DWXA150 - String Potentiometer

Linear Position Feedback

Range: 0-4000mm

anodized aluminum enclosure

Compact Design

IP50 / NEMA 1 · automation and test applications

DWXA150

Industrial Grade · SSI/BiSS Communication



SPECIFICATIONS

SUMMARY

Full Stroke Range 0-4000mm
Output Signal ..... SSI·BISS
Accuracy ..... see ordering information
Repeatability ..... ±0.02% full stroke
Resolution ..... see ordering information
Measuring Cable ..... 0.48mm dia. nylon-coated stainless
Enclosure Material ..... anodized aluminum
Sensor ..... plastic-hybrid precision potentiometer
Max. Cable Accel. ..... see ordering information
Weight ..... 454 g (1 lb.) max.

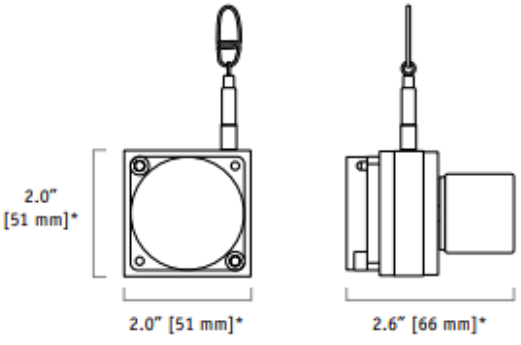
ELECTRICAL

input voltage ..... see ordering information
input current ..... see ordering information
permissible load ..... 30 mA max.
driver type ..... clock and data signals / RS422
3 dB cut-off frequency ..... 500 kHz
alarm output SSI: optional alarm bit; BiSS: warning and alarm bits

ENVIRONMENTAL

Enclosure IP50,NEMA 1
Operating Temperature ..... 0° to 160°F (-17° to 71°C)
humidity ..... 98% RH, non-condensing
Vibration ..... 10 g to 58-500 Hz

The DWXA150 is a low-cost, compact and easy-to-use string potentiometer with a full stroke range up to 4000mm. It provides linear position feedback with SSI and BiSS signals. Simply mount the sensor body to a fixed surface and attach the cable to the moving object. Recommended for budget-conscious, space-limited installations.



Output Signal

SSI binary signal (+1 Vpp sine-cosine signal)
SSI binary signal
SSI Gray code signal (+1 Vpp sine-cosine signal)
SSI Gray code signal
BiSS-B (+1 Vpp sine-cosine signal)
BISS-B
BiSS-C (+1 Vpp sine-cosine signal)
BISS-C

· see ordering information for available channels

DWXA150 - String Potentiometer

ORDERING INFORMATION

Sample Model Number:

DWXA150 - 625 - 111 - BE - B - 00
Ⓡ Ⓐ Ⓓ Ⓔ

Ⓡ 625 = 625 mm stroke
Ⓐ 1 / 1 = mounting holes 8-32 x 6.25 mm
Ⓓ BE = BiSS-C output
Ⓔ B = 0.5 m cable, tangential exit

Model Number:

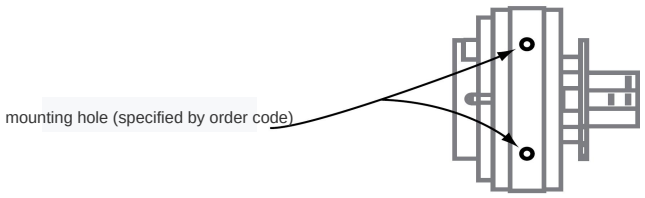
DWXA150 - R range ·A 1 ·B 1 ·C mounting holes
D output signal ·E electrical connection

Range:

R order code: 625	1250	2500	4000
range stroke: 625 mm	1250mm	2500mm	4000mm
acc. : ±0.25 mm	±0.50 mm	±1.00 mm	±1.50 mm
repeatability: ±0.12 mm	±0.25 mm	±0.50 mm	±0.75 mm
cable tension (±20%)			13 oz.
Resolution 12 bit:	0.062 mm/step		
22bit:	0.06 ·m/step		

Mounting Holes:

C order code:	1	2
Mounting Holes:	8-32 x 6.25 mm threaded holes	M6 x 6.25 mm threaded holes



Output Signal:

D

order code	SB	SD	SG	SC	BI	BC	BE	BV
signal output	SSI binary signal	SSI binary signal (+1 Vpp sine-cosine signal)	SSI Gray	SSI Gray code signal (+1 Vpp sine-cosine signal)	BISS-B	BiSS-B (+1 Vpp sine-cosine signal)	BISS-C	BiSS-C (+1 Vpp sine-cosine signal)
input voltage	5 VDC (±5%, +10%) / 7-30 VDC							
	Example: order code = BE = BiSS-C							

Electrical Connection:

E order code:	0	2	A	B
	12-pin PCB connector, pre-fitted axial cable clamp	12-pin PCB connector, pre-fitted tangential cable clamp	with mating connector + 0.5 m cable, axial exit	with mating connector + 0.5 m cable, tangential exit
	for BC, BV, SD, SC interfaces only		all interfaces, custom cable length	

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12-pin PCB Connector Pin Definition:

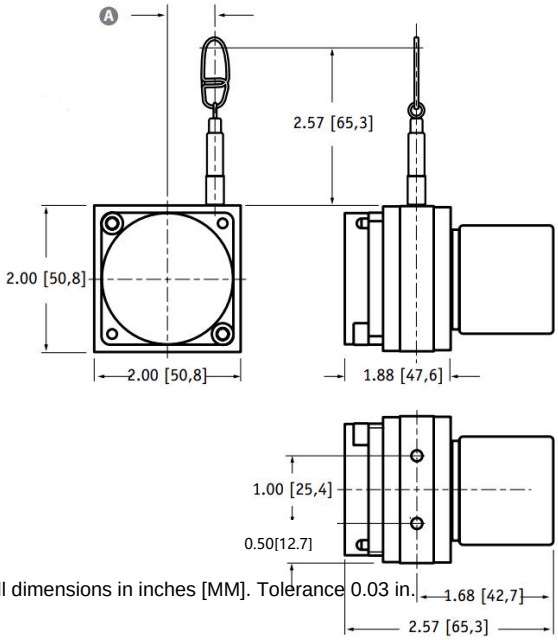
color code	pin no.	signal name
grey	1a	Data
white/green	2a	A+
BLACK	3a	sensor supply ground (0 V sensor)
red/blue	4a	B+
GREEN	5a	Clock
violet	6a	5 V sensor
WHITE	1b	main supply (DC 5 V / 7-30 V)
yellow	2b	Clock
grey/pink	3b	B-
brown	4b	supply ground (0 V)
brown/green	5b	A-
pink	6b	Data

A/B type cable exit:

code	cable length
no code	0.5 m
-B5	1.5 m
-D0	3 m
-F0	5 m
-K0	10 m
-P0	15 m
-U0	20 m
-V0	25 m

Outline Drawing:

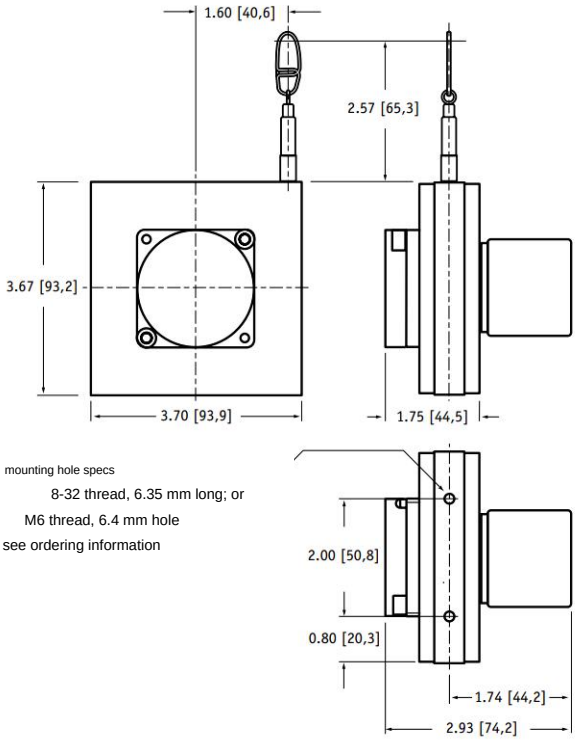
(drawing for 0-625, 0-1250 mm ranges)



All dimensions in inches [MM]. Tolerance 0.03 in.

	Full Stroke Range	dimensions
A	25 in. • 625 mm	0.34 [8,6]
	50 in. • 1250 mm	0.64 [16,2]

(drawing for 0-2500, 0-4000 mm ranges)



mounting hole specs
8-32 thread, 6.35 mm long; or
M6 thread, 6.4 mm hole
see ordering information