

SIZE 25 SERIES TRDA-25N INCREMENTAL SHAFT ENCODER

Nicely equipped MS
Connector Model
US \$295.00
(up to 1024ppr)

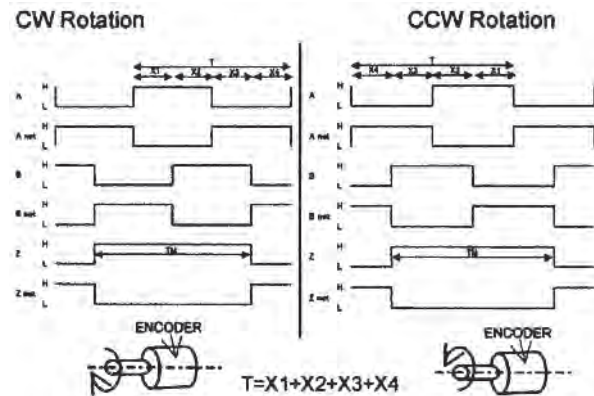


Starting at US \$240.00
(up to 1024ppr)
S.R.P. List Price
With cable model (Above)

FEATURES

- 2.5" O.D., heavy duty designed, NEMA4/IP65
- 3/8" shaft, shaft seal standard (Detachable and Repairable)
- Up to 5000 P/R Available
- 250 KHz frequency response
- Index gated 1/2, 1/4 channel cycle available
- Detachable Square flange or Servo/face flange mounting
- Super Linedriver OL7272 Compatible 5-30 Vdc available

LINE DRIVER WAVE FORM



CW or CCW ROTATION AS VIEWED FROM ENCODER SHAFT

DIVISION ACCURACY

Symmetry (A, B)	$X1+X2=0.5T \pm 0.25T$ $X2+X3=0.5T \pm 0.25T$
Phase shift	$Xn=0.25T \pm 0.125T$ (n=1, 2, 3, 4)
Signal width of Z ch.	$TM=1T \pm 0.5T$
$T=360^\circ/N$ N : Pulse per revolution	

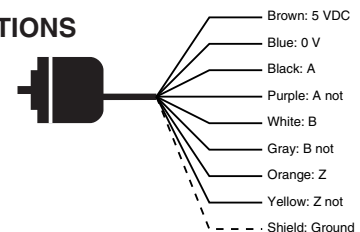
DIVISION ACCURACY OF SIGNAL

Pitch Error	$\pm 0.01T$
Adjacent Pitch Error	$\pm 0.02T$

WIRING DIAGRAMS

LINE DRIVER CONNECTIONS

(Shield = Body)



ELECTRICAL CONNECTIONS/ORDER SEPARATELY

#DMS3102E18-1P (10 Pin)/MATING# DMS3106E18-1S

Pin Code	Line Driver
A	Channel A
B	Channel B
C	Index Z
D	Vcc
E	-
F	OV, Common
G	Case Ground
H	Channel A not
I	Channel B not
J	Index Z not

SPECIFICATIONS

Electrical

Pulse per Revolution	Up to 5000 ppr, real direct count
Supply Voltage	5Vdc line driver, 5-30Vdc TTL & Super line driver
Output Format	Dual Square Wave in Quadrature with Index
Output Option	TTL Output Line Driver
Current Requirements	TTL: 40mA Max. No Load Line Driver: 60mA Max. No Load
Frequency Response	250 KHz
Duty Ratio	$50 \pm 25\%$
Phase Shift	$25 \pm 12.5\%$
Index Signal Width	$100 \pm 50\%$
Output Level	(H) $\geq 2.5V$ (L) $\leq 0.5V$
Rise and Fall Time	$\leq 1\mu s$ (When cable length is 1m)
Insulation Resistance	$\geq 50M\Omega$

Mechanical

Shaft Diameter	.3747"/.3744"
Shaft Loading	Axial: 40 lbs. Max. Radial: 35 lbs. Max.
Shaft Seal	Standard (Detachable, Repairable)
Starting Torque	2.8 oz.-in at 77°F (25°C)
Shaft Angular Acceleration	1000 rad/sec ²
Moment of Inertia	$2.0 \times 10^{-3} \text{Kg} \cdot \text{m}^2$
Mech. Perm Speed	6000 RPM Max.
Weight	1 lb.

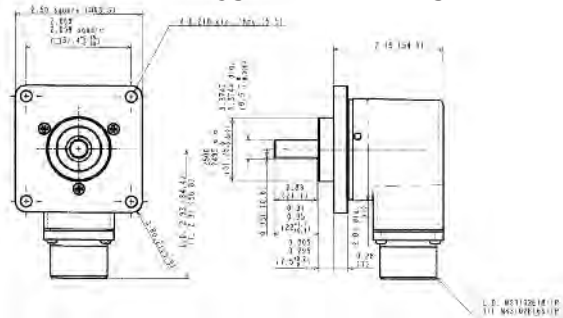
Environmental

Temperature	Operating: -10 ~ +70°C Storage: -25 ~ +85°C
Operating Humidity	35 ~ 85% without condensation
Vibration	Durable for one hour along 3 axes at 10 to 55 Hz 0.75mm amplitude
Shock	Metal Slit: 981 m/s ² (11ms 3-times, each X, Y, Z) Glass Slit: 490 m/s ² (11ms 3-times, each X, Y, Z)
Withstand Voltage	500VAC
Construction	NEMA4/IP-65

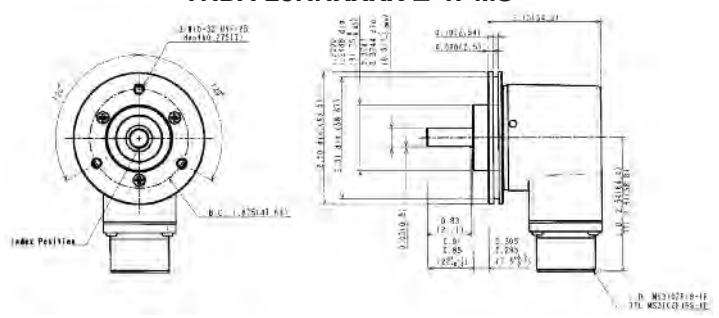
SIZE 25 SERIES TRDA-25N INCREMENTAL SHAFT ENCODER

OUTSIDE DIMENSIONS

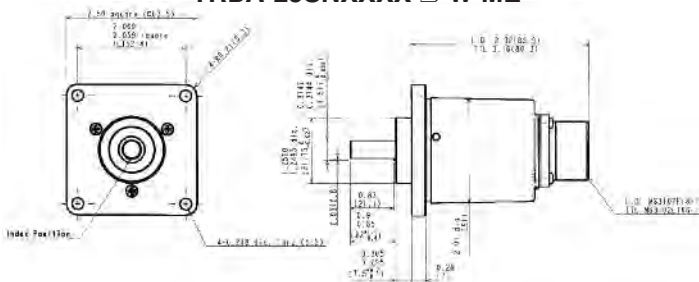
TRDA-25SNXXXX □ W-MS



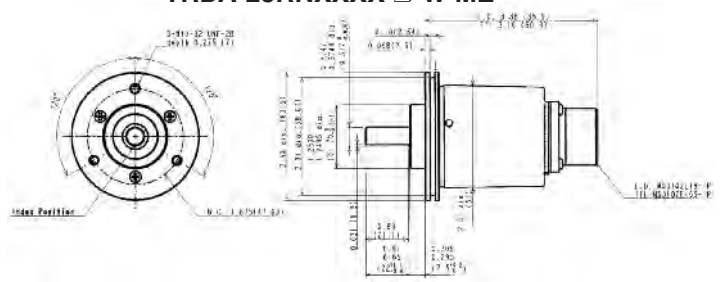
TRDA-25RNXXXX □ W-MS



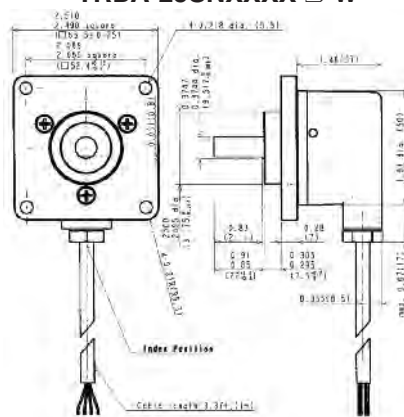
TRDA-25SNXXXX □ W-ME



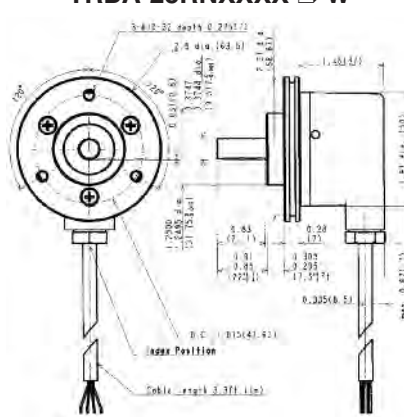
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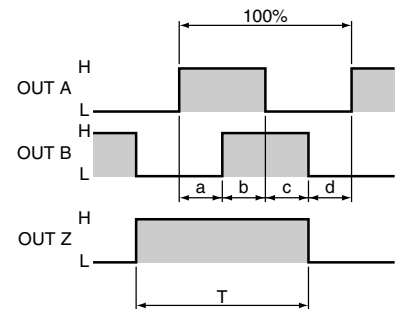
TRDA-25SNXXXX □ W



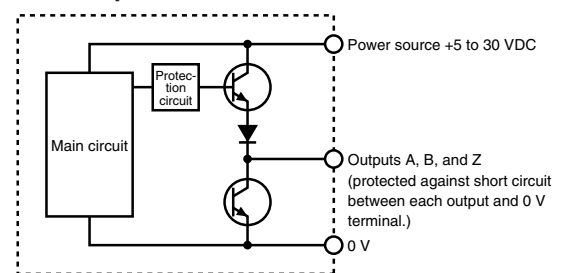
TRDA-25RNXXXX □ W



TTL (Totem Pole) Wave Form (viewed from shaft side)



TTL Output circuit

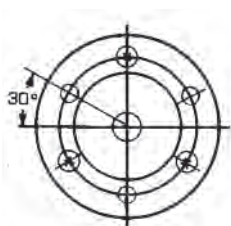


Detachable Flanges (You may choose and change)

Square Flange



Round Servo Flange

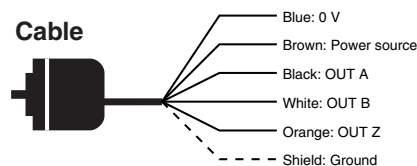


10-32 UNF 0.275 deep
3 Places equally spaced on a
1.875 Dia. bolt circle

WIRING DIAGRAMS (TTL)

AWG 20-22

Cable



TTL Connections (7 pin/
Order Separately
#DMS3102E16-P
Mating# DMS3106E16-1S
(Shield = Body)

Pin Code	Function
A	Channel A
B	Channel B
C	Index Z
D	Vcc
E	-
F	0V, Common
G	Case, GRD

Due to circumstances beyond World Encoders' control, small quantities of In-Stock items will be shipped immediately, and lead time on Non-Stock items is up to a few weeks.



Series TRDA-25N / Size 25 Shaft Encoder

1-800-903-9093

Model	Flange	N	Resolution	Output	W	Termination
TRDA-25	<input type="checkbox"/>	N	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	W	<input type="checkbox"/>

ORDERING INFORMATION

TRDA-25 Size 25 Shaft Encoder	S: Square Flange	N	Metal Disks			RZ: 5 - 30V TTL (single ended)	W	Blank: Cable (3.3 ft.)
	R: Round Flange (3) #10-32 @1.875" BC		3	4	5			
		10	30	40	S: 5 - 30V Super Line Driver (0L7272 Compatible)	ME: End Mount MS Connector		
		50	60	100				
		120	192	200				
		240	250	300				
		360	400	480				
		500						
		Glass Disks						
		600	750	1000				
		1024	1200	2000				
		2048	2500	5000				

PRICING INFORMATION

	FLANGE:	RESOLUTION	ELECTRICAL	MECHANICAL	TERMINATION
TRDA-25 Base Price \$230.00	Detachable Flanges	3 Thru 1024	TTL 5-30V (Single Ended) - Quadrature A & B with Index Z N/C	Shaft Seal Standard N/C	MS Conn.--Diecast Body NEMA4 IP-65 - Side Mount Add \$55.00 - End Mount Add \$55.00
	Square Flange #TRDA-25SN Add \$10.00	1200 Thru 2048 Add \$25.00	Linedriver 5V Quadrature A & B with Index Z N/C		3 ft. cable/Diecast Body NEMA4, IP-65 N/C
	Round Flange #TRDA-25RN Add \$10.00	2500 Add \$40.00	Super Linedriver 5-30V Quadrature A & B with Index Z Add \$30.00		MS 10 pin Mating-Part #DMS3106E18-1S \$38.00 (order separately) MS 7 pin Mating-Part #DMS3106E16-1S \$30.00 (order separately)
		5000 Add \$285.00			

PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE
TRDA-25SN100RZW	\$240.00	TRDA-25SN1000RZW-MS	\$295.00	TRDA-25SN2500SW-MS	\$365.00
TRDA-25SN100RZW-MS	\$295.00	TRDA-25SN1000SW-ME	\$325.00	TRDA-25SN2500VW-ME	\$335.00
TRDA-25SN100SW-ME	\$325.00	TRDA-25SN1000SW-MS	\$325.00	TRDA-25SN2500VW-MS	\$335.00
TRDA-25SN100SW-MS	\$325.00	TRDA-25SN1000VW-ME	\$295.00	TRDA-25SN5000VW-MS	\$660.00
TRDA-25SN100VW-MS	\$295.00	TRDA-25SN1000VW-MS	\$295.00	Flanges	
TRDA-25SN192RZW-MS	\$295.00	TRDA-25SN1000VWL-MS	\$295.00	TRDA-25RN	\$10.00
TRDA-25SN250RZW	\$240.00	TRDA-25SN1024RZW	\$240.00	TRDA-25SN	\$10.00
TRDA-25SN250SW-MS	\$325.00	TRDA-25SN1024RZW-MS	\$295.00	Mating Connector	
TRDA-25SN250VW-MS	\$295.00	TRDA-25SN1024SW-MS	\$325.00	DMS3106E18-1S (10pin Linedriver)	\$38.00
TRDA-25SN360RZW	\$240.00	TRDA-25SN1024VW-ME	\$295.00	DMS3106E16-1S (7pin TTL)	\$30.00
TRDA-25SN360SW-MS	\$325.00	TRDA-25SN1024VW-MS	\$295.00	MS mating conn. w/10ft cable assemblies	
TRDA-25SN360VW-MS	\$295.00	TRDA-25SN1250VW-7145	\$660.00	C10-9-10 LD (Linedriver)	\$75.00
TRDA-25SN500RZW	\$240.00	TRDA-25SN2000RZW	\$265.00	MS10 pin mating w/10ft cable (9 wires)	
TRDA-25SN500RZW-MS	\$295.00	TRDA-25SN2000RZW-MS	\$320.00	C7-5-10 RC (TTL)	\$65.00
TRDA-25SN500SW-ME	\$325.00	TRDA-25SN2000SW-MS	\$350.00	MS7 pin mating w/10ft cable (5 wires)	
TRDA-25SN500SW-MS	\$325.00	TRDA-25SN2000VW-7151	\$660.00	Cables	
TRDA-25SN500VW-ME	\$295.00	TRDA-25SN2000VW-ME	\$320.00	CBL-2025N-XXX FT	\$3.00 per Ft.
TRDA-25SN500VW-MS	\$295.00	TRDA-25SN2000VW-MS	\$320.00	Bell Flanges	
TRDA-25SN512RZW	\$240.00	TRDA-25SN2048RZW	\$265.00	F-20	\$60.00
TRDA-25SN512RZW-MS	\$295.00	TRDA-25SN2048SW-MS	\$350.00	F-21	\$60.00
TRDA-25SN512VW-ME	\$295.00	TRDA-25SN2048VW-ME	\$320.00	3.5" Center Height Foot Mounting Bracket	
TRDA-25SN512VW-MS	\$295.00	TRDA-25SN2048VW-MS	\$320.00	LM-001	\$90.00
TRDA-25RN1000RZW-MS	\$295.00	TRDA-25SN2500RZW	\$280.00	NOTE: Above stock items show Square Flange. Round Flange Models 1 & 2 are also stock items.	
TRDA-25SN1000RZW	\$240.00	TRDA-25SN2500RZW-MS	\$335.00		

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OPTIONAL PARTS:

Order Separately

DETACHABLE FLANGE	Part No.	List Price
Square Flange	TRDA-25SN	\$10.00
Round Flange	TRDA-25RN	\$10.00

MATING CONNECTOR KIT

LD 10 Pin	DMS3106E18-1S	\$38.00
TTL 7 Pin	DMS3106E16-1S	\$30.00
(Including Straight Plug w/Cable Clamp, Insertion & Bushing)		
Cable	CBL-2025N-XXXFT	\$ 3.00/Ft.

BELL FLANGES / For Servo / Round Flange Encoder

NEMA 42-Flat Bottom	F-20	\$60.00
NEMA 42-Pilot@Bottom	F-21	\$60.00

FLEXIBLE COUPLING

BT100-C.250-C.375	\$34.00
BT125-C.375-C.250	\$44.00
BT100-C.375-C.375	\$34.00
BT125-C.375-C.375	\$44.00
BT125-C.375-C.500	\$44.00
BT125-C.375-P8MM	\$44.00
BT125-C.375-P10MM	\$44.00

(Refer to Page 20 for the detail specifications.)

3.5" CENTER HEIGHT FOOT MOUNTING BRACKET

5.25"Hx3.2"Wx2.5"L	LM-001	\$90.00
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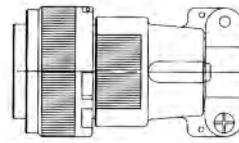
12" CIRCUMFERENCE MEASURING WHEEL (3.82" dia)

Material	Hub x Width		
Urethane	3/8" x 3/8"	MW-1-B	\$36.00
Urethane	3/8" x 1"	MW-1W-B	\$36.00

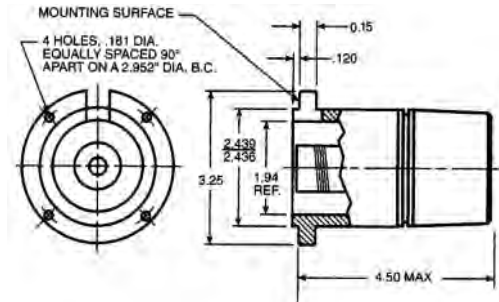
Urethane Rubber: 83A Shore Hardness

Operating Temperature: -25° to 65° C, -20° to 150° F

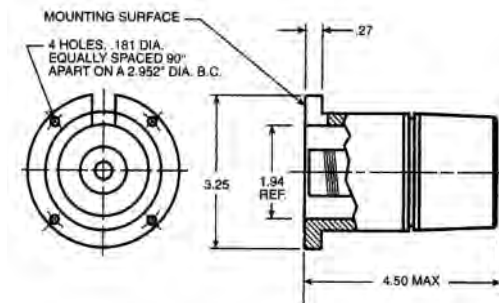
Plug Connector



F-21



F-20



OPTIONAL PARTS:

Order Separately

● Measuring Wheel Mounting Adapter & Yoke Assembly Kit

Mt. Beam Size	Part No.	List Price
1/4" - 28	MTA/Y-1	\$30.00
3/8" - 16	MTA/Y-3	\$30.00

Measuring Wheel Mounting Adapter

Size	Part No.	List Price
6"x2.25"x1/8" Thickness	MTA-001	\$15.00

Yoke Assembly

Size	Mt. Beam Size	Part No.	List Price
2.25"L x 5/8"	1/4" - 28	Y-1	\$15.00
2.25"L x 5/8"	3/8" - 16	Y-3	\$15.00

● Measuring Wheel Mounting Adapter & Offset Foot Bracket Assembly Kit

Arm Length	Part No.	List Price
7.00"	MTA/MB-UB2	\$71.00
11.25"	MTA/MB-UB2A	\$75.00

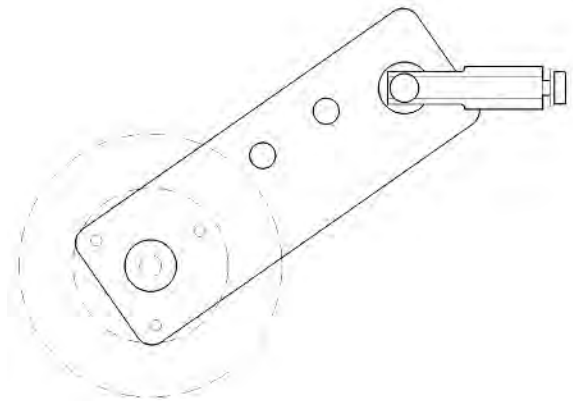
Measuring Wheel Mounting Adapter

Size	Part No.	List Price
6"x2.25"x1/8" Thickness	MTA-001	\$15.00

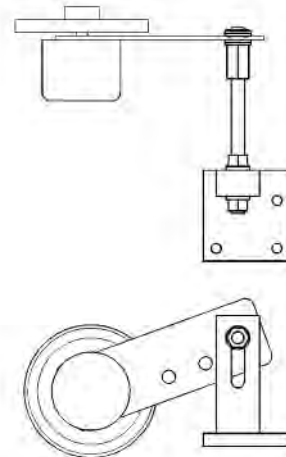
Offset Foot Bracket

Size	Part No.	List Price
3.125"H x 7.00" Arm	MB-UB2	\$56.00
3.125"H x 11.25" Arm	MB-UB2A	\$60.00

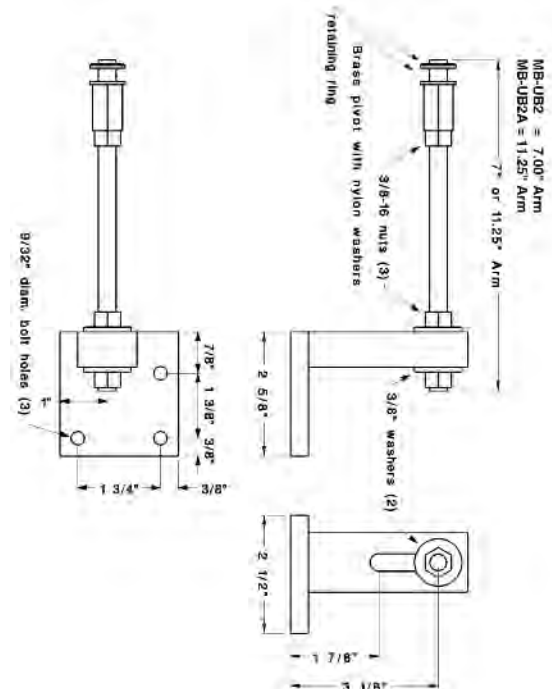
Mounting Adapter & Yoke Assembly Kit



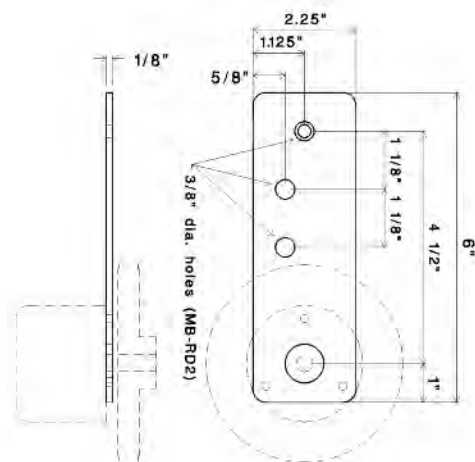
Mounting Adapter & Offset Foot Bracket Assembly Kit



Offset Foot Bracket



Measuring Wheel Mounting Adapter



Yoke Assembly

