

# Fenac Draw-Wire Sensor

Length up to 6000 mm



## FNC W80 Series



### Features

Measurement length up to 6000 mm  
Robust aluminum housing  
Very compact design  
Protection to IP54  
Wire-actuated mechanism for all rotary encoders with 58mm servo flange and different signal outputs  
Drum circumference is 200 mm  
Linearity is  $\sim \pm 0,35 \%$

### Technical data

|                           |                                                               |                                     |                 |
|---------------------------|---------------------------------------------------------------|-------------------------------------|-----------------|
| Material                  | Housing: aluminum<br>Wire: 7x7 pvc coated 304 stainless steel | Drum circumference                  | 200 mm          |
| Wire length               | 1000,1500, 2000, 3000 ,4000 ,5000 mm                          | Drum width                          | 18 mm           |
| Output Signal Mode        | Resistance (Potentiometer)                                    | Drum wire winding number            | Max.22          |
| Resolution                | Essentially infinite                                          | Wire dimensions (Thickness x Width) | 0.25 x 10 mm    |
| Linearity                 | $\pm 0.25\%$                                                  | Repeatability                       | $\pm 0.05\%$ FS |
| Output Resistance         | FS; 5K ohm $\pm 5\%$ FS                                       | Protection class                    | IP54            |
| Power Rating (watts)      | [ 2W at 70°C ]                                                | Temperature range                   | 20 ... +80°C    |
| Recommended Input Voltage | 30V (AC/DC) max., best voltage at 5 ~ 10 VAC/VDC              | Approval                            | CE              |
| Wire diameter             | 0.8 mm                                                        | Vibration                           | 2000 Hz/ 15 g   |
| Wire retraction           | 6 - 7.5 N                                                     |                                     |                 |

### Electircal data

3 OUTPUT (POT)

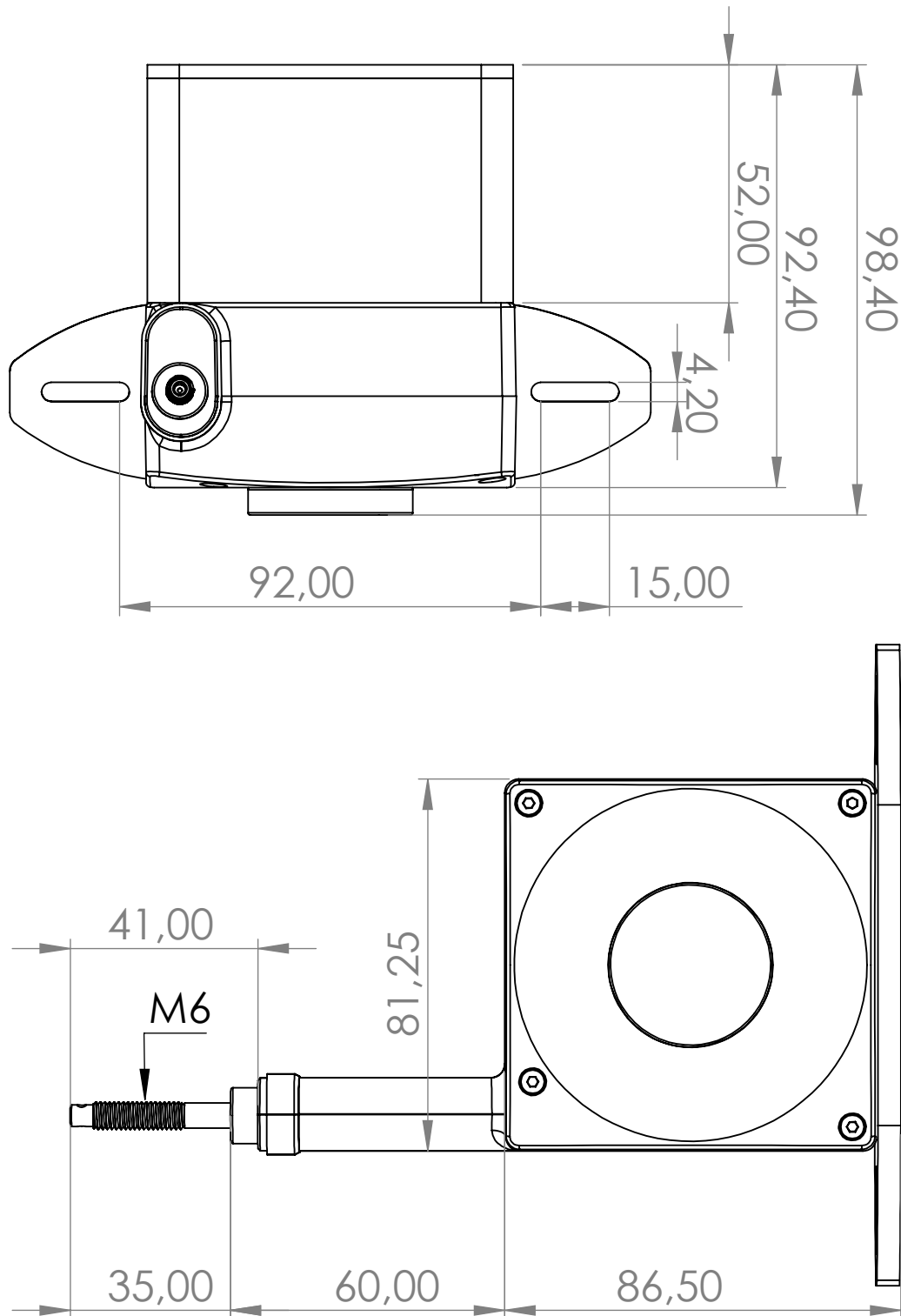
Yeşil/Green

1 VCC  
Kahverengi/Brown

2 GND  
Beyaz/White

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### Mechanical dimensions



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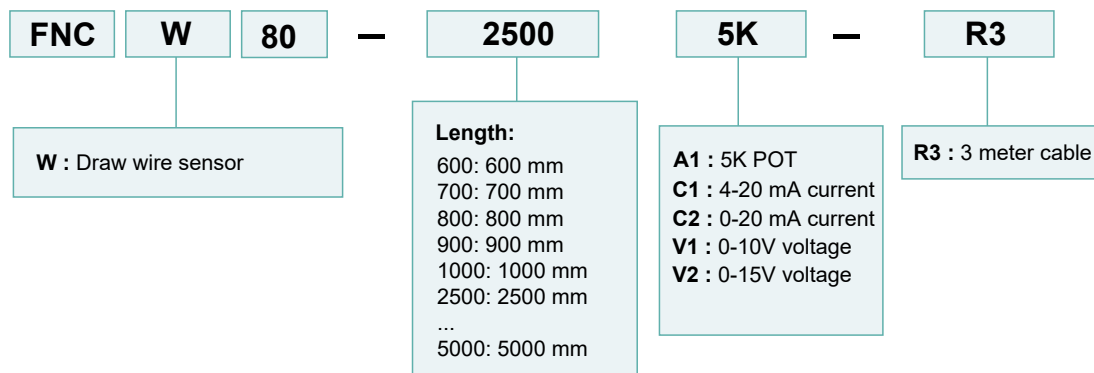
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Draw Wire Units Comparison Table

| Specifications                          | W55 Series              | W80 Series             | W100 Series           | W100 PRO Series        | W115 Series           | W115 PRO Series         | W120 Series           |
|-----------------------------------------|-------------------------|------------------------|-----------------------|------------------------|-----------------------|-------------------------|-----------------------|
| Wire Length                             | 0 - 3,000 mm            | 0-5,000 mm             | 0 - 10,000 mm         | 0 - 12,000 mm          | 0 - 13,500 mm         | 0 - 13,500 mm           | 0 - 20,000 mm         |
| Wire Diameter                           | 0.5 mm                  | 0,8 mm                 | 1 mm                  | 1 mm                   | 1 mm                  | 1 mm                    | 1 mm                  |
| Spring Return Force                     | 3.5 - 5 N <sup>1)</sup> | 6 -7.5 N <sup>1)</sup> | 4 - 5 N <sup>1)</sup> | 7 - 10 N <sup>1)</sup> | 4 - 5 N <sup>1)</sup> | 6 - 8.5 N <sup>1)</sup> | 7 - 9 N <sup>1)</sup> |
| Drum Circumference                      | 125 mm                  | 200 mm                 | 250 mm                | 250 mm                 | 300 mm                | 300 mm                  | 350 mm                |
| Drum Width                              | 10 mm                   | 18 mm                  | 18 mm                 | 40 mm                  | 18 mm                 | 26 mm                   | 30 mm                 |
| Drum Wire Winding Number                | Max. 20                 | Max. 22                | Max. 18               | Max. 40                | Max. 18               | Max. 26                 | Max. 30               |
| Wire Dimensions<br>( Thickness x Width) | 0.15 x 10 mm            | 0.25 x 10 mm           | 0.25x 12 mm           | 0.2 x 20 mm            | 0.3 x 12 mm           | 0.3 x 18 mm             | 0.2 x 20 mm           |

These values were measured at an ambient temperature of 25 °C. There may be variations at other temperatures.

Part number



\*\* Please order the encoder separately.

\*\* This code table can only be used for the selection of the wire unit.