

**DESCRIPTION/APPLICATION**

Mechanical safety and EMI/RFI protection are major features of the Thomas & Betts Metal and Plastic Shell Ribbon Connectors

Together with Thomas & Betts Flat Cable, matching backshells for jacketed flat cable or special round cable as well as different mounting hardware accessories, they provide reliable and functional I/O terminations.

Serial production of cable sets benefits from efficient and electrically safe installation of the flat cable. This is ensured by beryllium copper contacts and connector design.

The spread contacts, a proprietary technique developed by Thomas & Betts, allow the use of standard flat cable on 1.27mm centers as well as any mating Thomas & Betts connectors.

Thomas & Betts Ribbon Connectors are fully compatible with industry standard 2.16mm center connectors.

**DESIGN ADVANTAGES**

- Indents in the high quality tin plated metal shell assure superior ground connection.
- Available with bail mount or full mounting ears (through hole, metric and UNC threaded insert).
- Stable plastic backshells, also metallized, with outlet for jacketed flat cable or special round cable available for any number of positions, with full screw mounting hardware.

# RIBBON CABLE CONNECTORS



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## PLASTIC SHELL RIBBON CONNECTOR 14, 24, 36 AND 50 POSITION, MALE



LR92984 E60980

### PHYSICAL PROPERTIES

**INSULATION MATERIAL:** Glass filled thermoplastic, rated UL 94V-0

**COLOR:** Blue

**CONTACT MATERIAL:** Beryllium copper: 30μ inches minimum gold over 50μ inches nickel in contact zone: tin-lead over nickel in termination area.

### ELECTRICAL PROPERTIES

**CURRENT RATING:** 1 Amp

**INSULATION RESISTANCE:** >1000 Megohms @ 500 VDC

**DIELECTRIC STRENGTH:** >1000 VRMS (Sea Level)

### ENVIRONMENTAL PROPERTIES

**TEMPERATURE RATING:** -55°C to 125°C

### APPLICATION TOOLING

**HAND TOOL** 779-2100

use Die 779-2172

**BENCH PRESS (MANUAL)** 779-3200

use Base Plate 779-3184

**BENCH PRESS (PNEUMATIC)** 779-3500XT

use Platen 779-3130

use Base Plate 779-3184

### ACCESSORIES

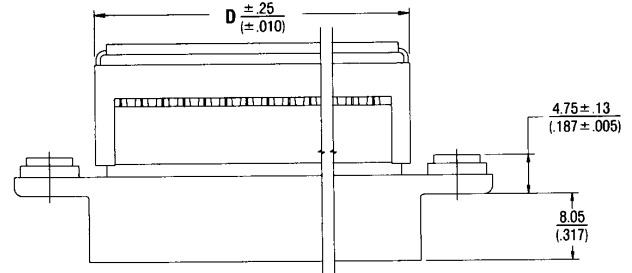
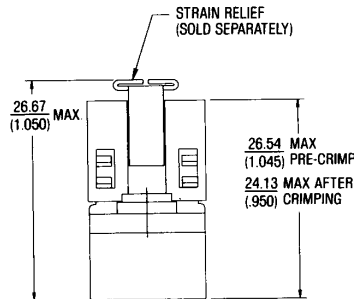
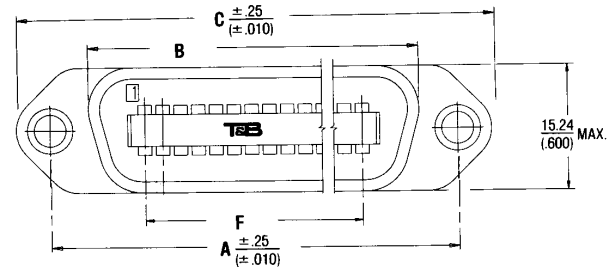
See pages 98-100

### CABLE

See pages 116-128

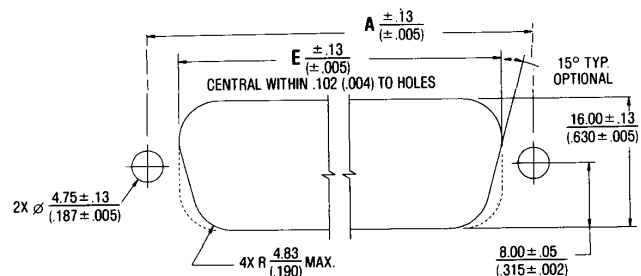
### STRAIN RELIEF

ADD RSR AFTER NUMBER OF POSITIONS IN PART NUMBER



### RECOMMENDED PANEL CUTOUT DIMENSIONS (BACK PANEL MOUNTED)

Maximum Panel Thickness: 3.18 (.125).



### Ordering Information

M-MALE WITH THRU-HOLE MOUNTING EARS	CATALOG NUMBERS		NO. OF POS.	DIMENSIONS IN					
	M1-MALE WITH MOUNTING EARS 3.5 MM THREADED INSERT	M2-MALE WITH MOUNTING EARS 4-40 THREADED INSERT		MM	INCHES	A	B	C	D
622-14M	622-14M1	622-14M2	14	35.99 (1.417)	28.55 (1.124)	44.20 (1.740)	22.81 (.898)	29.84 (1.175)	12.95 (.510)
622-24M	622-24M1	622-24M2	24	46.79 (1.842)	39.34 (1.549)	54.99 (2.165)	35.51 (1.398)	40.64 (1.600)	23.75 (.935)
622-36M	622-36M1	622-36M2	36	59.74 (2.352)	52.30 (2.059)	67.95 (2.675)	50.75 (1.998)	53.59 (2.110)	36.70 (1.445)
622-50M	622-50M1	622-50M2	50	74.85 (2.947)	67.41 (2.654)	83.06 (3.270)	68.53 (2.698)	68.83 (2.710)	51.81 (2.040)

**PLASTIC SHELL RIBBON  
CONNECTOR**  
**14, 24, 36 AND 50  
POSITION, FEMALE**



LR92984 E60980

**PHYSICAL PROPERTIES**

**INSULATION MATERIAL:** Glass filled thermoplastic, rated UL 94V-0

**COLOR:** Blue

**CONTACT MATERIAL:** Beryllium copper: 30µ inches minimum gold over 50µ inches nickel in contact zone: tin-lead over nickel in termination area.

**ELECTRICAL PROPERTIES**

**CURRENT RATING:** 1 Amp

**INSULATION RESISTANCE:** >1000 Megohms @ 500 VDC

**DIELECTRIC STRENGTH:** >1000 VRMS (Sea Level)

**ENVIRONMENTAL PROPERTIES**

**TEMPERATURE RATING:** -55°C to 125°C

**APPLICATION TOOLING**

**HAND TOOL** 779-2100

use Die 779-2172

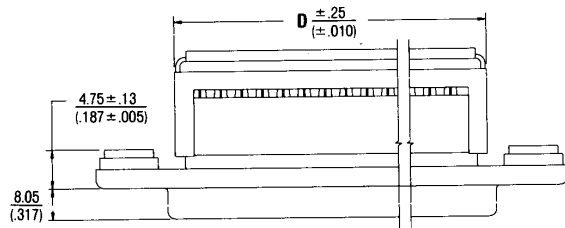
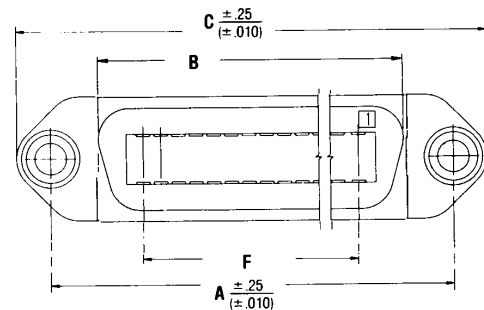
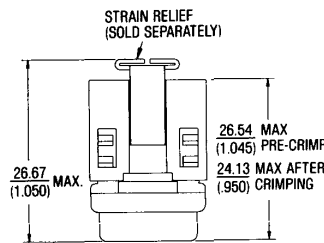
**BENCH PRESS (MANUAL)** 779-3200

use Base Plate 779-3184

**BENCH PRESS (PNEUMATIC)** 779-3500XT

use Platen 779-3130

use Base Plate 779-3184



**ACCESSORIES**

See pages 98-100

**CABLE**

See pages 116-128

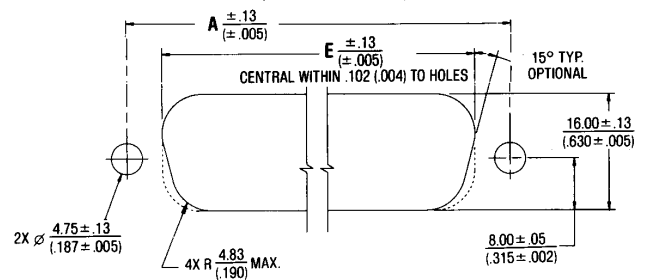
**STRAIN RELIEF**

ADD RSR AFTER NUMBER OF POSITIONS IN PART NUMBER

**RECOMMENDED PANEL CUTOUT DIMENSIONS**

Maximum Panel Thickness: 3.18 (.125).

(BACK PANEL MOUNTED)



**Ordering Information**

F-FEMALE WITH THRU-HOLE MOUNTING EARS	CATALOG NUMBERS		NO. OF POS.	DIMENSIONS IN					
	F1-FEMALE WITH MOUNTING EARS 3.5 MM THREADED INSERT	F2-FEMALE WITH MOUNTING EARS 4-40 THREADED INSERT		MM	INCHES	A	B	C	D
622-14F	622-14F1	622-14F2	14	35.99 (1.417)	28.55 (1.124)	44.20 (1.740)	22.81 (.898)	29.84 (1.175)	12.95 (.510)
622-24F	622-24F1	622-24F2	24	46.79 (1.842)	39.34 (1.549)	54.99 (2.165)	35.51 (1.398)	40.64 (1.600)	23.75 (.935)
622-36F	622-36F1	622-36F2	36	59.74 (2.352)	52.30 (2.059)	67.95 (2.675)	50.75 (1.998)	53.59 (2.110)	36.70 (1.445)
622-50F	622-50F1	622-50F2	50	74.85 (2.947)	67.41 (2.654)	83.06 (3.270)	68.53 (2.698)	68.83 (2.710)	51.81 (2.040)

### METAL SHELL RIBBON CONNECTOR 14, 24, 36 AND 50 POSITION, FEMALE THRU-HOLE AND BAIL MOUNT



LR92984 E60980

#### PHYSICAL PROPERTIES

INSULATION MATERIAL: Glass filled thermoplastic, rated UL 94V-0  
COLOR: Blue

CONTACT MATERIAL: Beryllium copper: 30μ inches minimum gold over 50μ inches nickel in contact zone; tin-lead over nickel in termination area.

#### ELECTRICAL PROPERTIES

CURRENT RATING: 1 Amp  
INSULATION RESISTANCE: >1000 Megohms @ 500 VDC  
DIELECTRIC STRENGTH: >1000 VRMS (Sea Level)

#### ENVIRONMENTAL PROPERTIES

TEMPERATURE RATING: -55°C to 125°C

#### APPLICATION TOOLING

**HAND TOOL** 779-2100  
use Die 779-2172  
**BENCH PRESS (MANUAL)** 779-3200  
use Base Plate 779-3184  
**BENCH PRESS (PNEUMATIC)** 779-3500XT  
use Platen 779-3130  
use Base Plate 779-3184

#### ACCESSORIES

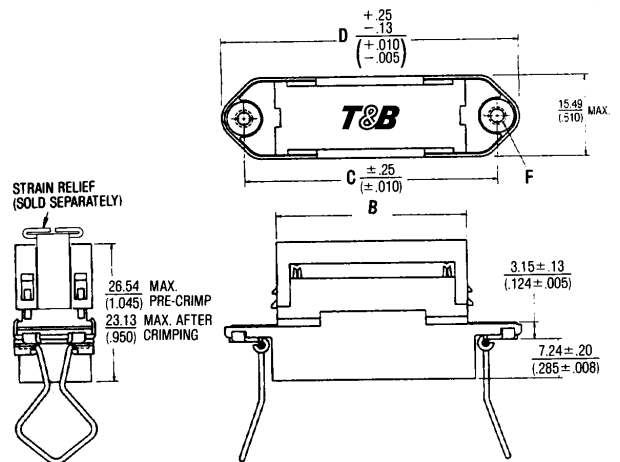
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#### CABLE

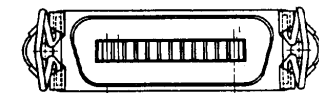
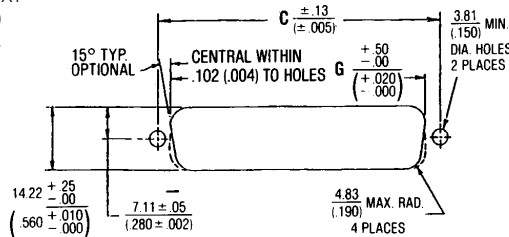
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#### STRAIN RELIEF

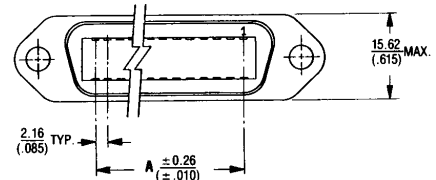
ADD RSR AFTER NUMBER  
OF POSITIONS IN PART NUMBER



#### RECOMMENDED PANEL CUTOUT DIMENSIONS (BACK PANEL MOUNTED)



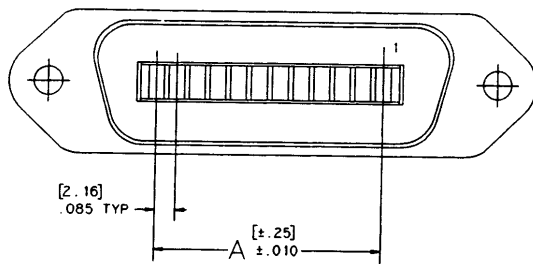
#### THRU-HOLE THREADED TYPE



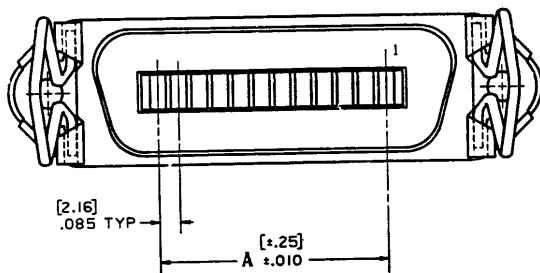
#### Ordering Information

CATALOG NUMBER	NO. OF POS.	DIMENSIONS IN MM (INCHES)					
		A	B	C	D	F	G
622-14FM	14	12.95 (.510)	22.81 (.898)	35.99 (1.417)	39.12 (1.540)	.142 ± .003 Ø THRU	28.19 (1.110)
622-24FM	24	23.75 (.935)	35.51 (1.398)	46.78 (1.842)	54.99 (2.165)	.142 ± .003 Ø THRU	39.12 (1.540)
622-36FM	36	36.70 (1.445)	50.75 (1.998)	59.74 (2.352)	67.94 (2.675)	.142 ± .003 Ø THRU	51.82 (2.040)
622-50FM	50	51.82 (2.040)	68.53 (2.698)	74.85 (2.947)	83.06 (3.270)	.142 ± .003 Ø THRU	67.06 (2.640)
622-14FM1	14	12.95 (.510)	22.81 (.898)	35.99 (1.417)	39.12 (1.540)	M3.5x0.6-6H THD	28.19 (1.110)
622-24FM1	24	23.75 (.935)	35.51 (1.398)	46.78 (1.842)	54.99 (2.165)	M3.5x0.6-6H THD	39.12 (1.540)
622-36FM1	36	36.70 (1.445)	50.75 (1.998)	59.74 (2.352)	67.94 (2.675)	M3.5x0.6-6H THD	51.82 (2.040)
622-50FM1	50	51.82 (2.040)	68.53 (2.698)	74.85 (2.947)	83.06 (3 270)	M3.5x0.6-6H THD	67.06 (2.640)
622-14FM2	14	12.95 (.510)	22.81 (.898)	35.99 (1.417)	39.12 (1.540)	4-40 UNC-2B THD	28.19 (1.110)
622-24FM2	24	23.75 (.935)	35.51 (1.398)	46.78 (1.842)	54.99 (2.165)	4-40 UNC-2B THD	39.12 (1.540)
622-36FM2	36	36.70 (1.445)	50.75 (1.998)	59.74 (2.352)	67.94 (2.675)	4-40 UNC-2B THD	51.82 (2.040)
622-50FM2	50	51.82 (2.040)	68.53 (2.698)	74.85 (2.947)	83.06 (3.270)	4-40 UNC-2B THD	67.06 (2.640)
622-14FM3	14	12.95 (.510)	22.81 (.898)	35.99 (1.417)	39.12 (1.540)	Bail Mount	28.19 (1.110)
622-24FM3	24	23.75 (.935)	35.51 (1.398)	46.78 (1.842)	54.99 (2.165)	Bail Mount	39.12 (1.540)
622-36FM3	36	36.70 (1.445)	50.75 (1.998)	59.74 (2.352)	67.94 (2.675)	Bail Mount	51.82 (2.040)
622 50FM3	50	51.82 (2.040)	68.53 (2.698)	74.85 (2.947)	83.06 (3.270)	Bail Mount	67.06 (2.640)

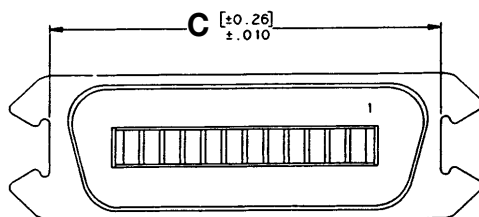
**METAL SHELL RIBBON  
CONNECTOR  
14, 24, 36 AND 50  
POSITION, FEMALE  
THRU-HOLE AND BAIL  
MOUNT**



**Thru-Hole/Threaded**

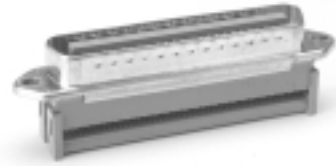


**Bail Mount Latches**



**Bail Mount Ears**

**METAL SHELL RIBBON CONNECTOR**  
**14, 24, 36 AND 50 POSITION, MALE THRU-HOLE AND BAIL MOUNT**



LR92984 E60980

**PHYSICAL PROPERTIES**

**INSULATION MATERIAL:** Glass filled thermoplastic, rated UL 94V-0  
**COLOR:** Blue  
**CONTACT MATERIAL:** Beryllium copper: 30µ inches minimum gold over 50µ inches nickel in contact zone: tin-lead over nickel in termination area.

**ELECTRICAL PROPERTIES**

**CURRENT RATING:** 1 Amp  
**INSULATION RESISTANCE:** >1000 Megohms @ 500 VDC  
**DIELECTRIC STRENGTH:** >1000 VRMS (Sea Level)

**ENVIRONMENTAL PROPERTIES**

**TEMPERATURE RATING:** -55°C to 125°C

**APPLICATION TOOLING**

- HAND TOOL** 779-2100  
use Die 779-2172
- BENCH PRESS (MANUAL)** 779-3200  
use Base Plate 779-3184
- BENCH PRESS (PNEUMATIC)** 779-3500XT  
use Platen 779-3130  
use Base Plate 779-3184

**ACCESSORIES**

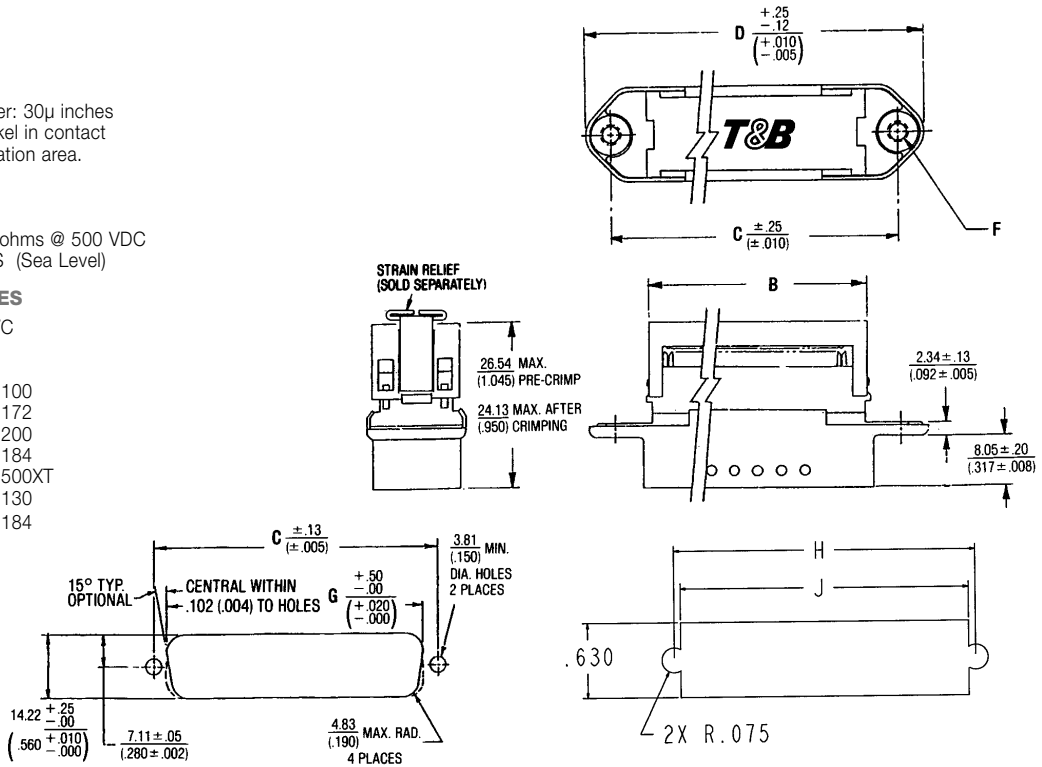
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**CABLE**

See pages 116-128

**STRAIN RELIEF**

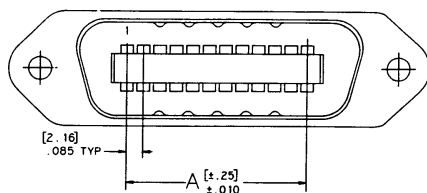
ADD RSR AFTER NUMBER OF POSITIONS IN PART NUMBER



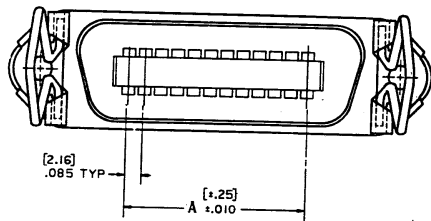
**Ordering Information**

CATALOG NUMBER	NO. OF POS.	DIMENSIONS IN MM (INCHES)								
		A	B	C	D	F	G	H	J	
622-14MM	14	12.95 (.510)	22.81 (.898)	35.99 (1.417)	39.12 (1.540)	.142 ± .003 Ø THRU	28.19 (1.110)	N/A	N/A	
622-24MM	24	23.75 (.935)	35.51 (1.398)	46.78 (1.842)	54.99 (2.165)	.142 ± .003 Ø THRU	39.12 (1.540)	N/A	N/A	
622-36MM	36	36.70 (1.445)	50.75 (1.998)	59.74 (2.352)	67.94 (2.675)	.142 ± .003 Ø THRU	51.82 (2.040)	N/A	N/A	
622-50MM	50	51.82 (2.040)	68.53 (2.698)	74.85 (2.947)	83.06 (3.270)	.142 ± .003 Ø THRU	67.06 (2.640)	N/A	N/A	
622-14MM1	14	12.95 (.510)	22.81 (.898)	35.99 (1.417)	39.12 (1.540)	M3.5x0.6-6H THD	28.19 (1.110)	N/A	N/A	
622-24MM1	24	23.75 (.935)	35.51 (1.398)	46.78 (1.842)	54.99 (2.165)	M3.5x0.6-6H THD	39.12 (1.540)	N/A	N/A	
622-36MM1	36	36.70 (1.445)	50.75 (1.998)	59.74 (2.352)	67.94 (2.675)	M3.5x0.6-6H THD	51.82 (2.040)	N/A	N/A	
622-50MM1	50	51.82 (2.040)	68.53 (2.698)	74.85 (2.947)	83.06 (3.270)	M3.5x0.6-6H THD	67.06 (2.640)	N/A	N/A	
622-14MM2	14	12.95 (.510)	22.81 (.898)	35.99 (1.417)	39.12 (1.540)	4-40 UNC-2B THD	28.19 (1.110)	N/A	N/A	
622-24MM2	24	23.75 (.935)	35.51 (1.398)	46.78 (1.842)	54.99 (2.165)	4-40 UNC-2B THD	39.12 (1.540)	N/A	N/A	
622-36MM2	36	36.70 (1.445)	50.75 (1.998)	59.74 (2.352)	67.94 (2.675)	4-40 UNC-2B THD	51.82 (2.040)	N/A	N/A	
622-50MM2	50	51.82 (2.040)	68.53 (2.698)	74.85 (2.947)	83.06 (3.270)	4-40 UNC-2B THD	67.06 (2.640)	N/A	N/A	
622-14MM3	14	12.95 (.510)	22.81 (.898)	35.99 (1.417)	39.12 (1.540)	Bail Mount Latches	N/A	35.99 (1.417)	34.41 (1.417)	
622-24MM3	24	23.75 (.935)	35.51 (1.398)	46.78 (1.842)	54.99 (2.165)	Bail Mount Latches	N/A	46.78 (1.842)	45.21 (1.780)	
622-36MM3	36	36.70 (1.445)	50.75 (1.998)	59.74 (2.352)	67.94 (2.675)	Bail Mount Latches	N/A	59.74 (2.352)	59.17 (2.290)	
622-50MM3	50	51.82 (2.040)	68.53 (2.698)	74.85 (2.947)	83.06 (3.270)	Bail Mount Latches	N/A	74.85 (2.947)	73.41 (2.890)	
622-14MAM	14	12.95 (.510)	22.81 (.898)	N/A	N/A	Bail Mount Ears	N/A	N/A	N/A	
622-24MAM	24	23.75 (.935)	35.51 (1.398)	N/A	N/A	Bail Mount Ears	N/A	N/A	N/A	
622-36MAM	36	36.70 (1.445)	50.75 (1.998)	N/A	N/A	Bail Mount Ears	N/A	N/A	N/A	
622-50MAM	50	51.82 (2.040)	68.53 (2.698)	N/A	N/A	Bail Mount Ears	N/A	N/A	N/A	

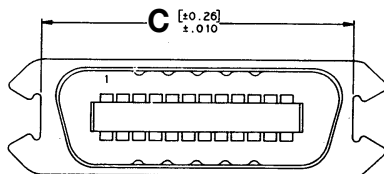
**METAL SHELL RIBBON  
CONNECTOR  
14, 24, 36 AND 50  
POSITION, MALE  
THRU-HOLE AND BAIL  
MOUNT**



***Thru-Hole/Threaded***



***Bail Mount Latches***



***Bail Mount Ears***

**BACKSHELLS FOR  
METAL SHELL  
RIBBON CONNECTORS  
14-50 POSITIONS**



**PHYSICAL PROPERTIES**

INSULATION MATERIAL: Glass filled thermoplastic, rated UL 94V-0.

**ELECTRICAL PROPERTIES**

SHIELDING EFFICIENCY: >40dB @ 100 MHz to 1 GHz

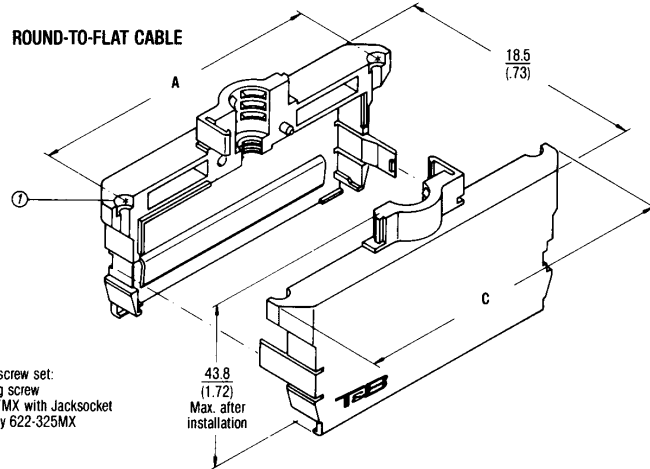
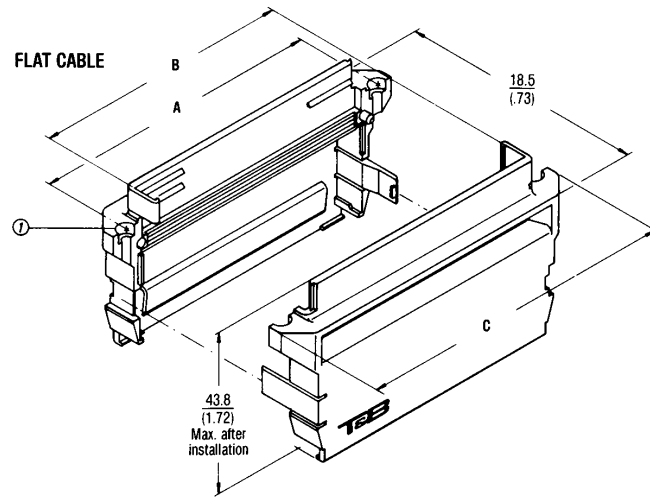
**ENVIRONMENTAL PROPERTIES**

TEMPERATURE RATING: -55°C to 125°C

**APPLICATION TOOLING**

- HAND TOOL**
  - 779-2100 use Die (Flat Cable Outlet)
  - 779-2173 use Die (Round Cable Outlet)
- BENCH PRESS (MANUAL)** 779-3200
- BENCH PRESS (PNEUMATIC)** 779-3500XT
  - use Platen and Base Plate (Flat Cable Outlet) 779-3173
  - use Platen and Base Plate (Round Cable Outlet) 779-3174

NOTE: CANNOT BE USED ON PLASTIC SHELL CONNECTOR



① Use for screw set:  
Mounting screw  
622-327MX with Jacksocket  
Assembly 622-325MX

**Ordering Information**

CABLE TYPE	CATALOG NUMBERS		NO. OF POS.	DIMENSIONS IN			RECOMMENDED			
	PLASTIC (BLACK)	METALLIZED (CHROME)		MM (INCHES)			JACKET DIAMETER		SHIELD DIAMETER	
				A	B	C	MIN.	MAX.	MIN.	MAX.
Flat Cable	622-014	622-014M	14	36.0 (1.42)	21.3 (.84)	44.2 (1.74)	—	—	—	—
Flat Cable	622-024	622-024M	24	46.8 (1.84)	34.0 (1.34)	55.0 (2.16)	—	—	—	—
Flat Cable	622-036	622-036M	36	59.7 (2.35)	49.3 (1.94)	68.0 (2.68)	—	—	—	—
Flat Cable	622-050	622-050M	50	74.9 (2.95)	67.1 (2.64)	83.1 (3.27)	—	—	—	—
Round Cable	622-014R	622-014RM	14	36.0 (1.42)	—	44.2 (1.74)	6.0 (.24)	7.4 (.29)	4.2 (.17)	5.6 (.21)
Round Cable	622-024R	622-024RM	24	46.8 (1.84)	—	55.0 (2.17)	7.0 (.28)	8.5 (.33)	5.2 (.20)	6.7 (.25)
Round Cable	622-036R	622-036RM	36	59.7 (2.35)	—	68.0 (2.68)	8.1 (.32)	9.8 (.39)	6.4 (.25)	8.0 (.30)
Round Cable	622-050R	622-050RM	50	74.9 (2.95)	—	83.1 (3.27)	9.4 (.37)	11.2 (.44)	7.6 (.30)	9.4 (.35)



**PRODUCT DESCRIPTION**

Screw sets and bail mounts are available for all Thomas & Betts Metal Shell Ribbon Connectors. These allow cable splices, panel mounting and combinations with standard ribbon connectors for individual wiring applications. All mounting hardware are easy to install.

**622-320M**

Bail mount clip

Mounting screw 4-40 UNC

- couples ribbon connector with or without back panel mounting to another ribbon connector and can be used with or without backshell.

Panel thickness 3.2 (.13) max.

**622-325M1**

Jacksocket assembly

Mounting screw M 3.5

- couples ribbon connector with or without backpanel mounting via mounting screw to another ribbon connector with or without backshell

Surface: zinc-plated

Panel thickness 2.4 (.094) max.

**622-325M2**

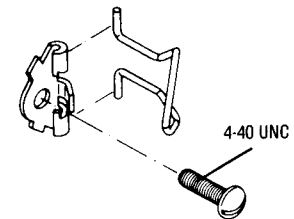
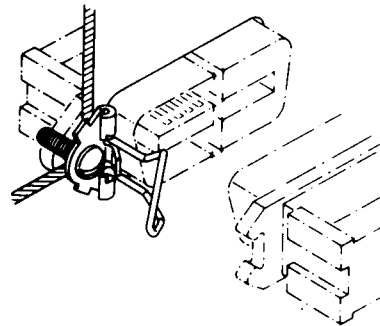
Jacksocket assembly 4-40 UNC

- couples ribbon connector with or without backpanel mounting via mounting screws to another ribbon connector with or without backshell

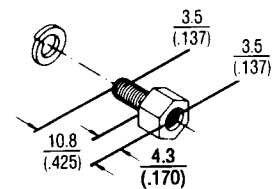
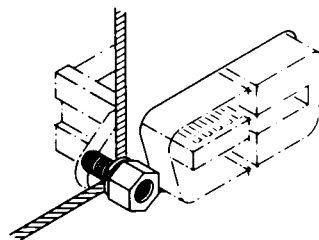
Surface: zinc-plated

Panel thickness 2.4 (.094) max.

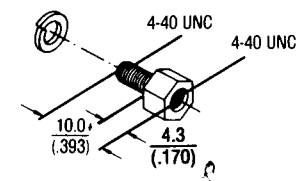
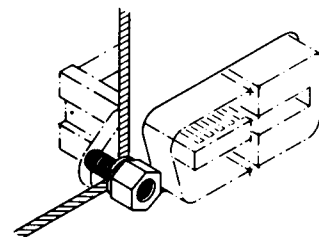
**MOUNTING HARDWARE FOR METAL SHELL RIBBON CONNECTORS**



FOR USE WITH:  
CONNECTORS  
622-XXMM2  
622-XXFM2  
622-XXF2  
622-XXM2



FOR USE WITH:  
CONNECTORS  
622-XXMM1  
622-XXFM1  
622-XXF1  
622-XXM1



FOR USE WITH:  
622-XXMM2  
622-XXFM2  
622-XXM2  
622-XXF2

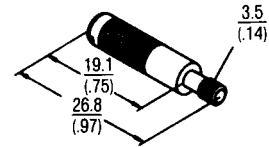
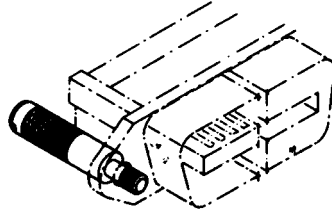
## 622-326M1

Mounting screw M 3.5

- couples ribbon connector without backshell via jacksockets to ribbon connector, with or without panel mounting

Surface: zinc-plated

## MOUNTING HARDWARE FOR RIBBON CONNECTORS



FOR USE WITH:  
CONNECTORS  
622-XXMM1  
622-XXFM1  
622-XXM  
622-XXF

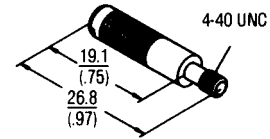
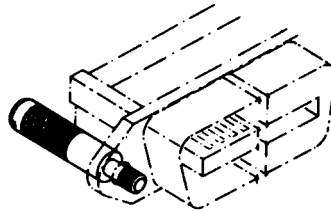
JACKSOCKET  
622-325M1

## 622-326M2

Mounting screw 4-40 UNC

- couples ribbon connector without backshell via jackscrews to ribbon connector, with or without panel mounting

Surface: zinc-plated



FOR USE WITH:  
CONNECTORS  
622-XXMM2  
622-XXFM2  
622-XXM  
622-XXF

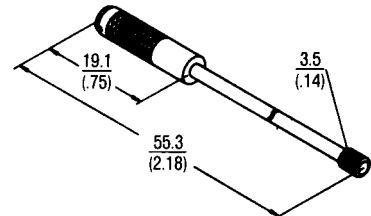
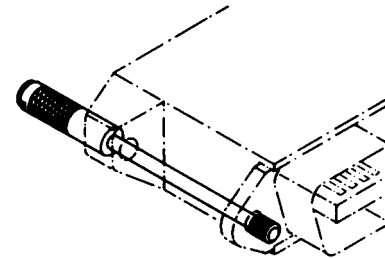
JACKSOCKET  
622-325M2

## 622-327M1

Mounting screw M 3.5

- couples ribbon connector with backshell via jacksockets to ribbon connector, with or without panel mounting

Surface: zinc-plated



FOR USE WITH:  
CONNECTORS  
622-XXMM1  
622-XXFM1  
with backshell

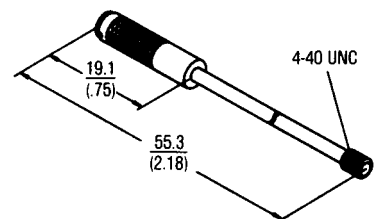
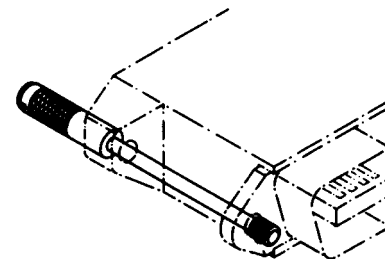
JACKSOCKET  
622-325M1

## 622-327M2

Mounting screw 4-40 UNC

- couples ribbon connector with backshell via jacksockets to ribbon connector, with or without panel mounting

Surface: zinc-plated



FOR USE WITH:  
CONNECTORS  
622-XXMM2  
622-XXFM2  
with backshell

JACKSOCKET  
622-325M2