

## Slide Lock Environmental Connector

SLE Slide Lock Environmental connectors were designed to meet the most demanding requirements of under-the-hood applications. These connectors are very easy to assemble and maintain. Extremely user friendly, these connector feature an audible and tactile feedback and can be unmated simply by depressing the slide locks and pulling back on the connector body. The contacts will handle up to five amps continuous at fully rated temperature range, -40°C to +125°C, and can handle wire size from 20 AWG to 16 AWG.

## **Applications**

- Engine Electronics
- Instrumentation
- Automotive CPUs

#### **Features**

#### **Rectangular Connector Bodies**

SLE's rectangular design is ideally suited for easy printed circuit board layouts for both straight off-the-board and right angle applications, since the contacts are precisely arranged in rows.

#### **Keyable Connector Bodies**

Four simple slotted keys and keyways are supplied with the connectors that allow the user to key connector halves. This prevents connectors of the same shell size, mounted in close proximity to each other, from being mated with the incorrect connector and damaging the sophisticated electronic controls modules.

Dielectric Withstanding Voltage 1000 Vac rms at sea level

## Clamshell Style Plug Cable Clamps for any Cable Orientation

Plug cable clamps are ordered as part of the connector and are available in five different styles; up, down, right, left and straight cable exits. This saves space and allows easy mating in the crowded under-the-hood environments. See How to Order page for more details.

#### Strong Connector Slide Locks

Slide locks are located at either end of the SLE connectors. These locks are molded right into the connector bodies and lock the connectors together when mated. To unmate just depress the slide locks simultaneously and pull the connectors apart.

# Technical Specifications

#### **MATERIALS & FINISHES**

Shell	High performance thermoplastic body, silicone wire seals
Contacts	Copper alloy
Plating	Selective gold over nickel plating on mating surface, tin/lead over nickel
	plating on wire crimp area.

#### **ELECTRICAL DATA**

Current Rating	5 Amps continuous at 125°C
Wire Range Sizes	20-16 AWG
Contact Resistance	10 milliohms maximum
Insulation Resistance	20 megohms minimum (USCAR)
MECHANICAL	
Operating Temperature	-40°C to 125°C (-40°F to 257°F)

MECHANICAL	
Operating Temperature	-40°C to 125°C (-40°F to 257°F)
Sealing	2-12 inches of 5% salt solution for 24 hours
Wire Sealing Range	.095"120" (2.42mm - 3.05mm)
Insulation Strip Length	.210"220" (5.33mm - 5.59mm)
Mating Life	25 cycles minimum
Salt Spray	5% solution 96 hours
Heat	125°C +/- 3° 1000 hours
Chemical Resistance	Resistant to most common automotive contaminants (see test data)
Vibration	10.2 grms 20 hours min.(see test data)
Shock	100 g's 18 shocks for 6 milliseconds
Contact Type	Crimp using automatic, semi-automatic or hand tooling, printed circuit
Number of Circuits	19 & 28
Contact Insertion	From rear with no insertion tool needed

From rear with low cost hand tool

Moveable molded keys and keyways

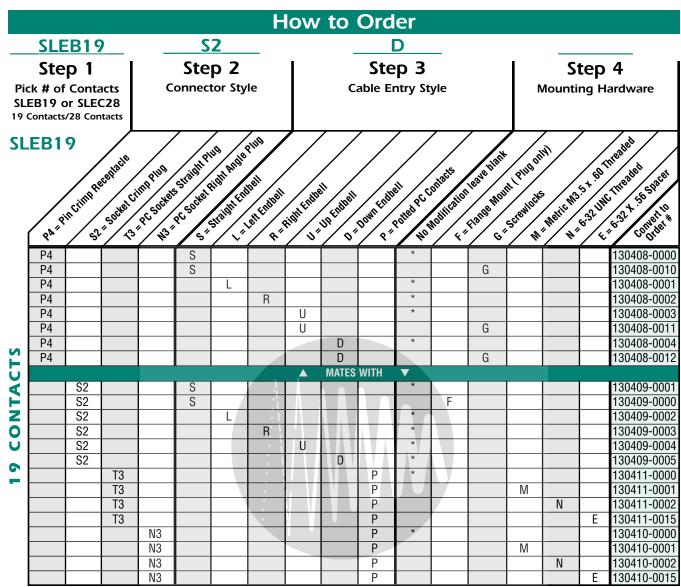
25 lbs. (111N) minimum



Contact Removal

Polarization

Contact Retention



For High Volume Low Temperature (100°C) Low Cost Tin Lead Contacts, Please Call.

#### SLEC28

1	D4				C						*						100410 0000
	P4				S												130412-0000
	P4				S						*		G				130412-0010
	P4					L											130412-0001
	P4						R				*						130412-0002
	P4							U			*						130412-0003
	P4							U					G				130412-0011
	P4								D		*						130412-0004
TS	P4								D				G				130412-0012
5								<b>A</b>	MATES	WITH	$\overline{\mathbf{V}}$						
Š		S2			S						*						130413-0001
$\mathbf{F}$		S2			S							F					130413-0000
Z		S2				L					*						130413-0002
0		S2					R				*						130413-0003
Ŭ		S2						U			*						130413-0004
-		S2							D		*						130413-0005
00			T3							Р	*						130415-0000
7			T3							P				M			130415-0001
			T3							P					N		130415-0002
			T3							P						Е	130415-0004
			10	N3						P	*						130414-0000
				N3						P				М			130414-0001
				N3						P				IVI	N		130414-0001
										P					IN	Е	130414-0002
				N3						۲							130414-0020

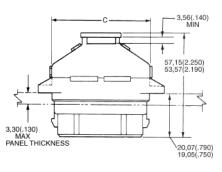
See pages 37-39 for Dimensions.

## **Dimensions**

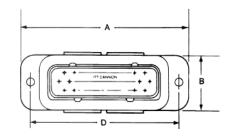
16-20 AWG	Pins For Receptacles	Sockets For Plugs	Crimp Tool	Strip Length	Wire Sealing Range	Wire Hole Filler	Extraction Tool
Loose	030-2464-007	030-2480-000	112108-0007	<b>m</b> +		225-0093-000	274-7068-001
		030-2480-007 Hooded	THE CHANCE		0		
Reel of	110238-0446	110238-0488	Automatic/	.210220	.095130		
4500 pcs.	110236-0440	110238-1016 Hooded	Semi-Automatic Please Call	(5.33-5.99mm)	(2.42-3.30mm)		323-9519-000 Replacement Tip

## S2 Plug

## With Flange Endbell (Plug Only)

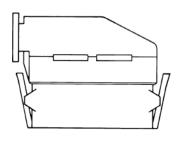


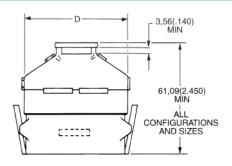


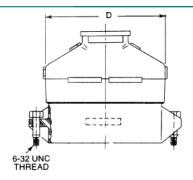


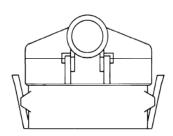
No. of Contacts	Part Number by Shell Size	A Max.	B Max.	C Max.	D ±0,38 (.015)
19	SLEB	71,88 (2.830)	26,16 (1.030)	47,50 (1.870)	59,05 (2.325)
28	SLEC	87,11 (3.430)	26,16 (1.030)	62,74 (2.470)	74,29 (2.925)

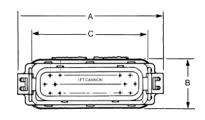
## P4 Receptacle

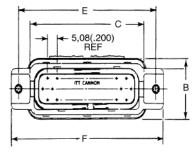








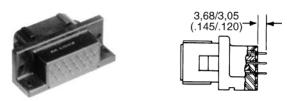




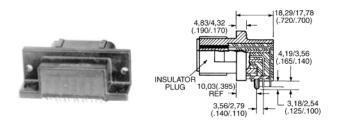
No. of Contacts	Part Number by Shell Size	A Max.	B Max.	C Max.	D Max.	E ±0,38 (.015)	F Max.
19	SLEB	59,44 (2.340)	26,16 (1.030)	44,07 (1.735)	50,58 (2.000)	55,87 (2.200)	64,25 (2.530)
28	SLEC	76,45 (3.010)	26,16 (1.030)	59,31 (2.335)	66,04 (2.600)	71,11 (2.800)	79,49 (3.130)

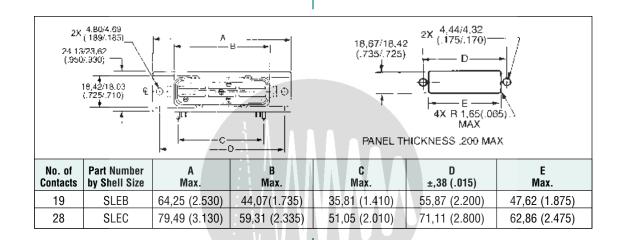
## **Printed Circuit Board Plug**

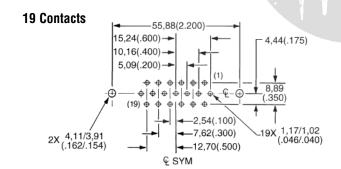
#### T3 Straight

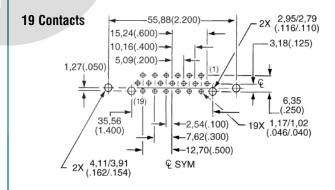


#### **N3 Right Angle**

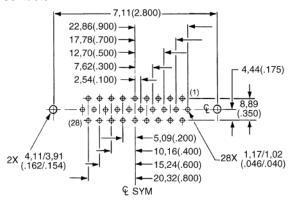








#### 28 Contacts

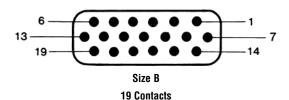


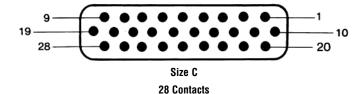
All dimensions are in mm(inches) unless otherwise indicated.

#### 28 Contacts 7,11(2.800) 22,86(.900) 2,95/2,79 17,78(.700) (.116/.110) 12,70(.500) 3,18(.125) 7,62(.300) 2,54(.100) 1,27(.050) 0 (28) 6,35 (2.000)(.250)-5,09(.200) **1**0,16(.400) 28X 1,17/1,02 (.046/.040) -15,24(.600) 20,32(.800) 2X 4,11/3,91 (.162/.154) € SYM

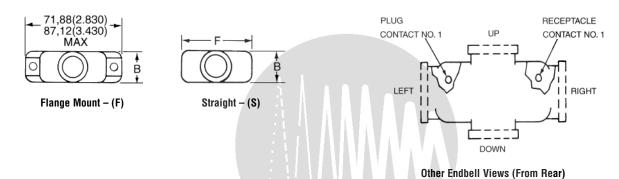
## **Contact Arrangement**

#### Face View - Engaging Face of Plug





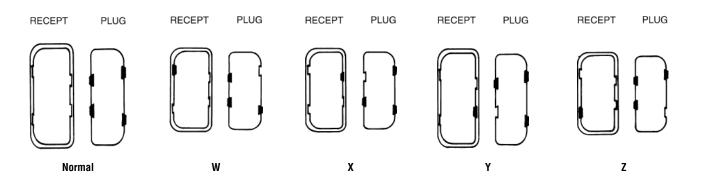
### **Endbells**



"B" and "F" dimensions are the same for all SLE endbells

Part Number by Shell Size	B Max.	F Max.	Cable Entry I.D.
SLEB	26,16 (1.030)	50,80 (2.000)	14,73 (.580)
SLEC	26,16 (1.030)	66,04 (2.600)	19,81(.780)

### **Polarization**



#### **Contacts & Tools**

16-20 AWG	Pins	Sockets	Crimp Tool	Strip Length	Wire Sealing Range	Wire Hole Filler	Extraction Tool
Loose	030-2464-007	030-2480-000 030-2480-007 Hooded	112108-0007		10	225-0093-000	274-7068-001
Reel of 4500 pcs.	110238-0446	110238-0488 110238-1016 Hooded	Automatic/ Semi-Automatic Please Call	.210220 (5.33-5.99mm)	.095130 (2.42-3.30mm)		323-9519-000 Replacement Tip

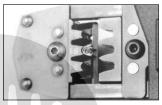
## Crimping



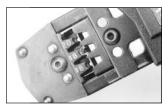
1. Cycle the CCT-SLE hand tool to the open position. Part No. 995-0002-232



2. While pressing upward on the locator spring, insert the contact with tails upward completely into the locator.

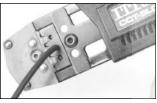


3. When correctly positioned the contact should be located beyond flush with the edge of the CCT-SLE and positioned on the concave polished split level crimp.



4. Partially cycle (usually the first click) the hand tool assuring that the upward thrusting tails of the contact has started engaging with the top jaw of the tool. (There is a slight tendency for the contact to roll out of vertical alignment.)

## **Crimp Inspection**



5. Insert the pre-stripped wire into the crimp area of the contact and completely cycle the tool.



pressing upward on the locator spring, withdraw the

crimp termination. The result will be a perfect termination.



1. Note that there are no un-terminated wire strands, and that some strand ends can be seen at the forward edge of the crimp. Also note the insulation is gripped by the smaller secondary crimp. Distortion is at a minimum, both axially and laterally – no sharp edges. Enlargement of micro section allows for final judgement of crimp quality. This test is recommended whenever new tools or new types of wire are used.

## Insertion



1. Insert contact from rear; an audible snap can be felt and heard. Slight pull in the opposite direction will confirm complete insertion.

## Extraction (SLE shown)



1. Open the CET-SLE extraction tool and place it over the insulation of the wire.



2. Using a straight motion forward, insert the tool along the wire until it bottoms against the connector. (Do not use a screwing motion, damage will result.)



3. While the CET-SLE is bottomed, simply pull the wire/contract assembly out.



4. Remove the CET-SLE. Extraction is complete.