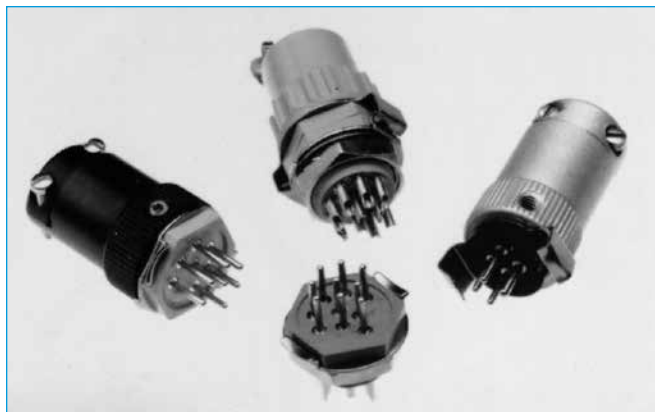


Size 20 Contacts
High Performance
Construction
5 Insulator Variants
4 through 10 Contacts

UL Recognized
File #E49351



GH series connectors are high reliability, hexagonal connectors offered with solder and straight solder terminations. Contacts have 0.040 inch [1.02 mm] diameters and are rated to 7.5 amperes per contact. Five connector variants, four through ten poles, are offered.

GH series connectors have DAP insulators. A variety of plastic and metal hoods are available, and the locking system is achieved by a lock-ring spring mechanism. Polarization is accomplished by contact layouts or by an oversized contact.

GH series connectors are ideal for use in industrial and instrumentation applications where light weight, miniature, high reliability interconnections are necessary.



For RoHS options
see page 8.

TECHNICAL CHARACTERISTICS

MATERIALS AND FINISHES:

Insulator:	Glass-filled DAP per ASTM-D-5948, Type SDG-F. Grey color is standard.
Contacts:	Precision machined copper alloy.
Contact Plating:	Gold flash over nickel.
Hoods:	Aluminum with yellow or black anodize. Glass-filled DAP.
Lock Rings and Lock Springs:	Copper alloy with zinc plate and chromate seal.

MECHANICAL CHARACTERISTICS:

Fixed Contacts:	Size 20 contact, male - 0.040 inch [1.02 mm] diameter. Female contact - open entry is standard. "Closed entry" is available on solder cup contacts for high reliability applications.
Contact Retention in Insulator:	10 lbs. [44.5N], minimum.
Contact Termination:	Solder cup - 0.046 inch [1.17 mm] hole diameter for 20 AWG [0.5 mm ²] wire maximum Straight printed board mount - 0.025 inch [0.64 mm] termination diameter.
Locking Systems:	Friction, lock spring with lock ring.

MECHANICAL CHARACTERISTICS, continued:

Polarization:	0.056 inch [1.42 mm] diameter male contact in position "A" on Size 4 connector. Molding configuration provides polarization on other sizes.
Mechanical Operations:	
Open Entry Contacts:	250 operations per IEC 60512-5.
Closed Entry Contacts:	500 operations per IEC 60512-5.

ELECTRICAL CHARACTERISTICS:

Contact Current Rating:	7.5 amperes, maximum.
Initial Contact Resistance:	0.010 ohms, maximum.
Flash over Voltage:	1,750 VAC (rms).
Test Voltage:	1,200 VAC (rms).
Insulation Resistance:	5 G ohms.
Clearance and Creepage Distance:	0.025 inch [0.64 mm], minimum.
Working Voltage:	600 VAC (rms).

CLIMATIC CHARACTERISTICS:

Temperature Range:	-55°C to +125°C.
Damp Heat, Steady State:	21 days.



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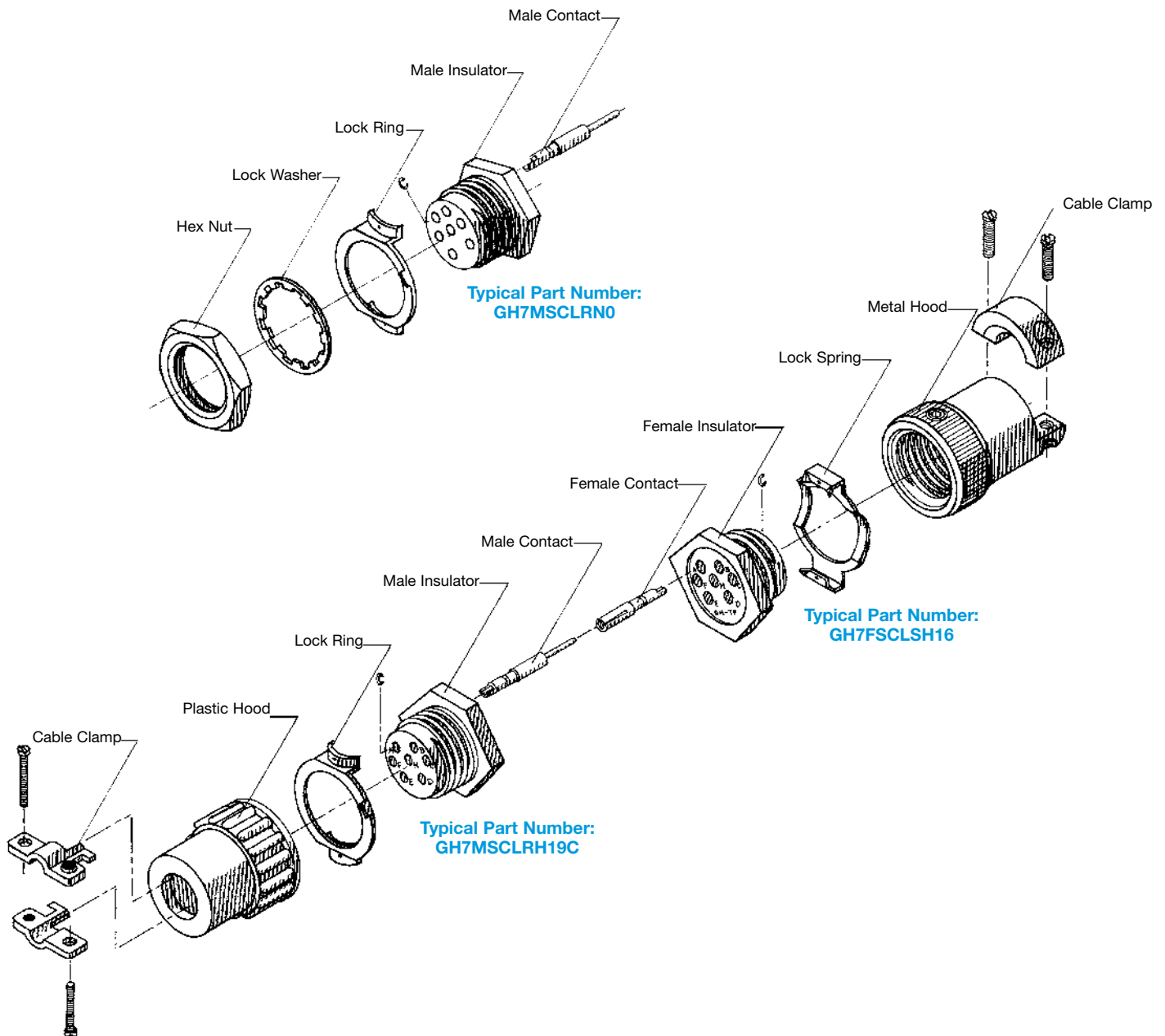
GH SERIES

PROFESSIONAL QUALITY / FIXED CONTACTS

MINIATURE CIRCLE HEX CONNECTORS

Circle
Hex

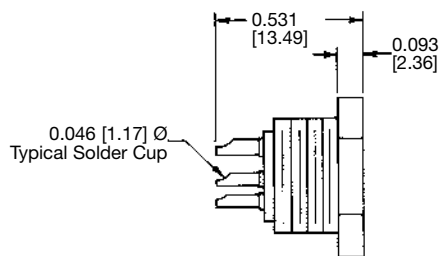
EXPLODED VIEW OF TYPICAL CONNECTOR ASSEMBLY



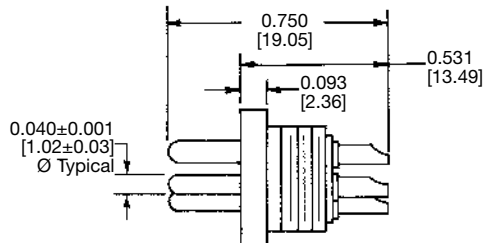
SOLDER CUP TERMINATION

CODE SC ^{*1}

For solder cup contacts, specify contact code "SC" in Step 4 of the ordering information on page 8.



TYPICAL PART NUMBER: GH4FSC00



TYPICAL PART NUMBER: GH4MSC00

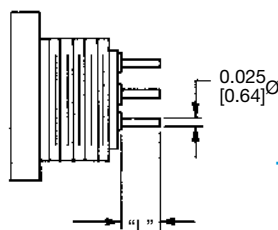
NOTE:

^{*1} GH4 has 0.056±0.001 [1.42±0.03] Ø Pin in "A" position for polarization.

STRAIGHT SOLDER PRINTED BOARD MOUNT TERMINATION

CODE DS3, DS4, DS5 and DS6 ^{*1}

For straight solder contacts, specify contact code (DS3, DS4, DS5, or DS6) for desired length of contact termination in Step 4 of the ordering information on page 8.



TYPICAL PART NUMBER
GH5FDS400

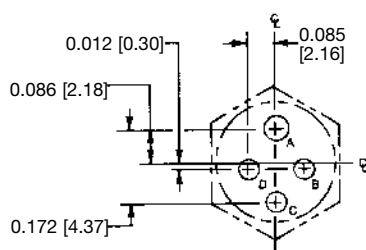
NOTE:

^{*1} Straight solder contacts are not available in GH4 connector.

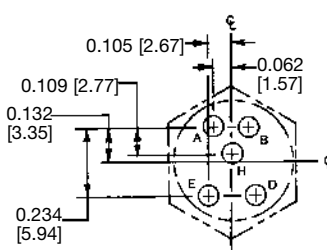
CONTACT CODE	"L"
DS3	0.093 [2.36]
DS4	0.125 [3.18]
DS5	0.156 [3.96]
DS6	0.187 [4.75]

CONTACT HOLE POSITION DIMENSIONS AND PRINTED BOARD MOUNT CONTACT HOLE PATTERN

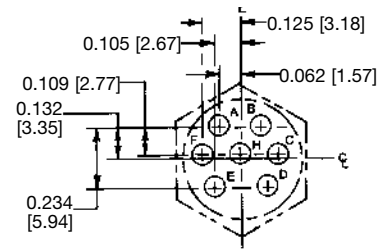
HOLE IDENTIFICATION SHOWN IS FOR MATING FACE OF FEMALE CONNECTOR. USE MIRROR IMAGE FOR MALE CONNECTOR.



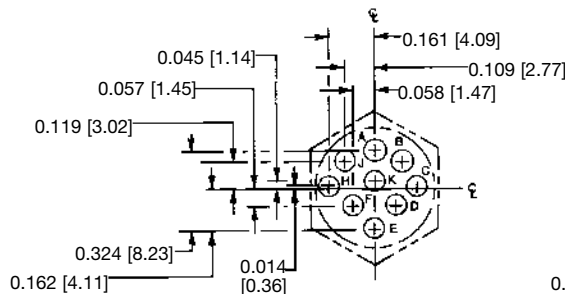
GH4



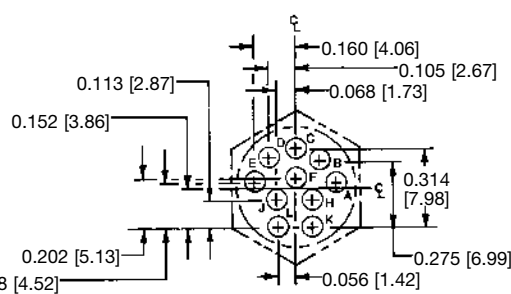
GH5



GH7



GH9



GH10

SUGGESTED PRINTED BOARD HOLE SIZES:

Suggest 0.040 [1.01] Ø holes in printed board for contact terminations.

DIMENSIONS ARE IN INCHES [MILLIMETERS].
ALL DIMENSIONS ARE SUBJECT TO CHANGE.



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GH SERIES

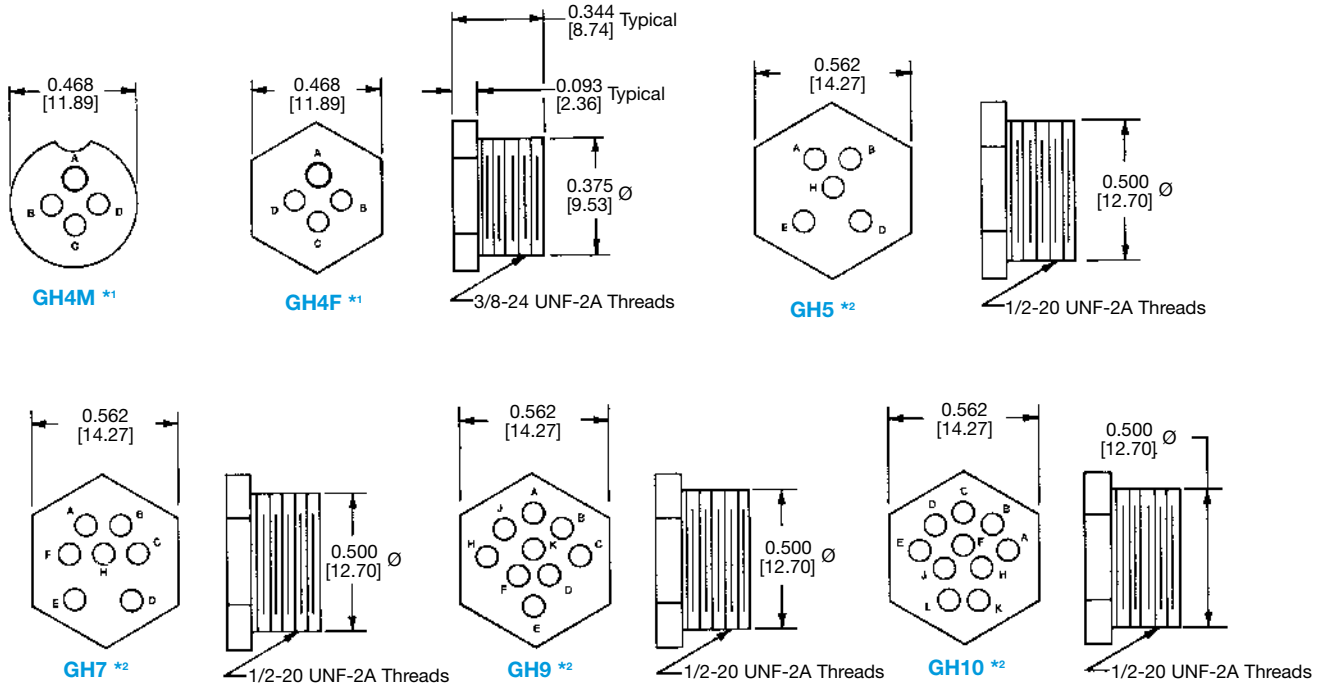
PROFESSIONAL QUALITY / FIXED CONTACTS

MINIATURE CIRCLE HEX CONNECTORS

Circle
Hex

INSULATOR DIMENSIONS

MATING FACE OF FEMALE CONNECTOR FOR SIZES GH 5, 7, 9, AND 10.



NOTES:

*1 Size GH4 uses 0.056 [1.42] Ø pin in position "A" for polarization.
For all other sizes, the body design provides polarization.

*2 For Sizes 5 through 10, male and female connector dimensions are typical.

See GH Series Printed Board Hole Patterns, page 3 of this catalog, for contact variant hole positions.

TYPICAL MATING ASSEMBLIES

GH4MSCLSH10C



GH4FSCLRNO

GH5FSCLR19S



GH5MSCLSH19

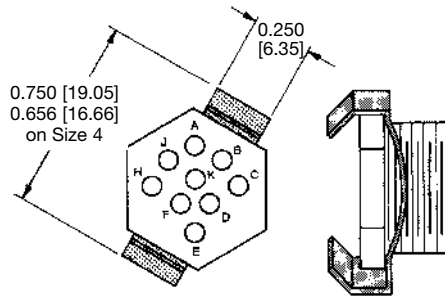
GH10FSCLSH16



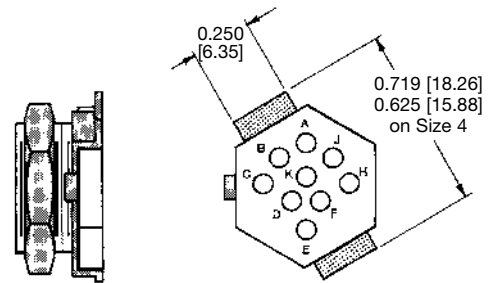
GH10MDS4LRNO

LOCKING DEVICES

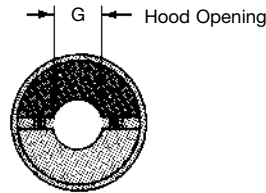
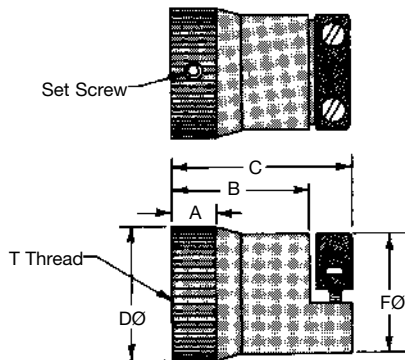
LOCK SPRING CODE LS



LOCK RING AND NUT CODE LRN



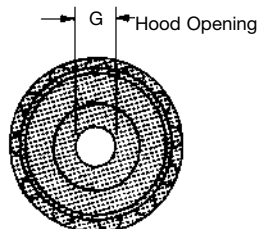
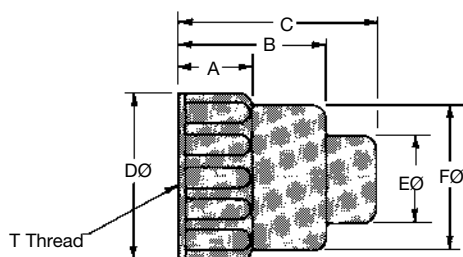
ALUMINUM HOODS CODE H14 and H16



HOOD CODE	CONNECTOR SIZE	A	B	C	D	F	G	T THREAD
H14	GH-4	0.250 [6.35]	0.799 [20.29]	1.062 [26.97]	0.594 [15.09]	0.563 [14.30]	0.218 [5.54]	3/8-24 UNF-2B
H16	GH-5, 7, 9, 10	0.260 [6.60]	0.708 [17.98]	0.938 [23.82]	0.632 [16.05]	0.578 [14.68]	0.250 [6.35]	1/2-20 UNF-2B

STANDARD PLASTIC HOOD

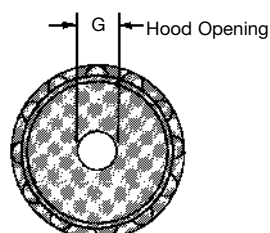
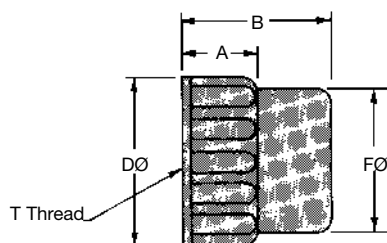
CODE H10 and H19



HOOD CODE	CONNECTOR SIZE	A	B	C	D	E	F	G	T THREAD
H10	GH4	0.312 [7.92]	0.687 [17.45]	0.750 [19.05]	0.562 [14.27]	0.250 [6.35]	0.437 [11.10]	0.157 [3.99]	3/8-24 UNF-2B
H19	GH 5, 7, 9, 10	0.281 [7.14]	0.656 [16.66]	0.875 [22.23]	0.655 [16.64]	0.422 [10.72]	0.540 [13.72]	0.297 [7.54]	1/2-20 UNF-2B

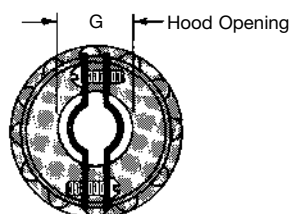
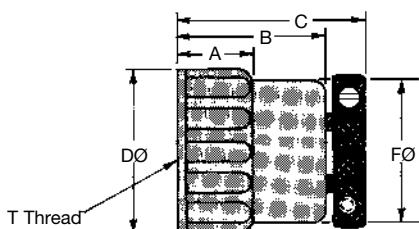
SHORT PLASTIC HOOD

CODE H10S and H19S



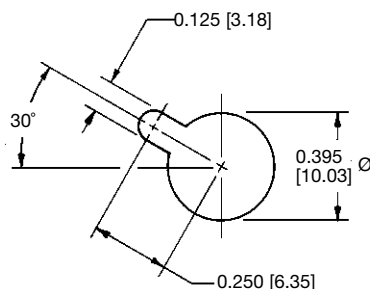
HOOD CODE	CONNECTOR SIZE	A	B	D	F	G	T THREAD
H10S	GH4	0.312 [7.92]	0.687 [17.45]	0.562 [14.27]	0.437 [11.10]	0.157 [3.99]	3/8-24 UNF-2B
H19S	GH 5, 7, 9, 10	0.281 [7.14]	0.656 [16.66]	0.655 [16.64]	0.540 [13.72]	0.297 [7.54]	1/2-20 UNF-2B

PLASTIC HOODS WITH CABLE CLAMPS

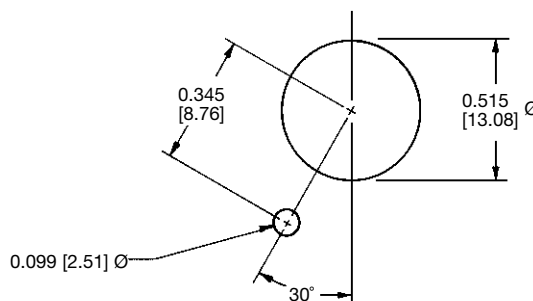


HOOD CODE	CONNECTOR SIZE	A	B	C	D	F	G	T THREAD
H10C	GH4	0.312 [7.92]	0.687 [17.45]	0.851 [21.61]	0.562 [14.27]	0.437 [11.10]	0.209 [5.31]	3/8-24 UNF-2B
H19C	GH 5, 7, 9, 10	0.281 [7.14]	0.656 [16.66]	0.820 [20.83]	0.655 [16.64]	0.540 [13.72]	0.297 [7.54]	1/2-20 UNF-2B

PANEL CUT-OUT DIMENSIONS



SIZE 4



SIZES 5, 7, 9, & 10





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GH SERIES

PROFESSIONAL QUALITY / FIXED CONTACTS

MINIATURE CIRCLE HEX CONNECTORS

Circle
Hex

ORDERING INFORMATION - CODE NUMBERING SYSTEM

Specify Complete Connector By Selecting An Option From Step 1 Through 6

STEP	1	2	3	4	5	6	7	8	9
EXAMPLE	GH	10	M	SC	LRN	0	CE	/AA	

STEP 1 - BASIC SERIES

GH Series

STEP 2 - CONNECTOR VARIANTS

4, 5, 7, 9, 10

STEP 3 - CONNECTOR GENDER

M - Male
F - Female

STEP 4 - CONTACT TERMINATION TYPE

SC - Solder Cup. For "Closed Entry" design, add "CE" in Step 7.
DS3 - Straight Solder, 0.093 [2.36].
DS4 - Straight Solder, 0.125 [3.18].
DS5 - Straight Solder, 0.156 [3.96].
DS6 - Straight Solder, 0.187 [4.75].

NOTE: DS contacts are not available on GH4 connector.

STEP 5 - MOUNTING AND LOCKING ACCESSORIES

LR - Lock Ring.
LS - Lock Spring.
N - Mounting Nut.
W - Lockwasher.
0 - If no mounting or locking accessories are required.

NOTE: When the Lock Ring (LR) or Lock Spring (LS) are ordered with the Mounting Nut (N), a Lockwasher (W) is furnished.

STEP 9 - SPECIAL OPTIONS

**CONTACT TECHNICAL SALES
FOR SPECIAL OPTIONS**

STEP 8 - ENVIRONMENTAL COMPLIANCE OPTIONS

/AA - Compliant per EU Directive
2002/95/EC (RoHS)

NOTE: If compliance to
environmental legislation is not
required, this step will not be used.
Example: GH10MSCLRN0



STEP 7 - ADDITIONAL FEATURES

*1 B - For black anodized aluminum parts.
CE - "Closed Entry" contacts on female solder
contact.

NOTE: Position "A" of GH4 connector is available
as "Open Entry" only.

**SKIP STEP 7 - IF NO ADDITIONAL FEATURES
ARE REQUIRED**

STEP 6 - CABLE ADAPTERS (HOODS)

H10 - Standard plastic hood offered on 4 variant.
H19 - Standard plastic hood offered on 5, 7, 9, and
10 variants.
H10S - Short plastic hood offered on 4 variant.
H19S - Short plastic hood offered on 5, 7, 9, and 10
variants.
H10C - Plastic hood with cable clamps offered on 4
variant.
H19C - Plastic hood with cable clamps offered on 5, 7,
9, and 10 variants.
*1 H14 - Aluminum hood offered on 4 variant.
*1 H16 - Aluminum hood offered on 5, 7, 9, and 10
variants.
0 - If no hoods are required.

NOTE:

*1 Yellow anodize finish is standard for Aluminum parts.