

DC SERVO MOTOR DRIVER

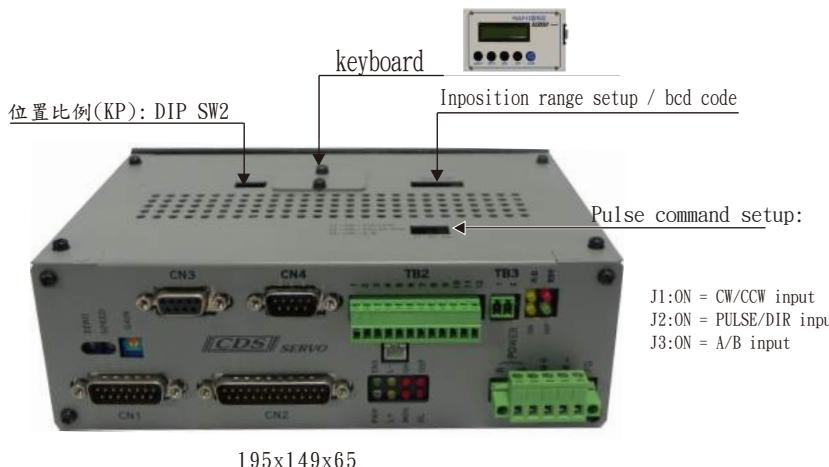
Operation Instructions

CDS—□□□□FVPW

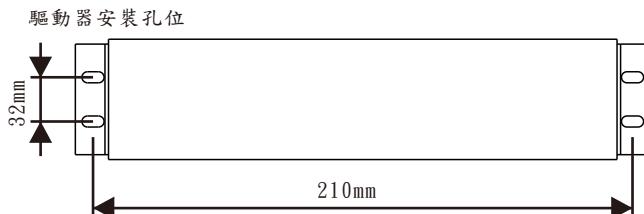


- Command Type :
 - Pulse
 - Direction
 - Pulse CW
 - Pulse CCW
- Speed Feedback Type : F/V
 - (Applicable Encoder Specifications
1000~5000P/R)
- Applicable Encoder Signal Type : Increment
 - 5VDC Line Driver
 - 5VDC Open Collector

CDS—□□□□FVPW INSTALLATION



J1:ON = CW/CCW input
 J2:ON = PULSE/DIR input
 J3:ON = A/B input



Notices for installation environment:

- (1) The ambient temperature shall not exceed the limit of 0~50°C.
- (2) The relative humidity shall not exceed the limit of 10~90%RH(no dew)
- (3) Environment with corrosive and inflammable gases shall be avoided.
- (4) Environment with dust,salt, and ferrous dust shall be avoided.
- (5) Environment possible for water,oil and chemical spray shall be avoided.
- (6) No big vibration and impaction.
- (7) Good ventilation is required.

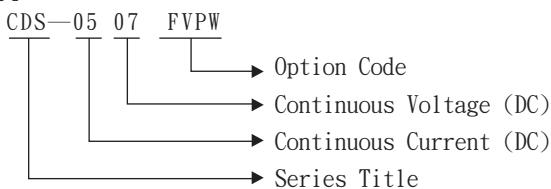
TABLE OF SPECIFICATIONS

SPEC	MODE	CDS—□□□□FVPW					
		0307	0310	0315	0507	0510	0515
CONT. CURRENT (A)		3	3	3	5	5	5
PEAK. CURRENT (A)		8	8	8	13	13	16
CONT. DCV(DC)		70	100	150	70	100	150
NET WEIGHT (KG)		1.3 Kg	1.3 Kg	1.3 Kg	1.3 Kg	1.3 Kg	1.4 Kg

SPEC	MODE	CDS—□□□□FVPW					
		0710	0715	1007	1010	1015	1515
CONT. CURRENT (A)		7	7	10	10	10	15
PEAK. CURRENT (A)		16	16	20	20	20	25
CONT. DCV(DC)		100	150	70	100	150	150
NET WEIGHT (KG)		1.6 Kg	1.6 Kg	1.6 Kg	1.6 Kg	1.6 Kg	1.6 Kg

- Entry of speed command DC±10V/Rated rpm.
- Speed feedback signal : ENCODER 1000~2500P/R 500P/R~5000P/R
(custom-made spec. can also be accepted.)
- Protection device : overheated in the motor、overheated in the driver、overload short-circuit in the motor、overspeed.
- Custom-made spec can also be accepted of main voltage.
- Cable length below 15M.

Type Code :



(DIP Switch or Jump) IUSTRCTION

POSITION GAIN RATE SETUP (P.P) DIP SW2

P. P SETUP

1	2	3	4	
0	0	0	0	NO USE
0	0	0	1	→ GAIN LOW (FACTORY DEAFULT)
0	0	1	0	
0	0	1	1	
0	1	0	0	
0	1	0	1	
0	1	1	0	
0	1	1	1	
1	0	0	0	
1	0	0	1	
1	0	1	0	
1	0	1	1	
1	1	0	0	
1	1	0	1	
1	1	1	0	
1	1	1	1	→ GAIN HI

INPOSITION RANG SETUP : (INPOSITION) DIP SW1

DIP. SW1第1PIN = ON/ 128Pulse

DIP. SW1第2PIN = ON/ 64Pulse

DIP. SW1第3PIN = ON/ 32Pulse

DIP. SW1第4PIN = ON/ 16Pulse

ALLOW TOTAL PULSE = 240 PULSE / OVER 240 PULSE INP LED OFF

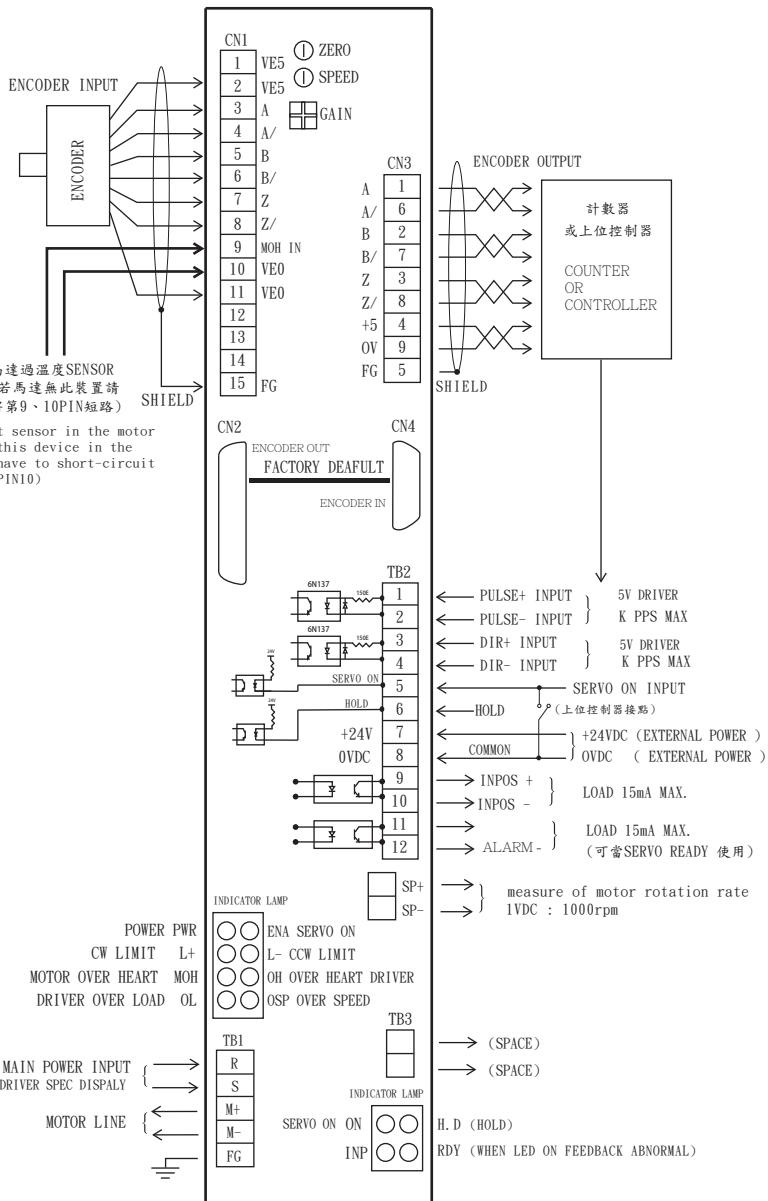
PULSE COMMAND MODE :

J1: ON時為  Pulse CW
 Pulse CCW

J2: ON時為  Pulse
 Direction

J3: ON時為  A Quadrature
 B Quadrature (FACTORY DEEFLT MODE)

FVPW WIRING INSTRUCTIONS



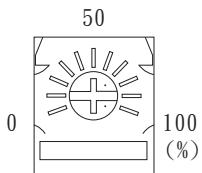
FVPW ADJUSTMENT INSTRUCTIONS

(VR ON PANEL)

1. ZERO Zero Potential Adjustment (or Balance Adjustment, Offset Adjustment)
(18-turn long-reach trimming variable resistor) : When the zero, the motor should be held. If there is any positive or turn this button CW or CCW to reset the motor. (If Offset dr improve the V-command and the shielding effect of the encoder.)
2. SPEED RPM adjustment (18-turn long-reach trimming variable resistor)
(Proportion Gain) : This is the internal speed limit adjustmen command is controlled here.
(Observe the max. rpm specifications of the driver.
CW = Deceleration
CCW = Accelerat

3. GAIN Dynamic Response Adjustment (250 degree block-type square trimming variable resistor)

(Adjusting appropriately to match with the gain value of the command can improve the carrying stability and the accuracy of the dynamic response.)



CW = GAIN increse
CCW = GAIN decrese

Note :

1. CDS motors will be optimized before shipment.
2. Customes motors will be adjusted to 50% before

GAIN Adjustment Diagram :

 Measures : Adjusting counter-clockwise can decrease the gain and improve the overshoot as shown in the left figure.

 Moderate

 Measures : Adjusting clockwise can increase the gain and improve the overshoot as show in the left figure.

 (Over Shoot)

FVPW PROTECTION AND STATUS INSTRUCTIONS

(1) PWR : POWER LAMP

(2) ENA : ENABLE DRIVER SERVO ON

(3) L- : CCW LIMIT

L+ Pos. Limit Display (LED ON) : The positive limit reaches the point where only reverse operation is possible. (RESET invalid)

(4) L- : CCW LIMIT

L+ Neg. Limit Display (LED ON) : The positive limit reaches the point where only reverse operation is possible. (RESET invalid)

(5) 0.L Display System Overload :

1. Heavy load for a long time.
2. Inappropriate acce./decel. control.

3. Motor short-circuit :

- A. Motor coil short .
- B. Motor wire M+ or short-circuit.
- C. Motor failed.
- D. Motor commutator disturbed by foreign matters.
- E. High noise. Check the F.G wiring with reference to the wiring diagram.

(6) M.O.H (Motor Overheat) Note : Reset wil run automatically when the temperature drops.

1. Motor overload for a long time with bad ventilation.
2. Bad cooling function.
3. Inappropriate motor specifications.
4. Motor jitter under high frequency.

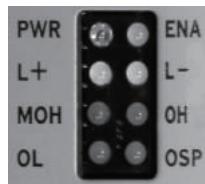
Note : If the motor is not installed with this protection device, the 9th and 10th pins of must

CN1 be in the short-circuit state. Otherwise, the system will be deemed as overheat

(7) 0.H (Driver Overheat) :

Note : The protective switch works when the temperature is higher than 80°C. It reset automatically when the temperature drops to 65°C or lower.

INDECATOR LAMP



1. Ambient temperature is too high or ventilation is bad. (Addi
can be used for improvement.)
2. Overload for a long time.
3. Inappropriate driver or motor specifications. (Inappropriate
the driver/motor.)
4. The regenerated voltage is abnormal : inappropriate control of accel./
decel. time.

(8) OSP (Driver Overrun) :

1. Higher than the rated rpm of the driver
2. Check the max. rpm of the driver.

(9) SV ON : Driver servo on.

(10) HOLD : Spare.

(11) INP : Motor arrival inposition indicator. If the LED not ON, adjust to ZERO VR,
please, until LED ON.

1. Balance adjustment too much.
2. Setup DIP SW1 range not enough.

(12) RDY : Following error

1. ENCODER maybe abnormal.
2. Driver maybe abnormal.
3. Driver speed gain adjustment maybe abnormal.
4. Driver gain VR adjustment maybe abnormal.
5. Feed back maybe abnormal.
6. Wiring of shield maybe abnorm
7. Acceleration/deceleration set

||CDS|| SERVO

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MADE IN TAIWAN
