Model TSA35

Non-Contact Angle Position Sensor

HIGHLIGHT FEATURES

- Hall-effective
- Absolute position
- Anodized aluminum housing
- Stainless steel shaft with 2 ball bearing structure
- Independent Linearity < ±0.2%
- Life > $10*10^6$

APPLICATIONS

Measuring applications
Tension Controlling (Printing, Dyeing, Packing, Textile Machine
Operating table
Lifting apparatus
Windmill
Angle\Position measurement in steering systems

MECHANICAL

Total Mechanical Travel	0 - 360(±5)° (with\without stop)
Starting Torque	0.5Ncm
Max Rotating Speed	120rpm
Max Permitted Axial Shaft Load	10N
Max Permitted Radial Shaft Load	10N
Weight	37g

ELECTRICAL

Measuring Range	360° (Find more options in ORDER INFO)
Independent Linearity	< ±0.2%
Resolution	12 bit
Refresh Rate	290 (±15) μs
Max. Hysteresis	0.1°
Max. Repeatability	0.1°
Supply Voltage	5 (±10%) VDD (Find more options in ORDER INFO)
Supply Current	<12mA
Output Load Analog	10kΩ
Load Output Capacity	10 to 330nF

ENVIRONMENTAL

Protection Class	IP54/IP65
Life	> $10*10^6$
Operation Temperature Range	-40°C ~ +150°C (Find more options in ORDER INFO)
Shock	50g, 11m
Storage Temperature	-40°C ~ +85°C

CE-CONFORMITY

RF noise field strength EN 55011, class B
ESD EN 61000-4-2
Radiated immunity EN 61000-4-3
Burst EN 61000-4-4
Conducted disturbances induced by RF fields EN 61000-4-6

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ORDERING INFORMATION

TSA35 **1 1 1 3 6 0 3 6 0 I 4 K**

Mechanical Travel

360° without stop	Standard	**1**
Other Angle Request with stop	Optional	**X**

Effective Electronic Travel

360°	Standard	**1**
Other Angel	Optional	**X**

Output Signal

1	Standard	10% - 90%
2	Standard	0% - 100%
3	Optional	4 - 20 mA
X	Optional	X% - Y%

Input Voltage

1	Standard	5V DC
2	Optional	12V DC
3	Optional	24V DC

Output Characteristic

1	Standard	Positive gradient CW
2	Standard	Positive gradient CCW
3	Optional	Positive gradient CW, Dual Parallel Output
4	Optional	Positive gradient CCW, Dual Parallel Output
X	Optional	Multi-Point Programming, Dual Parallel\Cross Output

Shaft Type

D	Standard	D Type
I	Standard	I Type
R	Standard	R Type
X	Optional	Other Type Request

Shaft Length

4	Standard	20mm
X	Optional	Other Length Request

Operation Temperature

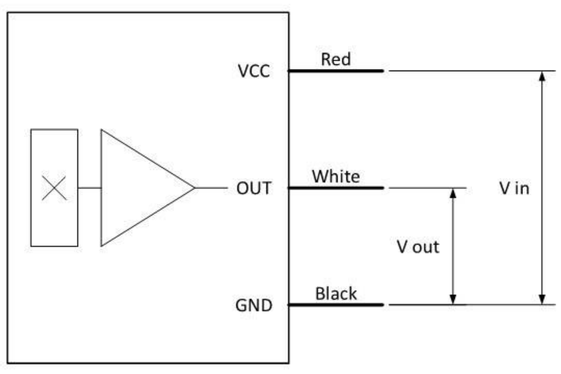
E	Standard	-40°C ~ +85°C
K	Standard	-40°C ~ +125°C
L	Optional	-40°C ~ +150°C

WIRE SPECIFICATION

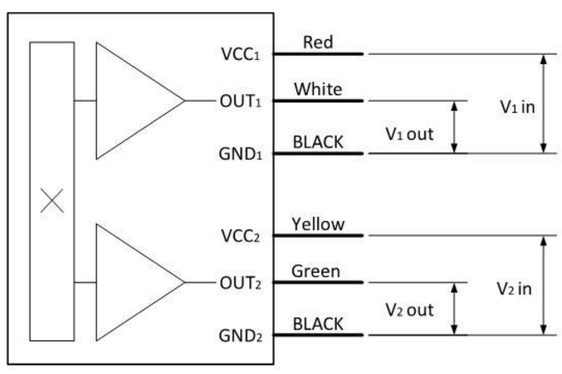
Length of wires	Standard	AWG18 15cm
Length of wires	Optional	AWG18 20cm
Length of wires	Optional	AWG18 30cm
Length of wires	Optional	Other Request

CONNECTION

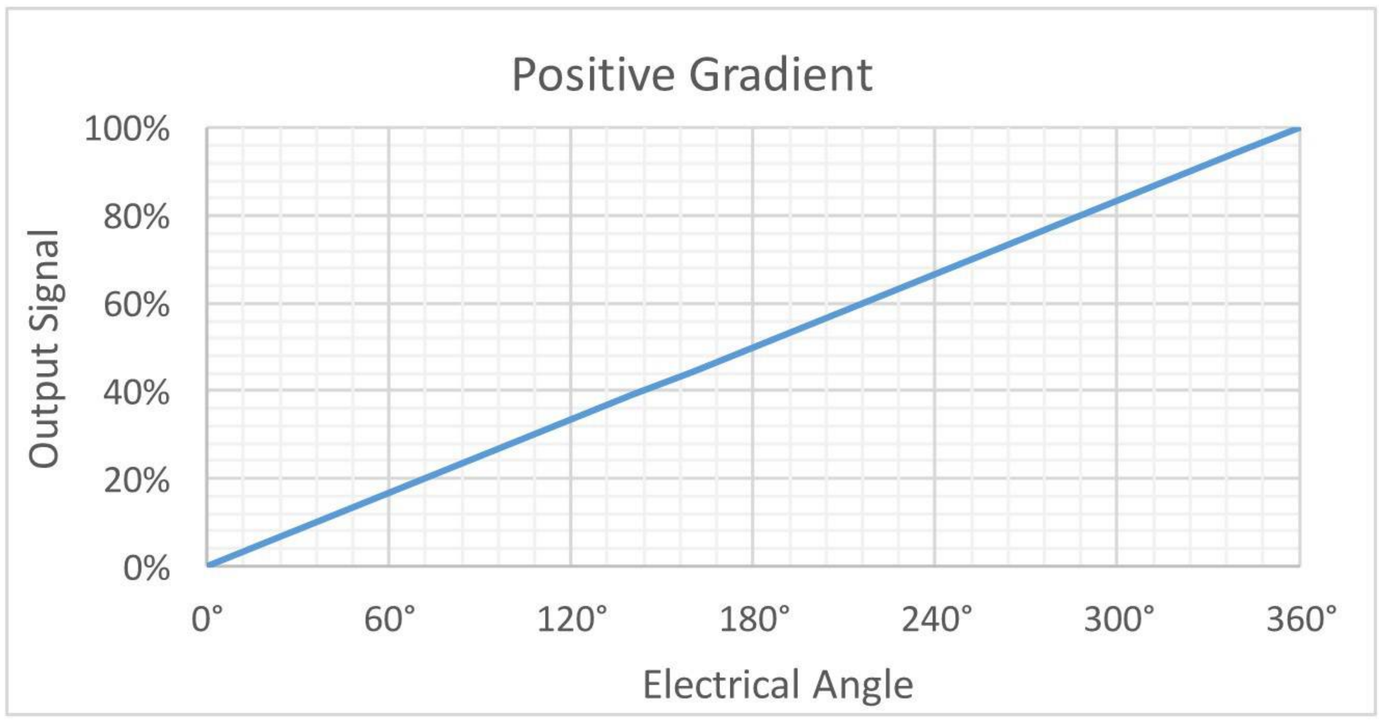
SINGLE OUTPUT



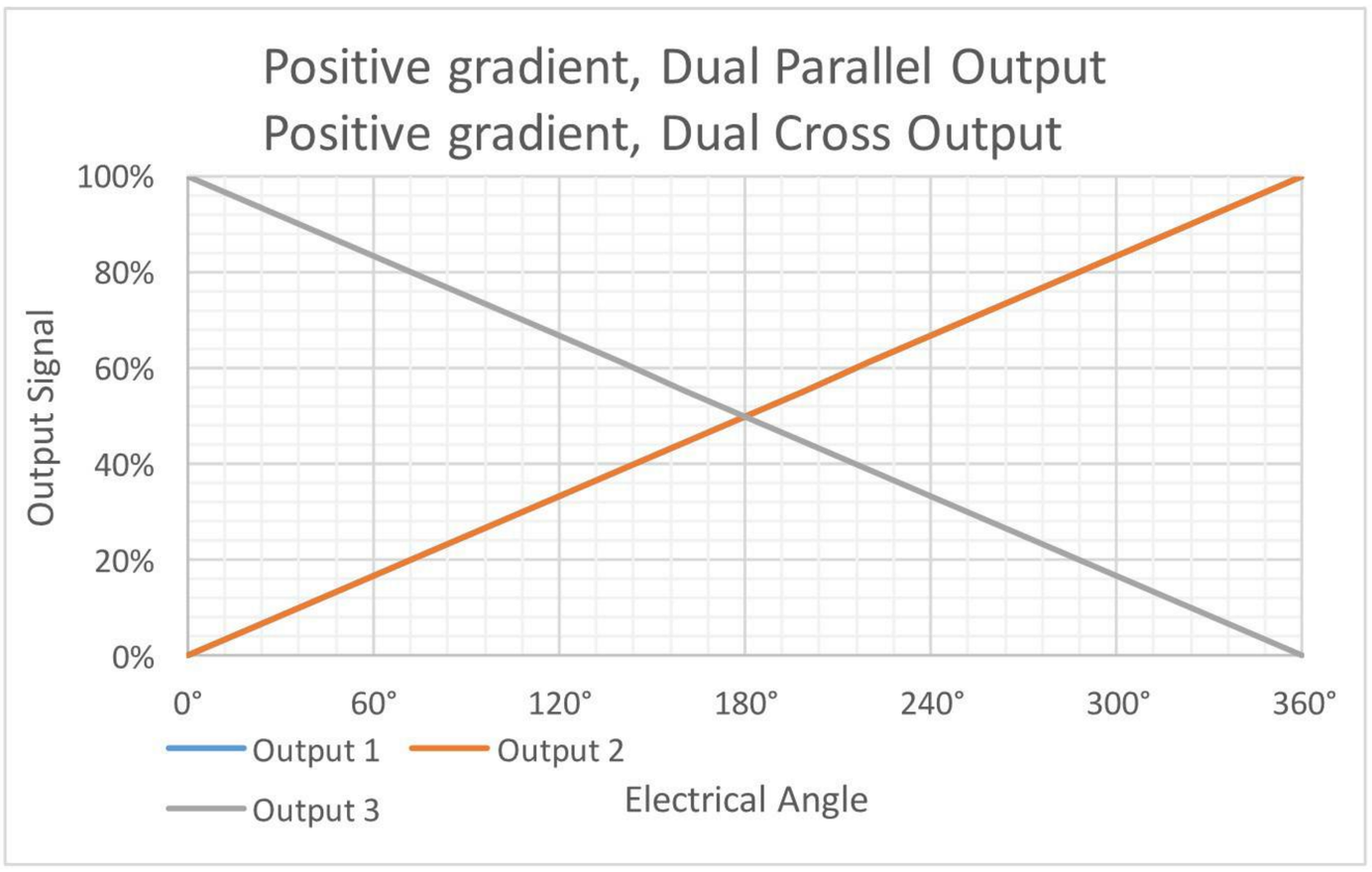
DUAL OUTPUT



OUTPUT CHARACTERISTIC

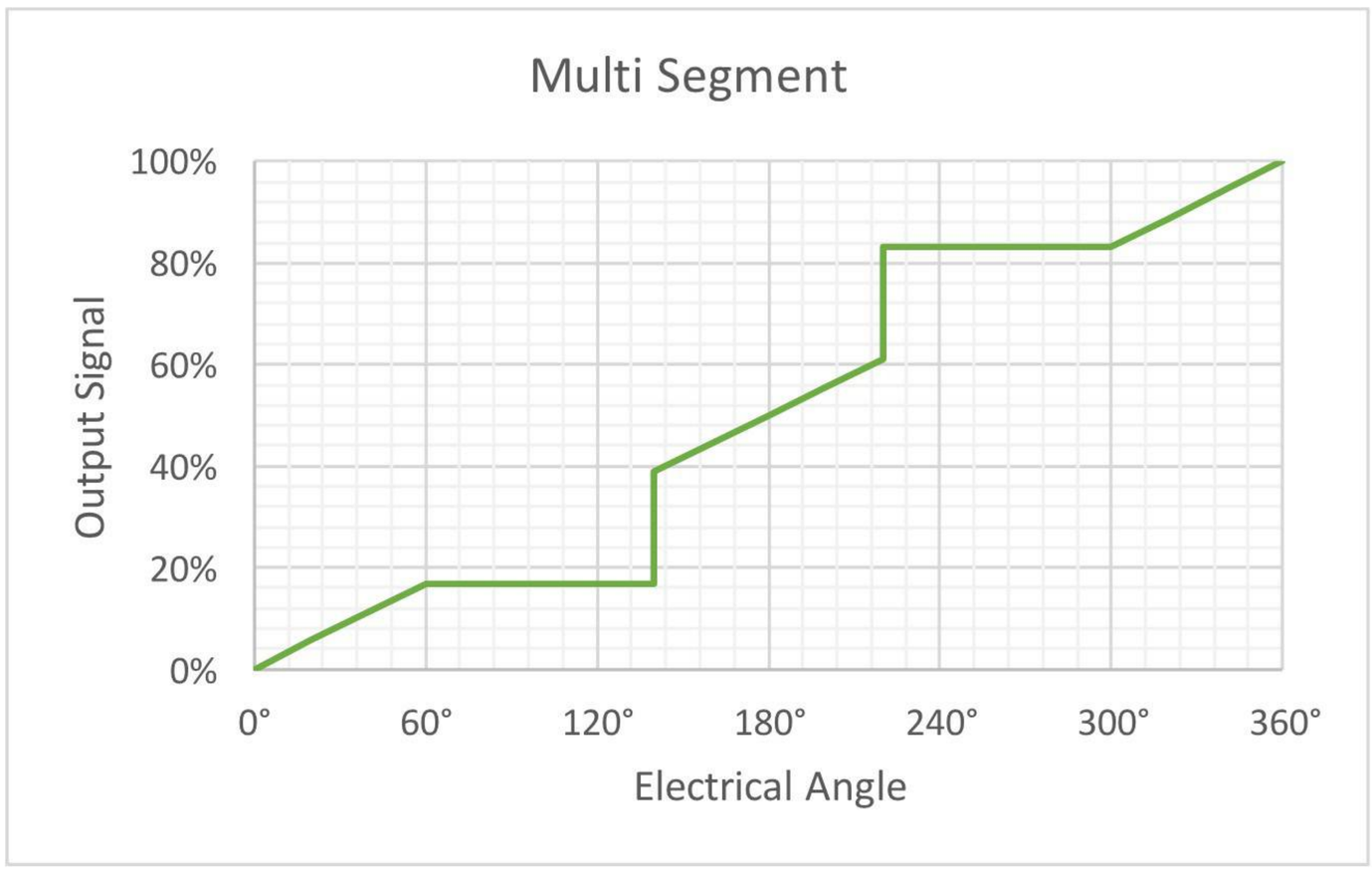


Positive Gradient
Angle Range:
(A° - B°), A, B = (0, 360), B > A
Output Signal:
(X% - Y%)Vcc, X, Y = (0, 100), Y > X



Positive Gradient CW,
Dual Parallel Output:
OUTPUT 1
Angle Range:
(A_1° - B_1)°, A_1, B_1 = (0, 360), $B_1 > A_1$
Output Signal:
(X_1% - Y_1%)Vcc, X_1, Y_1 = (0, 100), $Y_1 > X_1$
OUTPUT 2 parallel **OUTPUT 1**

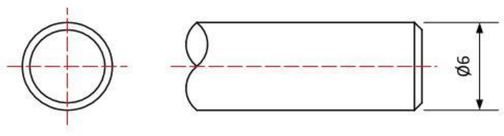
Positive Gradient CW,
Dual Cross Output
OUTPUT 3 cross **OUTPUT 1**



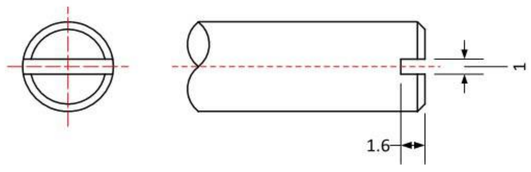
Multi Point Programming
17 Points, (16 segments) can be programmed in 360° electrical angle

SHAFT TYPE

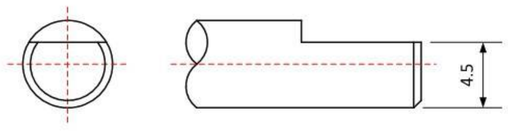
SHAFT TYPE - R



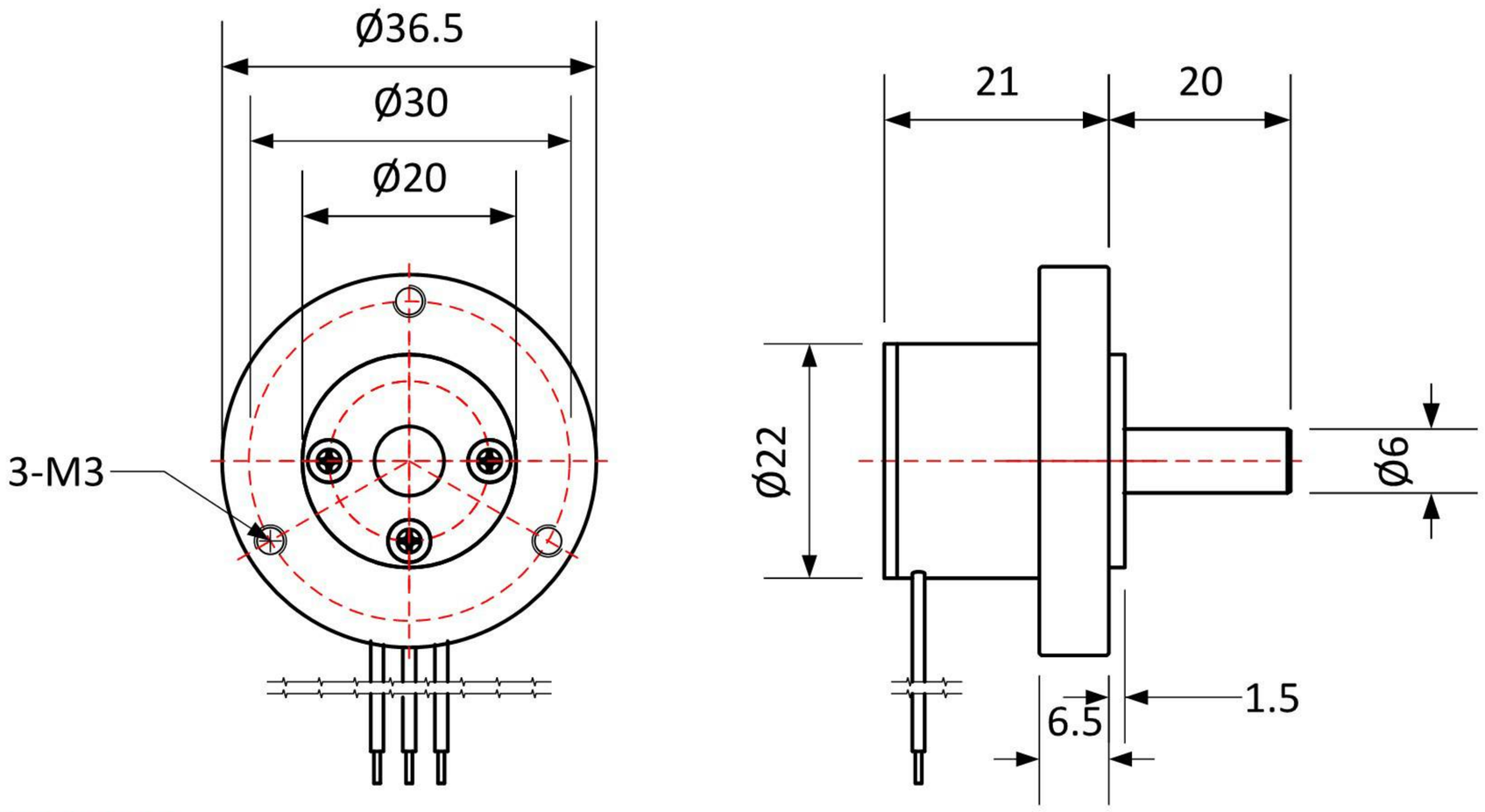
SHAFT TYPE - I



SHAFT TYPE - D



OUTLINE DRAWING



INSTALLATION

PANEL MOUNT