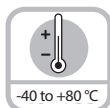


Draw Wire Encoder DW124



Wide temperature range
-40 to +80 °C



High protection level
IP 67



Shock/vibration resistant



Redundancy

Robust

- Measuring length 6-10 m.
- Different types of sensors (analog, CANopen).
- Linearity up to $\pm 0.5\%$ of the measuring range.
- IP67 protection level and wide temperature range from -40 to +85 °C.



Advantages

- Cost, space and installation work saving.
- Simple selection and fast installation.
- High accuracy at economic prices.
- Reliability and long service life for outdoor applications.

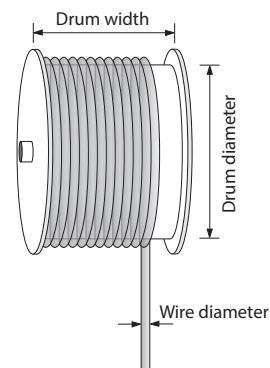
Versatile

- Integrated inclinometer.
- Redundant sensors.
- The suitable measuring length for every application.
- For even higher plant availability.

Mechanical Characteristics (Draw Wire Mechanics):

Measuring range:	6 - 10 m
Measuring wire:	
	material 304 stainless steel, nylon coated
	diameter 0.9 mm
Wire fastening:	Eyelet
	internal diameter Ø 8 mm
	outer diameter Ø 15 mm
	height 2 mm
Max. speed:	1 m/s
Max. acceleration:	10 m/s ²
Linearity (entire measuring range):	
	analog $\pm 1.0\%$
	CANopen $\pm 0.5\%$
Repeat accuracy (entire measuring range):	
	analog $\pm 0.5\%$
	CANopen $\pm 0.2\%$
Retraction force:	1.01 lbs (4.5 N)
Extension force:	2.02 lbs (9 N)
Housing:	poly carbonate reinforced with glass fibers
Protection:	IP67
Temperature range:	-40 to +185 °F (-40 to +85 °C)
Weight:	approx. 2.13 lbs (0.97 kg)
Stock resistance acc. to EN 60068-2-27:	30 g (300 m/s ²), 11 ms
Vibration resistance acc. to EN 60068-2-6:	10 g (100 m/s ²), 10-500 Hz

Operating Principle:



Construction:

The core of a draw wire device is a drum mounted on bearings, onto which a wire is wound. Winding takes place via a spring-loaded device.

Note:

Exceeding the maximum extension length of the draw wire will lead to damage to the wire and the mechanics.

Linear Position Technology

Draw Wire Mechanics with Encoder or Analog Sensor

Draw Wire Encoder DW124

Electrical Characteristics:	
Power supply:	9-30 VDC
	5 V DC $\pm 10\%$ (Analog Only)
	12-30 VDC (Analog Only)
Electromagnetic compatibility:	acc. to EN 61326-1, EN 61326-3-1
RoHS compliant acc. to EU guideline 2011/65/EU	

Analog sensor:	
Output signal:	analog
Resolution:	12 bit

CANopen:	
Output signal:	CANopen (DS301)
Resolution:	14 bit
Resolution inclinometer:	0.1°
Accuracy inclinometer:	$\pm 0.6^\circ$
Temperature drift inclinometer:	$\pm 0.01\% / ^\circ\text{C}$

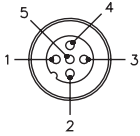
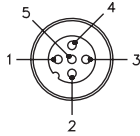
Standard Wiring (Analog Output):

Connection Type	+V	N/C	Common (0V)	Out 1	Out 2
Pin	1	2	3	4	5

Standard Wiring (CANopen Output):

Connection Type	Common (0V)	+V	CAN GND	CAN High	Can Low
Pin	3	2	1	4	5

Wiring Diagram:

Analogue Output	CANopen Output
Male Encoder View	Male Encoder View
	
Mating Cordset: RK 4.5T-*/S618	Mating Cordset: RKC 572-*/M/S3117

* Length in meters.

- Accessories:
- See page H1, Connectivity, for cables and connectors

Draw Wire Encoder DW124

Part Number Key: DW124 with CANopen and inclinometer

A	B		C		D		E		F
DW	6000	-	124	-	9D14B	-	H1151	/	Specials

A	Type
DW	Draw Wire

B	Measuring Range
6000	6000 mm Steel Wire
7000	7000 mm Steel Wire
8000	8000 mm Steel Wire
9000	9000 mm Steel Wire
10000	10000 mm Steel Wire

C	Housing
124	124 mm

D	Voltage Supply and Output Type
9D14B	9-30 VDC, CANopen, 14 bit

E	Type of Connection
H1151	5-pin M12 Eurofast Connector

F	Specials
(BLANK)	No Options
N81	1 Inclinometer
N82	2 Inclinometers

Part Number Key: DW124 with Analog Sensor

A	B		C		D		E
DW	6000	-	124	-	8F	-	H1151

A	Type
DW	Draw Wire

B	Measuring Range
6000	6000 mm Steel Wire
7000	7000 mm Steel Wire
8000	8000 mm Steel Wire
9000	9000 mm Steel Wire
10000	10000 mm Steel Wire

C	Housing
124	124 mm

D	Voltage Supply and Output Type
7E	12-30 VDC, 4-20 mA
7G	12-30 VDC, 4-20 mA, Redundant
8F	12-30 VDC, 0-10 V
8G	12-30 VDC, 0-10 V, Redundant
HA	5 VDC, 0.5-4.5 V
HB	5 VDC, 0.5-4.5 V, Redundant
HC	12-30 VDC, 0.5-4.5 V
HD	12-30 VDC, 0.5-4.5 V, Redundant

E	Type of Connection
H1151	5-pin M12 Eurofast Connector

Linear Position Technology

Draw Wire Mechanics with Encoder or Analog Sensor

Draw Wire Encoder DW124

Technology in Detail

CANopen with inclinometer:

Setting possibility 360°	Setting possibility ±180°
	
angle: 0-360°	angle: ±180°

Redundant signals possible.

Setting possibilities:

- Switching between setting possibilities 180° and 360°.
- Switching between synchronous and asynchronous output.
- Change of direction of rotation (cw/ccw).
- Setting and resetting an offset.

Draw Wire Encoder DW124

Dimensions: DW124

