

TX1/TX2/TX3 SERIES CONNECTORS

1.27mm (.050") Contact Spacing, PCB-to-Cable Connectors



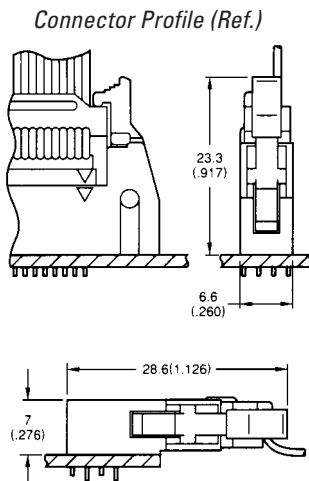
FEATURES

■ IDC Socket (TX1/TX2)

- Flat ribbon cable centers:
0.635mm (.025") for TX1
1.27mm (.050") for TX2
- TX1 socket can be terminated in "daisy-chain" style in the middle of the cable
- TX2 socket is terminated at the end of the two stacked cables
- Socket contacts have dual-contact-point tuning fork design
- All wires can be terminated in a single action (Insulation is automatically removed)

■ Pin Header With Latch (TX3)

- Available in straight and right angle through hole types
- Self-locking, self-ejecting lever for easy operation



TX 1 to 3 Series connectors are two-piece PCB connectors with 1.27mm (.050") contact spacing.

They are designed for board-to-cable applications.

Configurations include IDC sockets (TX1 and TX2) for flat ribbon cable; and pin headers (TX3) with a latching mechanism.

Applications include computers, business machines, industrial control machinery, telecommunications, audiovisual appliances, measuring equipment, and applications wherever high density packaging is required.

GENERAL SPECIFICATIONS

Number of Contacts	20, 26, 30, 34, 40, 50, 60, 68, 80, 100
Contact Spacing	1.27mm (.050"), Double row
Current Rating	0.5 Amps
Operating Voltage	250 VAC r.m.s.
Dielectric Withstanding Voltage	500 VAC r.m.s. (for one minute)
Insulation Resistance	100 megohms min.
Contact Resistance	25 milliohms max.
Operating Temperature	-40°C to + 80°C
Applicable PCB Thickness	1.6mm (.063")
Applicable F.R.C.: TX1	0.635mm (.025") pitch: #30 AWG
TX2	1.27mm (.050") pitch: #28 AWG

MATERIALS AND FINISHES

TX1/TX2

Description	Materials/Finishes
Insulator	PBT (UL94V-0, Black)
Strain Relief	Glass-filled Nylon (UL94V-0, Black)
Cover	Glass-filled Nylon (UL94V-0, Black)
Contact (Note)	Beryllium Copper Connecting area: Gold plating over Nickel IDC Terminal area: Tin plating Other areas: Gold flash over Nickel

TX3

Description	Materials/Finishes
Insulator	PBT (UL94V-0, Black)
Expansion Post	Phosphor Bronze/Tin plating
Lever (TX3)	Nylon (UL94V-0, Black)
Contact (Note)	Phosphor Bronze Connecting area: Gold plating over Nickel Terminal area: Tin plating

Note: Contact finish – Gold plating on connecting area is 0.1µm (.000004") min.

Dimensions and specifications subject to change without notice.

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ORDERING INFORMATION

	TX	*	-	**	*	-	D2	**	*	-	*	*	*	*
Series	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Connector Type	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
1 – IDC Socket, .635mm (.025") pitch cable														
2 – IDC Socket, 1.27mm (.050") pitch cable														
3 – Pin Header with latch														
No. of Contacts	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
20, 26, 30, 34, 40, 50, 60, 68, 80, 100														
Contact Type	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
S – Socket (TX1, TX2)														
P – Pin (TX3)														
Contact Arrangement	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
D2 – Double Row														
Termination	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
P – IDC														
LT – Right Angle Through Hole														
ST – Straight Through Hole														
Applicable Wire	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
1 – #30 AWG (TX1)														
#28 AWG (TX2)														
Latch Type (TX3)	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
L – Standard Latch														
S – Short Latch														
Expansion Post (TX3)	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
H – With Post														
N – Without Post														
Contact Finish Code	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
1 – 0.1µm (.000004") thick gold plating min.														
Cover Style	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
C – Closed End (TX2)														
D – Daisy Chain (TX1)														

Dimensions in mm (inches).

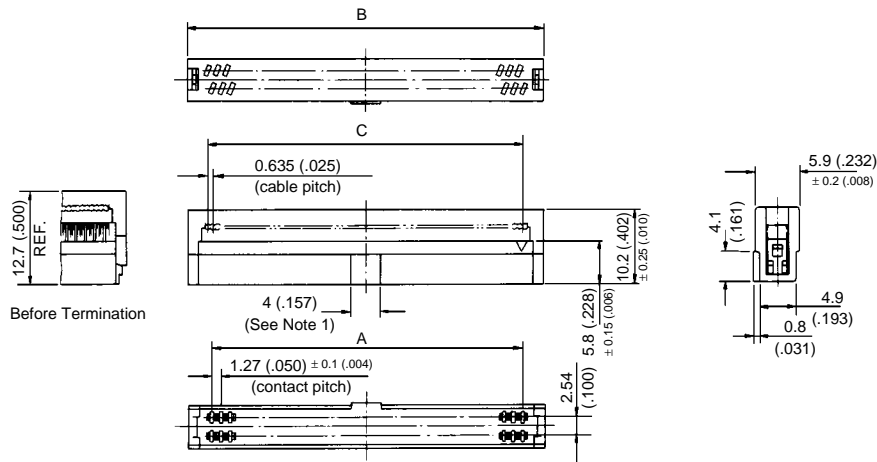


TX1/TX2/TX3 SERIES CONNECTORS

1.27mm (.050") Contact Spacing, PCB-to-Cable Connectors

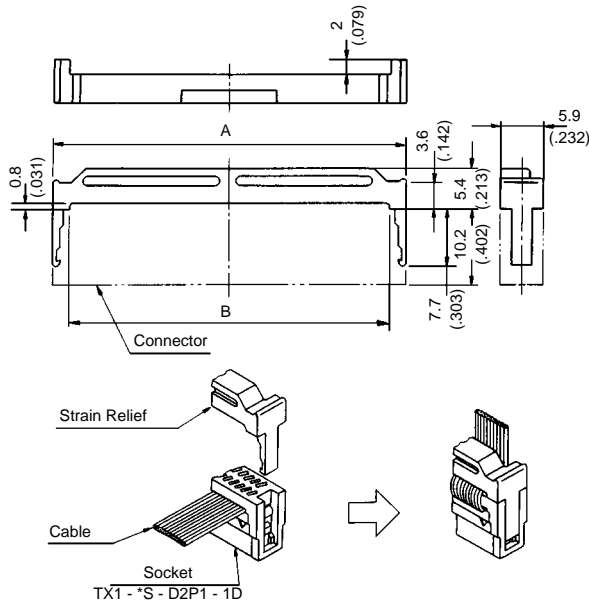
IDC TYPE SOCKET (FOR FLAT RIBBON CABLE)

TX1—For 0.635mm (.025") Pitch Cable



Note 1: For 80 and 100 position connectors, two polarizing bosses are provided. For other contact arrangements, one polarizing boss is provided at the center.

• STRAIN RELIEF: TX1-SR**



APPLICABLE CABLE WIRE (0.635mm/.025" pitch)

1. Conductor: #30 AWG wire, 7 strands of 0.102mm (.004") diameter, tin plated soft copper.
#30 AWG wire, solid of 0.254mm (.010") diameter, tin plated soft copper.
2. Insulation: Soft polyvinyl chloride (PVC) or Teflon, 0.7mm (.028") max. thickness.

APPLICABLE IDC TOOL

Pneumatic, semi-automatic, IDC tool: SP399-2-TX1
Hand IDC tool: SP299-2-TX1

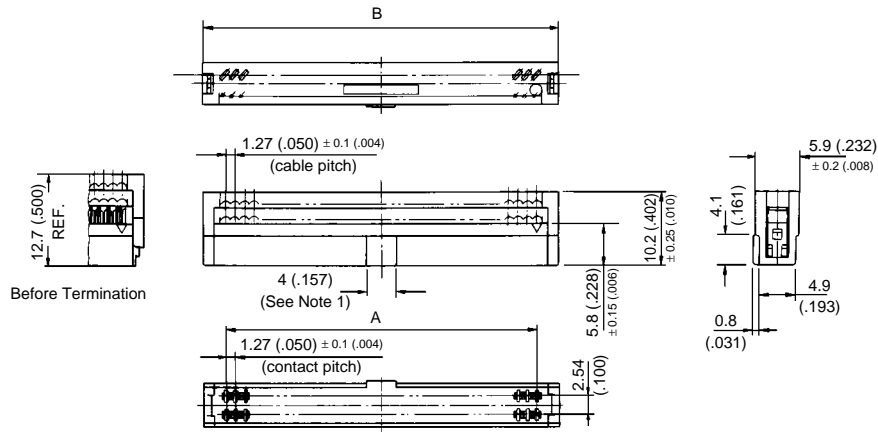
No. of Contacts	Part Number	$\pm 0.15 (\pm .006)$	$+0.1 (+.004)$ $-0.2 (-.008)$	C	Strain Relief Part Number	$\pm 0.1 (\pm .004)$	$\pm 0.1 (\pm .004)$
20	TX1- 20S-D2P1-1D	11.43 (.450)	17.4 (.685)	12.065 (.475)	TX1-SR 20	17.43 (.686)	13.00 (.512)
26	TX1- 26S-D2P1-1D	15.24 (.600)	21.2 (.835)	15.875 (.625)	TX1-SR 26	21.24 (.836)	16.81 (.662)
30	TX1- 30S-D2P1-1D	17.78 (.700)	23.8 (.937)	18.415 (.725)	TX1-SR 30	23.78 (.936)	19.35 (.762)
34	TX1- 34S-D2P1-1D	20.32 (.800)	26.3 (1.035)	20.955 (.825)	TX1-SR 34	26.32 (1.036)	21.89 (.862)
40	TX1- 40S-D2P1-1D	24.13 (.950)	30.1 (1.185)	24.765 (.975)	TX1-SR 40	30.13 (1.186)	25.70 (1.012)
50	TX1- 50S-D2P1-1D	30.48 (1.200)	36.5 (1.437)	31.115 (1.225)	TX1-SR 50	36.48 (1.436)	32.05 (1.262)
60	TX1- 60S-D2P1-1D	36.83 (1.450)	42.8 (1.685)	37.465 (1.475)	TX1-SR 60	42.83 (1.686)	38.40 (1.512)
68	TX1- 68S-D2P1-1D	41.91 (1.650)	47.9 (1.886)	42.545 (1.675)	TX1-SR 68	47.91 (1.886)	43.48 (1.712)
80	TX1- 80S-D2P1-1D	49.53 (1.950)	55.5 (2.185)	50.165 (1.975)	TX1-SR 80	55.53 (2.186)	51.10 (2.012)
100	TX1-100S-D2P1-1D	62.23 (2.450)	68.2 (2.685)	62.865 (2.475)	TX1-SR100	68.23 (2.686)	63.80 (2.512)

Dimensions in mm (inches).

TX1/TX2/TX3 SERIES CONNECTORS

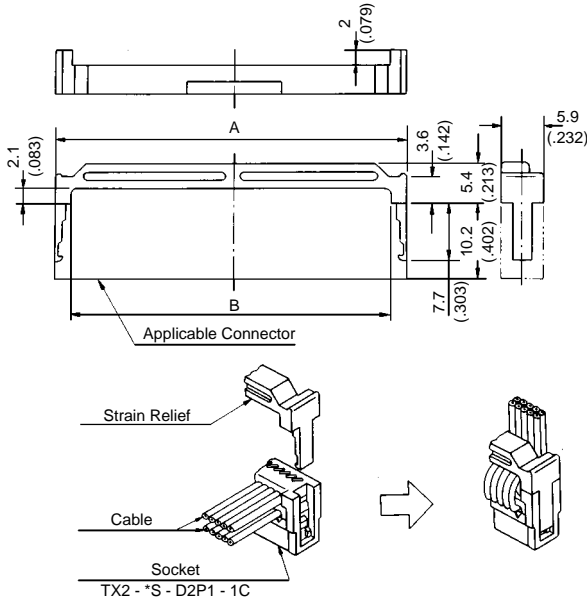
1.27mm (.050") Contact Spacing, PCB-to-Cable Connectors

IDC TYPE SOCKET (FOR FLAT RIBBON CABLE) TX2—For 1.27mm (.050") Pitch Cable



Note 1: For 80 and 100 position connectors, two polarizing bosses are provided. For other contact arrangements, one polarizing boss is provided at the center.

• STRAIN RELIEF: TX2-SR**



APPLICABLE CABLE WIRE (1.27mm/.050" pitch)

- Conductor: #28 AWG wire, 7 strands of 0.12mm (.005") or 0.127mm (.0049") diameter, tin plated soft copper.
#28 AWG wire, solid of 0.32mm (.013") diameter, tin plated soft copper.
- Insulation: Soft polyvinyl chloride (PVC) or Teflon, 0.88 to 1.0mm (.035 to .039") thickness.

APPLICABLE IDC TOOL

Pneumatic, semi-automatic, IDC tool: SP399-2-TX2
Hand IDC tool: SP299-2-TX2

No. of Contacts	Part Number	± 0.15 (± .006)	± 0.1 (+.004) -0.2 (-.008)	Strain Relief Part Number	± 0.1 (± .004)	± 0.1 (± .004)
20	TX2- 20S-D2P1-1C	11.43 (.450)	17.4 (.685)	TX2-SR 20	17.43 (.686)	13.00 (.512)
26	TX2- 26S-D2P1-1C	15.24 (.600)	21.2 (.835)	TX2-SR 26	21.24 (.836)	16.81 (.662)
30	TX2- 30S-D2P1-1C	17.78 (.700)	23.8 (.937)	TX2-SR 30	23.78 (.936)	19.35 (.762)
34	TX2- 34S-D2P1-1C	20.32 (.800)	26.3 (1.035)	TX2-SR 34	26.32 (1.036)	21.89 (.862)
40	TX2- 40S-D2P1-1C	24.13 (.950)	30.1 (1.185)	TX2-SR 40	30.13 (1.186)	25.70 (1.012)
50	TX2- 50S-D2P1-1C	30.48 (1.200)	36.5 (1.437)	TX2-SR 50	36.48 (1.436)	32.05 (1.262)
60	TX2- 60S-D2P1-1C	36.83 (1.450)	42.8 (1.685)	TX2-SR 60	42.83 (1.686)	38.40 (1.512)
68	TX2- 68S-D2P1-1C	41.91 (1.650)	47.9 (1.886)	TX2-SR 68	47.91 (1.886)	43.48 (1.712)
80	TX2- 80S-D2P1-1C	49.53 (1.950)	55.5 (2.185)	TX2-SR 80	55.53 (2.186)	51.10 (2.012)
100	TX2-100S-D2P1-1C	62.23 (2.450)	68.2 (2.685)	TX2-SR100	68.23 (2.686)	63.80 (2.512)

Dimensions in mm (inches).

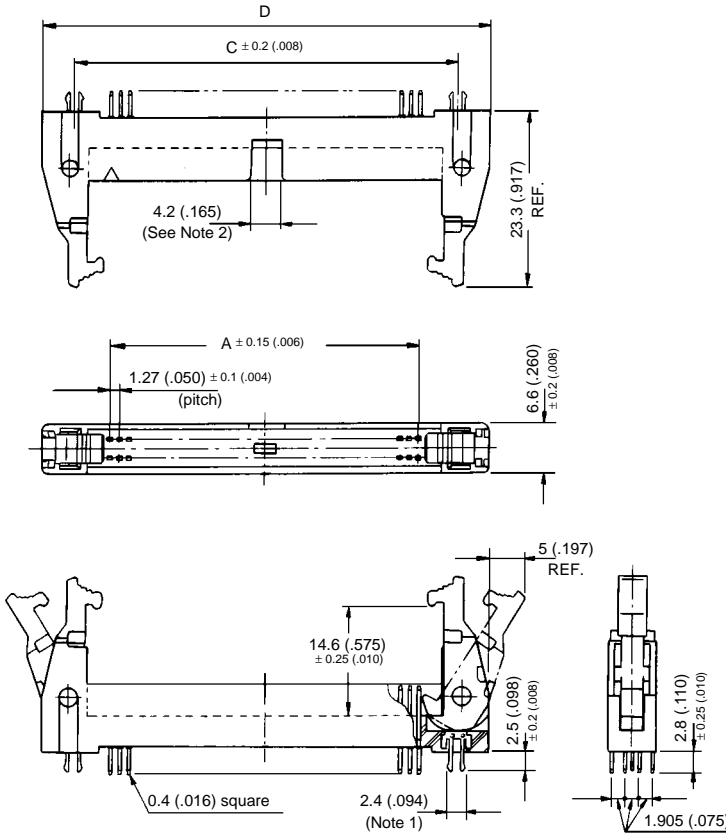


TX1/TX2/TX3 SERIES CONNECTORS

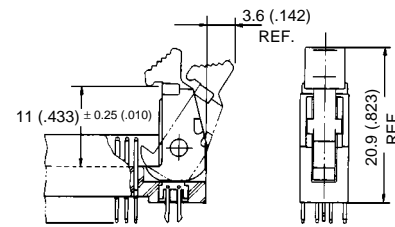
1.27mm (.050") Contact Spacing, PCB-to-Cable Connectors

PIN HEADER WITH LATCHING MECHANISM TX3-ST—Straight Through Hole Type

STANDARD LATCH TYPE



SHORT LATCH TYPE



Note: For short lever type, do not use strain relief on the mating IDC socket connector.

Note 1: Above figure shows the connector with expansion post. Without-expansion-post type is also available.

Note 2: For 80 and 100 position connectors, two polarizing keyways are provided. For other contact arrangements, one polarizing keyway is provided at the center.

• Refer to PCB Mounting Hole Dimension Illustration.

No. of Contacts	Part Number				A	C	D ± 0.4 (± .016)
	Standard Latch Type		Short Latch Type				
	With Expansion Post	Without Expansion Post	With Expansion Post	Without Expansion Post			
20	TX3- 20P-D2ST-LH1	TX3- 20P-D2ST-LN1	TX3- 20P-D2ST-SH1	TX3- 20P-D2ST-SN1	11.43 (.450)	21.59 (.850)	30.4 (1.197)
26	TX3- 26P-D2ST-LH1	TX3- 26P-D2ST-LN1	TX3- 26P-D2ST-SH1	TX3- 26P-D2ST-SN1	15.24 (.600)	25.40 (1.000)	34.2 (1.346)
30	TX3- 30P-D2ST-LH1	TX3- 30P-D2ST-LN1	TX3- 30P-D2ST-SH1	TX3- 30P-D2ST-SN1	17.78 (.700)	27.94 (1.100)	36.8 (1.449)
34	TX3- 34P-D2ST-LH1	TX3- 34P-D2ST-LN1	TX3- 34P-D2ST-SH1	TX3- 34P-D2ST-SN1	20.32 (.800)	30.48 (1.200)	39.3 (1.547)
40	TX3- 40P-D2ST-LH1	TX3- 40P-D2ST-LN1	TX3- 40P-D2ST-SH1	TX3- 40P-D2ST-SN1	24.13 (.950)	34.29 (1.350)	43.1 (1.697)
50	TX3- 50P-D2ST-LH1	TX3- 50P-D2ST-LN1	TX3- 50P-D2ST-SH1	TX3- 50P-D2ST-SN1	30.48 (1.200)	40.64 (1.600)	49.5 (1.949)
60	TX3- 60P-D2ST-LH1	TX3- 60P-D2ST-LN1	TX3- 60P-D2ST-SH1	TX3- 60P-D2ST-SN1	36.83 (1.450)	46.99 (1.850)	55.8 (2.197)
68	TX3- 68P-D2ST-LH1	TX3- 68P-D2ST-LN1	TX3- 68P-D2ST-SH1	TX3- 68P-D2ST-SN1	41.91 (1.650)	52.07 (2.050)	60.9 (2.398)
80	TX3- 80P-D2ST-LH1	TX3- 80P-D2ST-LN1	TX3- 80P-D2ST-SH1	TX3- 80P-D2ST-SN1	49.53 (1.950)	59.69 (2.350)	68.5 (2.697)
100	TX3- 100P-D2ST-LH1	TX3- 100P-D2ST-LN1	TX3- 100P-D2ST-SH1	TX3- 100P-D2ST-SN1	62.23 (2.450)	72.39 (2.850)	81.2 (3.197)

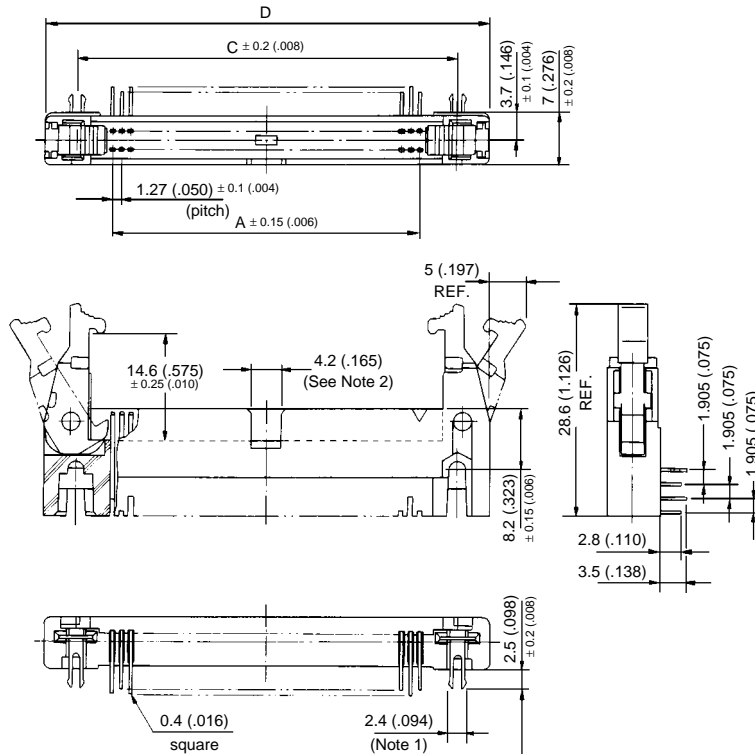
Dimensions in mm (inches).

TX1/TX2/TX3 SERIES CONNECTORS

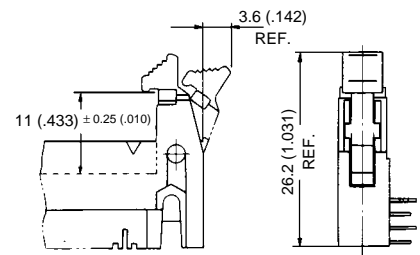
1.27mm (.050") Contact Spacing, PCB-to-Cable Connectors

PIN HEADER WITH LATCHING MECHANISM TX3-LT—Right Angle Through Hole Type

STANDARD LATCH TYPE



SHORT LATCH TYPE



Note: For short latch type, do not use strain relief on the mating IDC socket connector.

Note 1: Above figure shows the connector with expansion post. Without-expansion-post type is also available.

Note 2: For 80 and 100 position connectors, two polarizing keyways are provided. For other contact arrangement one polarizing keyway is provided at the center.

• Refer to PCB Mounting Hole Dimension Illustration.

No. of Contacts	Part Number				A	C	D ± 0.4 (± .016)
	Standard Latch Type		Short Latch Type				
	With Expansion Post	Without Expansion Post	With Expansion Post	Without Expansion Post			
20	TX3- 20P-D2LT-LH1	TX3- 20P-D2LT-LN1	TX3- 20P-D2LT-SH1	TX3- 20P-D2LT-SN1	11.43 (.450)	21.59 (.850)	30.4 (1.197)
26	TX3- 26P-D2LT-LH1	TX3- 26P-D2LT-LN1	TX3- 26P-D2LT-SH1	TX3- 26P-D2LT-SN1	15.24 (.600)	25.40 (1.000)	34.2 (1.346)
30	TX3- 30P-D2LT-LH1	TX3- 30P-D2LT-LN1	TX3- 30P-D2LT-SH1	TX3- 30P-D2LT-SN1	17.78 (.700)	27.94 (1.100)	36.8 (1.449)
34	TX3- 34P-D2LT-LH1	TX3- 34P-D2LT-LN1	TX3- 34P-D2LT-SH1	TX3- 34P-D2LT-SN1	20.32 (.800)	30.48 (1.200)	39.3 (1.547)
40	TX3- 40P-D2LT-LH1	TX3- 40P-D2LT-LN1	TX3- 40P-D2LT-SH1	TX3- 40P-D2LT-SN1	24.13 (.950)	34.29 (1.350)	43.1 (1.697)
50	TX3- 50P-D2LT-LH1	TX3- 50P-D2LT-LN1	TX3- 50P-D2LT-SH1	TX3- 50P-D2LT-SN1	30.48 (1.200)	40.64 (1.600)	49.5 (1.949)
60	TX3- 60P-D2LT-LH1	TX3- 60P-D2LT-LN1	TX3- 60P-D2LT-SH1	TX3- 60P-D2LT-SN1	36.83 (1.450)	46.99 (1.850)	55.8 (2.197)
68	TX3- 68P-D2LT-LH1	TX3- 68P-D2LT-LN1	TX3- 68P-D2LT-SH1	TX3- 68P-D2LT-SN1	41.91 (1.650)	52.07 (2.050)	60.9 (2.398)
80	TX3- 80P-D2LT-LH1	TX3- 80P-D2LT-LN1	TX3- 80P-D2LT-SH1	TX3- 80P-D2LT-SN1	49.53 (1.950)	59.69 (2.350)	68.5 (2.697)
100	TX3- 100P-D2LT-LH1	TX3- 100P-D2LT-LN1	TX3- 100P-D2LT-SH1	TX3- 100P-D2LT-SN1	62.23 (2.450)	72.39 (2.850)	81.2 (3.197)

Dimensions in mm (inches).



TX1/TX2/TX3 SERIES CONNECTORS

1.27mm (.050") Contact Spacing, PCB-to-Cable Connectors

IDC MACHINE

Applicable Connector	IDC Machine Part Number (See Note 1)		Applicator (See Note 2)	Interchangeable unit (See Note 3)
	Pneumatic, semi-automatic type	Hand Type		
TX1	SP399-2-TX1	SP299-2-TX1	MT499-TX1-2	700-04034-200
TX2	SP399-2-TX2	SP299-2-TX2	MT499-TX2-2	700-04041-200

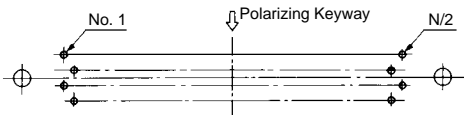
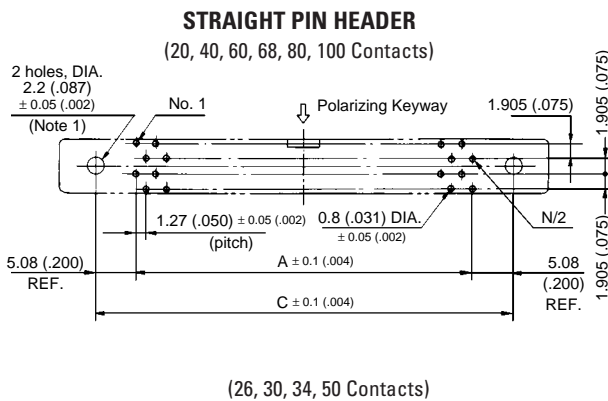
Note 1: With interchangeable applicator.

Note 2: Interchangeable applicator with base plate and pressure unit.

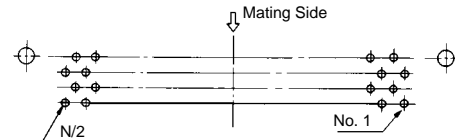
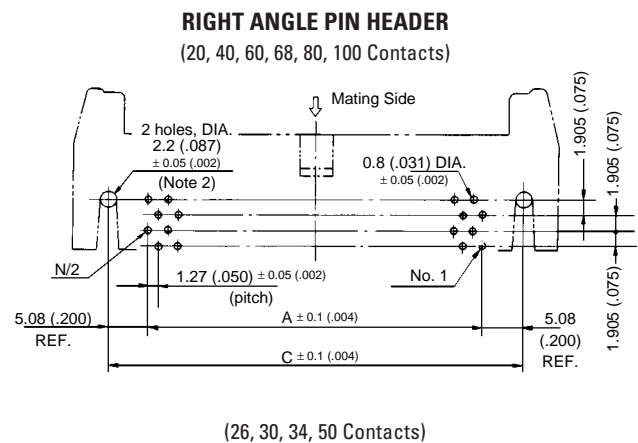
Part number for interchangeable applicator only; 700-04061-100 (TX1/TX2)

Note 3: Base plate and pressure unit only.

PCB MOUNTING HOLE DIMENSION (for TX3: pin header with latching mechanism)



Note 1: 2 holes are not needed for without-expansion-posts type.



Note 2: 2.2^{+0.2}₋₀ (.087^{+0.008}₋₀) dia. for without-expansion-posts type.
(applicable screw: M2)

No. of Contacts	A ± 0.1 (.004)	C ± 0.1 (.004)
20	11.43 (.450)	21.59 (.850)
26	15.24 (.600)	25.40 (1.000)
30	17.78 (.700)	27.94 (1.100)
34	20.32 (.800)	30.48 (1.200)
40	24.13 (.950)	34.29 (1.350)
50	30.48 (1.200)	40.64 (1.600)
60	36.83 (1.450)	46.99 (1.850)
68	41.91 (1.650)	52.07 (2.050)
80	49.53 (1.950)	59.69 (2.350)
100	62.23 (2.450)	72.39 (2.850)

Dimensions in mm (inches).