ENCODER PRODUCTS COMPANY

RX/TX CONVERTER

FEATURES

The RX/TX Converter converts a Push-Pull or NPN encoder output to an RS422 compatible differential Line Driver output. In addition, it will also convert Line Driver/RS422 encoder output to single ended signals (Push-Pull) for compatibility with certain PLC's.

Each converter has two independent channels: Channel 1 is equipped with a differential Line Receiver on the input. It then converts these differential signals (A, A', B, B', Z, Z') to Push-Pull output signals (A, B, Z), with an amplitude equivalent to Vcc.

Channel 2 will convert single ended signals from a Push-Pull or NPN Open Collector encoder to Differential Line Driver signals. Differential Line Driver signals include complementary outputs A', B', and Z' which offer greater immunity to electrical noise, signal distortion, and interference, especially with long cable runs.

APPLICATIONS

To provide differential signals for data transmission over long distances between a push-pull, or NPN open collector transmitter and receiver. To enable devices with different output/input circuits to be connected. To properly terminate differential signals to eliminate/reduce signal distortions.

RX/TX CONVERTER ORDERING INFORMATION

(Specify stock # when ordering)

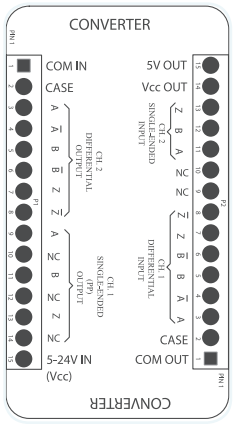
Differential = A,A', B,B', Z,Z'
Single Ended = A, B, Z

	Channel 1		Channel 2	
	INPUT	OUTPUT	INPUT	OUTPUT
Stock #	Differential Line Reciever MAX 3095	Single Ended Push Pull Output 7272	Single Ended 7272	Differential Line Driver 7272
100020-1	5V	Vcc	5V, OC[1]	Vcc
100020-2	5V	Vcc	5V, OC[1]	5V
100020-3	5V	Vcc	5V[2]	Vcc
100020-4	5V	Vcc	5V[2]	5V
100020-5	6-12V	Vcc	5V, OC[1]	Vcc
100020-6	6-12V	Vcc	5V, OC[1]	5V
100020-7	6-12V	Vcc	5V[2]	Vcc
100020-8	6-12V	Vcc	5V[2]	5V
100020-9	13-24V	Vcc	5V, OC[1]	Vcc
100020-10	13-24V	Vcc	5V, OC[1]	5V
100020-11	13-24V	Vcc	5V[2]	Vcc
100020-12	13-24V	Vcc	5V[2]	5V

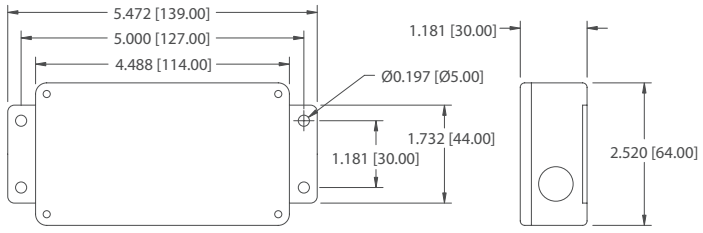
[1]OC- Open Collector input designed with a 2k pull-up resistor for an open collector output encoder or device.
[2]Inputs can be from devices with pull-up, push-pull or TTL type outputs.
[3]Vcc should range between 5-24 VDC

SPECIFICATIONS

Supply Source (Vcc) ..... 5 to 24 VDC
Current Consumption ..... 20 mA max (plus encoder and output load requirements)
Max Frequency ..... Up to 1 MHz
Enclosure ..... IP54 (dust proof)
Earth Circuit ..... Grounded to Case
Input Voltage ..... Channel 1: 24 VDC Max Diff
Channel 2: 5 VDC Max
Output Voltage ..... Channel 1: Vcc
Channel 2: 5 VDC or Vcc
Output Current ..... 30 mA/Channel Max



NOTES UNLESS OTHERWISE SPECIFIED
1. TERMINATE CABLE SHIELD/DRAIN WIRES TO THE CASE TERMINAL OF P1 AND P2, IF APPLICABLE. BARE CONDUCTORS MUST BE ELECTRICALLY INSULATED FROM THE CIRCUIT BOARD WITH A NONCONDUCTIVE SLEEVE SUCH AS HEAT SHRINK TUBING.
2. RECOMMENDED CABLE FOR DIFFERENTIAL/ COMPLEMENTARY ENCODER SIGNALS: LOW CAPACITANCE, TWISTED-SHIELDED PAIR: SEE ACCESSORIES SECTION FOR 4XXC CABLES/CONNECTORS. 4XXC CABLES MUST HAVE OUTER INSULATION STRIPPED OFF IN ORDER TO FIT THROUGH CABLE ENTRY GLANDS.
3. SEE CONFIGURATION ORDERING GUIDE FOR INPUT/OUTPUT VOLTAGE PER THE SELECTED RXTX MODEL NUMBER
4. P2-14 (Vcc) or P2-15 (5V) CAN BE USED TO POWER ENCODER.
5. P1-15 (5-24VDC IN (Vcc)) IS FOR CUSTOMER SUPPLIED POWER TO OPERATE RXTX.



All dimensions are in inches with a tolerance of ±0.005" or ±0.01" unless otherwise specified.
Metric dimensions are given in brackets [mm].

RX/TX REPEATER

FEATURES

The RX/TX Repeater retransmits signals from an encoder output in order to drive signals over a longer distance with reduced noise and distortion free waveforms. The input is equipped with a Differential Line Receiver and a Differential Line Driver. It takes the differential signals (A, A', B, B', Z, Z') , squares the signals up, and then repeats the signals at the outputs.

Benefits are greater immunity from electrical noise, signal distortion, and interference, especially with long cable runs. The output signal can be 5 VDC or an amplitude equivalent to Vcc.

APPLICATIONS

Repeat differential signals for data transmission over long distances. To properly terminate differential signals to eliminate/reduce signal distortions. Increase output current drive capability in order to drive multiple receivers

SPECIFICATIONS

Supply Source (Vcc)..... 5 to 24 VDC
Current Consumption ..... 20 mA max (plus encoder and output load requirements)
Max Frequency ..... Up to 1 MHz
Enclosure..... IP54 (dust proof)
Earth Circuit ..... Grounded to Case
Input Voltage..... 24 VDC Max Diff
Output Voltage..... 5 VDC or Vcc
Output Current ..... 30 mA/Channel Max

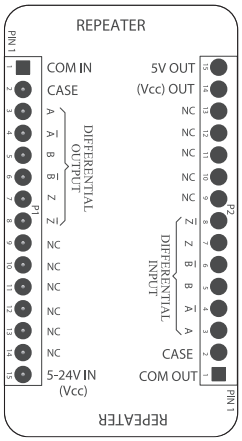
RX/TX REPEATER ORDERING INFORMATION

(Specify stock # when ordering)

Differential = A,A', B,B', Z,Z'
For differential signals only

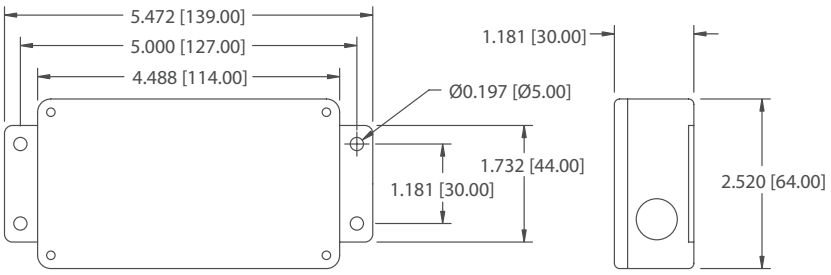
Stock #	INPUT Differential Line Receiver - MAX 3095	OUTPUT Differential Line Driver 7272
100020-13	5V	5V
100020-14	5V	Vcc[2]
100020-15	6-12V	5V
100020-16	6-12V	Vcc[2]
100020-17	13-24V	5V-
100020-18	13-24V	Vcc[2]

[1]Vcc should range between 5-24 VDC.
[2]Outputs will be equivalent to voltage applied to Vcc (Pin P1-15)



NOTES UNLESS OTHERWISE SPECIFIED

1. TERMINATE CABLE SHIELD/DRAIN WIRES TO THE CASE TERMINAL OF P1 AND P2, IF APPLICABLE. BARE CONDUCTORS MUST BE ELECTRICALLY INSULATED FROM THE CIRCUIT BOARD WITH A NONCONDUCTIVE SLEEVE SUCH AS HEAT SHRINK TUBING.
2. RECOMMENDED CABLE FOR DIFFERENTIAL/ COMPLEMENTARY ENCODER SIGNALS: LOW CAPACITANCE, TWISTED-SHIELDED PAIR: SEE ACCESSORIES SECTION FOR 4XXC CABLES/CONNECTORS. 4XXC CABLES MUST HAVE OUTER INSULATION STRIPPED OFF IN ORDER TO FIT THROUGH CABLE ENTRY GLANDS.
3. SEE CONFIGURATION ORDERING GUIDE FOR INPUT/OUTPUT VOLTAGE PER THE SELECTED RXTX MODEL NUMBER
4. P2-14 (Vcc) or P2-15 (5V) CAN BE USED TO POWER ENCODER.
5. P1-15 (5-24VDC IN (Vcc)) IS FOR CUSTOMER SUPPLIED POWER TO OPERATE RXTX.



All dimensions are in inches with a tolerance of ±0.005" or ±0.01" unless otherwise specified.
Metric dimensions are given in brackets [mm].

RX/TX SPLITTER

RX/TX SPLITTER ORDERING INFORMATION

(Specify stock # when ordering)

Differential = A,A', B,B', Z,Z'
Single Ended = A, B, Z

Stock #	INPUT TYPE	INPUT VOLTAGE (From Encoder)	OUTPUT VOLTAGES (single ended or differential-7272) CH1	CH.2
100020-20	Differential	5V	5V	5V
100020-21	Differential	5V	Vcc	Vcc
10002022	Differential	5V	Vcc	5V
100020-23	Differential	6-12V	5V	5V
100020-24	Differential	6-12V	Vcc	Vcc
100020-25	Differential	6-12V	Vcc	5V
100020-26	Differential	13-24V	5V	5V
100020-27	Differential	13-24V	Vcc	Vcc
100020-28	Differential	13-24V	Vcc	5V
100020-29	Single Ended	5V OC	5V	5V
100020-30	Single Ended	5-24V OC	Vcc	Vcc
100020-31	Single Ended	5V OC	Vcc	5V
100020-32	Single Ended	5V PP, PU, TTL	5V	5V
100020-33	Single Ended	5-24V PP, PU, TTL	Vcc	Vcc
100020-34	Single Ended	5V PP, PU, TTL	Vcc	5V

[1]Choose an input channel of signal type differential or single ended that is to be split into two output channels. These input signals are typically from an incremental encoder. Refer to the block diagram below for the input and output signal flow.
[2]For OC type inputs, 2K ohm resistors are used for pull-up internally.
[3]The output channels may be used in the differential mode (A,A', B,B', Z,Z') or as A, B, Z (PP) referenced to circuit common.
[4]Vcc is the RXTX Splitter supply voltage and ranges from 5 to 24 VDC.
[5]Single ended input voltage must be less than or equal to the output voltage (Vcc or 5V), Whichever is applicable.
[6]Vcc (5-24VDC) or a PCB generated 5V is supplied to the output drivers (channels).

FEATURES

The RX/TX Splitter has one input and two separate output channels. There are two different types of inputs available. One input type is a differential line receiver where differential input signals (A, A', B,B',Z,Z') are split into two identical differential output channels. Alternatively, the input can be configured for a single ended Push-Pull, NPN, Open Collector, or Pull-Up encoder (A,B,Z), which will split the signal into two independent differential line driver outputs (A, A', B,B',Z,Z'). Refer to the block diagram below for the signal flow through the device. Line Driver signals include complementary outputs A', B', and Z', and offer greater immunity from electrical noise, signal distortion, and interference especially with long cable runs. The output signal can be approximately 5 VDC or a voltage amplitude equivalent to the RXTX supply (Vcc).

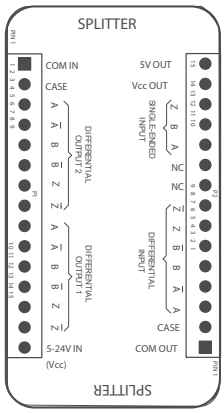
To order, choose the type of input (differential or single ended), the expected encoder signal voltage and the voltage output options. Use the RXTX Splitter ordering guide below to establish the stock number.

APPLICATIONS

To split differential, or single ended signals for data transmission over long or short distances to two different devices. To properly terminate differential signals to eliminate/reduce signal distortion. To increase output current drive capability in order to drive multiple receivers. To split the input signal and provide the two output channel drivers with differing voltage outputs.

SPECIFICATIONS

Supply Source (Vcc)..... 5 to 24 VDC
Current Consumption ..... 20 mA max (plus encoder & output load requirements)
Max Frequency ..... Up to 1 MHz
Enclosure..... IP54 (dust proof)
Earth Circuit ..... Grounded to Case
Input Voltage..... 24 VDC Max Diff
Output Voltage.....5 VDC or Vcc
Output Current.....30 mA/Channel Max



NOTES UNLESS OTHERWISE SPECIFIED
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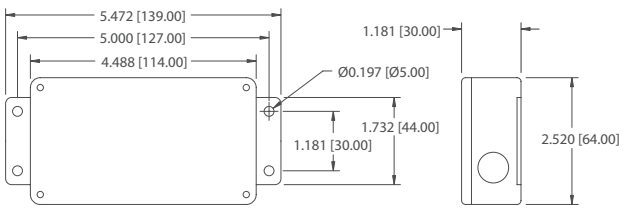
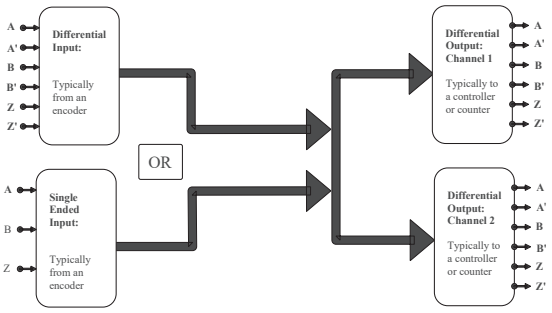
2. RECOMMENDED CABLE FOR DIFFERENTIAL/ COMPLEMENTARY ENCODER SIGNALS: LOW CAPACITANCE, TWISTED-SHIELDED PAIR: SEE ACCESSORIES SECTION FOR 4XXC CABLES/CONNECTORS. 4XXC CABLES MUST HAVE OUTER INSULATION STRIPPED OFF IN ORDER TO FIT THROUGH CABLE ENTRY GLANDS.
3. SEE CONFIGURATION ORDERING GUIDE FOR INPUT/OUTPUT VOLTAGE PER THE SELECTED RXTX MODEL NUMBER
4. P2-14 (Vcc) or P2-15 (5V) CAN BE USED TO POWER ENCODER.
5. P1-15 (5-24VDC IN (Vcc)) IS FOR CUSTOMER SUPPLIED POWER TO OPERATE RXTX.





ENCODER POWER SUPPLY

DISCONTINUED - Contact EPC Technical Support for assistance: sales@encoder.com

FEATURES

A clean source of dedicated power for your encoder is an important factor when designing a reliable system. Now available from EPC are small, easily mounted DIN Rail power supplies specifically chosen to power encoders. Designed for space efficiency, these compact power supplies are available in 5, 12, or 24 VDC.

Easy to see LED indicators show the power supply is working properly. Screw type terminals easily accommodate wires from AWG 24 to 14 while snap-on DIN-Rail mounting (TS35/7.5 or TS35/15) allows the unit to sit safely and firmly on the rail with no tools required even to remove. The shock proof housing is both UL and CE approved. These supplies have been tested to work with all our Accu-Coders™.

SPECIFICATIONS

Electrical

Nominal Input Voltage..... 100 to 240 Vac / 47 to 63 Hz
Input Voltage Range ..... 90 to 265 Vac / 47 to 63 Hz or
120 to 370 VDC
Frequency ..... 100 kHz min
Inrush Surge Current..... < 10 A @ 115Vac, < 18A @ 230 Vac
Input Fuse ..... T2A / 250 Vac

	EPS-5V	EPS-12V	EPS-24V
Nominal Output Voltage	5 VDC	12 VDC	24 VDC
Tolerance	± 1 %	± 1 %	± 1 %
Nominal Output Current	3 A	1.5 A	0.75 A
Efficiency	> 75%	> 77 %	> 77 %
Ripple and Noise	50 mV	50 mV	50 mV

Mechanical

Dimensions ..... 3.54" L x 0.89" W x 4.5" D
(90 mm L x 22.5 mm W x 115 mm D)
Connection Type ..... Screw Clamp Connection
Mounting ..... DIN-Rail TS35/7.5 or TS35/15

Environmental

Operating Temperature-10O C to +50O C
Storage Temperature ..... -25O C to +85O C
Relative Humidity..... 95% RH

ENCODER POWER SUPPLY ORDERING INFORMATION

(Specify stock # when ordering)
Differential = A,A', B,B', Z,Z'
Single Ended = A, B, Z

Stock #

100043.....5V Output (EPS-5V)
100044.....12V Output (EPS-12V)
100045.....24V Output (EPS-24V)

Approvals and Standards

UL/cUL...UL 508 / UL 1310 Listed, Class 2
TUV.....EN 60950
CE .....EN 50081-1 / EN 55022 Class B,
EN 61000-3-2
EN 61000-3-3, EN 50082-1 / EN 55024
FCC .....Class B

PROGRAMMABLE ENCODER ACCESSORIES

USB PROGRAMMING KIT

Kit includes software, USB Programming Module, and 2-meter Interface Cable with specified connector. See Accessories for individual Interface Cables.

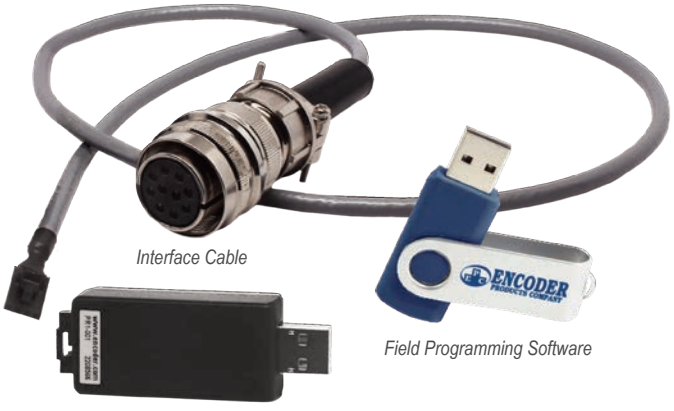
PR1-001-10..... 10-Pin MS Style Programming Kit
PR1-001-07..... 7-Pin MS Style Programming Kit
PR1-001-06..... 6-Pin MS Style Programming Kit
PR1-001-J ..... 5-Pin M12 Programming Kit
PR1-001-K..... 8-Pin M12 Programming Kit
PR1-001-09..... 9-Pin D-Sub Programming Kit
PR1-001-G ..... Gland Cable Programming Kit

USB PROGRAMMING MODULE

PR1-001..... USB Programming Module

PROGRAMMING INTERFACE CABLE (2 METER)

075233-02..... 10-Pin MS Style Interface Cable
075234-02..... 7-Pin MS Style Interface Cable
075235-02..... 6-Pin MS Style Interface Cable
075236-02..... 5-Pin M12 Interface Cable
075237-02..... 8-Pin M12 Interface Cable
075238-02..... 9-Pin D-Sub Interface Cable
075240-02..... Gland Interface Cable



Interface Cable

Field Programming Software

USB Programming Module

CONNECTORS & CABLES

MATING CONNECTORS

Stock #	Description	
080014	MS3106A14S-6S-619	6-pin MS
080174	MS3106A16S-1S-618	7-pin MS
080113	MS3106A18-1S-618	10-pin MS
080325-01	AIM 40-9709S	9-pin D-sub Miniature
080359		12-pin M23
080364		16-pin 23, CE
080365		16-pin M23
080023	KPT06F14-19S	19-pin Bayonet
080376-01		10-pin Industrial Clamp
080021	KPT06F12-10S	10-pin Bayonet

ELECTRICAL CABLE

Stock #	Description
070148	Standard Cable
070244	Twisted Pair Cable - Line Driver outputs only
070063	High Temperature Cable
070264	Cable for Absolute Encoders - Models 925 and 958

PRE-WIRED CABLE AND MATING CONNECTOR ASSEMBLIES

To order a pre-wired cable and connector assembly complete the boxes to indicate the connector style, cable length, and output configuration.

INCREMENTAL ENCODER CABLE ASSEMBLIES

(Cable is 24 AWG foil and braid shielded and is rated to 105° C)

□□□ C - □□□ - □□ - □ - □

CABLE TYPE
- **3** Standard
- **4** Twisted Pair

CONNECTOR TYPE
- **06** 6-pin MS[1]
- **07** 7-pin MS[1]
- **09** 9-pin D-Sub Mini[1]
- **10** 10-pin MS
- **12** 12-pin M23
- **A6** 6-Pin MS 90°
- **A7** 7-pin MS 90°
- **A1** 10-pin MS 90°
- **H1** 10-pin Bayonet

CABLE LENGTH
Number of Feet

OUTPUT TYPE
- **ST** OC, PU, PP, S, O
- **HV** HV

CHANNEL CONFIGURATION
- **A** Single Channel
- **Q** Quadrature or Dual Channel
- **R** Quadrature with Index Z

CE COMPATIBLE
- **Y** Yes
- **N** No

ABSOLUTE ENCODER CABLE ASSEMBLIES

(Cable is 28 or 30 AWG foil and braid shielded and is rated to 70° C)

□□□ C - □□□ - □

CABLE TYPE
- **5** Absolute
- **4** Twisted Pair

CONNECTOR TYPE
- **10** 10-pin MS[2]
- **16** 16-pin M23[3]
- **19** 19-pin Bayonet

CABLE LENGTH
Number of Feet

CE COMPATIBLE
- **Y** Yes
- **N** No

Notes:
1. Available with standard cable (3XX) only.
2. 8 bit only. CE option not available.
3. For use with ≤ 12 bit outputs.

MOLEX HEADER CORDSETS for use with Model 30M

Stock #	Description	Length
075230	8-pin Molex Mating Connector	24 inches
075232	16-pin Molex Mating Connector	24 inches

M12 (12 MM) CORDSETS (Always use a shielded cordset)

8-CONDUCTOR CORDSETS (FOR USE WITH 8-PIN M12 CONNECTORS)

Shield not connected to Coupling Nut

Stock #	Description	Length
075100	RKC8T-0.5/S618	0.5 Meters (1.64 ft)
075101	RKC 8T-2/S618	2 Meters (6.56 ft)
075102	RKC 8T-4/S618	4 Meters (13.12 ft)
075103	RKC 8T-6/S618	6 Meters (19.69 ft.)
075104	RKC 8T-10/S618	10 Meters (32.81 ft)

Shield connected to Coupling Nut (use for CE option)

Stock #	Description	Length
075200	RKS 8T-2	2 Meters (6.56 ft)
075201	RKS 8T-4	4 Meters (13.12 ft)
075202	RKS 8T-6	6 Meters (19.69 ft)
075203	RKS 8T-10	10 Meters (32.81 ft)

3, 4, AND 5-CONDUCTOR CORDSETS (FOR USE WITH 5-PIN M12 CONNECTORS)

Shield not connected to Coupling Nut

Stock #	Description	Length
075205	3-Conductor RK 4T-1/S618	1 Meter (3.28 ft)
075206	4-Conductor RK 4.4T-1/S618	1 Meter (3.28 ft)
075204	5-Conductor RK 4.5T-1/S618	1 Meter (3.28 ft)

Shield connected to Coupling Nut (use for CE option)

Stock #	Description	Length
075211	5-Conductor	1 Meter (3.28 ft)

CONNECTORS & CABLES

POWER AND COMMUNICATION CABLES FOR ETHERNET ENCODERS

Stock #	Description	Length
075241	DC Power Cable, A Code	2 M
075242	DC Power Cable, A Code	5 M
075243	DC Power Cable, A Code	10 M
075244	DC Power Cable, A Code	20 M
075245	Signal Cable, D Code, M12 4-pin to RJ-45	2 M
075246	Signal Cable, D Code, M12 4-pin to RJ-45	5 M
075247	Signal Cable, D Code, M12 4-pin to RJ-45	10 M
075248	Signal Cable, D Code, M12 4-pin to RJ-45	20 M
075249	Signal Cable, D Code, M12 4-pin to M12 4-pin	2 M
075250	Signal Cable, D Code, M12 4-pin to M12 4-pin	5 M
075251	Signal Cable, D Code, M12 4-pin to M12 4-pin	10 M
075252	Signal Cable, D Code, M12 4-pin to M12 4-pin	20 M

BORE & SHAFT ACCESSORIES

BORE ADAPTORS

INDIVIDUAL BORE ADAPTORS

Stock #	Description
176252	1.000" ID Bore Adaptor for Model 25T
176253	7/8" ID Bore Adaptor for Model 25T
176254	5/8" ID Bore Adaptor for Model 25T
176255	25 mm ID Bore Adaptor for Model 25T
176256	24 mm ID Bore Adaptor for Model 25T
176257	20 mm ID Bore Adaptor for Model 25T
176258	19 mm ID Bore Adaptor for Model 25T
176277	3/4" ID Bore Adaptor for Model 25T
176283	1/2" ID Bore Adaptor for Model 25T
176313	14 mm ID Bore Adaptor for Model 25T
176315	15 mm ID Bore Adaptor for Model 25T
176325	12 mm ID Bore Adaptor for Model 25T
176328	1/4" ID Bore Adaptor for Model 25T
176329	6 mm ID Bore Adaptor for Model 25T
176335	8 mm ID Bore Adaptor for Model 25T
176336	10 mm ID Bore Adaptor for Model 25T
176337	11 mm ID Bore Adaptor for Model 25T
176338	5/16" ID Bore Adaptor for Model 25T
176339	3/8" ID Bore Adaptor for Model 25T

Various Bore Adaptors

BORE ADAPTOR KITS

Stock#	Description
260-BK97	Small Metric Bore Adaptor Kit for 260. Includes 6, 8, & 10 mm
260-BK98	Large Metric Bore Adaptor Kit for 260. Includes 11, 12, & 14 mm
260-BK99	Inch Standard Bore Adaptor Kit for 260. Includes 0.250", 0.375 and 0.500"
25T-BK98	Metric Bore Adaptor Kit for 25T. Includes 19, 20, 24, 25 & 28 mm
25T-BK99	Inch Standard Bore Adaptor Kit for 25T. Includes 0.500", 0.625" 0.750", 0.875" and 1.000"
58T-BK98	Metric Bore Adaptor Kit for 58T. Includes 6, 8, 10, 11, 12 & 14 mm
58T-BK99	Inch Standard Bore Adaptor Kit for 58T. Includes 0.250", 0.3125" 0.375" and 0.500"

ACCESSORIES FOR MAGNETIC ENCODER MODULES

OVER SHAFT MAGNET HOLDERS

Stock#	Description
176596-01	3/16" Bore ID
176597-01	5mm Bore ID
176598-01	6mm Bore ID
176599-01	1/4" Bore ID
176600-01	5/16" Bore ID
176601-01	8mm Bore ID
176602-01	3/8" Bore ID
176603-01	10mm Bore ID
176604-01	1/2" Bore ID
176605-01	14mm Bore ID
176606-01	5/8" Bore ID

Over Shaft Magnet Holder

MAGNET

Stock#	Description
030141	Raw Magnet

PRESS IN/ON MAGNET HOLDER

Stock#	Description
176607-01	Press In/On Magnet Holder (0.250" bore/0.125" shaft)

Press In/On Magnet Holder

FIELD REPLACEABLE SEALS

Stock #	Description
161247	Field Replaceable IP66 seal for 725, 925, IND12 & TR3
161248	Field Replaceable IP67 seal for 725, 925, TR3
161254	Field Replaceable IP67 seal for 702, 802, 758, 858
161264	Field Replaceable IP66 seal for 702, 802, 758, 858

SHAFTS

Stock #	Description
176406	10:1 Tapered Shaft with Internal Threads
176407	10:1 Tapered Shaft without Internal Threads
176154-01	Model TR1 Replacement Pivot Shaft Kit, 1/4-20 Threaded
176155-01	Model TR1 Replacement Pivot Shaft Kit, M6 Threaded
176224-01	Model TR1 Torsion Spring Assembly

Tapered Shafts

SHAFT COUPLINGS

Stock #	Length	From shaft size	To shaft size
161307	1.00"	0.250"	0.250"
161308	1.00"	6 mm	6 mm
161309	1.00"	6 mm	0.250"
161314	1.00"	6 mm	0.375"
161313	1.00"	0.250"	0.375"
161317	1.00"	0.375"	0.375"
161319	1.50"	0.375"	0.500"

Flexible Shaft Couplings

MAGNETIC COUPLINGS

Stock #	Description
176282-01	For Models 260 & 25T with a 5/8"(0.625") bore
176409-01	For Models 260 & 25T with a 3/8" (0.375") bore

Magnetic Couplings

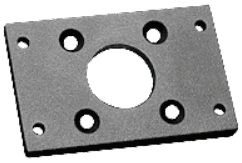
MOUNTING BRACKETS & OPTIONS

MOUNTING BRACKETS

Pivot Brackets

Stock #	
176430-01 (Replaces 140039)	Single Pivot for Cube Housing*
176430-02	Spring Loaded Single Pivot for Cube Housing*
176431-01 (Replaces 140040)	Double Pivot for Cube Housing*
176431-02	Spring Loaded Double Pivot for Cube Housing*
176727-01	Single Pivot Bracket for Size 25 Shaft Encoders*
176727-02	Spring Loaded Single Pivot Bracket for Size 25 Shaft Encoders*
140113	Spring Loaded Pivot Mounting Bracket for 702, 725, and 925

**Mounting bracket included.*



Heavy Duty Mounting Plate
#176396-01

Tru-Trac™ Optional Mounting Brackets

Stock #	
140104	Angled Mounting Bracket for Models TR1 Tru-Trac™ and TR2 Tru-Trac™
176389-01	Mounting Plate and Pivot Arm Kit for Model TR3 Tru-Trac™
176391-01	Double Pivot Bracket Kit for Model TR3 Tru-Trac™

Foot Mount Bracket
#140122

LCE Optional Mounting Plate

Stock #	
176064-01	Attaches to Standard or Industrial LCE in three different orientations

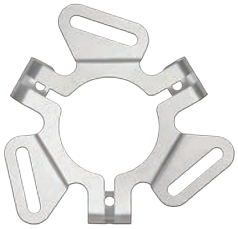
Foot Mounting Plates & Brackets

Stock #	
140121	Use with Clamping Flange 20 Type - 758, 858, 958
140122	For Use with 702, 802S, 725 & 925
176396-01	Heavy Duty Mounting Plate Kit for HD Cube Housing

Uni-Brackets

Adapts the Model 260 or Model 702 Flex-Mount to fit a standard motor mount with a mounting bolt circle up to 5.875", such as a NEMA 4.5" AK mount or IEC equivalent.

Stock #	
175997-01	Uni-Bracket Kit



Three Point Anti-Rotation Flex Mount
#140114-01

MOUNTING OPTIONS

Anti-Rotation Flex Mounts

Stock #	
140054-01	775, 776, Anti- Rotation Flex Arm Mounting Kit.
140106-01	225 Flex Arm Mounting Kit
140108-01	260 and 702 Flex Arm Mounting Kit
140055-01	260 SF Mounting Kit
140107-01	260 SD Mounting Kit
140071-01	260 FA Flex Arm Mounting Kit
140114-01	25T SE 3-Point Mount Kit
140115-01	25T SG Tether Arm Kit
140116-01	25T SJ Tether Arm Kit
140123-01	25T SH Tether Arm Kit

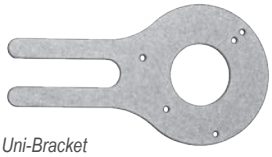
Angled Mounting Bracket
#140104

Mounting Hubs with Couplings for Size 15

Stock #	
175488-01	NEMA Size 34, 6 mm coupling
175489-01	NEMA Size 23, 6 mm coupling
175488-02	NEMA Size 34, 1/4" coupling
175489-02	NEMA Size 23, 1/4" coupling
175488-03	NEMA Size 34, 3/8" coupling
175489-03	NEMA Size 23, 3/8" coupling

Mounting Flanges and Adaptors

Stock #	
175124	Square Flange Adaptor for Model 755A
175125	Adapts Standard Cube Housing to fit in Explosion Proof Housing
175126	Standard Cube Universal Round Flange
175494	5PY Adaptor for Size 25 Series
175443	5PY Adaptor for 2.25" Standard Cube Housing
175557-01	Cube Mounting Adaptor for Size 20 Series
176672	Universal Mounting Adaptor for the Model 30MT



Uni-Bracket
#175997-01

MOTOR KITS/COVERS/GASKET KITS

MOTOR KITS

Model 25T Encoder with 5-28 VDC Input, A/B/Z Line Driver Outputs, 10-pin MS Style connector, -20° to 105° C Temp, IP66 Sealing, SG Tether Arm Kit, 10-pin MS Mating Connector, and 56C Protective Cover.

MK-56C-25T-001	5/8" Bore 1024 CPR
MK-56C-25T-002	5/8" Bore 2048 CPR
MK-56C-25T-003	5/8" Bore 4096 CPR
MK-56C-25T-004	1.0" Bore 1024 CPR
MK-56C-25T-005	1.0" Bore 2048 CPR
MK-56C-25T-006	1.0" Bore 4096 CPR

Model 25T Encoder with 5-28 VDC Input, A/B/Z Line Driver Outputs, 10-pin Bayonet connector, -20° to 105° C Temp, IP66 Sealing, SG Tether Arm Kit, 10-pin Bayonet Mating Connector and 56C Protective Cover.

MK-56C-25T-051	5/8" Bore 1024 CPR
MK-56C-25T-052	5/8" Bore 2048 CPR
MK-56C-25T-053	5/8" Bore 4096 CPR
MK-56C-25T-054	1.0" Bore 1024 CPR
MK-56C-25T-055	1.0" Bore 2048 CPR
MK-56C-25T-056	1.0" Bore 4096 CPR

Motor Kit for Model 25T

PROTECTIVE COVERS

Stock #	
175996-01	Uni-Cover Kit (includes bolts and washers). Compatible with Models 121, 225, 260, 755A, 702, 775, 776, and 960
770-000-02	770 Protective Cover Kit (includes mounting hardware, IP65 Sealing)
771-000-07	771 Protective Cover Kit (includes mounting hardware, IP65 Sealing)
865-000-02	865T Protective Cover Kit (includes mounting hardware, IP65 Sealing)
176301-01	56C Cage Style Cover Kit for Model 25T and Model 260 (includes bolts and washers)

Uni-Cover #175996

C-FACE GASKET KITS FOR MODELS 770 AND 771

Stock #	
770-Gasket-Kit	C-Face Gasket Kit for Model 770
771-Gasket-Kit	C-Face Gasket Kit for Model 771
121-Seal-Kit	121 Base Dust Seal (IP50)

770 Protective Cover #770-000-02

771 Protective Cover #771-000-07

TRU-TRAC™ & LINEAR ENCODER ACCESSORIES

LINEAR CABLE ACCESSORIES

50" Linear Cable Adaptor for standard or industrial cube housings. Mounting hardware is included for easy installation directly over the shaft of your existing cube encoder. See *Technical Bulletin TB-517* for specific installation instructions.

Stock #	
LCA01	50" Linear Cable Adaptor for Standard Cube Housing with 1/4" shaft
LCA02	50" Linear Cable Adaptor for Industrial Cube Housing with 3/8" shaft
176064-01	Optional Mounting Plate and hardware for cube style Linear Cable Encoders

LCE Linear Cable Adaptor #LCA01

TR2 RACKS & ACCESSORIES

Stock #	
140104	Angle Mounting Bracket
176216	12" for Stainless Steel
176217	24" for Stainless Steel
176218	36" for Stainless Steel
176219	Spacer Block for Stainless Steel
161546	2 meter Flexible Rack
161548	Flexible Rack Clamps 10 pk (with M4 x 0.7 x 1 mm) Phillips Pan Head Machine Screws
161547	1 meter Guide Rail for Flexible Rack (does not work with 176220 gear)
176220	40 Tooth Pinion Gear for use with Stainless Steel Rack
176302	40 Tooth Pinion Gear for use with Flexible Rack

Pinion Gears for TR2 Tru-Trac™ stainless steel rack #176220

For lengths over 36", order multiple pieces of rack or the flexible plastic option. A spacer block must be used to accurately join two or more pieces of rack. At encoder.com, see Technical Bulletins ***TB-522: TR2 – Tru-Trac™ Installation Instructions*** or ***TB-523: TR2 – Tru-Trac™ Flexible Rack Installation Instructions for details.***

TR2 Tru-Trac™ flexible rack, #161546.

ENCODER PRODUCTS COMPANY

MEASURING WHEELS

LINEAR MEASURING WHEELS

Faced Measuring Wheels

Stock #	Circumference	Rim Type	Bore	Width
161428 (TR3)	12"	60 Polyurethane	3/8"	0.75"
161442 (TR3)	300 mm	60 Polyurethane	3/8"	0.75"
161336	12"	80 Polyurethane	1/4"	0.70"
161337	12"	80 Polyurethane	3/8"	0.70"
161360 (TR1)	6"	85 Polyurethane	1/4"	0.25"
161399 (TR1)	200 mm	85 Polyurethane	1/4"	0.25"
161338	12"	90 Polyurethane	1/4"	0.70"
161339	12"	90 Polyurethane	3/8"	0.70"
161349	12"	90 Polyurethane	5/8"	0.70"
161370	6"	Knurled	1/4"	0.4"
161376	6"	Knurled	3/8"	0.4"
161401 (TR1)	6"	Knurled	1/4"	0.25"
161332	12"	Knurled	1/4"	1"
161333	12"	Knurled	3/8"	1"
161362	12"	Knurled	1/4"	0.4"
161379	12"	Knurled	3/8"	0.4"
161432 (TR3)	12"	Knurled	3/8"	0.75"
161361	1/3 Meter	Knurled	1/4"	10 mm
161380	1/3 Meter	Knurled	3/8"	10 mm
161371	200 mm	Knurled	1/4"	10 mm
161400 (TR1)	200 mm	Knurled	1/4"	0.25"
161424 (TR1)	200 mm	Knurled	1/4"	0.25"
161372	300 mm	Knurled	1/4"	10 mm
161377	300 mm	Knurled	3/8"	10 mm
161443 (TR3)	300 mm	Knurled	3/8"	0.75"
161373	400 mm	Knurled	1/4"	10 mm
161378	400 mm	Knurled	3/8"	10 mm
161374	500 mm	Knurled	1/4"	20 mm
161381	500 mm	Knurled	3/8"	20 mm
161423 (TR1)	6"	Knurled Hard Anodized	1/4"	0.25"
161419	12"	Knurled Hard Anodized	3/8"	0.4"
161436 (TR3)	12"	Knurled Hard Anodized	3/8"	0.75"
161438 (TR3)	300 mm	Knurled Hard Anodized	3/8"	0.75"
161420	12"	Knurled Hard Anodized	3/8"	1"
161310	12"	65 Polyurethane	1/4"	1"
161331	12"	65 Polyurethane	3/8"	1"
161346	12"	65 Polyurethane	1/4"	1/2"
161347	12"	65 Polyurethane	3/8"	1/2"
161344	1/3 Meter	65 Polyurethane	1/4"	5/8"
161359	1/3 Meter	65 Polyurethane	3/8"	5/8"

Rubber Insert Measuring Wheels

Stock #	Circumference	# of Inserts	Bore	Width
161363	200 mm	1	1/4"	10 mm
161382	200 mm	1	3/8"	10 mm
161364	300 mm	1	1/4"	10 mm
161384	300 mm	1	3/8"	10 mm
161365	400 mm	1	1/4"	10 mm
161385	400 mm	1	3/8"	10 mm
161366	500 mm	2	1/4"	20 mm
161388	500 mm	2	3/8"	20 mm
161369	1/3 Meter	1	1/4"	10 mm
161387	1/3 Meter	1	3/8"	10 mm
161367	6"	1	1/4"	10 mm
161383	6"	1	3/8"	10 mm
161368	12"	1	1/4"	10 mm
161386	12"	1	3/8"	10 mm

For more inofrmation on how to choose the right measuring wheel for your application, see page 35.

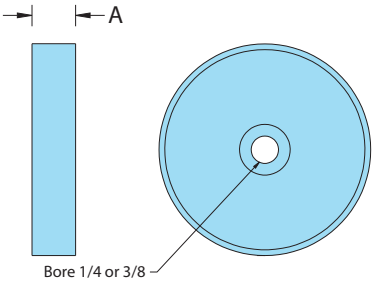
Measuring Wheel Dimensions

Rim Facing	Circumference	(A) Rim Width
Knurled	12"	1"
Rubber	12"	1"
80 Polyurethane	12"	0.70"
90 Polyurethane	12"	0.70"
Rubber	12"	1/2"
Knurled	1/3 meter	5/8" or 1"
Rubber	1/3 meter	5/8" or 1"
Urethane	1/3 meter	1"

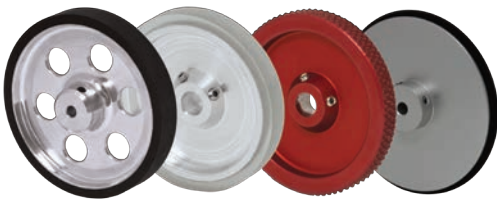
Temperature Specifications

Rubber Faced	Urethane Faced
-40° F to +275° F	-40° F to +155° F

*90 polyurethane is a more durable material and performs better for tracking rough or hard fibers than the slightly softer 80 polyurethane material. The above recommendations are only guidelines. Performance may vary depending on your application. Contact Customer Service for specification assistance.



Typical Measuring Wheel



Recommended Use for Measuring Wheels

KNURLED FACED
Course Fabric, Cloth Tape, Rough Wood, Rubber, Carpet, Foam, Insulation

80 POLYURETHANE FACED*
Soft Materials, Smooth Materials

90 POLYURETHANE FACED
Cardboard, Matting, Sandpaper, Insulated Wire, Metal

RUBBER INSERT
Fine Fabric, Paper, Cable, Hard Plastic, Film, Foil, Metal (cease-free)