

Optical encoder - WEDS/WEDL series



Features

- Low-priced
- Resolution: 500 increments/rev. 1000 increments/rev.
- Compact housing (also for hollow shaft with 10 mm diameter)
- TTL-compatible
- 3-channel (A/B track and index signal)
- Easy installation
- For 5 mm, 6.35 mm and 10 mm shaft diameter (hollow shaft)

The encoders of the WEDS/WEDL5541 series are powerful, 3-channel incremental encoders. The module includes the sender with LED source, the receiver and the code disc that rotates between the sender and receiver. In WEDL encoders, the signals prepared via a driver module are output as a differential signal which increases the immunity to interference. The interface to the application is formed by a pluggable flat ribbon cable or, optionally, a screened round cable.

Technical specification

Electrical specification	WEDS	WEDL
Signal form, output	Square wave signal	
Output signals	Phase A, B, I	Phase A, A $\bar{}$, B, B $\bar{}$, I, I $\bar{}$
Current consumption	≤ 60 mA	
Output current	0 ~ 5 mA	
Limit frequency	100 KHz	
Phase angle of the output signal	90° ± 45°	
Connection voltage	5 V DC	
Signal level	VH 85% VCC, VL ≤ 0.3 V	
Number of pulses per revolution	500, 1000 (others on request)	

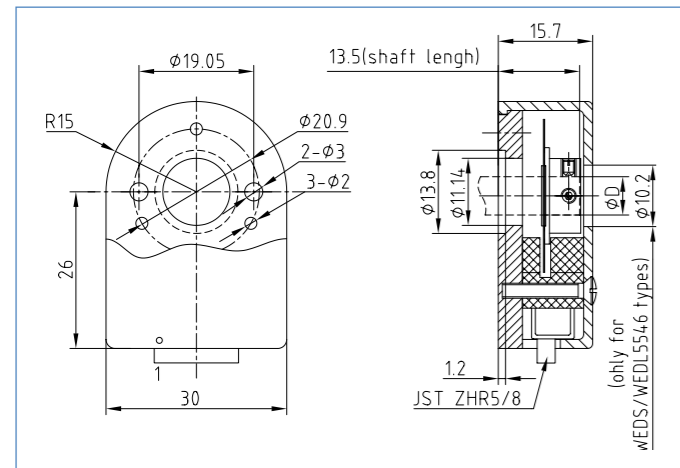
Technical specification

Mechanical specification	WEDS/WEDL
Mass inertia of the code wheel	Approx. 0.6 g cm ²
Impact resistance	980 m/s ² , 6 ms, 2 hours each in XYZ
Vibration test	50 m/s ² , 10 ~ 200 Hz, 2 hours each in XYZ
Average service life	MTBF 50000 h (+25 °C, 2000 rpm)
Weight	Approx. 20 g (with 0.5 meter cable)
Ambient conditions	
Operating humidity	30 ~ 85 % (no condensation)
Storage temperature	-40 °C ~ 100 °C
Working temperature	-25 °C ~ 100 °C

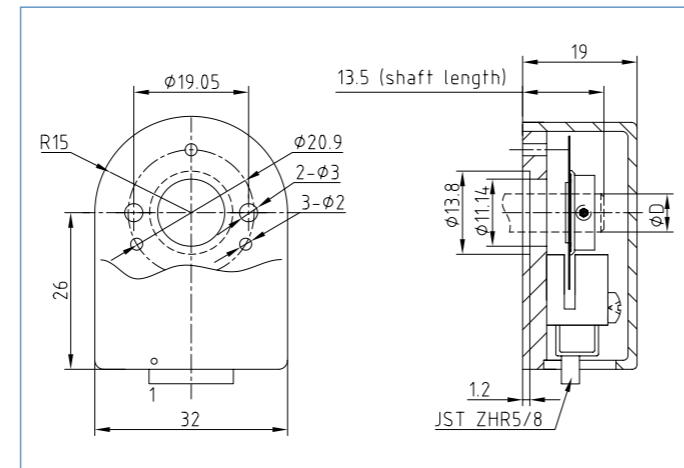
Connector configuration

Driver output	0 V	I	A	Vcc	B			
Coding system of the flat ribbon cable	1 (red)	2	3	4	5			
Core color WEDS-9000 cable	Black	Yellow	Green	Red	White			
Line driver output	0 V	Vcc	A	A $\bar{}$	B $\bar{}$	B	I $\bar{}$	I
Coding system of the flat ribbon cable	1 (red)	2	3	4	5	6	7	8
Core color WEDL-9000 cable	Black	Red	Green	Brown	Gray	White	Yellow	Orange

WEDS/WEDL 500 incr./rev., outline drawing in (mm)

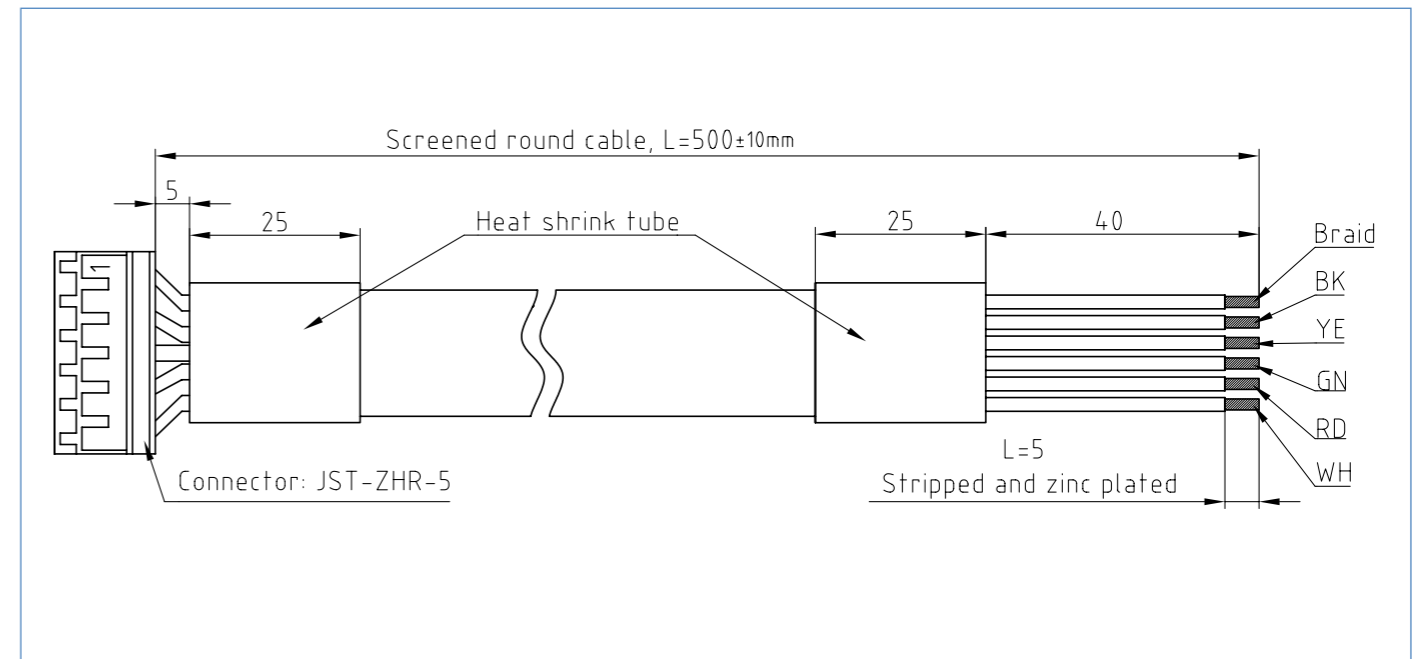


WEDS/WEDL 1000 incr./rev. outline drawing in (mm)

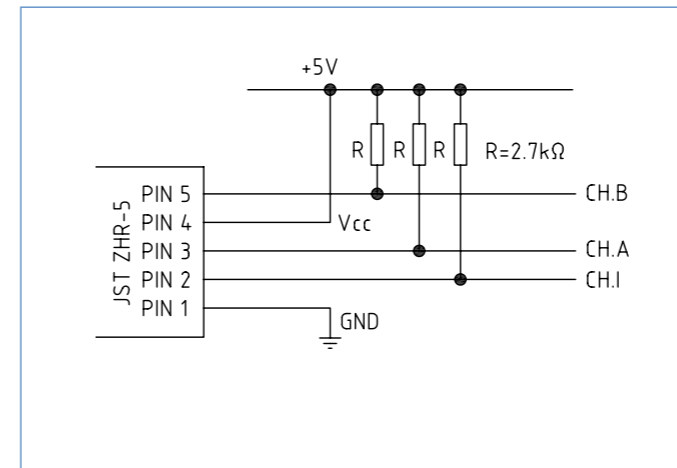


Optical encoder: Standard encoder for stepper motor mounting				
Order identifier	Pulses per revolution	for shaft diameter (mm)	Type	Plug
WEDS5541-A14	500	5.00		JST-ZHR-5
WEDS5541-A06	500	6.35		
WEDS5546-A10	500	10.00	Hollow shaft	
WEDS5541-B14	1000	5.00		
WEDS5541-B06	1000	6.35		
Encoder with line controller (for extremely interference-proof operating conditions or long supply cables)				
WEDL5541-A14	500	5.00		JST-ZHR-8
WEDL5541-A06	500	6.35		
WEDL5546-A10	500	10.00	Hollow shaft	
WEDL5541-B14	1000	5.00		
WEDL5541-B06	1000	6.35		
Flat ribbon cable, L=500		Screened round cable, L=500		
ZK-WEDS-5-500		ZK-WEDS-5-500-S		JST-ZHR-5
ZK-WEDL-8-500		ZK-WEDL-8-500-S		JST-ZHR-8

ZK-WEDS-5/8-500-S



WEDS encoder connector configuration



WEDL encoder with line driver output signals

