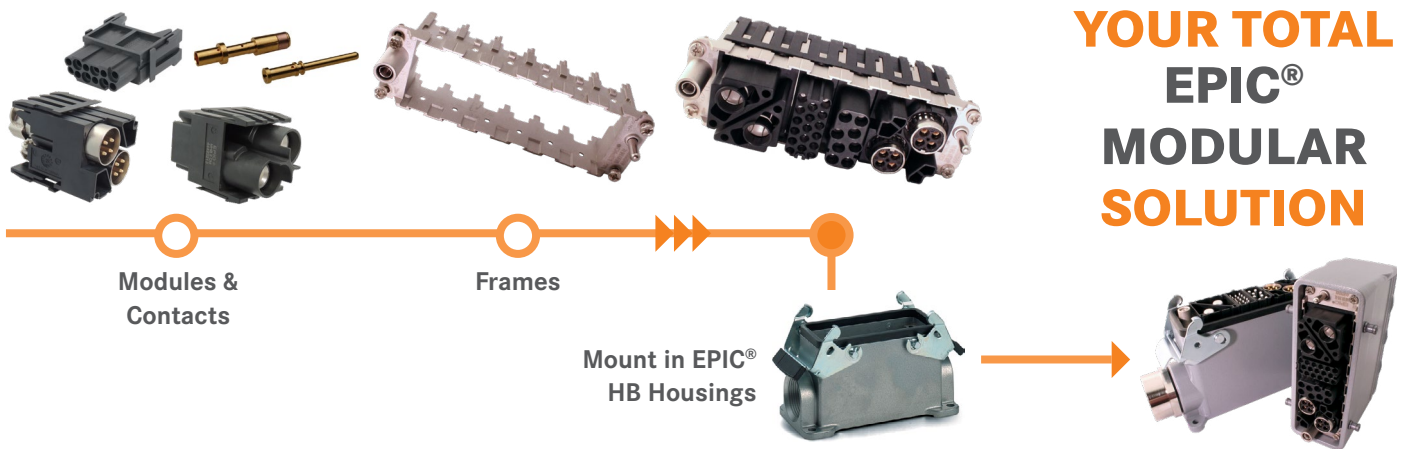


EPIC[®] Modular Connectors MC + MH Modular Inserts

Catalog configurable connectivity solutions for smart manufacturing,
factory automation, harsh environments and heavy-duty applications





What are Modular Inserts

EPIC® Modular Inserts combine high-power, data, signal and pneumatic connections all in the same connector that fits standard HB Series rectangular housings.

They Carry:

- Power: 1 A to 320 A, up to 1,000 V
- Data: gigabit industrial Ethernet (Cat7 copper or fiber), USB, coax
- Signal and control wiring
- Pneumatic

How the EPIC® Modular System Works:

Build an insert from individual modules that snap into a frame, so the connector matches exactly what the application needs – no more, no less.

Benefits

- Configure each insert to fit the application precisely, combining power, signal, data and pneumatic modules in one connector.
- Save panel space: the insert carries only the modules you actually need.
- Assemble quickly: modules simply snap into place, with no special tooling.

Choosing the MC or MH

MC and MH modular inserts mount in standard HB Series housings and carry power, signal, data and pneumatic connections in a single connector. What sets them apart is compatibility and module range.

- Pick the MC where there is a choice for new designs or cross-brand compatibility. MC offers the widest range of modular solutions & compatibility.
- Pick the MH for HARTING & Phoenix intermateability, gigabit and fiber data, touch-safe high-voltage modules and up to 36 poles.



EPIC® Modular has you covered

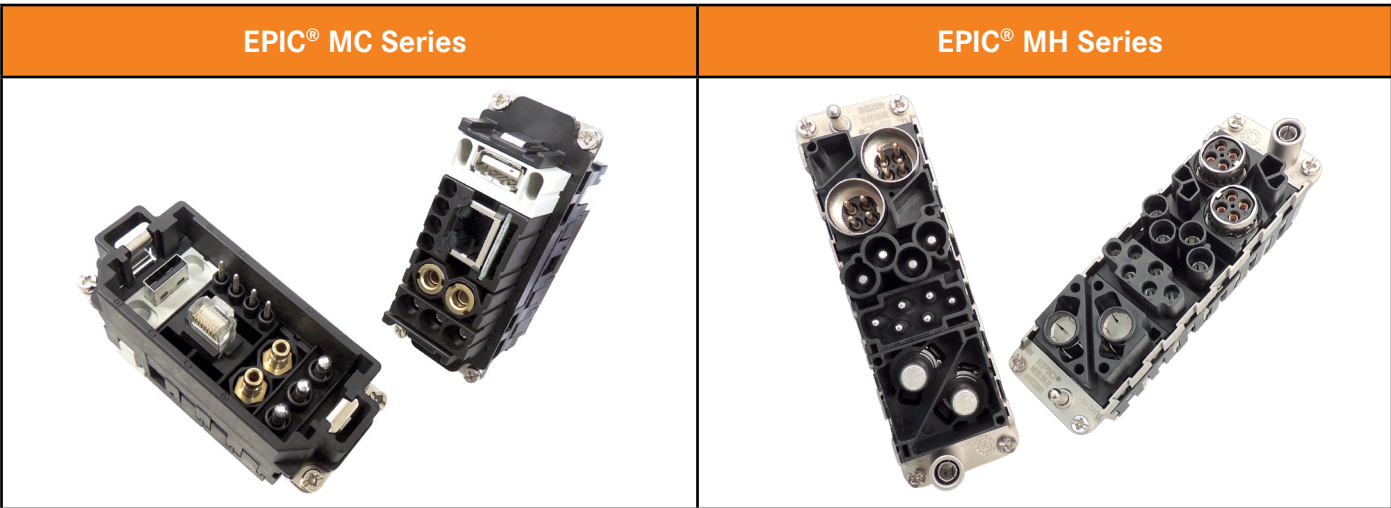


Compatibility at a Glance

- MC and MH are separate systems that don’t intermate with each other. Their frames and modules are not interchangeable: MC uses a plastic frame, and MH uses a metal frame.
- MC cross-mates with Amphenol, Weidmüller, Wieland and Walther modular connectors.
- MH is intermateable with the HARTING & Phoenix modular standard.
- Both MC and MH inserts mount in standard EPIC® HB Series housings.

	MC Series	MH Series
Max current	320 A	250 A
Rated Voltage	30-1,000 V	50-1,000 V
Rated Current	1-320 A	10-250 A
Wire range	30 AWG – 3/0 AWG	26 AWG – 3/0 AWG
Compatible Housing	HB Series	HB Series
Module Number	2, 3, 5, 7	2, 3, 4, 6
Available Modules	22 Modules – 44 Part Numbers	19 Modules – 50 Part Numbers
Specialty Modules	Bus + RJ45, Ethernet, Coax & Pneumatic	Gigabit, Fiber Optic, Coax
Brand Compatibility	Amphenol, Weidmüller, Wieland and Walther	HARTING & Phoenix

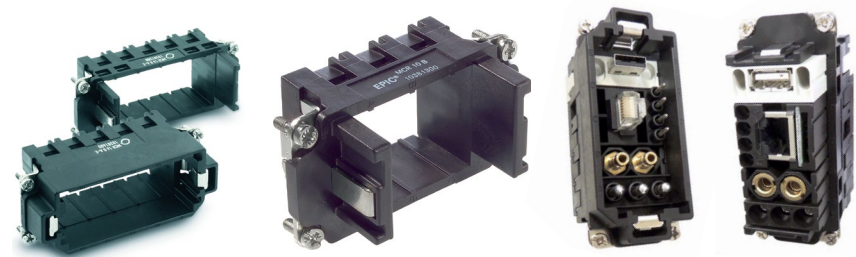
Beyond these figures, the number of module slots per frame differs between the two systems, and individual modules vary in termination style, contact count, voltage and current. See each system’s selection table for details.



An Overview of MC Inserts

- High current, high voltage
- 1 to 20 poles
- Profibus, RJ45 Industrial Ethernet module
- Coax module 50 Ω, 75 Ω
- Pneumatic modules

Rated voltage: 30 – 1,000 V
Rated current: 320 A max



Number of Poles				
Frame	Modules	Plug	Receptacle	Housing Size
MCR 6	2	10381000	10381100	HB 6
MCR 10	3	10381000	10381300	HB 10
MCR 16	5	10381400	10381500	HB 16
MCR 24	7	10381600	10381700	HB 24
MCR 16 (x2)	10 (5 x 2)	10381400 (x2)	10381500 (x2)	HB 32
MCR 24 (x2)	14 (7 x 2)	10381600 (x2)	10381700 (x2)	HB 48

Benefits

- Precise mating, thanks to guide pins on the frames.
- Unlimited module combinations for maximum flexibility.

Position sizing: 11.4 mm = 1 position; 22.8 mm = 2 positions.

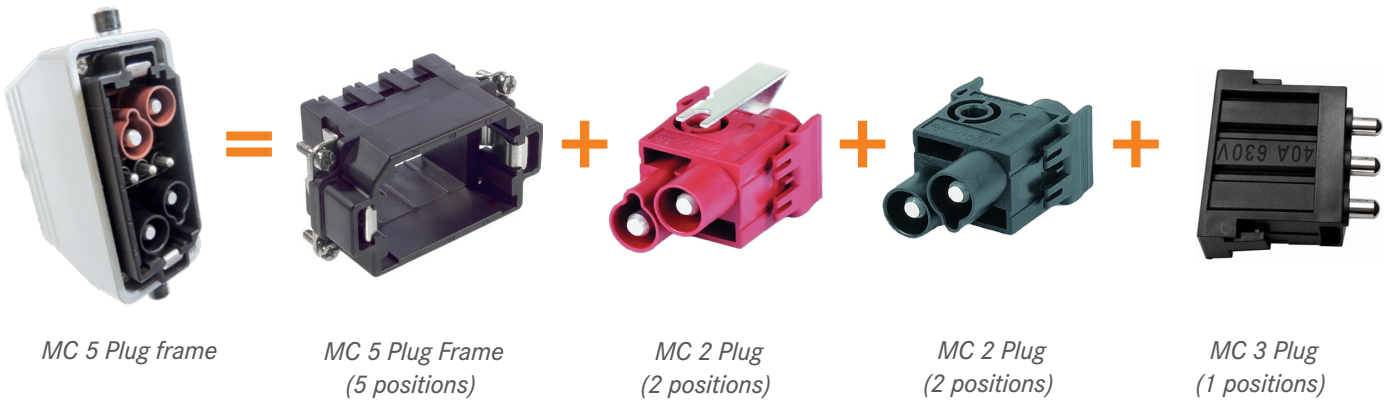
Configuration

- Modules consume either single or double positions in the frame.
- Add the total number of positions to determine the frame size.
- Select a Plug or Receptacle frame.

What you need to complete one insert half:

- Frame
- Modules
- Contacts

Example (5-position frame): MC 5 Plug frame = MC 2 Plug (2 positions) + MC 2 Plug (2 positions) + MC 3 Plug (1 position).



EPIC® MC Insert Selection Table

Contacts	EPIC® Module	Description	Plug	Receptacle	Rated Voltage	Rated Current	Removal Tool
1	MC HHC1	High current	44424030	44424031	1,000 V	220 A	No
2	MC HC2		44424012	44424013	1,000 V	65 A	No
2	MC HHC2	High current	44424030	44424018	1,000 V	220 A	No
2	MC 2	2 working contacts	10344100	10345100	1,000 V	150 A	No
2	MC 2	1 working contact + 1 ground	10344600	10345600	1,000 V	82 A	No
3	MC 3 Coax	Coax Module	10399200	10399300	250 V	82 A	Yes
3	MC 3	3 contacts	10382000	10382100	630 V		Yes
3	MC 3 High Voltage	High voltage	10399800	10399900	100 V	40 A	Yes
4	MC 4 HE	HE module	10399000	10399100	630 V	50 A	No
4+PE	MC 4+PE High Voltage	High voltage + ground	10383200	10383300	1,000 V	25 A	Yes
5	MC 5	5 contacts	10382200	10382300	400 V	16 A	Yes
10	MC 10	With machined contacts	10382400	10382500	250 V	20 A	Yes
10	MC 10	With stamped & formed contacts	10383400	10383500	250 V	10 A	Yes
20	MC 20	Low voltage	10383600	10383700	100 V	10 A	Yes
0	MC Dummy	Dummy module	10399400	10399500		4 A	Yes
4	MC Cage Clamp	Cage clamp module	10399600	10399700	400 V		Yes
2 + Shield	MC PROFIBUS DP	For PROFIBUS® DP	10390400	10390500	30 V	14 A	No
4+RJ45	MC Ethernet	RJ45 connector + 4 power contacts	10344300	10345300	600 V	1 A	Yes
1	MC Pneumatic	Pneumatic hose with 2.5 mm diameter	44424004	44424005	145 psi	10 A	Yes
1	MC Pneumatic	Pneumatic hose with 4 mm diameter	44424006	44424007	145 psi		Yes
2	MC Pneumatic	Pneumatic hose with 2.5 mm diameter	44424008	44424009	145 psi		Yes
2	MC Pneumatic	Pneumatic hose with 4 mm diameter	44424010	44424011	145 psi		Yes



An Overview of MH Inserts

Module

- High current, high voltage
- 1 to 36 poles
- Gigabit and fiber optic module
- Coax module

Rated voltage: 50 – 1,000 V
Rated current: 16 – 250 A max



Number of Poles		
Frame	Modules	Housing Size
MCR 6	2	HB 6
MCR 10	3	HB 10
MCR 16	4	HB 16
MCR 24	6	HB 24
MCR 16 (x2)	8 (4x2)	HB 32
MCR 24 (x2)	12 (6x2)	HB 48

Benefits

- Carries power, signal and data (Cat7 and fiber optic) in one insert.
- High-current module with touch-safe connections.
- Polarized modules ensure quick, accurate assembly.

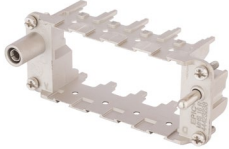
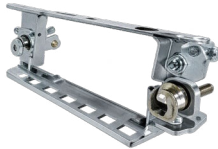
Configuration

Build your total EPIC® MH solution by combining modules and frames:

- A Choose your modules: power, signal and data.
- Choose your insert frame.
- Modules + frame = your complete EPIC® MH solution, compatible with the market standard.

MH Gigabit Cable Clamp	
LAPP Part #	Description
44423282	5-7 MM
44423283	7-10 MM
44423284	10-12 MM



Possible Configurations		
Insert	Frame	
 EPIC® MH	 EPIC® MH	✓
 Market Standard	 Adapter Clip	✓
 EPIC® MHB	 Market Standard	✗

EPIC® MH Selection Table

Market Standard #	LAPP Part #	Description	Insert Type	Contact Size
09140022651	44423212	MHS 2 CRM	Plug	8 MM = *8 AWG - 2 AWG
09140022653				
09140022751	44423213	MHB 2 CRF	Socket	8 MM = *8 AWG - 2 AWG
09140022753				
09140033001	44423214	MHS 3 CRM	Plug	4 MM = 16 AWG - 8 AWG
09140033101	44423215	MHB 3 CRF	Socket	4 MM = 16 AWG - 8 AWG
09140043041	44423216	MHS 4 CRM	Plug	4 MM = 16 AWG - 8 AWG
09140043141	44423217	MHB 4 CRF	Socket	4 MM = 16 AWG - 8 AWG
09140063001	44423218	MHS 6 CRM	Plug	2.5 MM = 26 AWG - 20 AWG
09140063101	44423219	MHB 6 CRF	Socket	2.5 MM = 26 AWG - 20 AWG
09140083001	44423220	MHS 8 CRM	Plug	2.5 MM = 26 AWG - 20 AWG

Market Standard #	LAPP Part #	Description	Insert Type	Contact Size
09140083101	44423221	MHB 8 CRF	Socket	2.5 MM = 26 AWG - 20 AWG
09140122632	44423222	MHS 12 CRM *	Plug	1.6 MM = 26 AWG -14 AWG
09140122732	44423223	MHB 12 CRF *	Socket	1.6 MM = 26 AWG -14 AWG
09140123002	44423222	MHS 12 CRM	Plug	1.6 MM = 26 AWG -14 AWG
09120123102	44423223	MHB 12 CRF	Socket	1.6 MM = 26 AWG -14 AWG
09140173001	44423224	MHS 17 CRM	Plug	1.6 MM = 26 AWG -14 AWG
09140173101	44423225	MHB 17 CRF	Socket	1.6 MM = 26 AWG -14 AWG
09140203001	44423226	MHS 20 CRM	Plug	2.5 MM = 26 AWG - 20 AWG
09140203101	44423227	MHB 20 CRF	Socket	2.5 MM = 26 AWG - 20 AWG
09140122634	44423222	MHS 12 CRM *	Plug	1.6 MM = 26 AWG -14 AWG
09140122734	44423223	MHB 12 CRF *	Socket	1.6 MM = 26 AWG -14 AWG
09140023001	44423228	MHS BUS 2x(4) CRM	Plug	2.5 MM = 26 AWG - 20 AWG
09140023101	44423230	MHB BUS 2x(4) CRF	Socket	2.5 MM = 26 AWG - 20 AWG
09150043013	44423229	MHS BUS PIN 1x(4) CRM	Plug	1.6 MM = 26 AWG -14 AWG
09150043113	44423231	MHB BUS PIN 1x(4) CRF	Socket	1.6 MM = 26 AWG -14 AWG
09150013013	44423260	MHS Coax CRM	Plug	1.6 MM = 26 AWG -14 AWG
09150013013	44423261	MHB Coax CRF	Socket	1.6 MM = 26 AWG -14 AWG
09150013023	44423262	MHS Coax D=CRM	Plug	2.5 MM = 26 AWG - 20 AWG
09150013123	44423263	MHB Coax D=CRF	Socket	2.5 MM = 26 AWG - 20 AWG
09140013011	44423276	MHS Gigabit M*	Plug	1 MM = 28 AWG - 20 AWG
09140013011	44423277	MHB Gigabit F*	Socket	1 MM = 28 AWG - 20 AWG
09140013012	44423279	MHS Gigabit PIN + GND*	Plug	1 MM = 28 AWG - 20 AWG
09140013012	44423281	MHB Gigabit PIN + GND*	Socket	1 MM = 28 AWG - 20 AWG
09140009950	44423232	MH 0	Plug	1 MM = 28 AWG - 20 AWG
09140009950	44423233	MH 0	Socket	1 MM = 28 AWG - 20 AWG

CRM = requires male crimp contacts (not included)
CRF = requires female crimp contacts (not included)

* = not quick-lock; requires gold contacts
* = MH Gigabit Cable Clamp available, see above

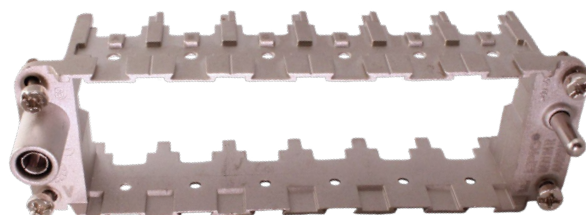
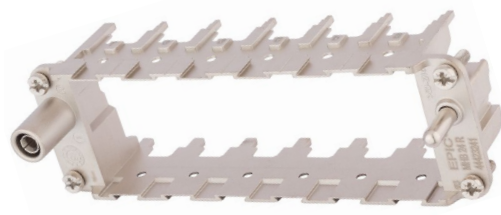


MH Gigabit Kit		
LAPP Part #	Size	Insert Type
44423291	Small	Plug
44423292	Small	Receptacle
44423326	Medium	Plug
44423327	Medium	Receptacle



Frames

Market Standard #	LAPP Part #	Description	Modules	EPIC® Housing
09140060361	44423234	MHS 6 R M	2	HB 6
09142060303				
09140060371	44423235	MHB 6 R F	2	HB 6
09142060313				
09140100361	44423236	MHS 10 R M	3	HB 10
09142100303				
09140100371	44423237	MHB R F	3	HB 10
09142100313				
09140160361	44423238	MHS 16 R M	4	HB 16
09142160303				
09140160371	44423239	MHB 16 R F	4	HB 16
09142160313				
09140240361	44423240	MHS 24 R M	6	HB 24
09142240303				
09140240371	44423241	MHB 24 R F	6	HB 24
09142240313				



Silver Contacts

Market Standard #	LAPP Part #	Description	Contact Variant
8 MM Silver Contacts			
09110006114	44423242	MH AG M 8 AWG/10 mm ²	Pin
09110006116	44423243	MH AG M 6 AWG/16 mm ²	Pin
09110006125	44423244	MH AG M 4 AWG/25 mm ²	Pin
09110006135	44423245	MH AG M 2 AWG/35 mm ²	Pin
09110006214	44423246	MH AG M 8 AWG/10 mm ²	Socket
09110006216	44423247	MH AG M 6 AWG/16 mm ²	Socket
09110006225	44423248	MH AG M 4 AWG/25 mm ²	Socket
09110006235	44423249	MH AG M 3 AWG/35 mm ²	Socket
4 MM Silver Contacts			
09320006104	44423250	MH AG M 16 AWG/1.5 mm ²	Pin
09320006105	44423251	MH AG M 14 AWG/2.5 mm ²	Pin
09320006107	44423252	MH AG M 12 AWG/4 mm ²	Pin
09320006108	44423253	MH AG M 10 AWG/6 mm ²	Pin
-	44423254	MH AG M 8 AWG/10 mm ²	Pin
09320006204	44423255	MH AG F 16 AWG/1.5 mm ²	Socket
09320006205	44423256	MH AG F 14 AWG/2.5 mm ²	Socket
09320006207	44423257	MH AG F 12 AWG/4 mm ²	Socket
09320006208	44423258	MH AG F 10 AWG/6 mm ²	Socket
-	44423259	MH AG F 8 AWG/10 mm ²	Socket
2.5 MM Silver Contacts			
09330006121	11190000	H-BE AG M 20 AWG/0.5 mm ²	Pin
09330006114	11190100	H-BE AG M 18 AWG/0.75-1.0 mm ²	Pin
09330006105	11190100	H-BE AG M 18 AWG/0.75-1.0 mm ²	Pin
09330006104	11190200	H-BE AG M 16 AWG/1.5 mm ²	Pin
09330006102	11190300	H-BE AG M 14 AWG/2.5 mm ²	Pin
09330006107	11190400	H-BE AG M 12 AWG/4.0 mm ²	Pin
09330006220	11195000	H-BE AG F 20 AWG/0.5 mm ²	Socket
09330006214	11195100	H-BE AG F 18 AWG/0.75-1.0 mm ²	Socket
09330006205	11195100	H-BE AG F 18 AWG/0.75-1.0 mm ²	Socket
09330006204	11195200	H-BE AG F 16 AWG/1.5 mm ²	Socket
09330006202	11195300	H-BE AG F 14 AWG/2.5 mm ²	Socket
09330006207	11195400	H-BE AG F 12 AWG/4.0 mm ²	Socket

Market Standard #	LAPP Part #	Description
1.6 MM Silver Contacts		
09150006104		H-BE AG M 26-22 AWG/0.14-0.37 mm ²
09150006103	13162000	H-BE AG M 20 AWG/0.5 mm ²
09150006105	13162100	H-BE AG M 18 AWG/0.75-1.0 mm ²
09150006102	13162200	H-BE AG M 18 AWG/0.75-1.0 mm ²
09150006101	13162200	H-BE AG M 16 AWG/1.5 mm ²
09150006106	13162300	H-BE AG M 14 AWG/2.5 mm ²
09150006204	13162400	H-BE AG F 26-22 AWG/0.14-0.37 mm ²
09150006203	13163000	H-BE AG F 20 AWG/0.5 mm ²
09150006205	13163100	H-BE AG F 18 AWG/0.75-1.0 mm ²
09150006202	13163200	H-BE AG F 18 AWG/0.75-1.0 mm ²
09150006201	13163200	H-BE AG F 16 AWG/1.5 mm ²
09150006206	13163400	H-BE AG F 14 AWG/2.5 mm ²

M = male pin contact

F = female socket contact



Gold Contacts

Market Standard #	LAPP Part #	Description
2.5 MM Gold Contacts		
09330006117	11190301	H-BE AU M 26-22 AWG/0.14-0.37 mm ²
09330006122	11192000	H-BE AU M 20 AWG/0.5 mm ²
09330006115	11192100	H-BE AU M 18 AWG/0.75-1.0 mm ²
09330006118	11192100	H-BE AU M 18 AWG/0.75-1.0 mm ²
09330006116	11192200	H-BE AU M 16 AWG/1.5 mm ²
09330006123	11192300	H-BE AU M 14 AWG/2.5 mm ²
09330006119	-	-
09330006217	11192302	H-BE AU F 26-22 AWG/0.14-0.37 mm ²
09330006222	11197000	H-BE AU F 20 AWG/0.5 mm ²
09330006215	11197100	H-BE AU F 18 AWG/0.75-1.0 mm ²
09330006218	11197100	H-BE AU F 18 AWG/0.75-1.0 mm ²
09330006216	11197200	H-BE AU F 16 AWG/1.5 mm ²
09330006223	11197300	H-BE AU F 14 AWG/2.5 mm ²
09330006221	-	-
1.6 MM Gold Contacts		
09150006124	13162500	H-BE AU M 26-22 AWG/0.14-0.37 mm ²
09150006123	13162600	H-BE AU M 20 AWG/0.5 mm ²
09150006125	13162700	H-BE AU M 18 AWG/0.75-1.0 mm ²
09150006122	13162700	H-BE AU M 18 AWG/0.75-1.0 mm ²
09150006121	13162800	H-BE AU M 16 AWG/1.5 mm ²
09150006126	13162900	H-BE AU M 14 AWG/2.5 mm ²
09150006224	13163500	H-BE AU F 26-22 AWG/0.14-0.37 mm ²
09150006223	13163600	H-BE AU F 20 AWG/0.5 mm ²
09150006225	13163700	H-BE AU F 18 AWG/0.75-1.0 mm ²
09150006222	13163700	H-BE AU F 18 AWG/0.75-1.0 mm ²
09150006221	13163800	H-BE AU F 16 AWG/1.5 mm ²
09150006226	13163900	H-BE AU F 14 AWG/2.5 mm ²
1.0 MM Gold Contacts		
09670007576	44423285	MH M AU 28-24 AWG/0.08-0.25 mm ²
09670007476	44423286	MH M AU 28-24 AWG/0.08-0.25 mm ²
09670005576	44423287	MH M AU 26-22 AWG/0.08-0.25 mm ²
09670005476	44423288	MH M AU 26-22 AWG/0.08-0.25 mm ²
09670005476	44423289	MH M AU 24-20 AWG/0.08-0.25 mm ²
09670005476	44423290	MH M AU 24-20 AWG/0.08-0.25 mm ²

M = male pin contact
F = female socket contact





EPIC® MH CLIP

WORKS WITH THE MARKET STANDARD

MH clip
44423264



Tools

Crimp Tool	Crimp Dies		Locator	Removal Tool
1.6 MM Contacts				
11147000	11147100		11147200	11161000
2.5 MM Contacts				
11147000	11147100		11147200	11182500 (HBE) 11171000 (MC)
4 MM Contacts				
11147000	16 - 12 AWG:	11174100*	11147201	44423269
	10 - 8 AWG:	11174101		
	*contact 44423257 requires crimp die 11174101			
8 MM Contacts				
use hydraulic crimp tool	8 AWG:	44423270	-	44423269
	6 AWG:	44423271		
	4 AWG:	44423272		
	2 AWG:	44423273		

*For more information or to connect
with your local LAPP representative,
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