

Draw Wire Length Sensor

DIGITAL ADVANCED SENSORS **DAS**

DWS

CE FC

DWS series is draw wire distance sensor that mount high precise potentiometer and has various output type and maximum length of 12 meters. DWS is mainly applied for sensing and measuring length of boom, outrigger and other parts of heavy equipments and construction machineries by its waterproof and high strength housing design.

- Voltage divider circuit consisted by potentiometers
- Nylon coated stainless steel wire
- Various output type and maximum 12 meters of measuring range
- High strength plastic housing for using in rough environments



Specifications [for 1.2 to 5 meters]

Item	Specification	
Max. Length	1.2m / 3m / 5m	
Potentiometer	1.2m / 3m	0.5...4.5 Kohm
	5m	0.3...4.7 Kohm
Voltage Output	10 ... 90% of power source	
Power Source	5 ... 30VDC	
Non-Linearity	0.25% FS	
Repeatability	1.2m / 3m	below 10mm
	5m	below 20mm
Wire	nylon coated stainless steel	
Thickness	1.0 mm	
Durability	over 20,000 times	
Operating Temp.	-20 ... +70 celsius	
Dimensions	W103 x H103 x D81mm	
Weight	660g	

Specifications [for 8 to 12 meters]

Item	Specification
Max. Length	8m / 10m / 12m
Potentiometer	0.25...4.75Kohm
Repeatability	below 30mm
Dimensions	W156 x H156 x D97.3mm
Weight	1,700g

✓ Other specifications are same as above.

Wiring Connections

	Color	Descriptions
Single	RED	V+
	BLACK	GND (COM)
	GREEN	Output+
Dual	WHITE	Dual-output+

Data Descriptions

$$Length = \left(\frac{\text{Maximum Length}}{\text{Output V Range}} \right) \times (\text{Output V})$$

Output V Range : 4.5V – 0.5V = 4V

e.g. Max. Length 5m, 12V Power source, Output 4.8V,

$$= \left\{ \frac{5m}{(12 \times 90\%) - (12 \times 10\%)} \right\} \times 4.8 = 2.5m$$

Ordering Code

Format : DWS-(1)-(2)-(3)

(1)	12	1.2m	30	3m	50	5m
	80	8m	100	10m	120	12m
(2)		Single output		D	Dual output	
(3)	Wire drawing direction when see the front					
	L	Left		R	Right	

e.g. DWS-50-D-R / DWS-30-L

Options

DSC420-DWS : 4...20mA output converter

NOTES

- 1) *DWS is designed for operating at low speed wire drawing condition. It may behind its durability If high speed drawing is repeated.*
- 2) *Immoderate drawing may cause damages of internal spring and wire.*
- 3) *Check wiring connections before use.*
- 4) *12 months warranty is provided after released. Warranty provided only in case of using for designed purpose correctly.*
- 5) *Specifications, design and components can be changed without prior notice to improve its performances.*

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