ZERO POWER POSTION SENSORS

LZ - Linear *absolute zero power position sensors*

- Zero power capable linear absolute position sensor
- Magnet track designed for boom extension application
  - Durable replacement for wire-reel cable and string-pot measure systems
- Current resolution of 1/2" on linear magnet track
- Totally sealed IP69K electronic package
- Joral's patented non-contact technology
- MILSPEC 202 ratings for shock and vibration
- Connector options: M12, Deutsch Connector
- Outputs: J1939, CAN open, or Modicon MODBUS

STANDARD OPERATING CHARACTERISTICS

ELECTRICAL	**Outputs**	**A - 1939**	J1939 output
		A - CAN1	CANopen Outptut
		A - MOD1	Modicon MODbus Output
	Input Power		6 to 30 VDC at approx 60 mA max, *not including output loads*
	Electrical Protection		Over-voltage, reserve-voltage, output short-circuit protected
	LED Indicators		Power and output channels
	Connections		M12 Leaded, M12 Pigtail, Flying Lead Cable, or Deutsch (4 or 6 pin)
	Resolution		1/2" (24 counts per foot)
	Application Track Length		Unlimited
MECHANICAL	**Housing Material**		Red Aluminum *(standard)*
	Weight		8.5 oz
ENVIRONMENTAL	**Operating Temperature**		-30° to +80° C
	Storage Temperature		-40° to +90° C
	Humidity		100%
	Shock		400g/6ms *(MIL STD 202)*
	Vibration		5 to 3000 Hz, 20g *(MIL STD 202)*
	Protection Class		IP69K *(connection dependent)*

LZ GENERAL ORDERING GUIDE

Code 1: Housing Style	Code 2: MagElec (Sensor Output)		Code 3: Connection		Code 4: Special Codes	
LZXS LZXS red aluminum housing includes Absolute Multi-turn Linear Encoder in ***"Box"*** housing	**A - 1939**	J1939, Addressable, Incremental signal	**M12**	M12 male	**53**	Black Aluminum
			M12P	M12 male on 18' pigtail	**54**	Stainless Steel
	A - MOD1	13 bit Modicon MODbus @8192 positions	**CXX**	Flying lead cable (enter XX as inches)		
LZBM LZBM red aluminum housing includes Absolute Multi-turn Linear Encoder in ***"Boom"*** housing	**A - CAN1**	13 bit CANopen CANBus	**DE4**	DT04 - 4 pin male Deutsch		
			DE6	DT04 - 6 pin male Deutsch		
	**** More outputs and connection options available, contact Joral if desired configuration is not listed***					

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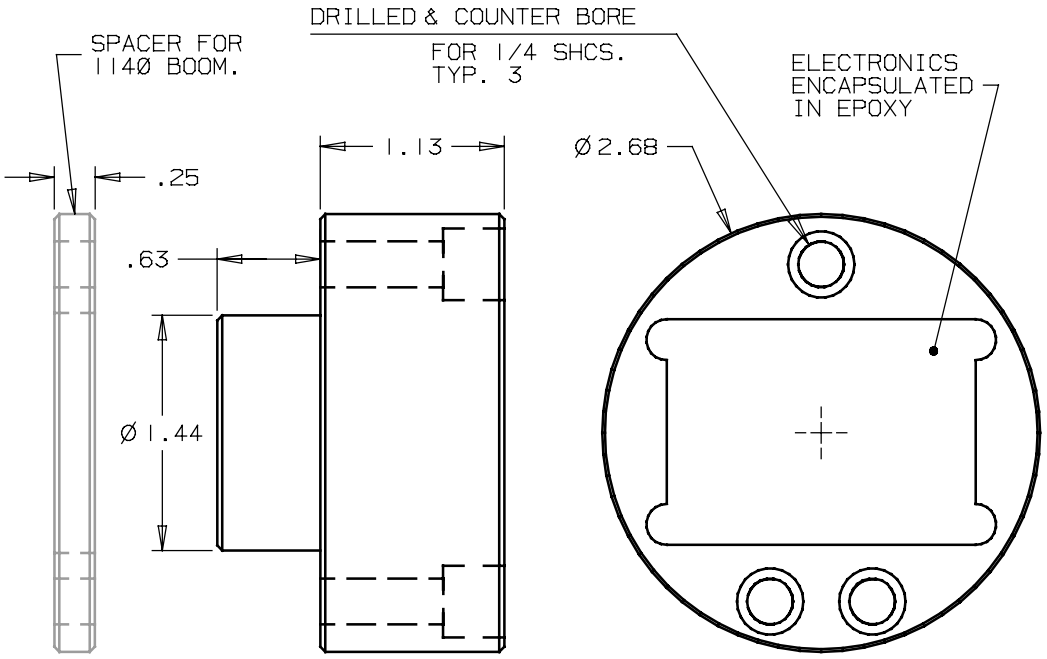
LZ DIMENSIONS & GENERAL PIN OUTS

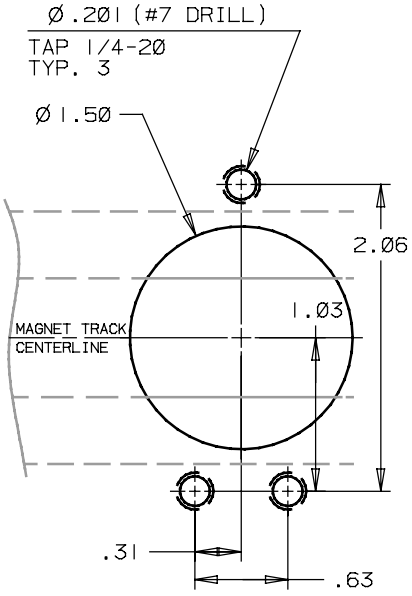
ENCODER



MAGNET TRACK MOVES

N S N S N

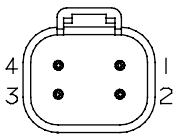
RECOMENDED DRILLING PATTERN



MAGNET TRACK MOVES

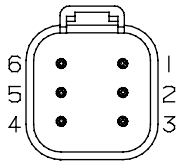
N S N S N

DTØ4-4P MALE
FACE VIEW



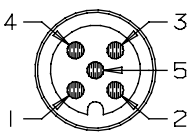
DTØ4-4P/[CABLE]/FLYING LEAD
J1939
1 = YEL [BLK] = CAN HIGH.
2 = GRN [WHT] = CAN LOW.
3 = RED [BRN] = +VDC.(VIN)
4 = BLK [BLU] = COMMON/GROUND.

DTØ4-6P MALE
FACE VIEW



DTØ4-6P/[CABLE]/FLYING LEAD
QUADRATURE & PWM OUTPUT ENCODER.
1 = YEL [BLK] = SIGNAL A.
2 = GRN [WHT] = SIGNAL B.
3 = RED [BRN] = +VDC.(VIN)
4 = BLK [BLU] = COMMON/GROUND.
5 = WHT [GRY] = SIGNAL Z.
6 = ORG [PNK] = PWM OUTPUT.

M12-5P MALE CODE A
FACE VIEW



M12-5P/[CABLE]/FLYING LEAD
J1939
1 = BRN = +VDC.(VIN)
2 = WHT = CAN HIGH.
3 = BLU = COMMON/GROUND.
4 = BLK = CAN LOW.
5 = GRY = ADDRESS SET.

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