

FA successful application

Case name	Shihlin SDE servo on laminating machine				
Department	FA engineering group	date	2017-10-23	page	2
product	SDE series	code	ANS00002		

1.Introduction

This high-precision laminating machine is the latest type of laminating machine. Its main performance and features: 1. Thermal energy circulation system, which effectively reduces heat energy loss, is more energy-saving and environmentally friendly, and improves efficiency; 2. Servo transmission control paper lap system makes paper position more stable, efficient and accurate; 3. parallel sheet , low speed operation, speed memory and other functions, making operation more convenient. The machine is compact in structure, stable in operation, ultra-high precision, and easy to operate and maintain. It has the characteristics of constant temperature, large pressing force, fast drying speed, power saving and uniform coating. It can be used for water-based dry-adhesive, non-adhesive film, pre-coated film, oil film, and can also be used for laminating. It can continuously press stretched polypropylene (BOPP) on printed matter, widely used in textbooks, book covers, calendars, cards, product samples, plastic packaging of packaging cartons, it is the ideal equipment for improving the quality of printed matter and reducing the cost of the process for printing factory and packaging factory .



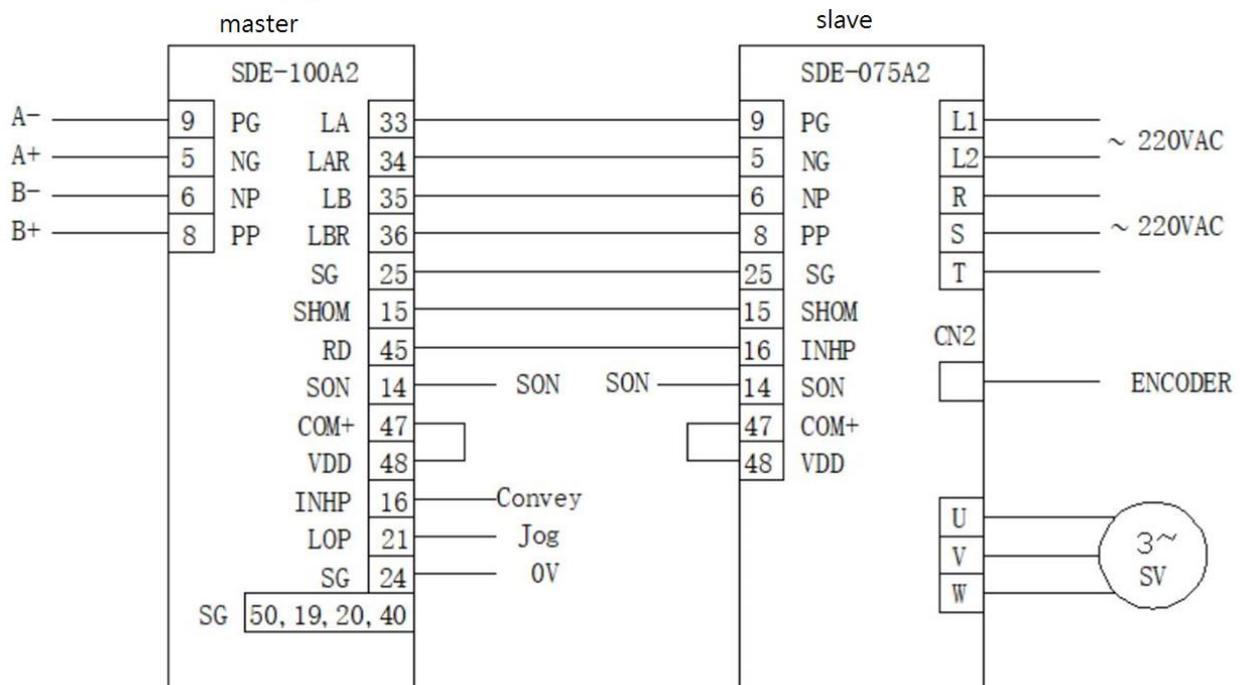
2. System control instructions

- Use the encoder send pulse to achieve SDE master-slave motion.
- Pulse signals (external buttons) is used to find the respective Z-phase origins on the master-slave servo .
- Z-phase origin search method is to look forward till find.
- Servo speed control needs to be modified to change the electronic gear ratio denominator.

3.SDE series servo drive features description

- 22-bit high resolution encoder for high precision positioning
- The speed response bandwidth is 1.2kHz, and the setting time is as short as 1ms.
- Excellent Auto-tuning function, can be accurately complete in only 1 cycle
- Excellent resonance suppression function to quickly and effectively suppress mechanical vibration or abnormal sound
- Responsiveness can be divided into 24 grades, and finer grades are convenient for adjusting rigidity
- Optional battery case for absolute encoder use
- Standard Modbus communication protocol facilitates upper computer communication connection
- Perfect servo online debugging software for engineers on site
- Highly flexible internal position mode reduces equipment construction costs

4. Wiring



5. Parameter

Master

parameter	abbr	set value	default value	unit
PA-01	STY	00000001	00001000	/
PA-02	ATUM	00000000	00000002	/
PA-04	HMOV	00000005	00000000	/
PA-06	CMX	131625	1	/
PA-07	CDV	588	1	/
PA-13	PLSS	00000112	00000000	/
PA-14	ENR	8000	10000	Pulse/rev
PA-35	FNO1	00001010	00000000	/
PA-39	POL	00000001	00000000	/
PB-04	PST	50	3	ms
PB-05	FFC	30	0	0.0001
PB-06	GD1	150	70	0.1 times
PB-07	PG1	145	45	rad/s
PB-08	VG1	210	183	rad/s
PB-27	ANCF	00000000	00000001	/
PC-05	SC1	10	100	rpm
PC-06	SC2	25	500	rpm
PC-07	SC3	10	1000	rpm
PC-15	SVZR	100	10	mV
PC-20	SNO	8	1	station
PC-22	BPS	00000027	00000010	/
PD-01	DIA1	00001110	00000000	/
PD-03	DI2	0000002D	0000000D	/
PD-04	DI3	0000001D	00000003	/
PD-07	DI6	00000009	0000000F	/
PD-08	DI7	00000007	00000012	/
PD-14	DO5	00000017	00000001	/
PF-05	PDEF51	00000001	00000000	/
PF-06	PDAT51	200	0	/
PF-07	PDEF52	00000001	00000000	/

Slave

parameter	abbr	set value	default value	unit
PA-01	STY	00000000	00001000	/
PA-02	ATUM	00000000	00000002	/
PA-04	HMOV	00000004	00000000	/
PA-06	CMX	838861	1	/
PA-07	CDV	400	1	/
PA-10	RES1	40	100	Ohm
PA-11	RES2	40	20	Watt
PA-13	PLSS	00000001	00000000	/
PB-03	NLP	8	10	0.1ms
PB-06	GD1	100	70	0.1 times
PB-07	PG1	85	45	rad/s
PB-08	VG1	340	183	rad/s
PB-09	VIC	18	34	ms
PB-27	ANCF	00000000	00000001	/
PC-05	SC1	10	100	rpm
PC-06	SC2	10	500	rpm
PC-07	SC3	10	1000	rpm
PD-01	DIA1	00001111	00000000	/
PD-03	DI2	0000002D	0000000D	/
PD-04	DI3	0000001D	00000003	/
PD-11	DO2	00000017	00000008	/