产品选型手册

Product selection guide



RSA Series

Applications & Features



New design, easy to move.
All-plastic housing, anti-oil, sealed.
With axis selection switch and resolution switch.
Emergency stop switch and reset switch optional.
Used for CNC machine tools and printing machinery.

Part Number

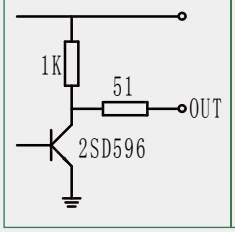
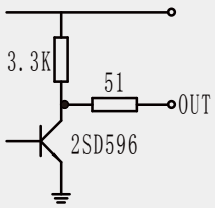
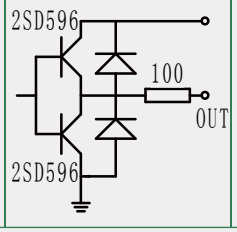
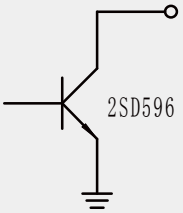
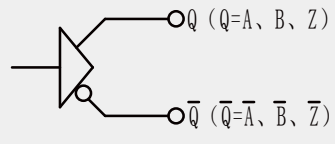
RSA | 4 | □ | T | R1 — □ | 2 | E — □ | B

- RSA — Product Type
- 4 — Axis No.
  - 4: 4 Axis
  - 6: 6 Axis
- □ — Resolution Switch
  - N: Without resolution switch
  - Blank: With resolution switch
- T — Emergency Stop
  - T: With emergency stop switch
  - Blank: Without emergency stop button
- R1 — Enable Switch
  - R1: Single enable switch
  - Blank: Without enable switch
- □ — Spiral Cable
  - Standard 3M
- 2 — Supply Voltage
  - 1: DC5V
  - 2: DC8-26V
- E — Output Circuit
  - E: Voltage Output
  - F: Push-pull
  - C: Open Collector
  - L: Line Driver
  - A: Wide Voltage Line Driver
- □ — Resolution
  - 25ppr、100ppr
- B — Signal
  - B:90° phase different A、B singals output

Electrical Specifications

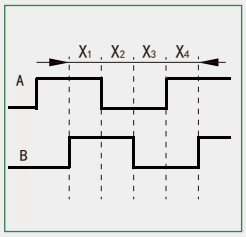
Output Circuit	Supply Voltage DC (V)	Current Requirement (mA)	Output Voltage (V)		Rise Time (ns)	Fall Time (ns)	Frequency Response (kHz)
			V_H	V_L			
E (Voltage)	5±0.25	≤60	≥3.5	≤0.5	≤500	≤100	0~100
	8~26		≥Vcc-2.5	≤0.5	≤1500	≤300	
C (Open Collector)	5±0.25	≤60					0~100
	8~26						
L (Line driver)	5±0.25	≤100	≥2.5	≤0.5	≤200	≤200	0~100
A (Wide Voltage Line Driver)	8~26	≤80	≥Vcc-2.5	≤0.8	≤800	≤200	0~100
F (Push Pull)	5±0.25	≤60	≥3.5	≤0.8	≤300	≤200	0~100
	8~26		≥Vcc-2.5	≤1.0	≤500	≤200	

Output Circuit

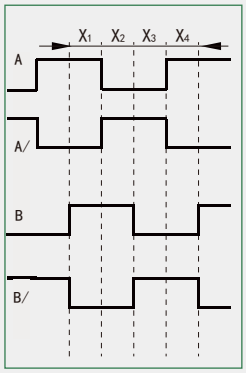
<table>
<tr><th colspan="2">E (Voltage)</th><th colspan="2">F (Push-pull)</th><th>C (Open Collector)</th><th>L、A (Line Driver)</th></tr>
<tr><th>5V</th><th>8-26V</th><th>5V</th><th>8-26V</th><th rowspan="2"></th><th rowspan="2"></th></tr>
<tr>
<td>
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<td>

L: 26C31
A: ET7272B</td>
</tr>
</table>

Output Waveform



Waveform for C, E, F output



Waveform for L,A output

Wave Ratio : X1+X2=0.5T±0.1T
X2+X3=0.5T±0.1T

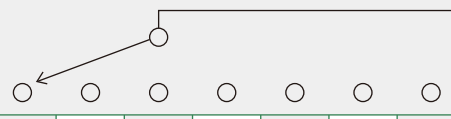
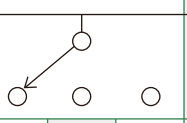
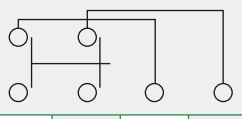
Phase Different : Xn≥0.125T (n=1,2,3,4)

Absolute Angle Error: ≤0.2T

Cycle Error : ≤0.05T

T=360° / N (N=lines count per revolution)

MPG Function

<table>
<tr><th colspan="7">Axis No.</th><th colspan="3">Resolution Switch</th><th>Start (Recover)</th><th colspan="2">Display (LED)</th><th colspan="4">Emergency Stop</th></tr>
<tr><td colspan="7"></td><td colspan="3"></td><td></td><td colspan="2"></td><td colspan="4"></td></tr>
<tr><td>OFF</td><td>X</td><td>Y</td><td>Z</td><td>4</td><td>5</td><td>6</td><td>X1</td><td>X10</td><td>X100</td><td>COM</td><td>DC 24V</td><td>OV_{LED}</td><td>NC1</td><td>NC2</td><td>NC1</td><td>NC2</td></tr>
</table>

Environmental Specifications

Max. Speed	600r/min
Operating Temp.	-10~+60℃
Store Temp.	-20~+70℃
Size	164*72*60mm
Weight	Approx. 0.59kg

Connection

17 Pins Cable Wire, 4 Axis

Cable Color	DBU	LBU	RD/BK	BU/BK	RD	BK	YL	WH	CR	GY	CR/BK	GN	OG	BN	PK	PL
L	4	COM	+L	-L	VCC	0V	A	B	X1	X10	X100	X	Y	Z	A/	B/
E	4	COM	+L	-L	VCC	0V	A	B	X1	X10	X100	X	Y	Z	/	/

21 Pins Cable Wire, 4 Axis with Emergency Stop Button

Cable Color	GY	GY/BK	WH/BK	LBU	GN	BN	BN/BK	OG	RD/BK	BU/BK	RD	BK	YL	WH	YL/BK	OG/BK	GN/BK	PL/BK	PK	PL
L	X1	X10	X100	COM	X	Z	4	Y	+L	-L	VCC	0V	A	B	K1	K2	K3	K4	A/	B/
E	X1	X10	X100	COM	X	Z	4	Y	+L	-L	VCC	0V	A	B	K1	K2	K3	K4	/	/

17 Pins Cable Wire, 6 Axis, Voltage Ouput

Cable Color	DBU	LBU	RD/BK	BU/BK	RD	BK	YL	WH	CR	GN/BK	CR/BK	GN	OG	BN	PK	PL
E	4	COM	+L	-L	VCC	0V	A	B	X1	X10	X100	X	Y	Z	5	6

21 Pins Cable Wire, 6 Axis, Line Driver Output

Cable Color	GY	GY/BK	WH/BK	LBU	GN	BN	BN/BK	OG	RD/BK	BU/BK	RD	BK	YL	WH	YL/BK	OG/BK	PK	PL
L	X1	X10	X100	COM	X	Z	4	Y	+L	-L	VCC	0V	A	B	5	6	A/	B/

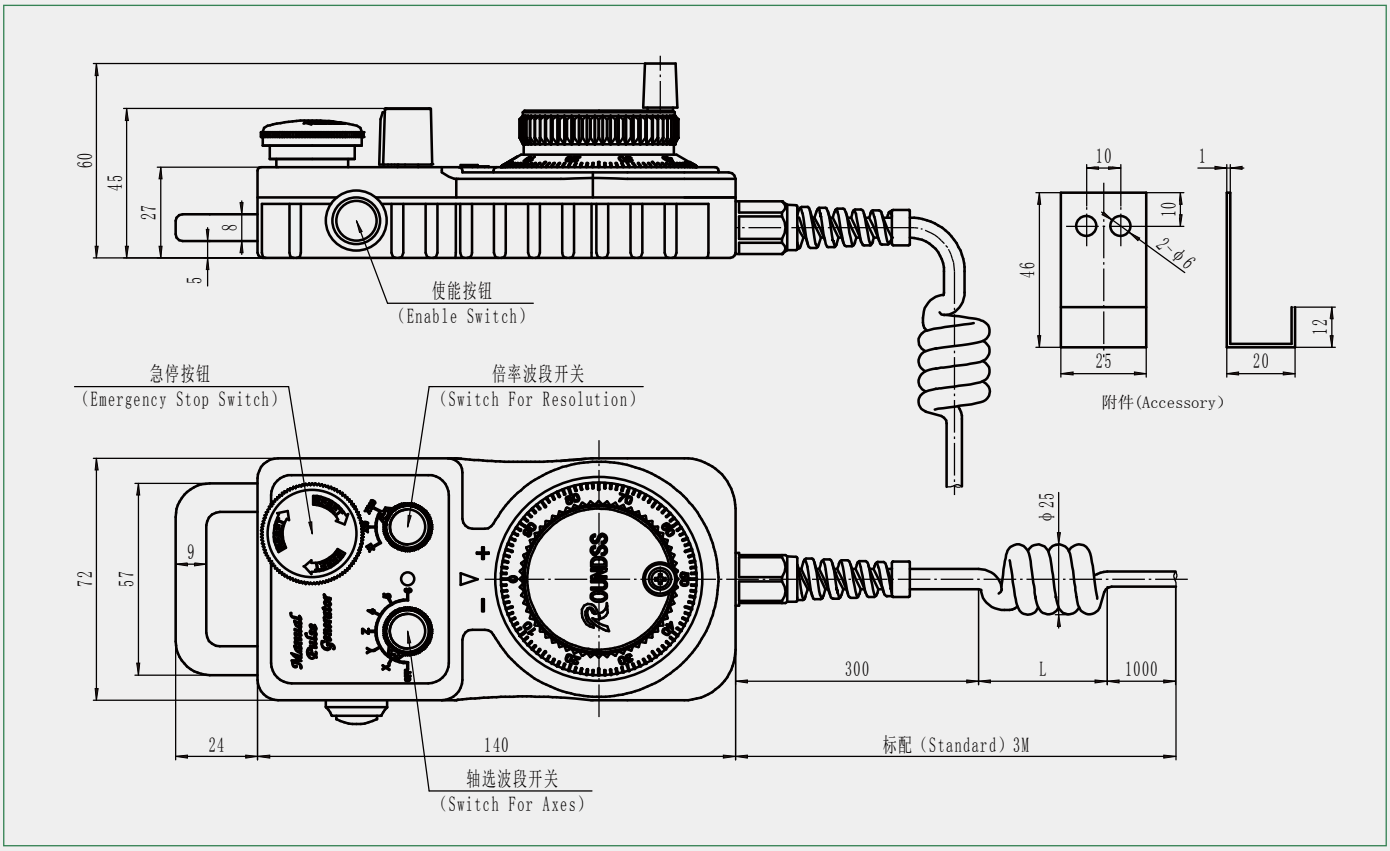
21 Pins Cable Wire, 6 Axis with Emergency Stop Button, Voltage Output

Cable Color	GY	GY/BK	WH/BK	LBU	GN	BN	BN/BK	OG	RD/BK	BU/BK	RD	BK	YL	WH	YL/BK	OG/BK	GN/BK	PL/BK	PK	PL
E	X1	X10	X100	COM	X	Z	4	Y	+L	-L	VCC	0V	A	B	K1	K2	K3	K4	5	6

24 Pins Cable Wire, 6 Axis with Emergency Stop Button, Line Driver Output

Cable Color	CR	CR/WH	WH/BK	LBU	WH/RD	WH/BU	GN	OG	BN	DBU	GY	WH/GY	YL	WH	BK	RD	WH/YL	WH/OG	WH/GN	WH/PL	PK	PL
L	X1	X10	X100	COM	+L	-L	X	Y	Z	4	5	6	A	B	0V	Vcc	K1	K2	K3	K4	A/	B/

Dimension



China Rongde Optics Co., Ltd

www.roundssencoder.com