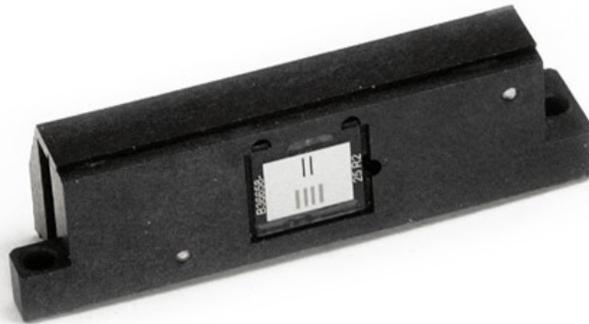


MODEL LDK Non-Contacting Linear Encoder Kit



- Low cost non-contacting linear encoder designed for OEM usage
- Utilizes reflective optical diffraction technology for superb bi-directional repeatability
- .520" by 1.814" cross section designed to fit most space restrictive applications
- Differential, TTL compatible line driver output with optional index
- Up to 48" (1220mm) travel lengths
- Enhanced mounting tolerances
- Single LED light source

The model LDK is a compact non-contacting incremental linear encoder. It is available with three scale options. Mini scale, Micro scale and the Micro scale mounted on a spar for simplifying the scale installation. In addition to the varies scale options the model LDK can also be supplied with varies lengths of PVC jacketed cable or a 12" PARLEX high flex cable.



LDK SPECIFICATIONS

ELECTRICAL

Resolution range: See part number table for available resolutions.
 Light source: Gallium aluminum arsenide L.E.D. rated @ 100,000 Hrs. MTBF (mfg's spec).
 Light sensor: Phototransistor detectors.
 Excitation voltage: +5Vdc ± 5% at 120mA maximum.
 Output format: Differential line driver RS422 output.
 Two count channels (A & B) in phase quadrature with an optional ZR output.
 Quadrature: 90° ± 45° (at maximum conditions).
 Symmetry: 180° ± 18° (at 10 KHz output frequency).
 Rise and fall time: 1 microsecond max. into 1,000pf load capacitance. Note: Units with line driver output the rise and fall time vary with line and load capacitance.
 Zero reference width: 3 to 5 electrical cycle in width.
 Phase sense: Channel A leads channel B for left to right movement of the scale when viewing the pattern side of the scale.

MECHANICAL

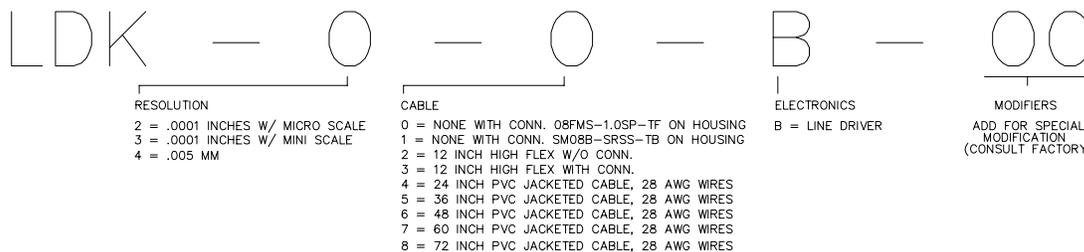
Housing material: 20% glass filled polycarbonate.
 Scale material: Soda-lime glass (Thermal expansion 4.5 PPM/°F).
 Cover material: 20% glass filled polycarbonate.
 Connector on encoder: JST # 08FMS-1.0SP-TF (fits Parlex cable).
 JST # SM08B-SRSS-TB (fits PVC cable).

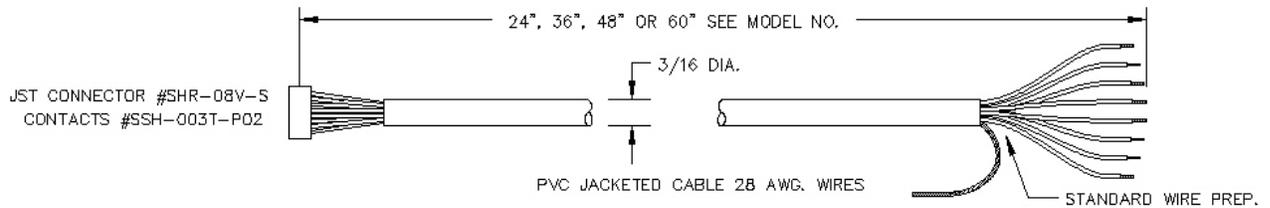
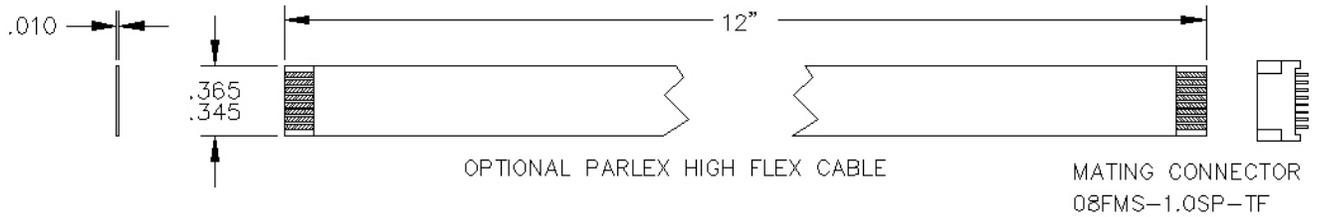
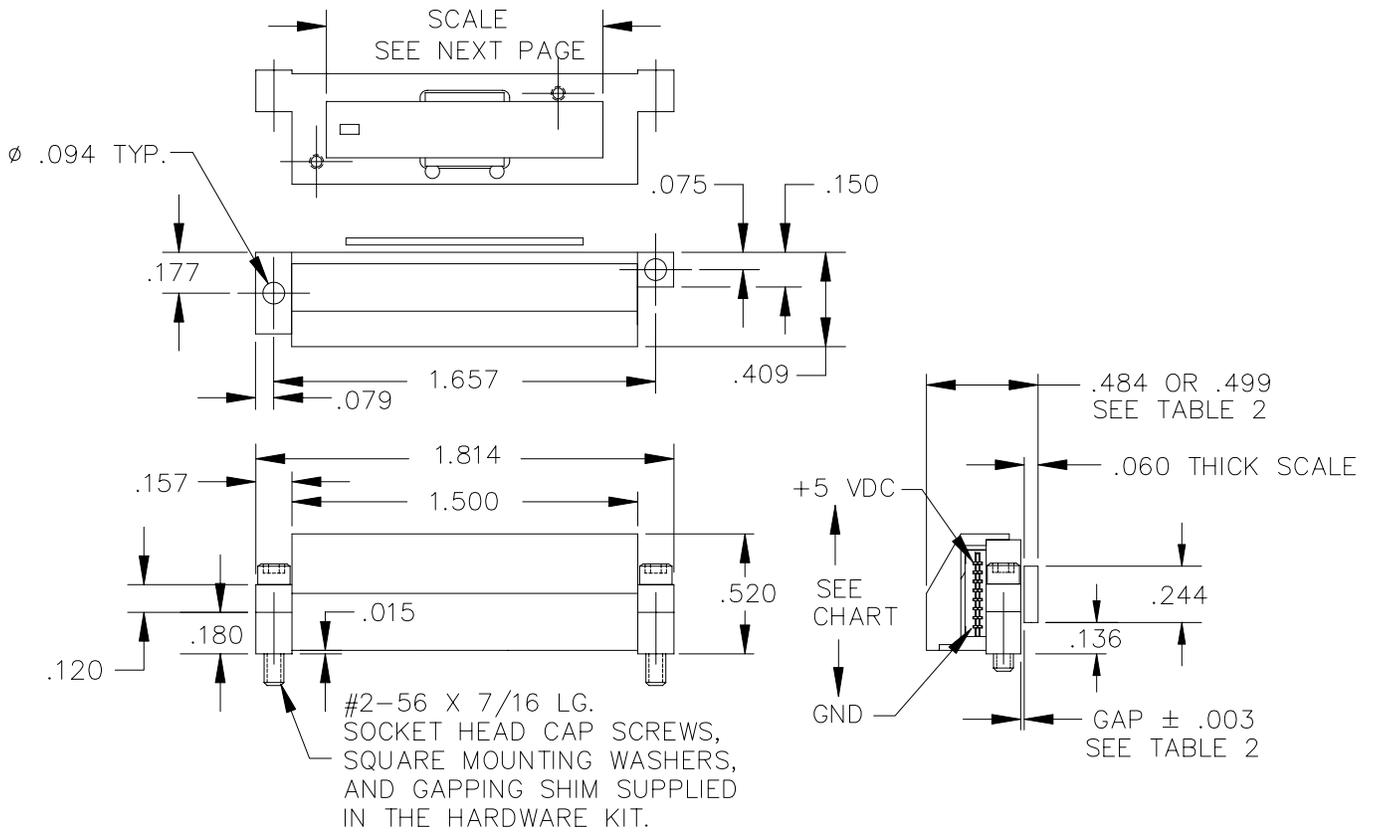
ENVIRONMENTAL

Operating temperature: -25°C to +85°C
 Storage temperature range: -25°C TO +85°C
 Shock: 10 G for 11 millisecond duration.
 Humidity: To 98% R.H. (non-condensing).

SPEED	RESOLUTION	SCALE	SPEED
	(2) .0001 IN.	MICRO SCALE	40 IN./SEC. (1.0 MPS)
	(3) .0001 IN.	MINI SCALE	20 IN./SEC. (0.5 MPS)
	(4) .005 MM.	ALL SCALES	60 IN./SEC. (1.5 MPS)

FUNCTION
+5 VDC (RED)
Z- (GRAY)
Z+ (BROWN)
B- (BLUE)
B+ (YELLOW)
A- (GREEN)
A+ (ORANGE)
GND (BLACK)





MAX. LENGTH OF MEASUREMENT STROKE (MICRO SCALE)		
ENGLISH	METRIC	
5.32 IN.	135 MM	NO ZR
5.02 IN.	127 MM	LEFT END OF TRAVEL
5.02 IN.	127 MM	RIGHT END OF TRAVEL
5.32 IN.	135 MM	CENTER OF TRAVEL

TABLE 1

GAP	RESOLUTION	RESOLUTION
.030	.0001 IN.	2500 CPI
.015	.005 MM	50 CPMM

TABLE 2

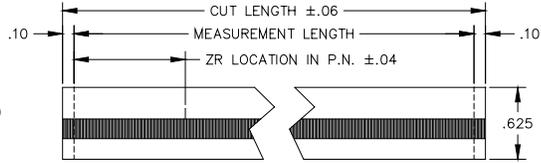
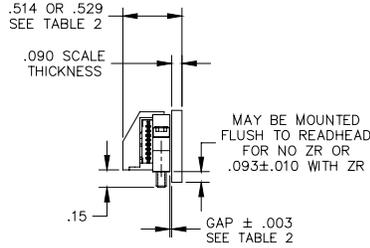
MINI SCALE

B36678 - X - XXXX - XXXX

CYCLES
2 = 2500 CPI
4 = 50 CPMM

ZR LOCATION
0.0 = NO ZR
XX.XX = INCHES
XXX.X = MM
(INCLUDE DECIMAL POINT)

MEASUREMENT LENGTH
(UP TO 1000 MM OR 48")
XX.XX = INCHES FOR ENGLISH SCALES
XXX.X = MILLIMETERS FOR METRIC SCALES
(INCLUDE DECIMAL POINT IN PART NUMBER)
CUT LENGTH = (MEASUREMENT LENGTH + .200) ± .06



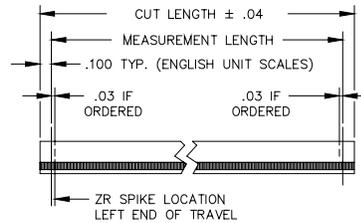
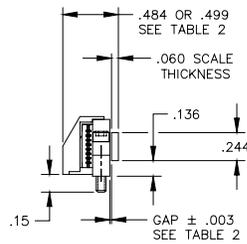
MICRO SCALE

B36681 - X - X - XXXX

CYCLES
2 = 2500 CPI (LDK ONLY)
4 = 50 CPMM

ZR LOCATION
0 = NO ZR
1 = LEFT END OF TRAVEL
2 = RIGHT END OF TRAVEL
3 = CENTER OF TRAVEL
(SCALE MOVEMENT)
(FRONT VIEW)

MEASUREMENT LENGTH (SEE TABLE 1)
XX.XX = INCHES FOR ENGLISH SCALES
XXX.X = MILLIMETERS FOR METRIC SCALES
(INCLUDE DECIMAL POINT IN PART NUMBER)
CUT LENGTH = (MEASUREMENT LENGTH + .200) ± .04



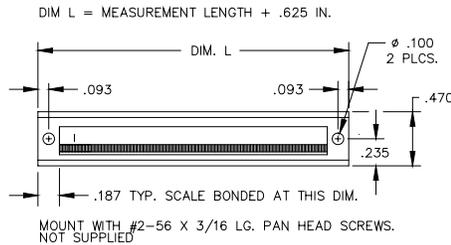
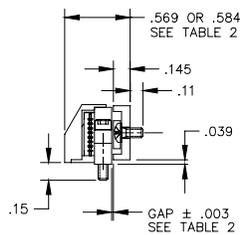
MICRO SCALE MOUNTED ON A SPAR

B36679 - X - X - XXX

CYCLES
2 = 2500 CPI (LDK ONLY)
4 = 50 CPMM

ZR LOCATION
0 = NO ZR
1 = LEFT END OF TRAVEL
2 = RIGHT END OF TRAVEL
3 = CENTER OF TRAVEL
(SCALE MOVEMENT)
(FRONT VIEW)

MEASUREMENT LENGTH (SEE TABLE 1)
1.00 = 1 IN. 25.0 = 25 MM
2.00 = 2 IN. 50.0 = 50 MM
3.00 = 3 IN. 75.0 = 75 MM
4.00 = 4 IN. 100.0 = 100 MM
5.00 = 5 IN. 125.0 = 125 MM
(INCLUDE DECIMAL POINT IN PART NUMBER)
SPECIAL LENGTHS AVAILABLE
CONSULT FACTORY



DRC ENCODER

GAP	RESOLUTION	RESOLUTION
.030	.0001 IN.	2500 CPI
.015	.005 MM	50 CPMM

Table 2