicated applications.

## Full Wiring Example

The following picture shows a full wiring example of the DCS810S.



## Mechanical Specifications (Units:mm 1 inch = 25.4 mm)



Mechanical specifications of the DCS810S