



# THE DATASHEET OF SFM-120-02-S-D

# RUGGED TIGER EYE™ SYSTEMS

(1.27 mm) .050" PITCH

MAX  
**3.7**  
A m p s

**8**  
G b p s

## FEATURES & BENEFITS

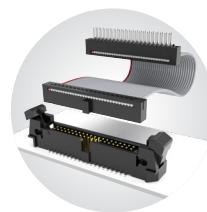
- Screw down, locking clip, friction latching and weld tab ruggedizing options
- Shrouded, polarized and keyed
- Surface mount or through-hole tails
- High-density, four row design (FOLC/MOLC Series)
- Discrete wire assemblies available in single or double row, 28 and 30 AWG PVC or \*Teflon™ Fluoropolymer (See pages 238-239). Contact [asp@samtec.com](mailto:asp@samtec.com) for custom solutions.
- Cable components (ISDF/CC03) and tooling available: [samtec.com/tooling](http://samtec.com/tooling)
- Severe Environment Testing qualified (SFM/TFM); aligns with MIL-DTL-55302. Visit [samtec.com/set](http://samtec.com/set)

\*Teflon™ is a trademark of The Chemours Company FC, LLC used under license by Samtec.

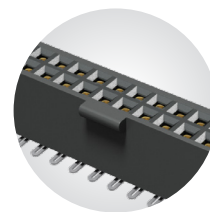
## KEY SPECIFICATIONS

| SERIES  | STACK HEIGHTS | INSULATOR MATERIAL | CONTACT MATERIAL                    | PLATING                          | OPERATING TEMP RANGE | CURRENT RATING                 | VOLTAGE RATING | MAX. CYCLES                              | LEAD-FREE SOLDERABLE |
|---------|---------------|--------------------|-------------------------------------|----------------------------------|----------------------|--------------------------------|----------------|------------------------------------------|----------------------|
| SFM/TFM | 6 to 12 mm    | Black LCP          | BeCu (SFM)<br>Phosphor Bronze (TFM) | Au or Sn over 50 μ" (1.27 μm) Ni | -55 °C to +125 °C    | 3.7A per pin (2 pins powered)  | 275 VAC        | 10,000 with 30 μ" (0.76 μm) Au           | Yes                  |
| SFC/TFM | 6 to 12 mm    | Black LCP          | Phosphor Bronze                     | Au or Sn over 50 μ" (1.27 μm) Ni | -55 °C to +125 °C    | 3.1 A per pin (2 pins powered) | 350 VAC        | (Call Samtec for E.L.P.™ plating option) | Yes                  |

**TIGER™  
EYE**  
CONTACT



IDC cable assemblies with rugged strain relief (FFSD/FFMD, FFTP/FMTP)



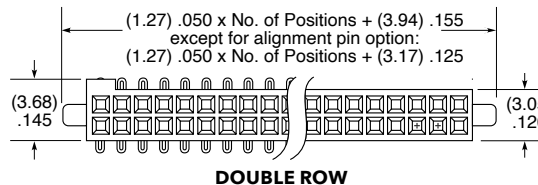
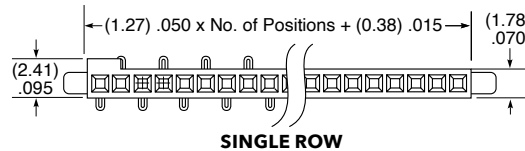
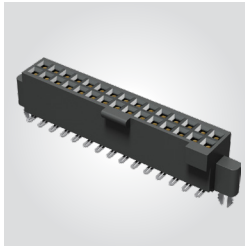
Locking for increased unmating force (SFML/TFML)

**(1.27 mm) .050" PITCH • SMT/THROUGH-HOLE SOCKET**

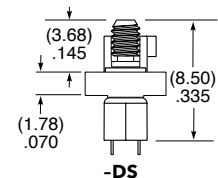
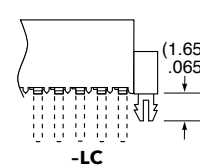
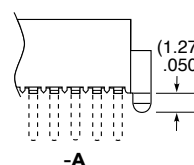
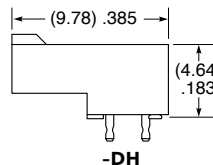
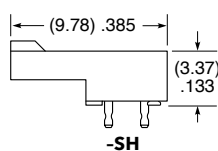
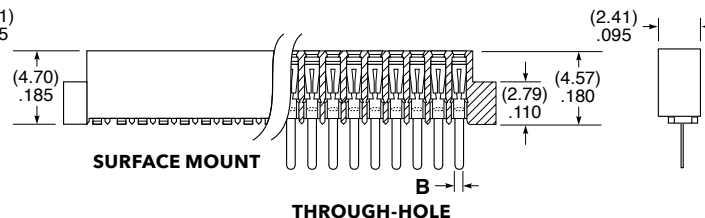
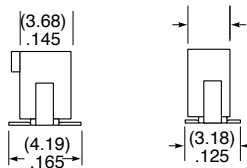
| SERIES                   | 1 | NO. PINS PER ROW                                                      | LEAD STYLE                                                    | PLATING OPTION                                                                                             | ROW OPTION                                                                                     | OPTIONS                                                                                                                                                                                                                                       |
|--------------------------|---|-----------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SFM</b><br>= Standard |   | <b>03, 04, 06, 08</b><br>(SFM only)                                   | (Surface Mount) <b>-02</b><br>= Tiger Eye™ Contact (BeCu)     | <b>-L</b><br>= 10 μ" (0.25 μm) Gold on contact, Matte Tin on tail (Call Samtec for E.L.P.™ plating option) | <b>-S</b><br>= Single Row (SFM only)                                                           | Specify only -A, -LC or -DS (Not available with -DH, -SH)                                                                                                                                                                                     |
| <b>SFML</b><br>= Locking |   | <b>05, 07, 10, 15, 20, 25, 30, 35, 40, 45, 50</b><br>(Standard sizes) | (Through-hole) <b>-01, -03</b><br>= Tiger Eye™ Contact (BeCu) |                                                                                                            | <b>-D</b><br>= Double Row                                                                      | Specify only -K or -P (Lead styles -02, -L2, -T2 only)                                                                                                                                                                                        |
|                          |   |                                                                       | <b>-L2</b><br>= Low Insertion Force Tiger Eye™ Contact (BeCu) |                                                                                                            | <b>-SH</b><br>= Single Horizontal (05 thru 30 positions only) (SFM only) (Lead style -02 only) | <b>-A</b><br>= Alignment Pin                                                                                                                                                                                                                  |
|                          |   |                                                                       | <b>-T2</b><br>= Tiger Eye™ LITE Contact (Phosphor Bronze)     |                                                                                                            | <b>-DH</b><br>= Double Horizontal (05 thru 30 positions only) (SFM only) (Lead style -02 only) | <b>-LC</b><br>= Locking Clip (Manual placement required)                                                                                                                                                                                      |
|                          |   |                                                                       | <b>-T1</b><br>= Tiger Eye™ LITE Contact (Phosphor Bronze)     |                                                                                                            |                                                                                                | <b>-DS</b><br>= Dual Screw Down for (1.60 mm) .062" PCB (05 thru 40 positions only) (Lead styles -01, -02 & -03 only) (Requires -D row option) (Not available with SFML) (Mates with TFM-DS option) (Not available with -A, -LC, -K, -P, -XR) |
|                          |   |                                                                       |                                                               |                                                                                                            |                                                                                                | <b>-K</b><br>= Polyimide film Pick & Place Pad (Not available with -DH, -SH)                                                                                                                                                                  |
|                          |   |                                                                       |                                                               |                                                                                                            |                                                                                                | <b>-P</b><br>= Plastic Pick & Place Pad (Not available with -DH, -SH)                                                                                                                                                                         |
|                          |   |                                                                       |                                                               |                                                                                                            |                                                                                                | Specify -TR or -FR last; Required for -DH & -SH. (Lead styles -02, -L2 & -T2 only)                                                                                                                                                            |
|                          |   |                                                                       |                                                               |                                                                                                            |                                                                                                | <b>-TR</b><br>= Tape & Reel                                                                                                                                                                                                                   |
|                          |   |                                                                       |                                                               |                                                                                                            |                                                                                                | <b>-FR</b><br>= Full Reel Tape & Reel (must order max. quantity per reel; contact Samtec for quantity breaks)                                                                                                                                 |

**SFM**  
Board Mates:  
TFM  
Cable Mates:  
TFSD, TFSS

**SFML**  
Board Mates:  
TFML  
Cable Mates:  
TFSD



| LEAD STYLE    | A           | B           |
|---------------|-------------|-------------|
| -01, -L1, -T1 | (3.05) .120 | (0.51) .020 |
| -03, -L3      | (1.91) .075 | (0.41) .016 |



**Notes:**  
Severe Environment Testing qualified (SFM); aligns with MIL-DTL-55302. Visit [samtec.com/set](http://samtec.com/set)

Some lengths, styles and options are non-standard, non-returnable.

View complete specifications at: [samtec.com?SFM](http://samtec.com?SFM) & [samtec.com?SFML](http://samtec.com?SFML)

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

 View [SFM-120-02-S-D](#) on WIN SOURCE

 [Samtec Inc.](#) Information

## Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
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-  Shortage Management
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