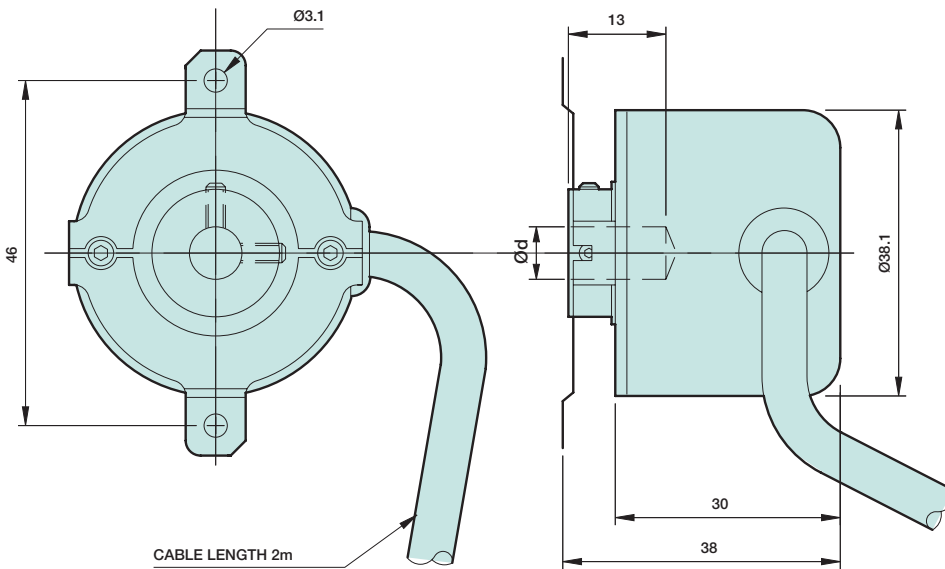
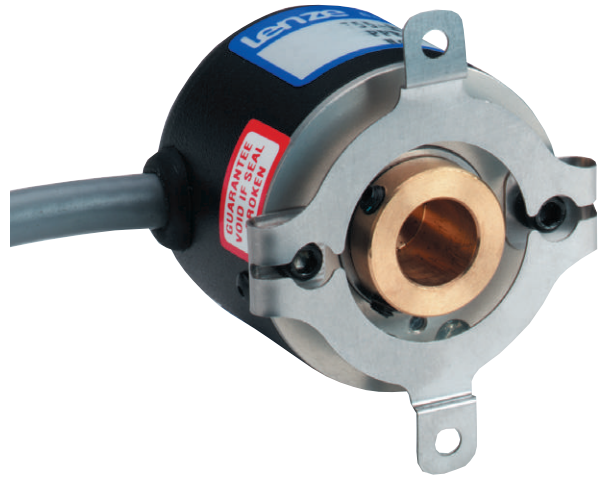


Hollow shaft incremental encoder

Type 75

- Blind hollow shaft up to 10mm diameter
- 10-25000 pulses per revolution
- Ideal for small motors
- One circuit 5-28V high voltage line driver



Wire colours

- White - V+
- Black - OV common
- Brown - A
- Red - B
- Orange - Z
- Yellow - \bar{A}
- Green - \bar{B}
- Blue - \bar{Z}
- Barewire - screen

Technical data

Supply volts	4.75 - 28
Current consumption, no load, mA	100
Output current per channel, mA	20
Max counting frequency kHz	125
Max r/min (mechanical)	6000
Recommended shaft tolerance	g6
Operating temperature °C	0 to +70
Protection (dust proof)	IP54
Max pulses per revolution	up to 25000
Weight, g	150
Wave form timing as type 260	
Output circuit 5-28V high voltage line driver (HV)	

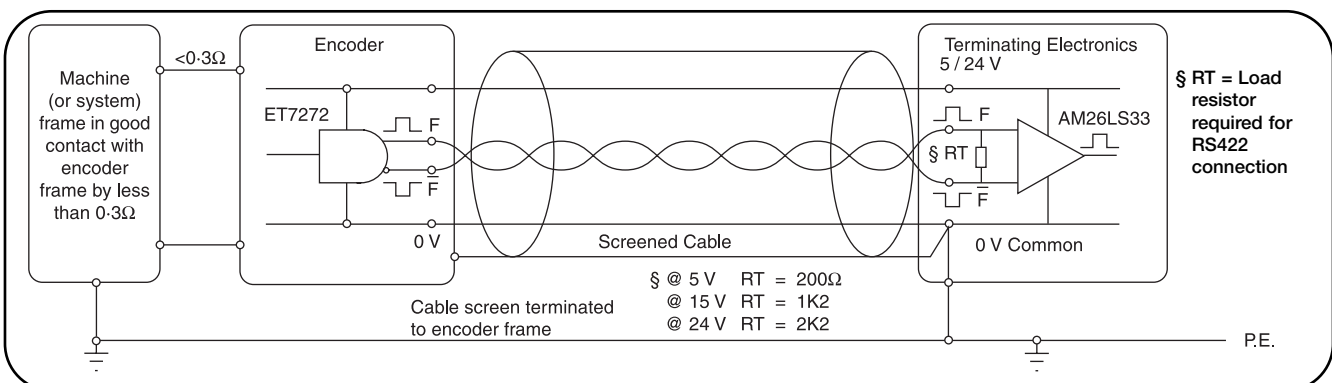
View Instruction Leaflet 350

Stockline numbers

Number of pulses per revolution	Bore 6mm	Bore 10mm
10	W6-394 661	W6-679 83
20	W6-347 975	W6-681 36
100	W6-293 049	W6-683 02
250	W6-507 882	W6-689 80
500	W6-292 916	W6-685 54
1000	W6-293 057	W6-690 54
1024	W6-755 745	W6-755 753
1250	W6-597 4X	W6-668 142
2048	W6-205 460	W6-668 150
2500	W6-222 618	W6-556 679

Stockline numbers in black – delivery time on request.

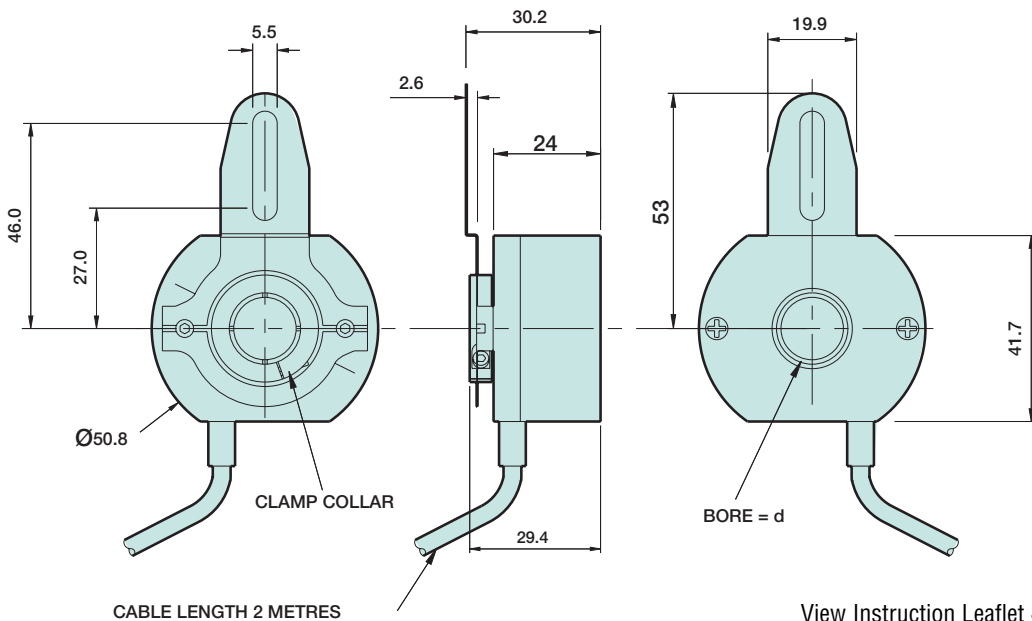
Output circuits per channel



Hollow shaft incremental encoder

Type 260

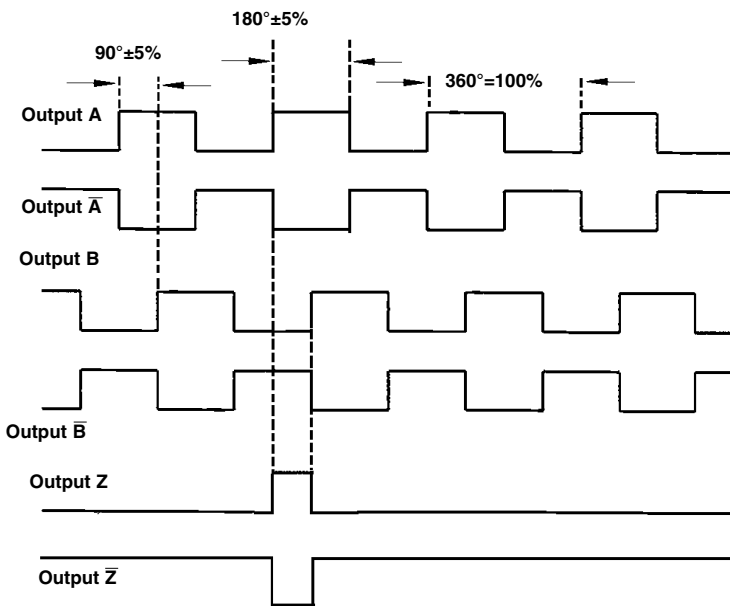
- Hollow shaft 10 or 14mm bores, through hole**
- Up to 2048 pulses/rev**
- Ideal for small motors**
- One circuit 5-28V supply high voltage line driver**



Wire colours	HVLD
Black	0 V common
White	V+
Brown	A
Yellow	\bar{A}
Red	B
Green	\bar{B}
Orange	Z
Blue	\bar{Z}
Bare wire	Screen

View Instruction Leaflet 424

Waveform timing



Technical data

Supply volts	4.75 - 28
Current consumption, no load, mA	50
Output current per channel, mA	20
Max counting frequency kHz	200
Max r/min (mechanical)	7500
Recommended shaft tolerance	g6
Operating temperature °C	0 to +100
Protection (dust proof)	IP54
Max pulses per revolution	2500
Weight, g	250
Output circuits as type 75	

Stockline numbers

Pulses per revolution	Bore 10mm	Bore 14mm
10	W6-305 503	W6-300 460
60	W6-595 49	W6-783 961
100	W6-606 6X	W6-783 996
200	W6-785 94X	W6-783 988
250	W6-611 27	W6-784 000
500	W6-620 61	W6-784 027
1000	W6-629 60	W6-784 043
1024	W6-235 736	W6-784 051
2048	W6-948 989	W6-775 097

Stockline numbers in black – delivery time on request.

Ordering example

(2) off encoders type 260, 1024 pulse/rev, 14mm bore

Stockline No. **W6-784 051**

Thalheim Hollow shaft incremental encoder

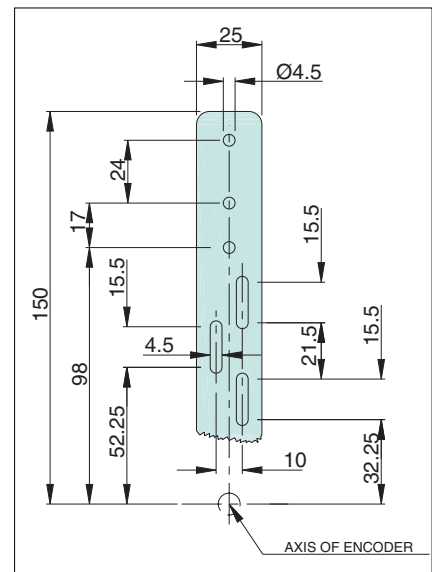
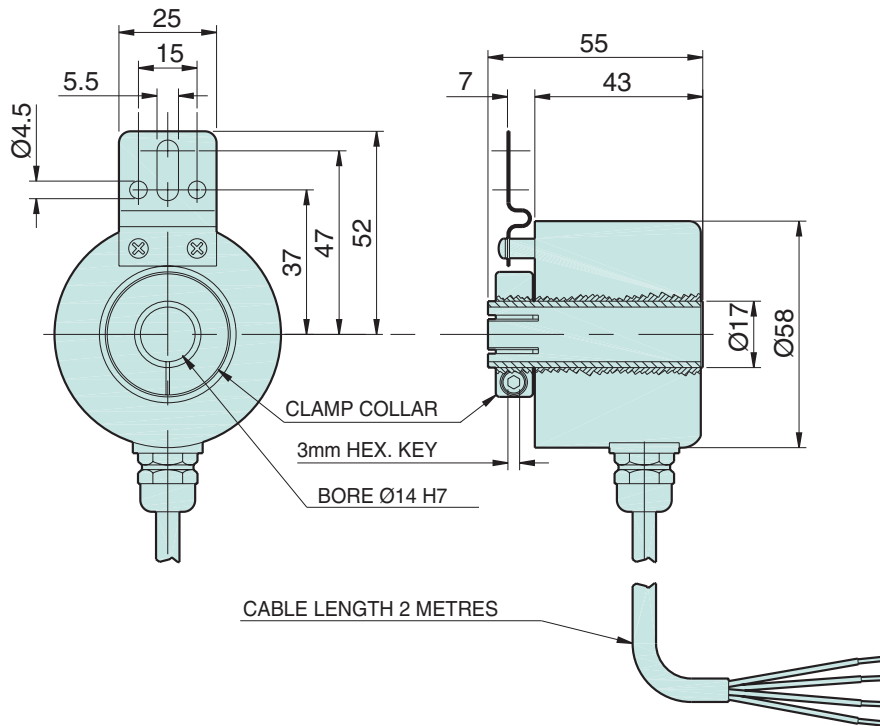
Type ITD21

Hollow shaft 14mm bore

Up to 6000 pulses/rev.

Suitable for electric motors

IP65 protected



Alternative spring type Y41

Technical data

	5V TTL	8-30V HTL
Supply volts	5±5%	8-30
Current consumption, no load, mA	100	100
Output current per channel	70	70
Max counting frequency kHz	300	160
Max r/min (mechanical)	8000	8000
Recommended shaft tolerance	g6	g6
Operating temperature °C	0 to +70	0 to +70
Protection (splash proof)	IP65	IP65
Max pluses per revolution	6000	6000
Weight, g	300	300

Wave form timing as type 260. Accuracy ±10%

Stockline numbers

Pulses per revolution	5V TTL	8-30V HTL
512	L4-842 394*	L4-984 87*
1024	L4-881 770	L4-987 75
2048	L4-830 57X*	L4-881 789*
4096	L4-881 797	L4-292 451

* Fitted with Y41 spring

View Instruction Leaflet 392

Other pulse rates available to order:

50, 60, 100, 150, 200, 250, 256, 300, 360, 400, 500, 600, 900, 1000, 1200, 1250, 1440, 1500, 1800, 2000, 2500, 3000, 3600, 5000, 6000.

Other models available to order with similar technical details

ITD 21 A4 . . . Y65 with 68mm body diameter, stainless steel housing and IP66 protection.

ITD 41 A4 . . . Y with 80mm body diameter and bores up to 28mm.

12 pin plugs and sockets can be fitted for long distance transmission. View Instruction Leaflet 523.

Ordering example

(2) off encoders ITD 21 A4 Y63, 4096 pulses/rev., 5V TTL

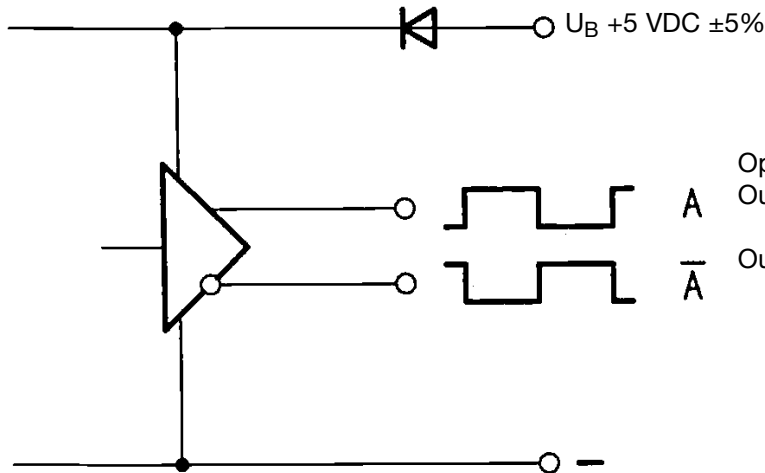
Stockline No. **L4-881 797**

Thalheim Hollow shaft incremental encoder

Type ITD21

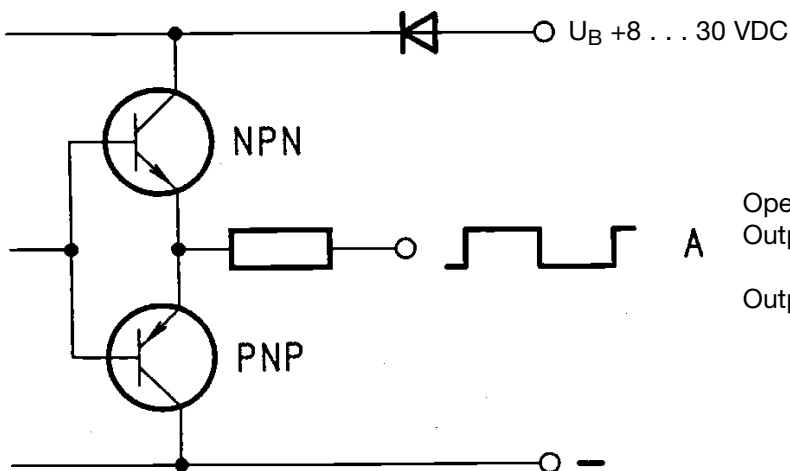
Output circuits

TTL – Output circuit
Line driver



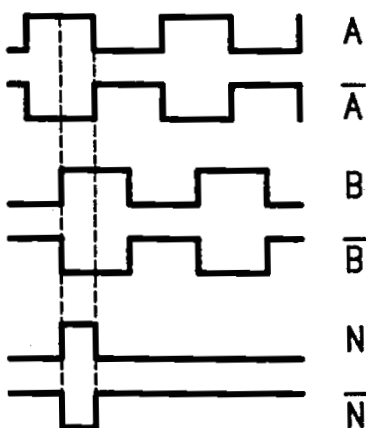
Operating voltage : $U_B = 5 \text{ VDC} \pm 5\%$
 Output amplitude : $U_{Low} \leq 0.5 \text{ VDC}$
 : $U_{High} \geq 2.5 \text{ VDC}$
 Output load current : $I_{Load} \leq 70 \text{ mA}$

HTL – Output circuit (Principle circuit diagram)
Push pull



Operating voltage : $U_B = 8 \text{ to } 30 \text{ VDC}$
 Output amplitude : $U_{Low} \leq 1.5 \text{ VDC}$
 : $U_{High} \geq U_B - 3 \text{ VDC}$
 Output load current : $I_{Load} \leq 70 \text{ mA}$

Output signal diagram



Wire colours	TTL/HTL
Blue	0V common
Red	V+
Green	A
Brown	\bar{A}
Grey	B
Black	\bar{B}
Pink	Z
White	\bar{Z}
Transparent	Screen