

# Series 38 EMI Backshells

for MIL-DTL-38999 Series III/IV Connectors

## 380H\*105 EMI Backshell, Self-Locking



**Self-Locking**

**Adapter Code H**

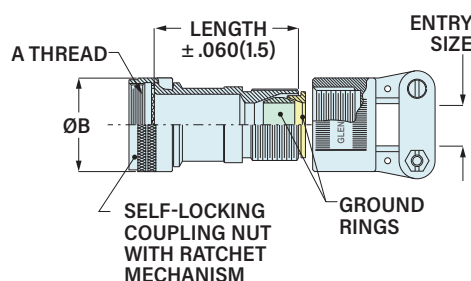
This accessory fits these connectors:  
MIL-DTL-38999 Series III and Series IV

### PROFILE SELECTION GUIDE

|                   |              |
|-------------------|--------------|
| <b>S</b> Straight | <b>A</b> 90° |
|                   |              |
| <b>B</b> 45°      | <b>C</b> 90° |
|                   |              |
| <b>D</b> 90°      | <b>F</b> 45° |
|                   |              |
| <b>H</b> 45°      | <b>J</b> 90° |
|                   |              |
| <b>M</b> 45°      | <b>N</b> 90° |
|                   |              |

### PART NUMBER

| PART NUMBER                                                                                                                                  |                                               | 380HS105                 | M                                                                               | 13         | 04              | H           | 3  |    |    |    |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--------------------------|---------------------------------------------------------------------------------|------------|-----------------|-------------|----|----|----|----|
| Base P/N                                                                                                                                     | Base Part No.                                 | Profile                  |                                                                                 |            |                 |             |    |    |    |    |
|                                                                                                                                              | 380HS105                                      | S                        | Straight                                                                        |            |                 |             |    |    |    |    |
|                                                                                                                                              | 380HA105                                      | A                        | 90° Elbow                                                                       |            |                 |             |    |    |    |    |
|                                                                                                                                              | 380HB105                                      | B                        | 45° Elbow                                                                       |            |                 |             |    |    |    |    |
|                                                                                                                                              | 380HC105                                      | C                        | 90° Low Prof.                                                                   |            |                 |             |    |    |    |    |
|                                                                                                                                              | 380HD105                                      | D                        | 90° Split                                                                       |            |                 |             |    |    |    |    |
|                                                                                                                                              | 380HF105                                      | F                        | 45° Split                                                                       |            |                 |             |    |    |    |    |
|                                                                                                                                              | 380HH105                                      | H                        | 45° Cut/Weld                                                                    |            |                 |             |    |    |    |    |
|                                                                                                                                              | 380HJ105                                      | J                        | 90° Cut/Weld                                                                    |            |                 |             |    |    |    |    |
|                                                                                                                                              | 380HM105                                      | M                        | 45° Full Radius                                                                 |            |                 |             |    |    |    |    |
| 380HN105                                                                                                                                     | N                                             | 90° Full Radius          |                                                                                 |            |                 |             |    |    |    |    |
| Material/Finish                                                                                                                              | M                                             | Alum/ Electroless Nickel |                                                                                 |            |                 |             |    |    |    |    |
|                                                                                                                                              | MT                                            | Alum/ Nickel-PTFE        |                                                                                 |            |                 |             |    |    |    |    |
|                                                                                                                                              | NF                                            | Alum/ Olive Drab Cadmium |                                                                                 |            |                 |             |    |    |    |    |
|                                                                                                                                              | ZR                                            | Alum/ Black Zinc-Nickel  |                                                                                 |            |                 |             |    |    |    |    |
|                                                                                                                                              | TZ                                            | Alum/ Tin-Zinc           |                                                                                 |            |                 |             |    |    |    |    |
| ZI                                                                                                                                           | SST/ Passivated (Profiles H, J, M, N, S only) |                          |                                                                                 |            |                 |             |    |    |    |    |
| Shell Size                                                                                                                                   | Shell Size                                    | 9                        | 11                                                                              | 13         | 15              | 17          | 19 | 21 | 23 | 25 |
|                                                                                                                                              | Size Code                                     | 09                       | 11                                                                              | 13         | 15              | 17          | 19 | 21 | 23 | 25 |
| Entry Size                                                                                                                                   | Entry Size                                    | Max. Cable Dia.          | Shell Size*                                                                     | Entry Size | Max. Cable Dia. | Shell Size* |    |    |    |    |
|                                                                                                                                              | 03                                            | .250 (7.9)               | 09-25                                                                           | 16         | .937 (23.8)     | 21-25       |    |    |    |    |
|                                                                                                                                              | 04                                            | .312 (7.9)               | 11-25                                                                           | 20         | 1.250 (31.8)    | 25          |    |    |    |    |
|                                                                                                                                              | 06                                            | .437 (11.1)              | 13-25                                                                           | 24         | 1.375 (34.9)    | -           |    |    |    |    |
|                                                                                                                                              | 08                                            | .562 (14.3)              | 15-25                                                                           | 28         | 1.625 (41.3)    | -           |    |    |    |    |
|                                                                                                                                              | 10                                            | .625 (15.9)              | 15-25                                                                           | 32         | 1.875 (47.6)    | -           |    |    |    |    |
|                                                                                                                                              | 12                                            | .750 (19.1)              | 17-25                                                                           |            |                 |             |    |    |    |    |
| * If selected entry size exceeds shell size range, a Style 2 transition adapter will be included. See <i>Maximum Entry Size</i> for details. |                                               |                          |                                                                                 |            |                 |             |    |    |    |    |
| ⚠ Profile C entry size cannot exceed shell size range listed in table.                                                                       |                                               |                          |                                                                                 |            |                 |             |    |    |    |    |
| Strain Relief                                                                                                                                | H                                             | Saddle Clamp             |                                                                                 |            |                 |             |    |    |    |    |
| Length                                                                                                                                       | 3                                             | 1.5 inches               | Applies to Profile S only.                                                      |            |                 |             |    |    |    |    |
|                                                                                                                                              | 4                                             | 2.0 inches               | If Entry Size is greater than "Maximum Entry Size" (see next page), then 2 inch |            |                 |             |    |    |    |    |
|                                                                                                                                              | 6                                             | 3.0 inches               | minimum applies.                                                                |            |                 |             |    |    |    |    |
|                                                                                                                                              | 8                                             | 4.0 inches               |                                                                                 |            |                 |             |    |    |    |    |



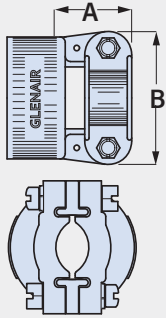
| Shell Size | A Thread   | ØB Max in | ØB Max mm |
|------------|------------|-----------|-----------|
| 9 (A)      | M12X1.0-6H | .94       | 24.8      |
| 11 (B)     | M15X1.0-6H | 1.06      | 26.9      |
| 13 (C)     | M18X1.0-6H | 1.17      | 29.7      |
| 15 (D)     | M22X1.0-6H | 1.29      | 32.7      |
| 17 (E)     | M25X1.0-6H | 1.42      | 36.1      |
| 19 (F)     | M28X1.0-6H | 1.54      | 39.1      |
| 21 (G)     | M31X1.0-6H | 1.67      | 42.4      |
| 23 (H)     | M34X1.0-6H | 2.01      | 51.1      |
| 25 (J)     | M37X1.0-6H | 2.12      | 53.8      |

# Series 38 EMI Backshells

for MIL-DTL-38999 Series III/IV Connectors

## 380H\*105 EMI Backshell, Self-Locking

### STRAIN RELIEF DIMENSIONS



| Entry Size | A Max |      | B Max |      | Cable Range |      |       |      |
|------------|-------|------|-------|------|-------------|------|-------|------|
|            | in    | mm   | in    | mm   | Min         | Max  | in    | mm   |
| 03         | .780  | 19.8 | .957  | 24.3 | .125        | .312 | .250  | 6.4  |
| 04         | .780  | 19.8 | .957  | 24.3 | .125        | .312 | .312  | 7.9  |
| 06         | .780  | 19.8 | 1.145 | 29.1 | .250        | .625 | .437  | 11.1 |
| 08         | .780  | 19.8 | 1.332 | 33.8 | .312        | .79  | .562  | 14.3 |
| 10         | .780  | 19.8 | 1.332 | 33.8 | .350        | .89  | .625  | 15.9 |
| 12         | .811  | 20.6 | 1.551 | 39.4 | .500        | 1.27 | .750  | 19.1 |
| 16         | .905  | 23.0 | 1.770 | 45.0 | .625        | 1.59 | .937  | 23.8 |
| 20         | 1.092 | 27.7 | 2.113 | 53.7 | .875        | 2.22 | 1.250 | 31.8 |
| 24         | 1.124 | 28.5 | 2.363 | 60.0 | 1.000       | 2.54 | 1.375 | 34.9 |
| 28         | 1.399 | 35.5 | 2.770 | 70.4 | 1.250       | 3.18 | 1.625 | 41.3 |
| 32         | 1.399 | 35.5 | 3.020 | 76.7 | 1.437       | 3.65 | 1.875 | 47.6 |

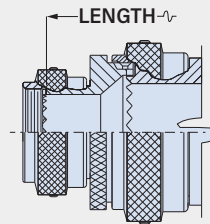
### MAXIMUM ENTRY SIZE

If the selected entry size exceeds the maximum size in this table, the backshell will have a front adapter. This is called a **Style 2** backshell.

**Profile C** backshells are not available with entry sizes larger than shown in table.

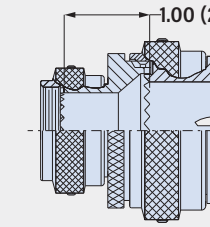
| Shell Size | Max. Entry Size | Shell Size | Max. Entry Size |
|------------|-----------------|------------|-----------------|
| 9 (A)      | 03              | 19 (F)     | 12              |
| 11 (B)     | 04              | 21 (G)     | 16              |
| 13 (C)     | 06              | 23 (H)     | 16              |
| 15 (D)     | 10              | 25 (J)     | 20              |
| 17 (E)     | 12              |            |                 |

### Style 2 Straight Backshell

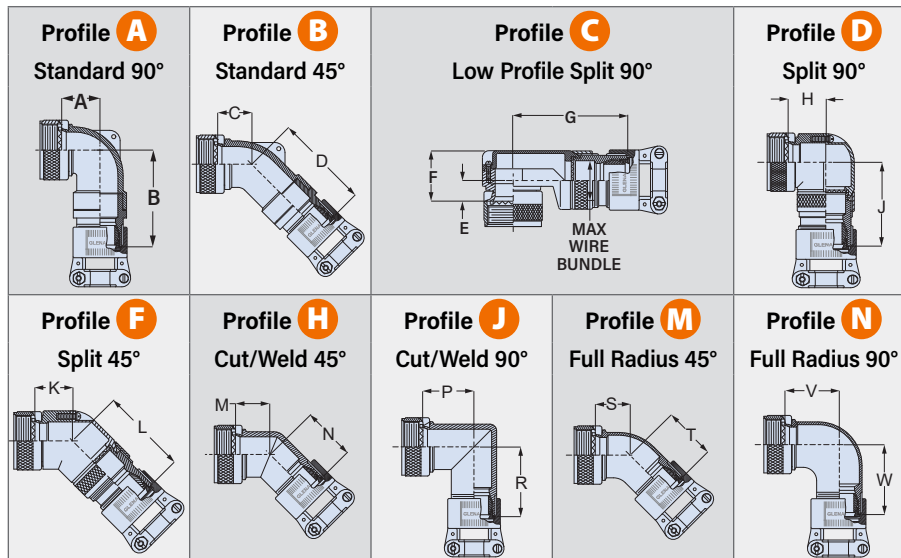


For Style 2 straight backshells, the minimum length code increases from 3 (1 1/2 inches) to 4 (2 inches).

### Style 2 45° and 90° Backshells



For Style 2 45° and 90° backshells, the length increases by 1.00 inches.



| Shell Size | Profile A |      |       |      | Profile B |      |       |      | Profile C |      |       |      |       |      |                 |      | Profile D |      |       |      |
|------------|-----------|------|-------|------|-----------|------|-------|------|-----------|------|-------|------|-------|------|-----------------|------|-----------|------|-------|------|
|            | A Max     |      | B Max |      | C Max     |      | D Max |      | E Max     |      | F Max |      | G Max |      | Max Wire Bundle |      | H Max     |      | J Max |      |
|            | in        | mm   | in    | mm   | in        | mm   | in    | mm   | in        | mm   | in    | mm   | in    | mm   | in              | mm   | in        | mm   | in    | mm   |
| 9 (A)      | .656      | 16.7 | 1.612 | 40.9 | .613      | 15.6 | 1.062 | 40.7 | .496      | 12.6 | .837  | 21.3 | 1.780 | 45.2 | .250            | 6.4  | .836      | 21.2 | 1.530 | 38.9 |
| 11 (B)     | .751      | 19.1 | 1.732 | 44.0 | .676      | 17.2 | 1.662 | 42.2 | .426      | 10.8 | .887  | 22.5 | 1.940 | 49.3 | .375            | 9.5  | .906      | 23.0 | 1.590 | 40.4 |
| 13 (C)     | .766      | 19.5 | 1.752 | 44.5 | .738      | 18.7 | 1.722 | 43.7 | .426      | 10.8 | .887  | 22.5 | 1.940 | 49.3 | .375            | 9.5  | .966      | 24.5 | 1.660 | 42.2 |
| 15 (D)     | .856      | 21.7 | 2.072 | 52.6 | .801      | 20.3 | 2.062 | 52.4 | .436      | 11.1 | .987  | 25.1 | 2.010 | 51.1 | .500            | 12.7 | 1.026     | 26.1 | 1.690 | 42.9 |
| 17 (E)     | 1.041     | 26.4 | 2.162 | 54.9 | .894      | 22.7 | 2.172 | 55.2 | .576      | 14.6 | 1.137 | 28.9 | 2.060 | 52.3 | .625            | 15.9 | 1.086     | 27.6 | 1.790 | 45.5 |
| 19 (F)     | 1.131     | 28.7 | 2.332 | 59.2 | 1.082     | 27.5 | 2.362 | 60.0 | .796      | 20.2 | 1.337 | 34.0 | 2.090 | 53.1 | .625            | 15.9 | 1.156     | 29.4 | 1.850 | 47.0 |
| 21 (G)     | 1.131     | 28.7 | 2.332 | 59.2 | 1.082     | 27.5 | 2.362 | 60.0 | .796      | 20.2 | 1.337 | 34.0 | 2.090 | 53.1 | .625            | 15.9 | 1.216     | 30.9 | 1.910 | 48.5 |
| 23 (H)     | 1.281     | 32.5 | 2.442 | 62.0 | 1.176     | 29.9 | 2.512 | 63.8 | .696      | 17.7 | 1.337 | 34.0 | 2.240 | 56.9 | .750            | 19.1 | 1.276     | 32.4 | 1.970 | 50.0 |
| 25 (J)     | 1.281     | 32.5 | 2.442 | 62.0 | 1.176     | 29.9 | 2.512 | 63.8 | .696      | 17.7 | 1.337 | 34.0 | 2.240 | 56.9 | .750            | 19.1 | 1.336     | 33.9 | 2.030 | 51.6 |

| Shell Size | Profile F |      |       |      | Profile H |      |       |      | Profile J |      |       |      | Profile M |      |       |      | Profile N |      |       |      |
|------------|-----------|------|-------|------|-----------|------|-------|------|-----------|------|-------|------|-----------|------|-------|------|-----------|------|-------|------|
|            | K Max     |      | L Max |      | M Max     |      | N Max |      | P Max     |      | R Max |      | S Max     |      | T Max |      | V Max     |      | W Max |      |
|            | in        | mm   | in    | mm   | in        | mm   | in    | mm   | in        | mm   | in    | mm   | in        | mm   | in    | mm   | in        | mm   | in    | mm   |
| 9 (A)      | .596      | 15.1 | 1.590 | 40.4 | .795      | 20.2 | 1.015 | 25.8 | .906      | 23.0 | 1.125 | 28.6 | .968      | 24.6 | .875  | 22.2 | 1.281     | 32.5 | 1.188 | 30.2 |
| 11 (B)     | .656      | 16.7 | 1.650 | 41.9 | .820      | 20.8 | 1.045 | 26.5 | .966      | 24.5 | 1.185 | 30.1 | 1.031     | 26.2 | .938  | 23.8 | 1.406     | 35.7 | 1.312 | 33.3 |
| 13 (C)     | .716      | 18.2 | 1.720 | 43.7 | .844      | 21.4 | 1.065 | 27.1 | 1.026     | 26.1 | 1.245 | 31.6 | 1.094     | 27.8 | 1.000 | 25.4 | 1.531     | 38.9 | 1.438 | 36.5 |
| 15 (D)     | .776      | 19.7 | 1.750 | 44.5 | .861      | 21.9 | 1.095 | 27.8 | 1.076     | 27.3 | 1.315 | 33.4 | 1.156     | 29.4 | 1.062 | 27.0 | 1.656     | 42.1 | 1.562 | 39.7 |
| 17 (E)     | .836      | 21.2 | 1.850 | 47.0 | .888      | 22.6 | 1.115 | 28.3 | 1.136     | 28.9 | 1.375 | 34.9 | 1.219     | 31.0 | 1.125 | 28.6 | 1.781     | 45.2 | 1.688 | 42.9 |
| 19 (F)     | .906      | 23.0 | 1.910 | 48.5 | .904      | 23.0 | 1.125 | 28.6 | 1.176     | 29.9 | 1.395 | 35.4 | 1.250     | 31.8 | 1.156 | 29.4 | 1.906     | 48.4 | 1.812 | 46.0 |
| 21 (G)     | .976      | 24.8 | 1.970 | 50.0 | .929      | 23.6 | 1.145 | 29.1 | 1.236     | 31.4 | 1.445 | 36.7 | 1.312     | 33.3 | 1.219 | 31.0 | 2.031     | 51.6 | 1.938 | 49.2 |
| 23 (H)     | 1.036     | 26.3 | 2.030 | 51.6 | .956      | 24.3 | 1.185 | 30.1 | 1.296     | 32.9 | 1.535 | 39.0 | 1.344     | 34.1 | 1.250 | 31.8 | 2.156     | 54.8 | 2.062 | 52.4 |
| 25 (J)     | 1.096     | 27.8 | 2.090 | 53.1 | .979      | 24.9 | 1.215 | 30.9 | 1.356     | 34.4 | 1.605 | 40.8 | 1.406     | 35.7 | 1.312 | 33.3 | 2.281     | 57.9 | 2.188 | 55.6 |

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