DWSM3A - String Potentiometer

Compact · Flight / Crash Test Applications
Dual-Axis 360° Mounting Bracket
Range: 0-1500mm
Humid Environments · Aluminum Enclosure

DWSM3A

Industrial Grade ·
Voltage Divider Output

model shown is 760 mm range with aluminum cover



SPECIFICATIONS

SUMMARY

Full Stroke Range 0-1500mm
Output Signal ..... voltage divider (potentiometer)
Accuracy ±1.1% to 0.15% full stroke, see ordering information
Repeatability ..... ±0.02% full stroke
Resolution ..... essentially infinite
Measuring Cable ..... 0.48mm dia. nylon-coated stainless
Enclosure Material ..... anodized aluminum
Sensor Cover ..... aluminum or polycarbonate
Sensor ..... conductive plastic hybrid potentiometer
Weight ..... 227 g (8 oz.) max.

ELECTRICAL

Input Resistance ..... 10K ohms (±10%)
Rated Power, Watts ..... 2 W at 158°F (70°C), derating to 0 W at 255°F (125°C)
Rec. Max. Input Voltage ..... 30 V(AC/DC)
Electrical Stroke ..... 94% ±4% of input voltage

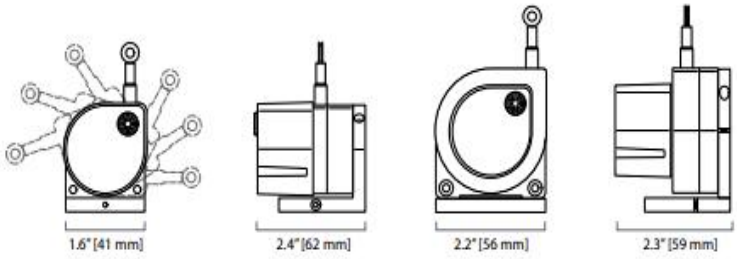
MECHANICAL

Cable Tension ..... 9, 14 and 33 oz.
Max. Cable Retraction Acceleration 90g

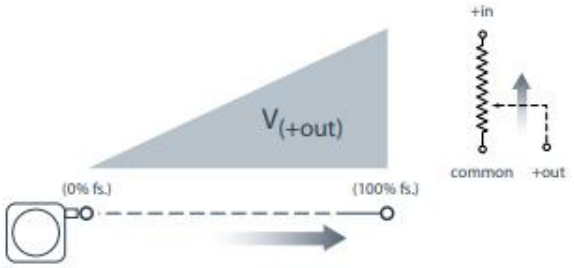
ENVIRONMENTAL

Enclosure ..... NEMA 4/IP67
Operating Temperature ..... -40° to 120°C

The DWSM3A is the solution for high-acceleration test applications in potentially humid environments. It offers five different full stroke ranges, designed specifically for flight and automotive crash test requirements, and comes with an easy-to-use dual-axis 360° rotating mounting bracket for installation in hard-to-reach areas. For extreme high-shock applications, the DWSM3A is now available with a rugged all-aluminum sensor cover.

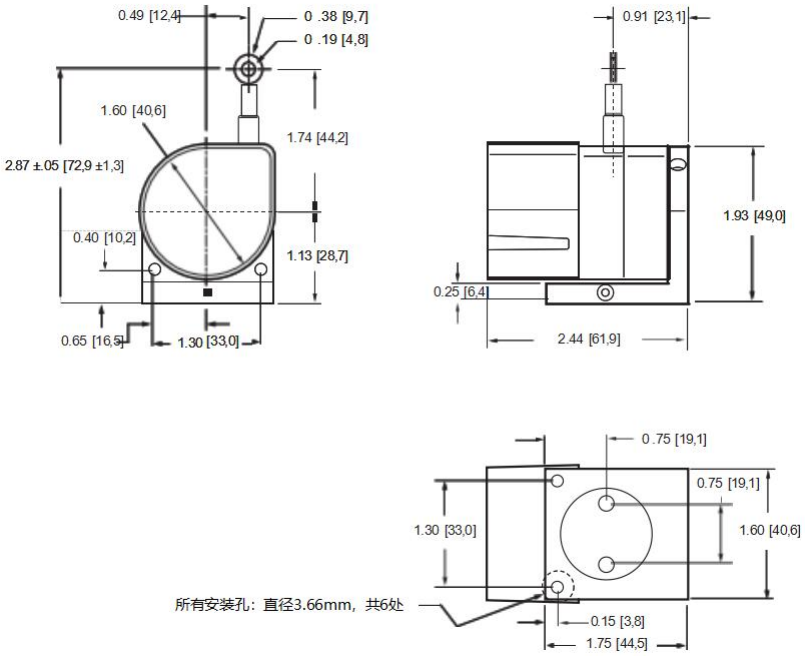


Output Signal

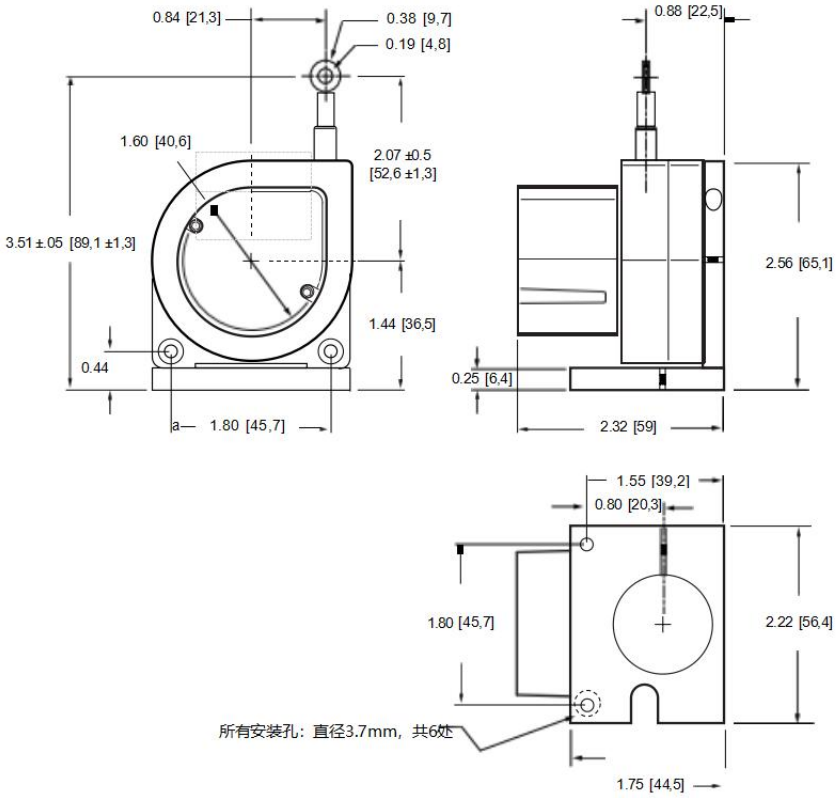


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Outline Drawing (0-75 and 0-760 mm ranges only):



Outline Drawing (0-1500 mm range only):



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ORDERING INFORMATION

Model Number:
DWSM3A - R range ·A cable guide
B cable tension - 10K ·C electrical connection

Sample Model Number:

DWSM3A - 225 - E - 33 - 10K - C1A
Ⓡ Ⓐ Ⓑ Ⓒ

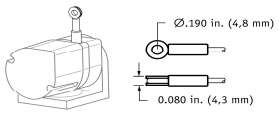
Ⓡ 225 = 225 mm stroke
Ⓐ E = metal eyelet cable guide
Ⓑ 33 = 33 (±6) oz. cable tension
Ⓒ C1A = end-mounted strain relief, aluminum cover

Range:

R order code:	75	225	380	750	1500
rangestroke:	75mm	225mm	380mm	750mm	1500mm
pot. cycle life:	2.5 x 10^6	8.3 x 10^5	5.0 x 10^5	2.5 x 10^5	2.5 x 10^5
acc.			(% of full stroke)	0.15%	0.15%

Cable Guide:

A order code:	E	L
Direction:	metal eyelet	extension cable (609.6 mm long)





Cable Tension:

B order code:	9	14	33
75,225,380,750mm			
Cable Tension:	9 (±2) oz.	14 (±4) oz.	33 (±6) oz.
Max. Cable Acceleration:	99 g	136 g	136 g
order code:	9	22	
1500 mm cable tension:	9 (±2) oz.	22 (±6) oz.	
Max. Cable Acceleration:	46 g	68 g	

Electrical Connection:

C order code: C1	C1A	C4	C4A	C2	C2A	C5	C5A
Sensor Cover:	polycarbonate / aluminum	polycarbonate / aluminum		polycarbonate / aluminum		polycarbonate / aluminum	
Cable Length:	4.5 m	9 m		4.5 m		9 m	



end-mounted strain relief



side-mounted strain relief

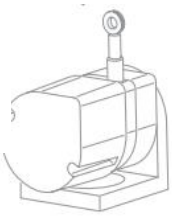
C order code: C3	C3A	C6	C6A	BC	BCA
Sensor Cover:	polycarbonate / aluminum	polycarbonate / aluminum		polycarbonate / aluminum	
Cable Length:	4.5 m	9 m		n/a	

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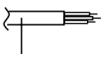
Top-mount strain relief bracket



*Blank cover



signal connections



24 AWG shielded

color code

color	signal
RED	+input
GREEN	+output

*Blank cover: the blank cover option is for users who supply their own connector or strain relief. This cover has no electrical cut-outs; users can drill it to suit their own requirements.