DWSX150 - Incremental Encoder

Measurement Range: 0-4000mm

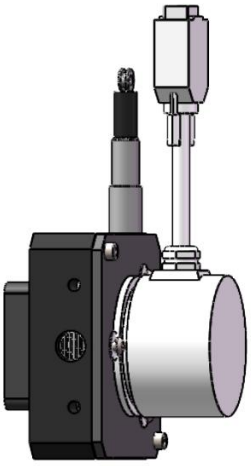
Medical Equipment / Engineering / Industrial

Anodized Aluminum Enclosure

IP65/67 Automation And Test Applications

DWSX150

Industrial Grade · Incremental Encoder



The DWSX150 is a compact, easy-to-use encoder-based string potentiometer. Simply mount the sensor body to a fixed surface and connect the extension cable to the moving object. Suitable for medical engineering, equipment engineering and industrial applications.

SPECIFICATIONS

SUMMARY

Full Stroke Range	multiple ranges available, 0-4000mm
Accuracy	±0.04% full stroke
Repeatability	±0.02% full stroke
Resolution	see ordering information
Measuring Cable	green nylon cable
Enclosure Material	anodized aluminum
Sensor	encoder
Weight	454 g (1 lb.) max.

ELECTRICAL

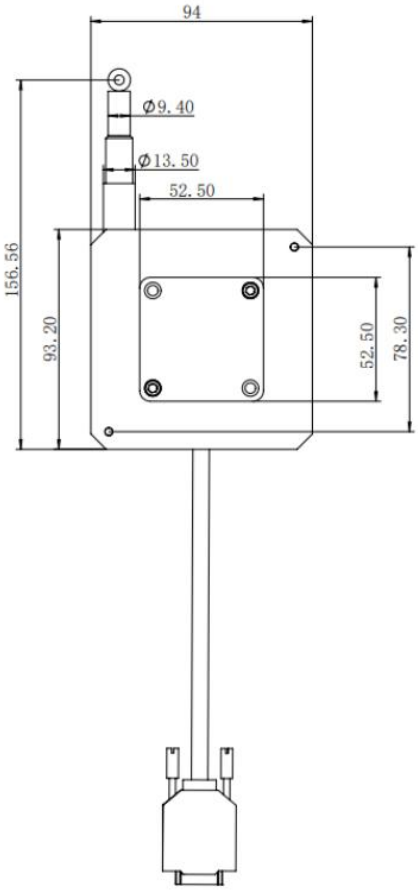
Supply Voltage	5 VDC ±10% or 10 ~ 30 VDC
Input Current	see ordering information
Pulses Per Revolution	see ordering information
Max. Pulse Frequency	RS422·300 kHz push-pull: 200 kHz
Alarm Output	NPN-O.C., 5 mA max.
Pulse Duty Cycle	1:1

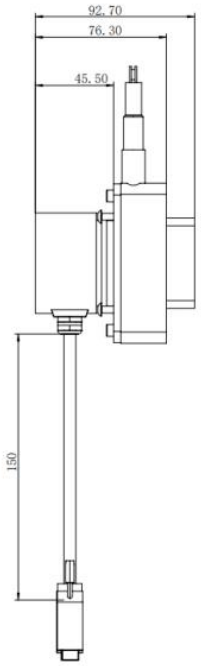
ENVIRONMENTAL

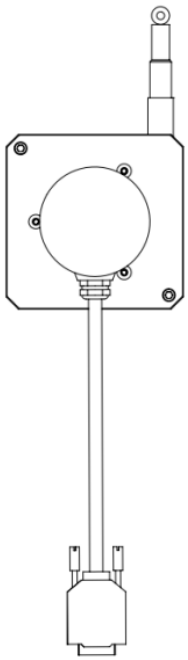
Enclosure	IP65/67
Operating Temperature	-40°C to 70°C
Storage Temperature	-25°C to 85°C
Vibration Resistance	100 m/s2(10 ~ 2000Hz)
Shock Resistance	1000 m/s2 (6ms)

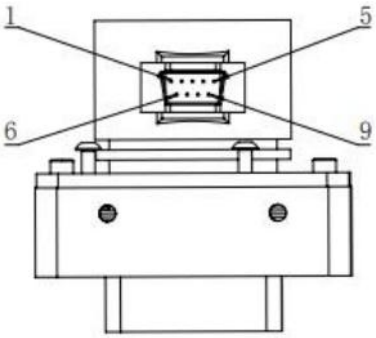
DWSX150 - Incremental Encoder

Outline Drawing:









All dimensions in mm

DWSX150 - Incremental Encoder

Model Number:

DWSX150 - R Range · RI58 · B Resolution · C Supply Voltage
D Flange, Protection Class, Shaft · E Output · F Connector · G Cable Length

Sample Model Number:

DWSX150-1000-RI58-5000-A-S.41-R-A-D0
Ⓡ Ⓑ Ⓒ Ⓓ ⒺⒻⒼ

Ⓡ 1000 = 1000 mm stroke
Ⓑ 20 = 20 pulses/mm resolution
Ⓒ 5 = 5 VDC supply voltage
Ⓓ A = synchro flange, IP65, 6 mm shaft
Ⓔ R = RS422 + alarm output
Ⓕ A = PVC cable, axial connector
Ⓖ D0 = 3 m cable length

Range:

R

ORDER CODE	Full Stroke Range
1000	1000mm
2000	2000mm
3000	3000mm
3200	3200mm
3500	3500mm

Resolution:

B

ORDER CODE	Encoder Resolution
10000	40 pulses/mm
5000	20 pulses/mm

Supply Voltage:

C

ORDER CODE	Supply Voltage
A	5 VDC
E	10 ~ 30 VDC

10-30 VDC for outputs K, I, R / 5 VDC for outputs R, T

Flange, Protection Class, Shaft:

D

ORDER CODE	Flange, Protection Class, Shaft
S.41	synchro flange, IP65, 6 mm
S.71	synchro flange, IP67, 6 mm

Other flange versions can be realised with a clamping flange + flange adapter

The enclosure and its connector only reach the stated protection class when a matching IP67 connector is correctly installed.

DWSX150 - Incremental Encoder

Output:

E

order code	Output
R	RS422 + alarm
T	RS422 + sensor
K	push-pull
I	push-pull complementary circuit

order codes "K" and "I": short-circuit proof

Connector:

F

order code	Connector
A	PVC cable, axial
B	PVC cable, radial
E	DB9 connector, axial
F	DB9 connector, radial

Electrical Connection Cable:

DB9 connector,

(order codes E, F)

	Output Circuit	TPE cable
DB9 connector, 9-pin,	push-pull complementary circuit (I)	color
1	5 / 10-30 VDC	brown/green
2	not connected	violet (white)
3	not connected	blue
4	B channel	brown
5	B channel inverted	green
6	common	white/green
7	A channel	grey
8	A channel inverted	pink
9	not connected	
	cable shield 1	cable shield 1

1 connected to encoder housing

DWSX150 - Incremental Encoder

Cable Length:

G

For cable output types (connections A, B, E, F) the following cable lengths are available. To order a required cable length, add the separate code after your order code. For different connectors at the cable end, insert the cable length code between the cable output direction and the connector code. Further cable lengths available on request.

order code	Cable Length
no code	0.15m
-D0	3m
-F0	5m
-K0	10m
-P0	15m
-U0	20m
-V0	25m
-W0	30m
-X0	40m
-Y0	50m

Example:

3 m cable: ...B-D0