

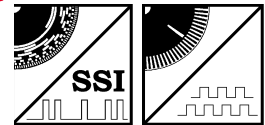
# WS11 Position Sensor with Absolute or Incremental Encoder



## Position Sensor with Heavy-Duty Encoder

- Protection Class IP65
- Measurement Range:  
0 ... 2000 mm and 0 ... 5000 mm  
0 ... 78.74 in and 0 ... 196.9 in
- With Absolute or Incremental Encoder Output

**Discontinued model**  
**Don't use for further developments**  
**Replaced by WS19KT/KK, WS58**



<b>Specifications</b>	Outputs	Multiturn Encoder with synchronous serial Interface SSI / RS-422 Incremental Encoder with Quadrature Output & Reference Signal for HTL 24V or Line Driver 5V
	Resolution	WS11-2000-XXX: 25 Counts/mm; 635 per in WS11-5000-XXX: 10 Counts/mm; 254 per in
	Distance per Revolution between Reference Pulses	WS11-2000-XXX: 163.84 mm; 6.45 in WS11-5000-XXX: 409.6 mm; 16.13 in
	Material	Aluminium and Stainless Steel. Cable: Stainless Steel
	Sensing Device	Absolute Multiturn or Incremental Encoder
	Connector	Socket 12 pin round
	Linearity	±0.05 % Full Scale, optional ±0.01 %
	Protection Class (IEC 529)	IP65
	Weight	WS11-2000-XXX: 1.5 kg approx. WS11-5000-XXX: 3 kg approx.
	Environmental	
	Immunity to Interference (EMC)	Refer to Output Specification
	Temperature	Refer to Output Specification
	Humidity	95 % R.H. max. non condensing
	Shock	15 g's for 11 ms Duration
	Vibration	5 g's max. (100 Hz)

## Order Code WS11

**Model Name** WS11 - [ ] - [ ] - [ ]

**Measurement Range (in mm)** 2000 / 5000 (smaller measurement ranges included)

**Outputs**  
 SSI = Multiturn Encoder with synchronous serial Output  
 INC24V = Incremental Encoder with HTL Output 10-30 V  
 INC5V = Incremental Encoder with Linedriver Output 5 V  
 Other Outputs on Request (Interbus S, Profibus, CAN-Bus)

**Linearity**  
 L01 = ±0.01 % related to the specified sensitivity on the label

## Order Code Mating Connector

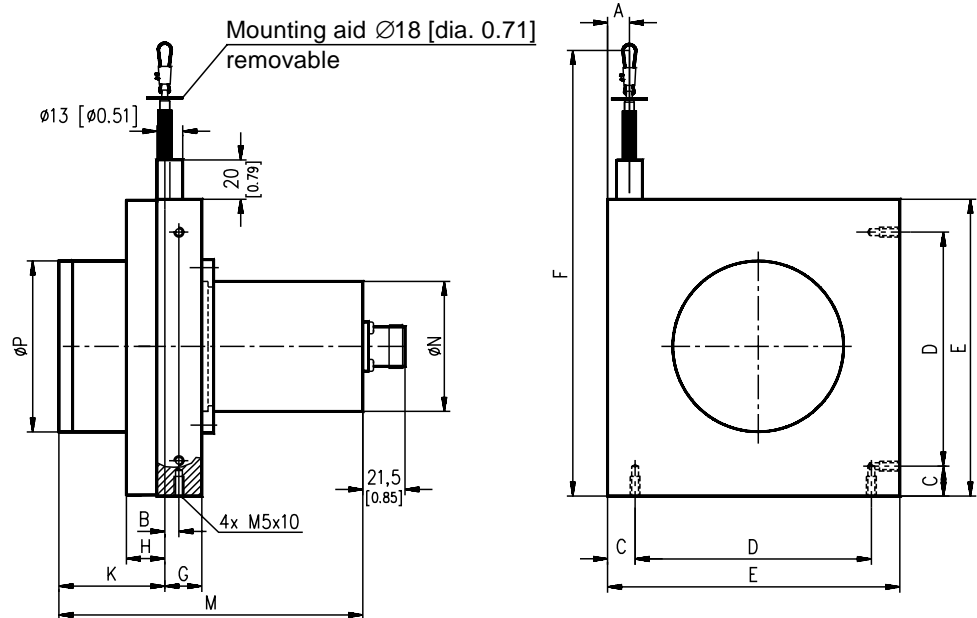
**WS11-CONN-12P**

**Order Example: WS11 - 2000 - SSI**

# WS11 Position Sensor with Absolute or Incremental Encoder



Cable Forces typical at 20 °C	Range		Maximum Pull-out Force [N]	Minimum Pull-in Force [N]
	[mm]	[in]		
	2000	78.74	11.5	7.5
5000	196.9	13.3	9.8	



Dimensions in brackets are inches.  
For guaranteed dimensions consult factory

Dimensions (mm)	Range	A	B	C	D	E	F	G	H	K	M	ØN	ØP
	2000 (SSI)	18	7	14	61	89	162±3	19.5	21	58.5	150	66.5	61
2000 (INC)	18	7	14	61	89	162±3	19.5	21	58.5	120	60	61	
5000 (SSI)	11	7	14	121	149	222±3	23	18	55	150	66.5	87	
5000 (INC)	11	7	14	121	149	222±3	23	18	55	120	60	87	
Dimensions (in)	78.74 (SSI)	0.71	0.28	0.55	2.4	3.5	6.38±0.12	0.77	0.83	2.3	5.9	2.62	2.4
	78.74 (INC)	0.71	0.28	0.55	2.4	3.5	6.38±0.12	0.77	0.83	2.3	4.72	2.36	2.4
	196.9 (SSI)	0.43	0.28	0.55	4.76	5.87	8.74±0.12	0.91	0.71	2.17	5.9	2.62	3.43
	196.9 (INC)	0.43	0.28	0.55	4.76	5.87	8.74±0.12	0.91	0.71	2.17	4.72	2.36	3.43