

# Switchcraft®

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## E SERIES RECEPTACLES

[click here to download a schematic drawing](#)

(you will need to have Adobe Acrobat installed on your system to do this)



E Series Q-G® Receptacles are available with quick release inserts. Quick insert release is accomplished by turning screw lock from front of insert. Insert can then be removed from the rear. For PC board applications, insert can be removed/assembled to the housing while soldered to the PC board.

E Series receptacles can be specified as complete assemblies, or as separate inserts and housings. Stocking separate inserts and housings offer considerable cost and time savings by minimizing inventory and maximizing configuration possibilities.

## FEATURES

- \* Replaces Neutrik D Series
- \* 3-pin contact; male and female types
- \* Both male and female fit in same panel cutout
- \* Choice of 4 terminations; solder cups, conical springs, straight or right-angle PC terminals
- \* Inserts and housings can be specified separately
- \* Quick release inserts for ease of removal
- \* Locking receptacles
- \* Protected ground clip minimizes scooping damage
- \* Insert lock detent resists disassembly from shock or vibration during normal handling and transportation
- \* Silver and gold-plated contacts available
- \* Rugged metal shells; black or satin nickel finishes
- \* Through-the-shell ground connection and all-metal shells for greater shielding effectiveness
- \* Compatible with Switchcraft Q-G<sup>®</sup>, QGP and other connectors with similar configurations

## **QUICK RELEASE INSERT**

In two simple steps, inserts can be released while housing stays fastened to the panel.

1. With a small screwdriver, twist insert locking screw from front of insert.
2. Remove insert from the rear of the housing.

## **SPECIFICATIONS**

## **ELECTRICAL**

**Contact Resistance:** 50 milliohms maximum, per pole.

**Current Rating:** 15A

**Insulation Resistance:**  $2 \times 10^6$  M(ohm)

**Dielectric Resistance:** 1,000 V rms

**Capacitance:** 10 pF

## **MECHANICAL**

**Insertion/Withdrawal Forces:** 7 pounds maximum/5 pounds nominal insertion; 7 pounds maximum/5 pounds nominal withdrawal.

**Life:** 10,000 operations (minimum).

## **ENVIRONMENTAL**

**Thermal Range:** -55° C to +85° C

**Humidity:** Meets MIL-STD-202F, method 106E.

**Thermal Shock:** Meets MIL-STD-202F, method 107D.

**Salt Spray:** Meets MIL-STD-202F, method 101D.

## **MATERIAL**

**Shells:** Die-cast; satin-nickel or Black Velvet.

**Inserts:** Glass-filled thermoplastic.

**Socket Contacts:** Copper alloy, silver- or gold-plated.

**Pin Contacts:** Copper alloy, silver- or gold-plated.

**Latch Release:** Steel, nickel-plated.

**Insert Locking Cam:** Die-cast zinc.

## **TERMINALS**

Four terminations are available on E Series receptacles:

**1. Conical Spring Solder terminals** - conical spring on each pin holds wire in place providing constant pressure during soldering process. This effectively acts as a third hand, assuring a high quality solder termination. Housing mounts to panel.

**2. Straight PC terminals** - direct termination to PC board. Housing mounts to panel.

**3. Right-angle PC terminals** - direct termination to PC board at a right-angle. Housing mounts to panel.

**3. SC** - Solder cup

Each character (or absence thereof) in the part numbers listed above denotes one specific feature.

<b>Character</b>	<b>Description</b>
<b>E</b>	Series designator
<b>3</b>	3 pins or contacts
<b>*</b>	M -male connector; F -female connector
<b>QG</b>	Denotes insert only
<b>H</b>	Denotes housing only
<b>B</b>	Black housing (absence of 'B' denotes satin-nickel housing)
<b>RA</b>	Right-angle PC terminals (absence of 'RA' or 'ST' denotes conical spring solder terminals)
<b>ST</b>	Straight PC terminals (absence of 'ST' or 'RA' denotes conical spring solder terminals)
<b>AU</b>	Gold contacts (absence of 'AU' denotes silver contacts)
<b>D</b>	Fas-disconnect
<b>SC</b>	Solder Cup



- 1. Conical Spring Solder Terminals, Straight PC Terminals and Right Angle PC Terminals**
- 2. Receptacles with new solder cup option shown**

## **INSERTS AND HOUSINGS**

Inserts and housings can be ordered separately to make any possible combination of the following features:

- 1) Silver or gold contacts
- 2) Satin nickel or black chrome over nickel housing
- 3) Locking
- 4) Male or female connector
- 5) Conical spring solder terminals, solder cup, straight or right-angle PC terminals

## **HOUSINGS**

E3MSCAUQG	Solder Cup	-	M
E3MSTAUQG	Straight PC	-	M
E3MRAAUQG	Right-Angle PC	-	M

### COMPLETE CONNECTOR ASSEMBLIES SATIN NICKEL HOUSING

Part Number	Terminals	Locking or Non-Locking <sup>1</sup>	Contacts	Housing	Insert	Housing	Type <sup>2</sup>
⌘E3F	Conical	Locking	Silver	Satin Nickel	E3FQG	EFH	F
⌘E3M	Solder				E3MQG	EMH	M
E3FSC	Solder	Locking			E3FSCQG	EFHB	F
E3MSC	Cup				E3MSCQG	EMHB	M
E3FST	Straight	Locking			E3FSTQG	EFH	F
E3MST	PC				E3MSTQG	EMH	M
E3FRA	Right-	Locking			E3FRAQG	EFH	F
E3MRA	Angle PC		E3MRAQG		EMH	M	
⌘E3FAU	Conical	Locking	Gold		E3FAUQG	EFH	F
⌘E3MAU	Solder				E3MAUQG	EMH	M
E3FSTAU	Straight	Locking			E3FSTAUQG	EFH	F
E3MSTAU	PC				E3MSTAUQG	EMH	M
E3FRAAU	Right-	Locking			E3FRAAUQG	EFH	F
E3MRAAU	Angle PC				E3MRAAUQG	EMH	M

### COMPLETE CONNECTOR ASSEMBLIES BLACK HOUSING

Part Number	Terminals	Locking or Non-Locking <sup>1</sup>	Contacts	Housing	Insert	Housing	Type
⌘E3FB	Conical	Locking	Silver		E3FQG	EFHB	F
⌘E3MB	Solder				E3MQG	EMHB	M
E3FSCB	Solder	Locking			E3FSCQG	EFHB	F
E3MSCB	Cup				E3MSCQG	EMHB	M
E3FSTB	Straight	Locking			E3FSTQG	EFHB	F

## E SERIES PART NUMBERING SYSTEM

## CONNECTOR PART NUMBER SCHEME

Series	Pins/ Contacts	Gender	Fas-disconnect Option	Termination Style	Housing Finish	Terminal Finish	Mounting Hole Options
E	3-5 pins	F: Female M: Male	D: Fas-disconnect Blank: Standard locking	ST: Straight PC terminals RA: Right angle PC terminals SC: Solder cups Blank: Conical springs*	B: Black Blank: Nickel	AU: Gold Blank: Silver	M3: M3 x 0.5 thread 440: #4-40 thread Blank: Counter- sunk hole

## HOUSING ONLY PART NUMBER SCHEME

Series	Pins/ Contacts	Housing Finish	Mounting Hole Options
E	F: Female M: Male	B: Black Blank: Nickel	M3: M3 x 0.5 thread 440: #4-40 thread Blank: Counter-sunk hole

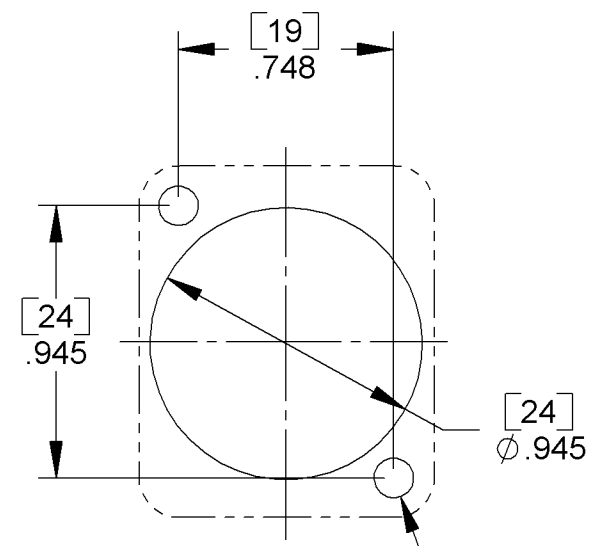
## INSERT ONLY PART NUMBER SCHEME

Series	Pins/ Contacts	Gender	Fas-disconnect Option	Termination Style	Housing Finish	Terminal Finish
E	3-5 pins	F: Female M: Male	D: Fas-disconnect Blank: Standard locking	ST: Straight PC terminals RA: Right angle PC terminals SC: Solder cups Blank: Conical springs*		AU: Gold Blank: Silver

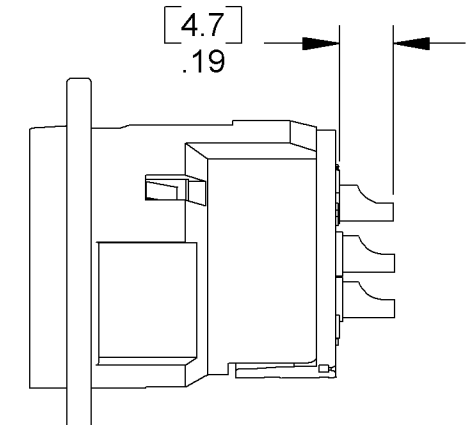
\*3-pin only

DIMENSIONS ARE FOR REFERENCE ONLY  $\frac{\text{Inch}}{(\text{mm})}$

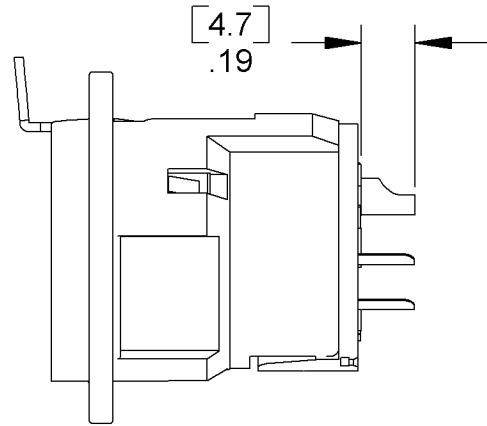
# Switchcraft, Inc. □ E Series



PANEL CUT-OUT  
FRONT OR REAR MOUNT

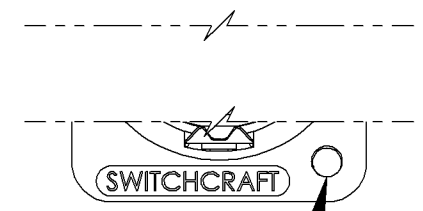


MALE SOLDER CUP  
OPTION "SC"

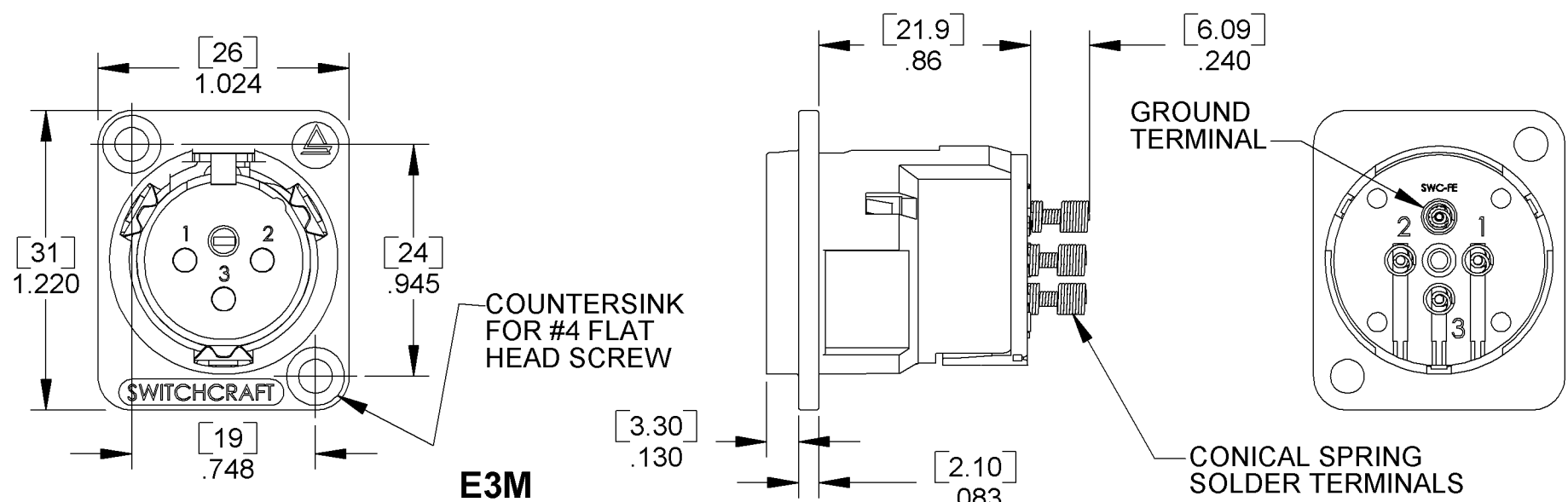


FEMALE SOLDER CUP  
OPTION "SC"

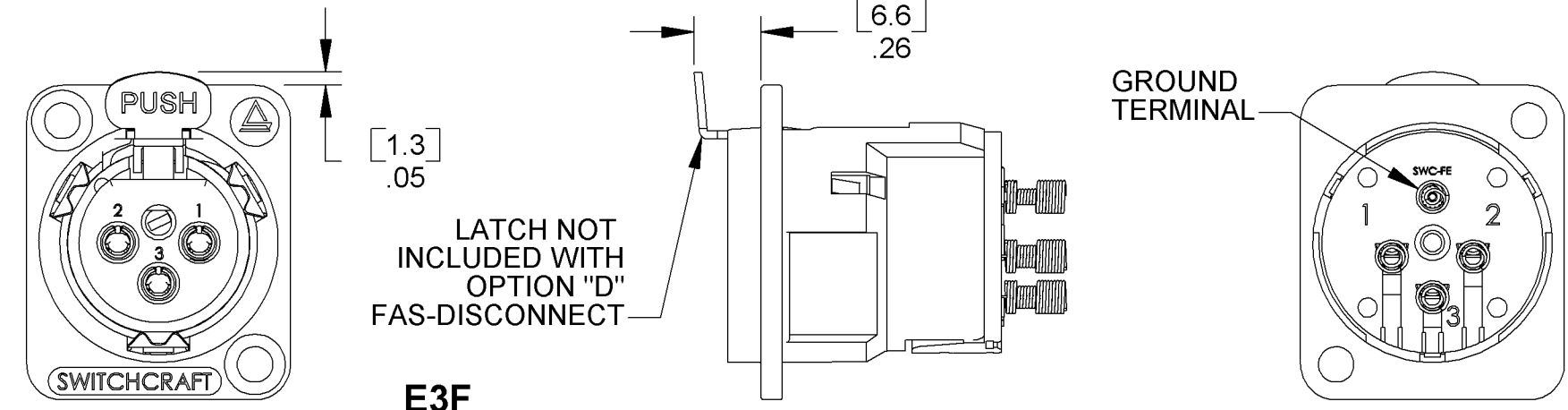
REAR MOUNT OPTIONS



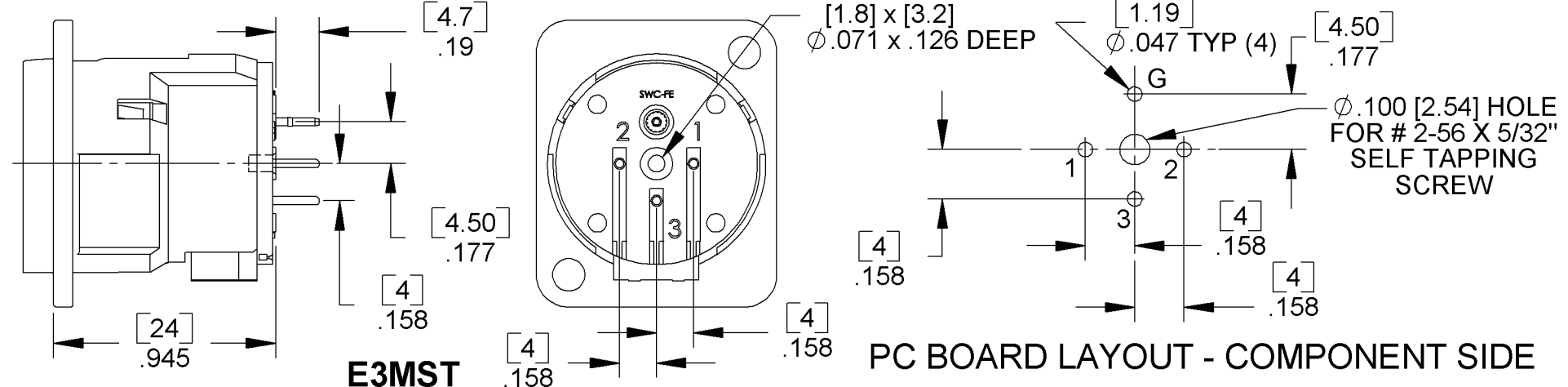
- MOUNTING HOLE TYP (2)
- OPTION "M3"  
M3 x 0.5 THREADED HOLES
- OPTION "440"  
#4-40 THREADED HOLES



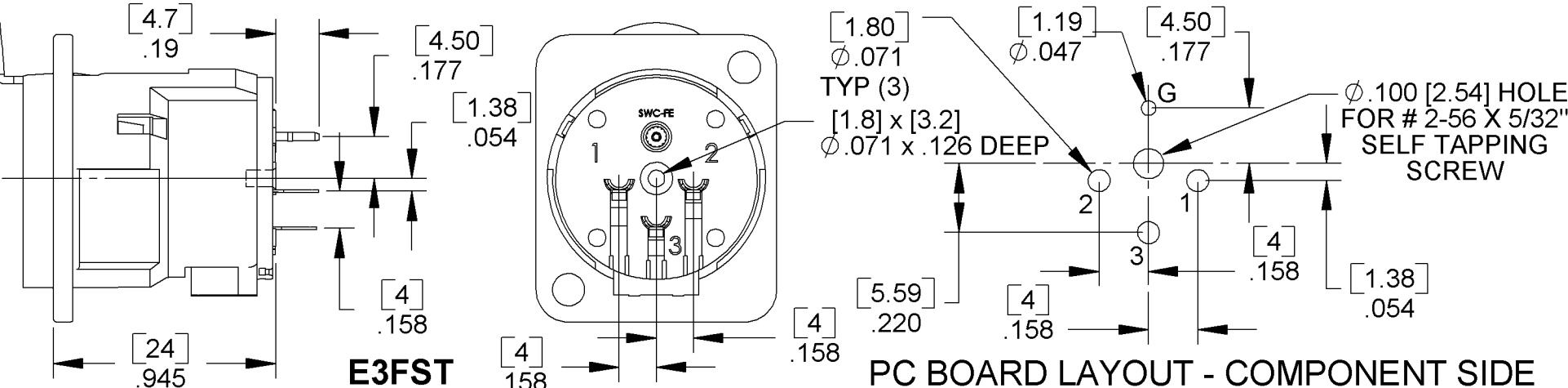
E3M



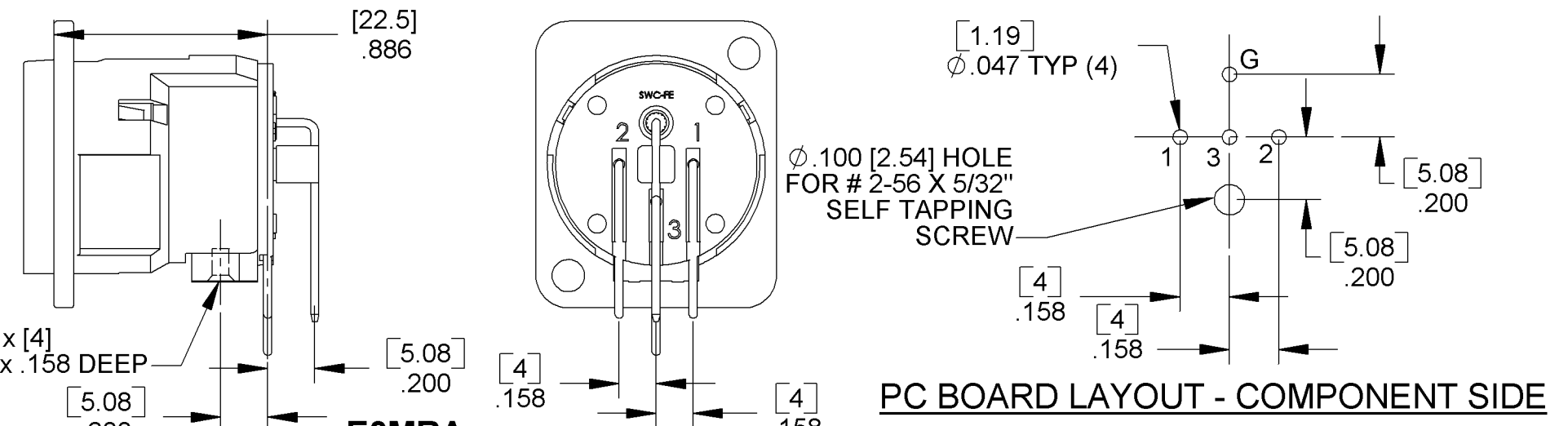
E3F



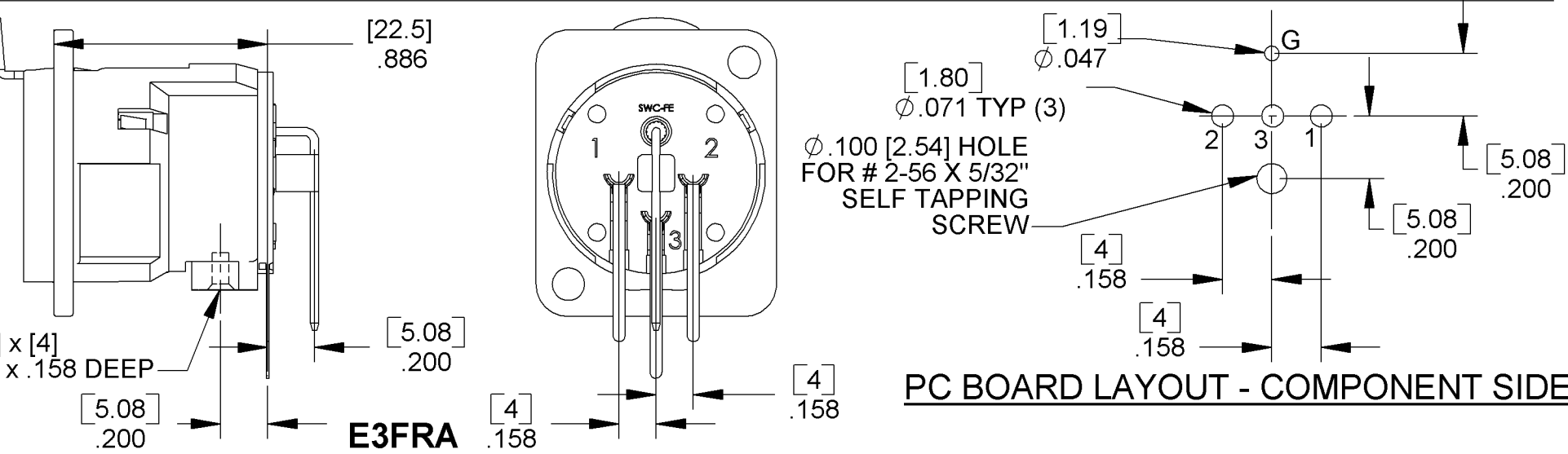
E3MST



E3FST



E3MRA



E3FRA