Case name	Shihlin SA3 on material winding machine				
Department	FA engineering group	date	2016.04.25	page	3
Product	Shihlin SA3 series				

1. Requirements

   This case is a paper winding machine. It uses a tension feedback sensor to feedback -10~10V voltage for torque control, 0~10V for speed control. There is a motor on each side, when one motor has insufficient torque, the other motor reacts to compensate, so that stable tension control can be achieved.

2. Photo

Tension sensor
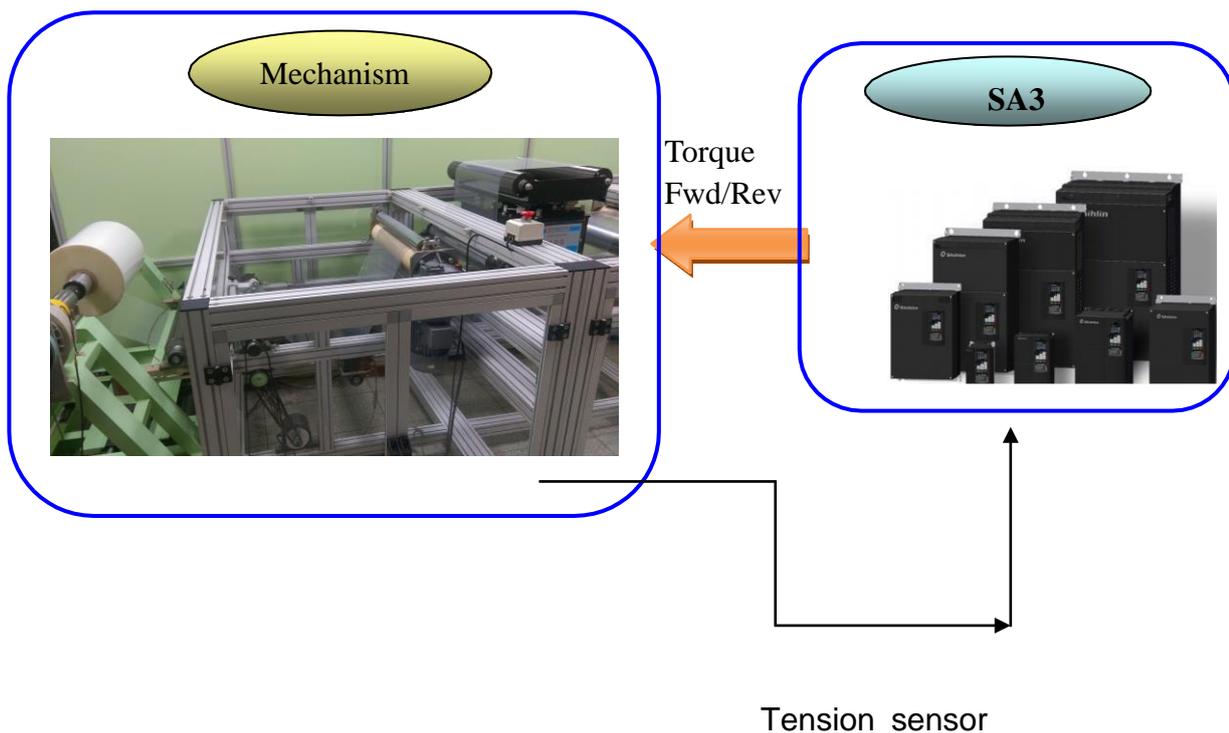
3. Parameter

Parameter	setting	description
Pr.300	4	Motor control mode
Pr.301	1	Motor auto-tuning
Pr.302	1.5	Motor rated power
Pr.303	4	Motor poles
Pr.304	220	Motor rated voltage
Pr.305	50	Motor rated frequency
Pr.306	6	Motor rated current
Pr.307	1420	Motor rated speed
Pr.349	0	Encoder(synchronous motor)
Pr.350	600	Encoder pulse per round
Pr.351	2	Encoder type
Pr.38	50	2-5 max frequency
Pr.73	5	2-5 signal source
Pr.192	0	2-5 minimum input voltage(+)
Pr.193	10	2-5 maximum input voltage(+)
Pr.194	0	2-5 minimum voltage(+) to percentage
Pr.195	100	2-5 maximum voltage(+) to percentage
Pr.510	0	2-5 minimum voltage(-) to percentage
Pr.511	-100	2-5 maximum voltage(-) to percentage
Pr.512	0	2-5 minimum input voltage(-)
Pr.513	10	2-5 maximum input voltage(-)
Pr.139	0	2-5 voltage signal biased percentage
Pr.500	2	2-5 input function
Pr.402	-120	Speed limit
Pr.403	120	Speed limit biased percentage
Pr.405	1	Torque source
Pr.406	1	Speed limit type
Pr.407	1	Speed priority loop function
Pr.400	2	Control mode
Pr.501	0	4-5 terminal input function
Pr.504	1	3-5 terminal input function

4. System function and feature

※ High performance vector control technology
※ Four quadrant torque control
※ Low voltage transient compensation
※ Magnetic brake
※ High performance synchronous motor control technology
※ Built-in position control, torque control, speed control, tension control function
※ Built-in PLC function

5. Conclusion

   Shihlin Inverter SA3 plus PG card can perform positioning control and torque control.
   Shihlin SA3 with communication expansion card can perform CANopen communication,
   Profibus communication, Devicenet communication.