



M23 A Series



M23 B Series



M40 C Series



M23 Checkmate™ (A & B Series)



M23 Hybrid DMC Series

# MotionGrade™ DIN Style Connectors



Standard products. Custom solutions.

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# We are Amphenol.

We are a global leader in providing you with world-class interconnection options and solutions.

We fulfill the needs of Industrial, Factory Automation, Heavy Duty, Automotive, Diagnostic and Custom-design markets.

Our engineers design innovative combinations of industry standard connectors and application specific shielding components to create assembly systems that set the standards for performance, reliability, and cost effectiveness. Our engineering, materials, and manufacturing organizations meet the high standards imposed by ISO 9001 as well as many customer specific quality systems. Our performance has earned us ship to stock and world class performance awards from many major OEMs.

We are one of the largest interconnect solution suppliers in the world and supplies a wide range of product solutions worldwide. Amphenol, and all our subsidiaries, design, manufacture and market electrical, electronic and fiber-optic connectors, interconnect systems and coaxial and specialty cable. Amphenol has a diversified presence in high growth markets including: Information Technology and Data Communications Equipment, Mobile Devices, Mobile Networks, Broadband Communication, Military and Commercial Aerospace, Industrial and Automotive.



# Standard products. Custom solutions.

Our MotionGrade™ DIN Style Automation product lines, which include M23 "A", "B", Checkmate™, Hybrid DMC and M40 Series, have key placement in all areas of Automation. Based on our superior build quality, high-performance capabilities and having been developed to be compatible with all other existing standard products industry-wide, our MotionGrade™ DIN Style products are the perfect alternatives for you.

We can custom design, engineer and manufacture cable assemblies to your exact customer specifications and produce large or small quantities, all to the highest standards, delivered on-time and in-specification, all with a significant cost-savings over the competition.

By combining locally-based Program Management & Engineering, along with the associated cost advantages derived from manufacturing in our low-cost production centers in North America and Asia, our Team will work with you to design the most cost-efficient and reliable interconnect system available.



# Product Overviews

Amphenol Sine Systems' MotionGrade™ M23 and M40 Connector Systems are designed to excel in performance and reliability in our customers' most demanding environments. Amphenol's MotionGrade™ M23 and M40 products are ideally suited for advanced servo drive encoder feedback applications, packaging, robotic, printing, machine tool, medical and automation environments where control signal transmission or power are required in a robust and compact delivery system.



## **M23 A Series** See Pg. 11 12, 16 and 17 positions available

- 10A Max Current; 160V (12 pos), 125V (16-17 pos); 18-26AWG
- High-performance, cost-effective
- Superior environmental seal retention
- Compatible with existing standard products industry-wide



## **M23 B Series** See Pg. 19 6, 8 and 9 positions available

- 30A Max Current; 630V Max Voltage; 14-16AWG
- High-performance, cost-effective
- Superior environmental seal retention
- Compatible with existing standard products industry-wide



## **M40 C Series** See Pg. 29 6 and 8 positions available

- 75A Max Current; 630V Max Voltage; 8-12AWG
- High-performance, cost-effective
- Superior environmental seal retention
- Compatible with existing standard products industry-wide



**M23 Checkmate™** See Pg. 11, 19

**A Series:** 12 and 17 positions available

**B Series:** 6, 8 and 9 positions available

- 10A Max Current; 160V (12 pos), 125V (17 pos); 14-20AWG
- NEWLY designed locking mechanism intermateable with other commercially available M23 quick-locking systems
- Vibration resistant, aerospace-style, MIL-38999 dual-ratcheting locking springs; IP-rated metal coupling system
- Distinctive alignment arrows with lock/unlock identifiers (ensures a solid connection every time)
- quarter-turn lock for quick-mating vs traditional threaded-style coupling



**M23 Hybrid DMC Series** See Pg. 27

2 Power + PE + 1 Signal + 4 Quad Element Ethernet

- 18A (2.0mm), 1A (1.0mm), 0.5A (Quad Element) Max Current
- 850V (2.0/1.0mm Contacts), 30VDC (Quad Element) Max. Volt.
- High-performance, cost-effective
- Superior environmental seal retention
- Ideally suited for advanced servo-drive encoder feedback applications where POWER, SIGNAL and COMMUNICATION is required in a robust and compact delivery system.

# MotionGrade™ M23 A, B and C Series | Ordering Guide

| Step 1-Choose Your Connector Type |   | Step 2- Choose Contact Type |                                     |                                    | Step 3-Choose Backend Hardware                          |  |  |
|-----------------------------------|---|-----------------------------|-------------------------------------|------------------------------------|---|--|--|
| A Series                          | Description                             | Type                        | P/N Socket                          | P/N Pin                            | P/N Cord Grip   | P/N Flex Grip                                      | Mates with...                          |
| MA1CAE1200                        | M23, Str Plug, 12 Pos, E Type           | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | MA3CG-S(x)<br>S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM | 1.MA4FSR-A8.5<br>2.MA4FSR-A10.5<br>3. MA4FSR-A12.8 | MA1RAP1201<br>MA1LAP1200<br>MA1JAP1200 |
| MA1CAP1200                        | M23, Str Plug, 12 Pos, P Type           | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | MA3CG-S(x)<br>S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM | 1.MA4FSR-A8.5<br>2.MA4FSR-A10.5<br>3. MA4FSR-A12.8 | MA1RAE1201<br>MA1LAE1200<br>MA1JAE1200 |
| MA1CAE1600                        | M23, Str Plug, 16 Pos, E Type           | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | MA3CG-S(x)<br>S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM | 1.MA4FSR-A8.5<br>2.MA4FSR-A10.5<br>3. MA4FSR-A12.8 | MA1RAP1601<br>MA1LAP1600<br>MA1JAP1600 |
| MA1CAP1600                        | M23, Str Plug, 16 Pos, P Type           | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | MA3CG-S(x)<br>S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM | 1.MA4FSR-A8.5<br>2.MA4FSR-A10.5<br>3. MA4FSR-A12.8 | MA1RAE1601<br>MA1LAE1600<br>MA1JAE1600 |
| MA1CAE1700                        | M23, Str Plug, 17 Pos, E Type           | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | MA3CG-S(x)<br>S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM | 1.MA4FSR-A8.5<br>2.MA4FSR-A10.5<br>3. MA4FSR-A12.8 | MA1RAP1701<br>MA1LAP1700<br>MA1JAP1700 |
| MA1CAP1700                        | M23, Str Plug, 17 Pos, P Type           | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | MA3CG-S(x)<br>S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM | 1.MA4FSR-A8.5<br>2.MA4FSR-A10.5<br>3. MA4FSR-A12.8 | MA1RAE1701<br>MA1LAE1700<br>MA1JAE1700 |
| MA1EAE1200                        | M23, Rotatable 90° Plug, 12 Pos, E Type | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | MA3CG-S(x)<br>S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM | 1.MA4FSR-A8.5<br>2.MA4FSR-A10.5<br>3. MA4FSR-A12.8 | MA1RAP1201<br>MA1LAP1200<br>MA1JAP1200 |
| MA1EAP1200                        | M23, Rotatable 90° Plug, 12 Pos, P Type | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | MA3CG-S(x)<br>S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM | 1.MA4FSR-A8.5<br>2.MA4FSR-A10.5<br>3. MA4FSR-A12.8 | MA1RAE1201<br>MA1LAE1200<br>MA1JAE1200 |
| MA1EAE1600                        | M23, Rotatable 90° Plug, 16 Pos, E Type | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | MA3CG-S(x)<br>S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM | 1.MA4FSR-A8.5<br>2.MA4FSR-A10.5<br>3. MA4FSR-A12.8 | MA1RAP1601<br>MA1LAP1600<br>MA1JAP1600 |
| MA1EAP1600                        | M23, Rotatable 90° Plug, 16 Pos, P Type | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | MA3CG-S(x)<br>S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM | 1.MA4FSR-A8.5<br>2.MA4FSR-A10.5<br>3. MA4FSR-A12.8 | MA1RAE1601<br>MA1LAE1600<br>MA1JAE1600 |
| MA1EAE1700                        | M23, Rotatable 90° Plug, 17 Pos, E Type | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | MA3CG-S(x)<br>S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM | 1.MA4FSR-A8.5<br>2.MA4FSR-A10.5<br>3. MA4FSR-A12.8 | MA1RAP1701<br>MA1LAP1700<br>MA1JAP1700 |
| MA1EAP1700                        | M23, Rotatable 90° Plug, 17 Pos, P Type | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | MA3CG-S(x)<br>S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM | 1.MA4FSR-A8.5<br>2.MA4FSR-A10.5<br>3. MA4FSR-A12.8 | MA1RAE1701<br>MA1LAE1700<br>MA1JAE1700 |
| MA1LAE1200                        | M23, Str Recep., 12 Pos, E Type         | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | N/A   | N/A  | MA1CAP1200<br>MA1EAP1200               |
| MA1LAP1200                        | M23, Str Recep., 12 Pos, P Type         | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | N/A   | N/A  | MA1CAE1200<br>MA1EAE1200               |



| Step 1-Choose Your Connector Type |   | Step 2- Choose Contact Type |                                     |                                    | Step 3-Choose Backend Hardware                          |  |                          |
|-----------------------------------|---|-----------------------------|-------------------------------------|------------------------------------|---|--|--------------------------|
| A Series                          | Description                               | Type                        | P/N Socket                          | P/N Pin                            | P/N Cord Grip   | P/N Flex Grip                                      | Mates with...            |
| MA1LAE1600                        | M23, Str Recep., 16 Pos, E Type           | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | N/A   | N/A  | MA1CAP1600<br>MA1EAP1600 |
| MA1LAP1600                        | M23, Str Recep., 16 Pos, P Type           | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | N/A   | N/A  | MA1CAE1600<br>MA1EAE1600 |
| MA1LAE1700                        | M23, Str Recep., 17 Pos, E Type           | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | N/A   | N/A  | MA1CAP1700<br>MA1EAP1700 |
| MA1LAP1700                        | M23, Str Recep., 17 Pos, P Type           | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | N/A   | N/A  | MA1CAE1700<br>MA1EAE1700 |
| MA1RAE1201                        | M23, Rotatable 90° Recep., 12 Pos, E Type | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | N/A   | N/A  | MA1CAP1200<br>MA1EAP1200 |
| MA1RAP1201                        | M23, Rotatable 90° Recep., 12 Pos, P Type | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | N/A   | N/A  | MA1CAE1200<br>MA1EAE1200 |
| MA1RAE1601                        | M23, Rotatable 90° Recep., 16 Pos, E Type | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | N/A   | N/A  | MA1CAP1600<br>MA1EAP1600 |
| MA1RAP1601                        | M23, Rotatable 90° Recep., 16 Pos, P Type | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | N/A   | N/A  | MA1CAE1600<br>MA1EAE1600 |
| MA1RAE1701                        | M23, Rotatable 90° Recep., 17 Pos, E Type | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | N/A   | N/A  | MA1CAP1700<br>MA1EAP1700 |
| MA1RAP1701                        | M23, Rotatable 90° Recep., 17 Pos, P Type | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | N/A   | N/A  | MA1CAE1700<br>MA1EAE1700 |
| MA1JAE1200                        | M23, Str Extension, 12 Pos, E Type        | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | MA3CG-S(x)<br>S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM | 1.MA4FSR-A8.5<br>2.MA4FSR-A10.5<br>3. MA4FSR-A12.8 | MA1CAP1200<br>MA1EAP1200 |
| MA1JAP1200                        | M23, Str Extension, 12 Pos, P Type        | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | MA3CG-S(x)<br>S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM | 1.MA4FSR-A8.5<br>2.MA4FSR-A10.5<br>3. MA4FSR-A12.8 | MA1CAE1200<br>MA1EAE1200 |
| MA1JAE1600                        | M23, Str Extension, 16 Pos, E Type        | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | MA3CG-S(x)<br>S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM | 1.MA4FSR-A8.5<br>2.MA4FSR-A10.5<br>3. MA4FSR-A12.8 | MA1CAP1600<br>MA1EAP1600 |
| MA1JAP1600                        | M23, Str Extension, 16 Pos, P Type        | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | MA3CG-S(x)<br>S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM | 1.MA4FSR-A8.5<br>2.MA4FSR-A10.5<br>3. MA4FSR-A12.8 | MA1CAE1600<br>MA1EAE1600 |
| MA1JAE1700                        | M23, Str Extension, 17 Pos, E Type        | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28) | SC000035(18-22)<br>SC000146(24-28) | MA3CG-S(x)<br>S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM | 1.MA4FSR-A8.5<br>2.MA4FSR-A10.5<br>3. MA4FSR-A12.8 | MA1CAP1700<br>MA1EAP1700 |

# MotionGrade™ M23 A, B and C Series | Ordering Guide, cont.

**NOTE:** Type marked with (\*) requires 2.0mm contacts, (\*\*) requires 1.0 and 2.0mm contacts

| Step 1-Choose Your Connector Type |  | Step 2- Choose Contact Type |  |                                    | Step 3-Choose Backend Hardware                            |  |  |
|-----------------------------------|--|-----------------------------|--|------------------------------------|---|--|--|
| A Series                          | Description  | Type                        | P/N Socket   | P/N Pin                            | P/N Cord Grip   | P/N Flex Grip  | Mates with...                          |
| MA1JAP1700                        | M23, Str Extension, 17 Pos, P Type                         | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28)  | SC000035(18-22)<br>SC000146(24-28) | MA3CG-S(x)<br>S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM   | 1.MA4FSR-A8.5<br>2.MA4FSR-A10.5<br>3. MA4FSR-A12.8                   | MA1CAE1700<br>MA1EAE1700               |
| MA3TNE1200-S(X)                   | M23,12 Position Panel Connector With Strain Relief, E Type | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28)  | SC000035(18-22)<br>SC000146(24-28) | S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM                 | N/A  | MA1CAP1200<br>MA1EAP1200               |
| MA3TNP1200-S(X)                   | M23,12 Position Panel Connector With Strain Relief, P Type | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28)  | SC000035(18-22)<br>SC000146(24-28) | S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM                 | N/A  | MA1CAE1200<br>MA1EAE1200               |
| MA3TNE1600-S(X)                   | M23,16 Position Panel Connector With Strain Relief, E Type | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28)  | SC000035(18-22)<br>SC000146(24-28) | S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM                 | N/A  | MA1CAP1600<br>MA1EAP1600               |
| MA3TNP1600-S(X)                   | M23,16 Position Panel Connector With Strain Relief, P Type | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28)  | SC000035(18-22)<br>SC000146(24-28) | S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM                 | N/A  | MA1CAE1600<br>MA1EAE1600               |
| MA3TNE1700-S(X)                   | M23,17 Position Panel Connector With Strain Relief, E Type | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28)  | SC000035(18-22)<br>SC000146(24-28) | S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM                 | N/A  | MA1CAP1700<br>MA1EAP1700               |
| MA3TNP1700-S(X)                   | M23,17 Position Panel Connector With Strain Relief, P Type | Pin or Socket               | SC000044(18-22)<br>SC000030 (24-28)  | SC000035(18-22)<br>SC000146(24-28) | S1=4.5-7.5MM<br>S2=7.5-11MM<br>S3=11-15MM                 | N/A  | MA1CAE1700<br>MA1EAE1700               |
| Step 1-Choose your connector type |  | Step 2- Choose Contact Type |  |                                    | Step 3-Choose Backend Hardware                            |  |  |
| B Series                          | Description  | Type                        | P/N Socket or Pin (Refer to Type)  |                                    | P/N Cord Grip   | P/N Flex Grip  | Mates with...                          |
| MB1CKN0600                        | M23, Str Plug, 6 Pos                                       | Socket Only*                | SC000045(2.0mm)(14-16)(6 Per)  |                                    | MB3CG-S(x)<br>S1=7.5-11MM<br>S2=11-14.5MM<br>S3=14.5-17MM | 1.MB4FSR-B10.3<br>2.MB4FSR-B12.5<br>3. MB4FSR-B14.5<br>4. MB4FSR-B17 | MB1LLN0600<br>MB1RJN0601<br>MB1JJN0600 |
| MB1CKN0800                        | M23, Str Plug, 8 Pos                                       | Socket Only**               | SC000044(1.0mm)(18-22)(4Per)<br>SC000030(1.0mm)(24-28)(4per)<br>SC000045(2.0mm)(14-16)(4 Per)    |                                    | MB3CG-S(x)<br>S1=7.5-11MM<br>S2=11-14.5MM<br>S3=14.5-17MM | 1.MB4FSR-B10.3<br>2.MB4FSR-B12.5<br>3. MB4FSR-B14.5<br>4. MB4FSR-B17 | MB1LLN0800<br>MB1RJN0801<br>MB1JJN0800 |
| MB1CKN0900                        | M23, Str Plug, 9 Pos                                       | Socket Only**               | SC000044(18-22)(1.0mm)(5Per) or<br>SC000030(24-28)(1.0mm)(5Per)<br>SC000045(14-16)(2.0mm)(4 Per) |                                    | MB3CG-S(x)<br>S1=7.5-11MM<br>S2=11-14.5MM<br>S3=14.5-17MM | 1.MB4FSR-B10.3<br>2.MB4FSR-B12.5<br>3. MB4FSR-B14.5<br>4. MB4FSR-B17 | MB1LLN0900<br>MB1RJN0901<br>MB1JJN0900 |
| MB1EJN0600                        | M23, Rotatable 90° Plug, 6 Pos                             | Socket Only*                | SC000045(14-16)(2.0mm)(6 Per)  |                                    | MB3CG-S(x)<br>S1=7.5-11MM<br>S2=11-14.5MM<br>S3=14.5-17MM | 1.MB4FSR-B10.3<br>2.MB4FSR-B12.5<br>3. MB4FSR-B14.5<br>4. MB4FSR-B17 | MB1LLN0600<br>MB1RJN0601<br>MB1JJN0600 |
| MB1EJN0800                        | M23, Rotatable 90° Plug, 8 Pos                             | Socket Only**               | SC000044(18-22)(1.0mm)(4Per) or<br>SC000030(24-28)(1.0mm)(4per)<br>SC000045(14-16)(2.0mm)(4 Per) |                                    | MB3CG-S(x)<br>S1=7.5-11MM<br>S2=11-14.5MM<br>S3=14.5-17MM | 1.MB4FSR-B10.3<br>2.MB4FSR-B12.5<br>3. MB4FSR-B14.5<br>4. MB4FSR-B17 | MB1LLN0800<br>MB1RJN0801<br>MB1JJN0800 |
| MB1EJN0900                        | M23, Rotatable 90° Plug, 9 Pos                             | Socket Only**               | SC000044(18-22)(1.0mm)(5Per) or<br>SC000030(24-28)(1.0mm)(5per)<br>SC000045(14-16)(2.0mm)(4 Per) |                                    | MB3CG-S(x)<br>S1=7.5-11MM<br>S2=11-14.5MM<br>S3=14.5-17MM | 1.MB4FSR-B10.3<br>2.MB4FSR-B12.5<br>3. MB4FSR-B14.5<br>4. MB4FSR-B17 | MB1LLN0900<br>MB1RJN0901<br>MB1JJN0900 |
| MB1LLN0600                        | M23, Str Recep., 6 Pos                                     | Pin Only*                   | SC000036(14-16)(2.0mm)(6Per)   |                                    | N/A   | N/A  | MB1CKN0600<br>MB1EJN0600               |
| MB1LLN0800                        | M23, Str Recep., 8 Pos                                     | Pin Only**                  | SC000035(18-22)(1.0mm)(4Per)<br>SC000036(14-16)(2.0mm)(4 Per)                                    |                                    | N/A   | N/A  | MB1CKN0600<br>MB1EJN0800               |

| Step 1-Choose your connector type |  | Step 2- Choose Contact Type |   | Step 3-Choose Backend Hardware                            |  |                          |
|-----------------------------------|--|-----------------------------|---|---|--|--------------------------|
| B Series                          | Description                                    | Type                        | P/N Socket or Pin (Refer to Type)   | P/N Cord Grip   | P/N Flex Grip  | Mates with...            |
| MB1LLN0900                        | M23, Str, Recep., 9 Pos                        | Pin Only**                  | SC000035(18-22)(1.0mm)(5 Per)<br>SC000036(14-16)(2.0mm)(4 Per)                                    | N/A   | N/A  | MB1CKN0900<br>MB1EJN0900 |
| MB1RJN0600                        | M23, Rotatable 90° Recep., 6 Pos               | Pin Only*                   | SC000036 (14-16)(2.0mm)(6Per)   | N/A   | N/A  | MB1CKN0600<br>MB1EJN0600 |
| MB1RJN0800                        | M23, Rotatable 90° Recep., 8 Pos               | Pin Only**                  | SC000035(18-22)(1.0mm)(4Per)<br>SC000036(14-16)(2.0mm)(4 Per)                                     | N/A   | N/A  | MB1CKN0800<br>MB1EJN0800 |
| MB1RJN0900                        | M23, Rotatable 90° Recep., 9 Pos               | Pin Only**                  | SC000035(18-22)(1.0mm)(5 Per)<br>SC000036(14-16)(2.0mm)(4 Per)                                    | N/A   | N/A  | MB1CKN0900<br>MB1EJN0900 |
| MB1JJN0600                        | M23, Str Extension, 6 Pos                      | Pin Only*                   | SC000036 (14-16)(2.0mm)(6Per)   | MB3CG-S(x)<br>S1=7.5-11MM<br>S2=11-14.5MM<br>S3=14.5-17MM | 1.MB4FSR-B10.3<br>2.MB4FSR-B12.5<br>3. MB4FSR-B14.5<br>4. MB4FSR-B17 | MB1CKN0600<br>MB1EJN0600 |
| MB1JJN0800                        | M23, Str Extension, 8 Pos                      | Pin Only**                  | SC000035(18-22)(1.0mm)(4Per)<br>SC000036(14-16)(2.0mm)(4 Per)                                     | MB3CG-S(x)<br>S1=7.5-11MM<br>S2=11-14.5MM<br>S3=14.5-17MM | 1.MB4FSR-B10.3<br>2.MB4FSR-B12.5<br>3. MB4FSR-B14.5<br>4. MB4FSR-B17 | MB1CKN0800<br>MB1EJN0800 |
| MB1JJN0900                        | M23, Str Extension, 9 Pos                      | Pin Only**                  | SC000035(18-22)(1.0mm)(5 Per)<br>SC000036(14-16)(2.0mm)(4 Per)                                    | MB3CG-S(x)<br>S1=7.5-11MM<br>S2=11-14.5MM<br>S3=14.5-17MM | 1.MB4FSR-B10.3<br>2.MB4FSR-B12.5<br>3. MB4FSR-B14.5<br>4. MB4FSR-B17 | MB1CKN0900<br>MB1EJN0900 |
| MB1GJN0600                        | M23, Female Panel Mount Conn, 6 Pos            | Socket Only*                | SC000045(14-16)(6 Per)  | N/A   | N/A  | MB1JJN0600               |
| MB1GJN0800                        | M23, Female Panel Mount Conn,8 Pos             | Socket Only**               | SC000044(18-22)(1.0mm)(4Per) or<br>SC000030(24-28)(1.0mm)(4per)<br>SC000045(2.0mm)(14-16)(4 Per)  | N/A   | N/A  | MB1JJN0800               |
| MB1GJN0900                        | M23, Female Panel Mount Conn, 9 Pos            | Socket Only**               | SC000044(18-22) (1.0mm)(5Per) or<br>SC000030(24-28)(1.0mm)(5per)<br>SC000045(2.0mm)(14-16)(4 Per) | N/A   | N/A  | MB1JJN0900               |
| MB3TNN0600-S(X)                   | M23, Panel Connector With Strain Relief, 6 Pos | Pin Only*                   | SC000036(14-16)(6Per)   | S1=7.5-11MM<br>S2=11-14.5MM<br>S3=14.5-17MM               | N/A  | MB1CKN0600<br>MB1EJN0600 |
| MB3TNN0800-S(X)                   | M23, Panel Connector With Strain Relief, 8 Pos | Pin Only**                  | SC000035(18-22)(1.0mm)(4Per)<br>SC000036(14-16)(2.0mm)(4 Per)                                     | S1=7.5-11MM<br>S2=11-14.5MM<br>S3=14.5-17MM               | N/A  | MB1CKN0800<br>MB1EJN0800 |
| MB3TNN0900-S(X)                   | M23, Panel Connector With Strain Relief, 9 Pos | Pin Only**                  | SC000035(18-22)(1.0mm)(5 Per)<br>SC000036(14-16)(2.0mm)(4 Per)                                    | S1=7.5-11MM<br>S2=11-14.5MM<br>S3=14.5-17MM               | N/A  | MB1CKN0900<br>MB1EJN0900 |
| MB1LKN0600                        | M23, Jam Nut Recep., 6 Pos                     | Pin Only*                   | SC000036(14-16)(2.0mm)(6Per)  | MB3CG-S(x)<br>S1=7.5-11MM<br>S2=11-14.5MM<br>S3=14.5-17MM | 1.MB4FSR-B10.3<br>2.MB4FSR-B12.5<br>3. MB4FSR-B14.5<br>4. MB4FSR-B17 | MB1CKN0600<br>MB1EJN0600 |
| MB1LKN0800                        | M23, Jam Nut Recep., 8 Pos                     | Pin Only**                  | SC000035(18-22)(1.0mm)(4Per)<br>SC000036(14-16)(2.0mm)(4 Per)                                     | MB3CG-S(x)<br>S1=7.5-11MM<br>S2=11-14.5MM<br>S3=14.5-17MM | 1.MB4FSR-B10.3<br>2.MB4FSR-B12.5<br>3. MB4FSR-B14.5<br>4. MB4FSR-B17 | MB1CKN0800<br>MB1EJN0800 |
| MB1LKN0900                        | M23, Jam Nut Recep., 9 Pos                     | Pin Only**                  | SC000035(18-22)(1.0mm)(5 Per)<br>SC000036(14-16)(2.0mm)(4 Per)                                    | MB3CG-S(x)<br>S1=7.5-11MM<br>S2=11-14.5MM<br>S3=14.5-17MM | 1.MB4FSR-B10.3<br>2.MB4FSR-B12.5<br>3. MB4FSR-B14.5<br>4. MB4FSR-B17 | MB1CKN0900<br>MB1EJN0900 |

# MotionGrade™ M23 A, B and C Series | Ordering Guide, cont.

**NOTE:** Type marked with (\*\*\*) requires 2.0mm and 3.6mm contacts

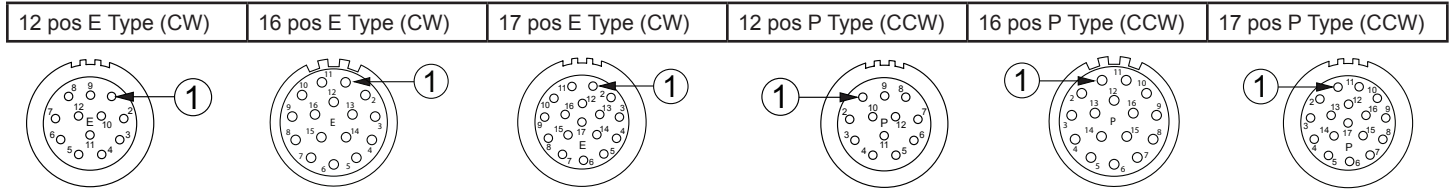
| Step 1-Choose your connector type |                                 | Step 2- Choose Contact Type |   | Step 3-Choose Backend Hardware  |               |  |
|-----------------------------------|---------------------------------|-----------------------------|---|---|---------------|--|
| M40 C SERIES                      | Description                     | Type                        | P/N Socket or Pin (Refer to Type)                           | P/N Cord Grip   | P/N Flex Grip | Mates with...                          |
| MC1CJN0600                        | M40, Str Plug,<br>6 Pos         | Socket Only***              | SC000045(14-16)(2.0mm)(2Per)<br>SC000046(8-12)(3.6mm)(4Per) | MC3CG-S(x)<br>S1=9-12MM<br>S2=12.5-14.5MM<br>S3=14.5-17MM<br>S4=17-19.5MM<br>S5=19-21.5MM<br>S6=21.5-24MM<br>S7=25.5-26MM | MC4FSR-C18.5  | MC1LKN0600<br>MC1NJN0600<br>MC1JJN0600 |
| MC1CJN0800                        | M40, Str Plug,<br>8 Pos         | Socket Only***              | SC000045(14-16)(2.0mm)(4Per)<br>SC000046(8-12)(3.6mm)(4Per) | MC3CG-S(x)<br>S1=9-12MM<br>S2=12.5-14.5MM<br>S3=14.5-17MM<br>S4=17-19.5MM<br>S5=19-21.5MM<br>S6=21.5-24MM<br>S7=25.5-26MM | MC4FSR-C18.5  | MC1LKN0800<br>MC1NJN0800<br>MC1JJN0800 |
| MC1LKN0600                        | M40, Str Recep.,<br>6 Pos       | Pin Only***                 | SC000040(14-18)(2.0mm)(2Per)<br>SC000041(8-12)(3.6mm)(4Per) | N/A   | N/A           | MC1CJN0600                             |
| MC1LKN0800                        | M40, Str Recep.,<br>8 Pos       | Pin Only***                 | SC000040(14-18)(2.0mm)(2Per)<br>SC000041(8-12)(3.6mm)(4Per) | N/A   | N/A           | MC1CJN0800                             |
| MC1NJN0600                        | M40, Fixed 90°<br>Recep., 6 Pos | Pin Only***                 | SC000040(14-18)(2.0mm)(2Per)<br>SC000041(8-12)(3.6mm)(4Per) | N/A   | N/A           | MC1CJN0600                             |
| MC1NJN0800                        | M40, Fixed 90°<br>Recep., 8 Pos | Pin Only***                 | SC000040(14-18)(2.0mm)(2Per)<br>SC000041(8-12)(3.6mm)(4Per) | N/A   | N/A           | MC1CJN0800                             |
| MC1JJN0600                        | M40,<br>Str Extension,<br>6 Pos | Pin Only***                 | SC000040(14-18)(2.0mm)(2Per)<br>SC000041(8-12)(3.6mm)(4Per) | MC3CG-S(x)<br>S1=9-12MM<br>S2=12.5-14.5MM<br>S3=14.5-17MM<br>S4=17-19.5MM<br>S5=19-21.5MM<br>S6=21.5-24MM<br>S7=25.5-26MM | MC4FSR-C18.5  | MC1CJN0600                             |
| MC1JJN0800                        | M40,<br>Str Extension,<br>8 Pos | Pin Only***                 | SC000040(14-18)(2.0mm)(2Per)<br>SC000041(8-12)(3.6mm)(4Per) | MC3CG-S(x)<br>S1=9-12MM<br>S2=12.5-14.5MM<br>S3=14.5-17MM<br>S4=17-19.5MM<br>S5=19-21.5MM<br>S6=21.5-24MM<br>S7=25.5-26MM | MC4FSR-C18.5  | MC1CJN0800                             |

# MotionGrade™ M23 and M40 | Coding Key Chart

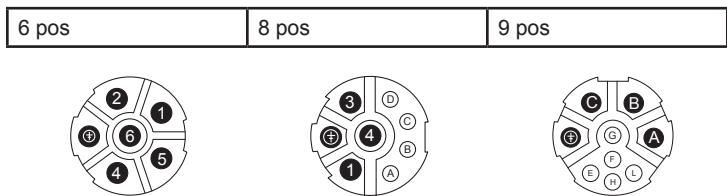
Insert Arrangements: A, B and C Series

| Contact Size Legend   |   |   |
|---|---|---|
|  |  |  |

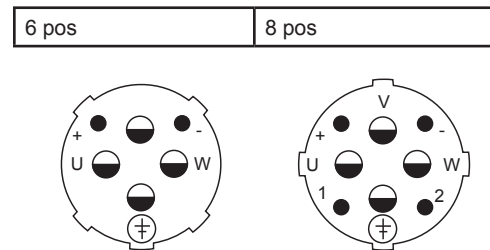
**M23 A Series** (Face view: CW - clockwise, CCW - counter clockwise)



**M23 B Series** (Face view of socket insert)

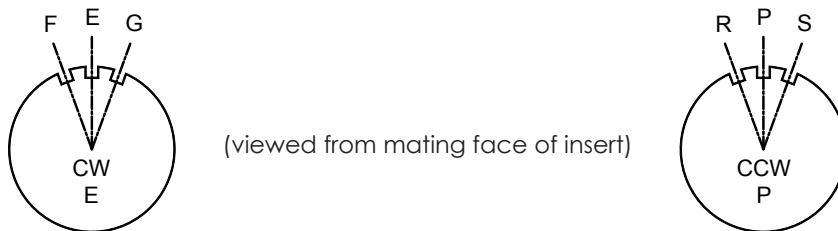


**M40 C Series** (Face view of socket insert)



Coding Keys: M23 A Series Inserts Come with 3 Coding Keys.

**NOTE:** For interconnection, "F" mates with "S", "E" mates with "P" and "G" mates with "R".



**If you are ordering an "E" type connector**, coding options are only: E, F & G.

Sample: MA1CA**E**1200 is "**E**" coding, MA1CA**F**1200 is "**F**" coding, MA1CA**G**1200 is "**G**" coding.  
Standard coding is identified as "E".

**If you are ordering a "P" type connector**, coding options are only: P, R & S.

Sample: MA1CA**P**1200 is "**P**" coding, MA1CA**R**1200 is "**R**" coding, MA1CA**S**1200 is "**S**" coding.  
Standard coding is identified as "P".

# MotionGrade™ M23 A Series

## Overview



## Features & Benefits

Superior Shielding

First quality components coupled with a simplistic design provide maximum EMI/RFI shielding capabilities while reducing assembly preparation times.

Cable Strain Relief

Your choice of either the innovative design features of FlexGrip™ or traditional cable strain relieving similar to existing standard systems.

Fluid Resistance & Sealing

In combination with our strain relief systems, Amphenol utilizes advanced sealing technologies & materials to ensure highest reliability when subjected to the harshest environments.

RoHS Compliant

**RoHS** All materials meet the requirements of the European Directive 2002/95/EC, Issue 13.2.2003.

Approvals

ISO 9001/2000, UL & cUL Recognized, CYJV2/CYJV8 (12 Pos.), ECBT2/ECBT8 (16 & 17 Pos.)

Pending Approvals

VDE

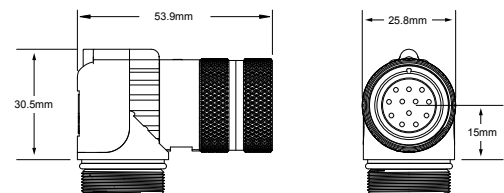
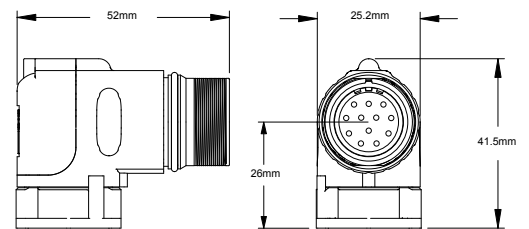
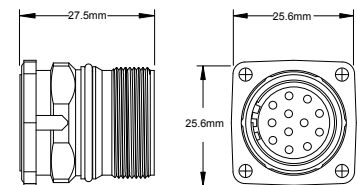
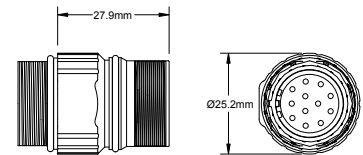
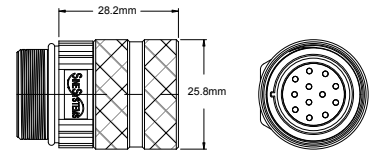
## Technical Specifications

|                             |                                       |
|-----------------------------|---------------------------------------|
| Temperature Range           | -20 to 130°C                          |
| Max. Current (AMP)          | 10A (12 Pos.), 9A (16, 17 Pos.)       |
| Voltage Rating (AC/DC)      | 160V (12 Pos.), 125V (16, 17 Pos.)    |
| Contact Resistance          | < 15mΩ (12 Pos.), < 5mΩ (16, 17 Pos.) |
| Min. Mating Cycles          | >50                                   |
| Test Voltage Rating         | 2500V                                 |
| Sealing Protection          | IP66/67 (plugged condition)           |
| Degree of Protection        | 3                                     |
| Overvoltage Category        | III                                   |
| Strain Relief Clamp Range   | 4.5-15.0mm                            |
| Number of Contact (Size mm) | 17 (0.6mm)                            |
| Wire Range (AWG)            | 18-30                                 |

## Product Material


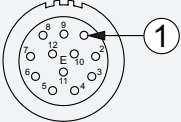



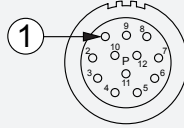


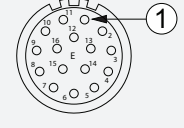

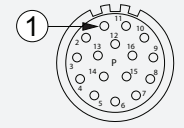

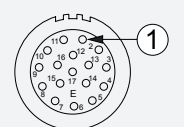
|                    |                    |
|--------------------|--------------------|
| Housing Body       | Zinc Die-cast      |
| Coupling Nut       | Nickel-plated      |
| Insulation Inserts | PA66, UL94/V0      |
| Contacts           | Brass, Gold-plated |
| Sealing Material   | DuPont Viton®      |

## Dimensional Drawings


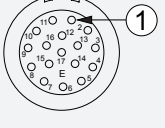

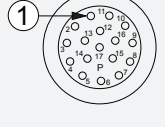

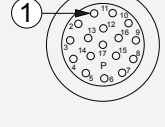

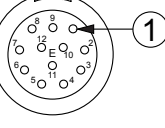

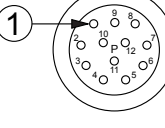

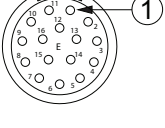

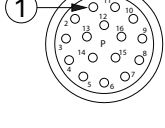

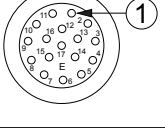

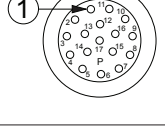


# MotionGrade™ M23 A Series | Standard Products

All A Series plugs, receptacles and extensions accept pins or sockets. For keying options, please refer to Coding Key Chart on page 10. Contact your Sales Representative for more information.


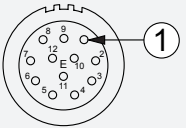

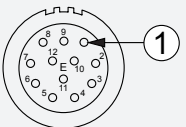
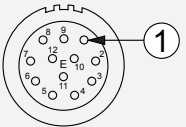

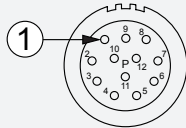

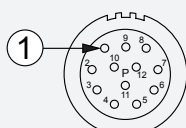


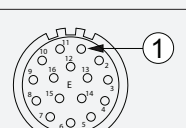

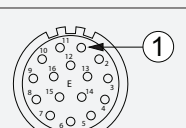

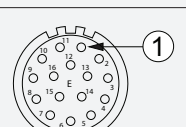
| Part  | Face View   | Part Number | Description  |
|---|---|-------------|--|
|    |    | MA1CAE1200  | M23, A Series, 12 pos., straight plug, E type, less contacts   |
|    |    | P30739-S(X) | <br>KIT: M23 Checkmate, A Series, straight plug, 12 pos., E Type, 1.0mm sockets. Options: <b>-S1 (4.5-7.5mm)</b> , <b>-S2 (7.5-11mm)</b> , <b>-S3 (11-15mm)</b>   |
|    |    | MA1CAP1200  | M23, A Series, 12 pos., straight plug, P type, less contacts   |
|   |   | P30740-S(X) | <br>KIT: M23 Checkmate, A Series, straight plug, 12 pos., P Type, 1.0mm sockets. Options: <b>-S1 (4.5-7.5mm)</b> , <b>-S2 (7.5-11mm)</b> , <b>-S3 (11-15mm)</b>   |
|  |  | MA1CAE1600  | M23, A Series, 16 pos., straight plug, E type, less contacts   |
|  |  | P30741-S(X) | <br>KIT: M23 Checkmate, A Series, straight plug, 16 pos., E Type, 1.0mm sockets. Options: <b>-S1 (4.5-7.5mm)</b> , <b>-S2 (7.5-11mm)</b> , <b>-S3 (11-15mm)</b> |
|  |  | MA1CAP1600  | M23, A Series, 16 pos., straight plug, P type, less contacts   |
|  |  | P30742-S(X) | <br>KIT: M23 Checkmate, A Series, straight plug, 16 pos., P Type, 1.0mm sockets. Options: <b>-S1 (4.5-7.5mm)</b> , <b>-S2 (7.5-11mm)</b> , <b>-S3 (11-15mm)</b> |
|  |  | MA1CAE1700  | M23, A Series, 17 pos., straight plug, E type, less contacts   |



| Part  | Face View   | Part Number | Description  |
|---|---|-------------|--|
|    |    | P30737-S(X) | <b>CHECKMATE™</b><br>KIT: M23 Checkmate, A Series, straight plug, 17 pos., E Type, 1.0mm sockets. Options: <b>-S1 (4.5-7.5mm)</b> , <b>-S2 (7.5-11mm)</b> , <b>-S3 (11-15mm)</b> |
|    |    | MA1CAP1700  | M23, A Series, 17 pos., straight plug, P type, less contacts   |
|    |    | P30738-S(X) | <b>CHECKMATE™</b><br>KIT: M23 Checkmate, A Series, straight plug, 17 pos., P Type, 1.0mm sockets. Options: <b>-S1 (4.5-7.5mm)</b> , <b>-S2 (7.5-11mm)</b> , <b>-S3 (11-15mm)</b> |
|   |   | MA1EAE1200  | M23, A Series, 12 pos., 90° rotatable plug, E type, less contacts  |
|  |  | MA1EAP1200  | M23, A Series, 12 pos., 90° rotatable plug, P type, less contacts  |
|  |  | MA1EAE1600  | M23, A Series, 16 pos., 90° rotatable plug, E type, less contacts  |
|  |  | MA1EAP1600  | M23, A Series, 16 pos., 90° rotatable plug, P type, less contacts  |
|  |  | MA1EAE1700  | M23, A Series, 17 pos., 90° rotatable plug, E type, less contacts  |
|  |  | MA1EAP1700  | M23, A Series, 17 pos., 90° rotatable plug, P type, less contacts  |

# MotionGrade™ M23 A Series | Standard Products, cont.


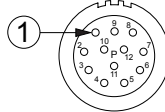


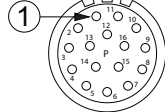

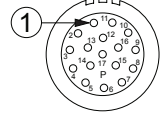
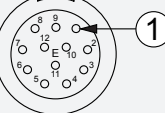
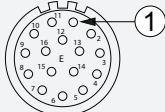
All A Series plugs, receptacles and extensions accept pins or sockets. For keying options, please refer to Coding Key Chart on page 10. Contact your Sales Representative for more information.

| Part  | Face View   | Part Number   | Description  |
|---|---|---------------|--|
|    |    | MA3TNE1200-S1 | M23, A Series, 12 pos., panel connector with strain relief, E type, less contacts, <b>cable diameter 4.5-7.5mm</b> |
|    |    | MA3TNE1200-S2 | M23, A Series, 12 pos., panel connector with strain relief, E type, less contacts, <b>cable diameter 7.5-11mm</b>  |
|    |    | MA3TNE1200-S3 | M23, A Series, 12 pos., panel connector with strain relief, E type, less contacts, <b>cable diameter 11.0-15mm</b> |
|   |   | MA3TNP1200-S1 | M23, A Series, 12 pos., panel connector with strain relief, P type, less contacts, <b>cable diameter 4.5-7.5mm</b> |
|  |  | MA3TNP1200-S2 | M23, A Series, 12 pos., panel connector with strain relief, P type, less contacts, <b>cable diameter 7.5-11mm</b>  |
|  |  | MA3TNP1200-S3 | M23, A Series, 12 pos., panel connector with strain relief, P type, less contacts, <b>cable diameter 11.0-15mm</b> |
|  |  | MA3TNE1600-S1 | M23, A Series, 16 pos., panel connector with strain relief, E type, less contacts, <b>cable diameter 4.5-7.5mm</b> |
|  |  | MA3TNE1600-S2 | M23, A Series, 16 pos., panel connector with strain relief, E type, less contacts, <b>cable diameter 7.5-11mm</b>  |
|  |  | MA3TNE1600-S3 | M23, A Series, 16 pos., panel connector with strain relief, E type, less contacts, <b>cable diameter 11.0-15mm</b> |

| Part  | Face View   | Part Number   | Description  |
|---|---|---------------|--|
|    |    | MA3TNP1600-S1 | M23, A Series, 16 pos., panel connector with strain relief, P type, less contacts, <b>cable diameter 4.5-7.5mm</b> |
|    |    | MA3TNP1600-S2 | M23, A Series, 16 pos., panel connector with strain relief, P type, less contacts, <b>cable diameter 7.5-11mm</b>  |
|    |    | MA3TNP1600-S3 | M23, A Series, 16 pos., panel connector with strain relief, P type, less contacts, <b>cable diameter 11.0-15mm</b> |
|   |   | MA3TNE1700-S1 | M23, A Series, 17 pos., panel connector with strain relief, E type, less contacts, <b>cable diameter 4.5-7.5mm</b> |
|  |  | MA3TNE1700-S2 | M23, A Series, 17 pos., panel connector with strain relief, E type, less contacts, <b>cable diameter 7.5-11mm</b>  |
|  |  | MA3TNE1700-S3 | M23, A Series, 17 pos., panel connector with strain relief, E type, less contacts, <b>cable diameter 11.0-15mm</b> |
|  |  | MA3TNP1700-S1 | M23, A Series, 17 pos., panel connector with strain relief, P type, less contacts, <b>cable diameter 4.5-7.5mm</b> |
|  |  | MA3TNP1700-S2 | M23, A Series, 17 pos., panel connector with strain relief, P type, less contacts, <b>cable diameter 7.5-11mm</b>  |
|  |  | MA3TNP1700-S3 | M23, A Series, 17 pos., panel connector with strain relief, P type, less contacts, <b>cable diameter 11.0-15mm</b> |

# MotionGrade™ M23 A Series | Standard Products, cont.

All A Series plugs, receptacles and extensions accept pins or sockets. For keying options, please refer to Coding Key Chart on page 10. Contact your Sales Representative for more information.

| Part  | Face View   | Part Number | Description   |
|---|---|-------------|---|
|    |    | MA1LAE1200  | M23, A Series, 12 pos., straight receptacle, flange mount, E type, less contacts      |
|    |    | MA1LAP1200  | M23 A Series, 12 pos., straight receptacle, flange mount, P type, less contacts       |
|    |    | MA1LAE1600  | M23, A Series, 16 pos., straight receptacle, flange mount, E type, less contacts      |
|   |   | MA1LAP1600  | M23, A Series, 16 pos., straight receptacle, flange mount, P type, less contacts      |
|  |  | MA1LAE1700  | M23, A Series, 17 pos., straight receptacle, flange mount, E type, less contacts      |
|  |  | MA1LAP1700  | M23, A Series, 17 pos., straight receptacle, flange mount, P type, less contacts      |
|  |  | MA1RAE1201  | M23, A Series, 12 pos., 90° rotatable receptacle, flange mount, E type, less contacts |
|  |  | MA1RAP1201  | M23, A Series, 12 pos., 90° rotatable receptacle, flange mount, P type, less contacts |
|  |  | MA1RAE1601  | M23, A Series, 16 pos., 90° rotatable receptacle, flange mount, E type, less contacts |

| Part  | Face View   | Part Number | Description  |
|---|---|-------------|--|
|    |    | MA1RAP1601  | M23, A Series, 16 pos., 90° rotatable receptacle, flange mount, P type, less contacts  |
|    |    | MA1RAE1701  | M23, A Series, 17 pos., 90° rotatable receptacle, flange mount, E type, less contacts  |
|    |    | MA1RAP1701  | M23, A Series, 17 pos., 90° rotatable receptacle, flange mount, P type, less contacts. |
|   |   | MA1JAE1200  | M23, A Series, 12 pos., straight extension connector, E type, less contacts            |
|  |  | MA1JAP1200  | M23, A Series, 12 pos., straight extension connector, P type, less contacts            |
|  |  | MA1JAE1600  | M23, A Series, 16 pos., straight extension connector, E type, less contacts            |
|  |  | MA1JAP1600  | M23, A Series, 16 pos., straight extension connector, P type, less contacts            |
|  |  | MA1JAE1700  | M23, A Series, 17 pos., straight extension connector, E type, less contacts            |
|  |  | MA1JAP1700  | M23, A Series, 17 pos., straight extension connector, P type, less contacts            |

# MotionGrade™ M23 B Series

## Overview



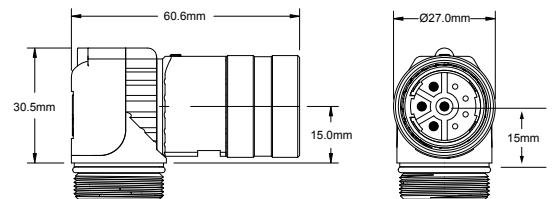
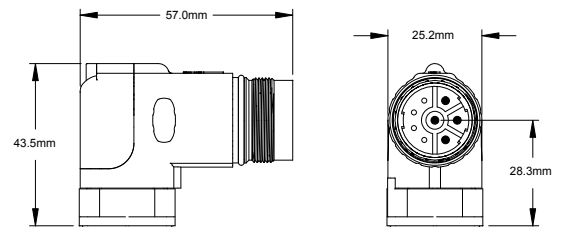
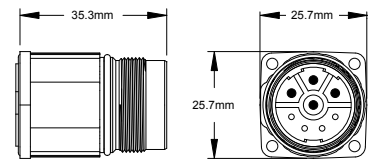
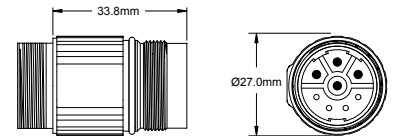
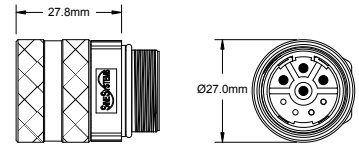
## Features & Benefits

|                            |   |
|----------------------------|---|
| Superior Shielding         | First quality components coupled with a simplistic design provide maximum EMI/RFI shielding capabilities while reducing assembly preparation times.                                   |
| Cable Strain Relief        | Your choice of either the innovative design features of FlexGrip™ or traditional cable strain relieving similar to existing standard systems.   |
| Fluid Resistance & Sealing | In combination with our strain relief systems, Amphenol utilizes advanced sealing technologies & materials to ensure highest reliability when subjected to the harshest environments. |
| RoHS Compliant             | <b>RoHS</b> All materials meet the requirements of the European Directive 2002/95/EC, Issue 13.2.2003.  |
| Approvals                  | ISO 9001/2000, E316693 Recognized (8 Pos.), E224856 Listed (6, 9 Pos.)  |
| Pending Approvals          | VDE   |

## Technical Specifications

|                           |  |
|---------------------------|--|
| Temperature Range         | -20 to 130°C   |
| Max. Current (AMP)        | 28A (6 Pos. Power), 30A (8, 9 Pos. Power)<br>10A (8, 9 Pos. Signal)                                      |
| Voltage Rating (AC/DC)    | 630V (6, 8, 9 Pos. Power), 250V (8, 9 Pos. Signal)   |
| Contact Resistance        | < 3mΩ (6, 8, 9 Pos. Power), < 5mΩ (8, 9 Pos. Signal)   |
| Min. Mating Cycles        | > 50   |
| Test Voltage Rating       | 6000V (6, 8, 9 Pos. Power), 2500V (8, 9 Pos. Signal)   |
| Sealing Protection        | IP66/67 (plugged condition)  |
| Protective Grounding      | Per VDE 0627   |
| Safety Protection         | Per VDE 0623   |
| Degree of Protection      | 3  |
| Overvoltage Category      | III  |
| Strain Relief Clamp Range | 7.5-17mm   |
| Number of Contact (mm)    | 6 Pos: 6 Power<br>8 Pos: 4 Power (2.0mm) + 4 Signal (1.0mm)<br>9 Pos: 4 Power (2.0mm) + 5 Signal (1.0mm) |
| Wire Range (AWG)          | 14-18, 18-22   |
| Product Material          |  |
| Housing Body              | Zinc Die-cast  |
| Coupling Nut              | Nickel-plate   |
| Insulation Inserts        | PA66, UL94/V0  |
| Contacts                  | Brass, Gold-plated   |
| Sealing Material          | DuPont Viton®  |

## Dimensional Drawings




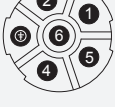













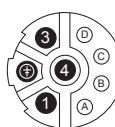


# MotionGrade™ M23 B Series | Standard Products

Below are a listing of all available M23 B Series standard products. Contact your Sales Representative for more information.

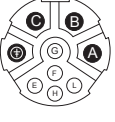
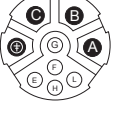

| Part  | Face View   | Part Number | Description  |
|---|---|-------------|--|
|    |    | MB1CKN0600  | M23, B Series, 6 pos., straight plug, less contacts.   |
|    |    | P30745-S(X) | <br>KIT: M23 Checkmate, B Series, 6 pos., 2.0mm sockets<br>Options: <b>-S1 (7.0-11.0mm)</b> , <b>-S2 (11.0-14.5mm)</b> , <b>-S3 (14.5-17.0mm)</b>   |
|    |    | MB1CKN0800  | M23, B Series, 8 pos. (4+4), straight plug, less contacts.   |
|    |    | P30744-S(X) | <br>KIT: M23 Checkmate, B Series, 8 pos., 2.0mm sockets<br>Options: <b>-S1 (7.0-11.0mm)</b> , <b>-S2 (11.0-14.5mm)</b> , <b>-S3 (14.5-17.0mm)</b>   |
|  |  | MB1CKN0900  | M23, B Series, 9 pos. (4+5), straight plug, less contacts.   |
|  |  | P30743-S(X) | <br>KIT: M23 Checkmate, B Series, 9 pos., 2.0mm sockets<br>Options: <b>-S1 (7.0-11.0mm)</b> , <b>-S2 (11.0-14.5mm)</b> , <b>-S3 (14.5-17.0mm)</b> |
|  |  | MB1CKNNG36  | M23, B Series, 9 pos. (3+6), straight plug, less contacts.<br>(Will accept up to 12AWG wire on the power.)   |
|  |  | MB1EJN0600  | M23, B Series, 6 pos., 90°, rotatable plug, less contacts.   |
|  |  | MB1EJN0800  | M23, B Series, 8 pos. (4+4), 90°, rotatable plug, less contacts  |
|  |  | MB1EJNNG36  | M23, B Series, 9 pos. (3+6), 90° rotatable plug, less contacts.<br>(Will accept up to 12AWG wire on the power.)  |



| Part  | Face View   | Part Number   | Description   |
|---|---|---------------|---|
|    |    | MB1EJN0900    | M23, B Series, 9 pos. (4+5), 90°, rotatable plug, less contacts   |
|    |    | MB1GJN0600    | M23, B Series, 6 pos., panel mount connector, female thread, less contacts.   |
|    |    | MB1GJN0800    | M23, B Series, 8 pos. (4+4), panel mount connector, female thread, less contacts.   |
|   |   | MB1GJN0900    | M23, B Series, 9 pos. (4+5), panel mount connector, female thread, less contacts.   |
|  |  | MB3TNN0600-S1 | M23, B Series, 6 pos., panel connector with strain relief, male thread, less contacts, <b>cable diameter 7.5-11mm</b>       |
|  |  | MB3TNN0600-S2 | M23, B Series, 6 pos., panel connector with strain relief, male thread, less contacts, <b>cable diameter 11-15mm</b>        |
|  |  | MB3TNN0600-S3 | M23, B Series, 6 pos., panel connector with strain relief, male thread, less contacts, <b>cable diameter 14.5-17mm</b>      |
|  |  | MB3TNN0800-S1 | M23, B Series, 8 pos.(4+4), panel connector with strain relief, male thread, less contacts, <b>cable diameter 7.5-11mm</b>  |
|  |  | MB3TNN0800-S2 | M23, B Series, 8 pos.(4+4), panel connector with strain relief, male thread, less contacts, <b>cable diameter 11-14.5mm</b> |

# MotionGrade™ M23 B Series | Standard Products, cont.


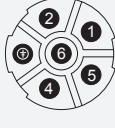

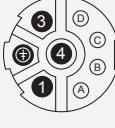

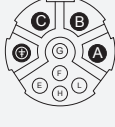

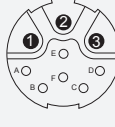
Below are a listing of all available M23 B Series standard products. Contact your Sales Representative for more information.

| Part  | Face View   | Part Number   | Description  |
|---|---|---------------|--|
|    |    | MB3TNN0800-S3 | M23, B Series, 8 position (4+4), panel connector with strain relief, male thread, less contacts, <b>cable diameter 14.5-17mm</b> |
|    |    | MB3TNN0900-S1 | M23, B Series, 9 position (4+5), panel connector with strain relief, male thread, less contacts, <b>cable diameter 7.5-11mm</b>  |
|    |    | MB3TNN0900-S2 | M23, B Series, 9 position (4+5), panel connector with strain relief, male thread, less contacts, <b>cable diameter 11-14.5mm</b> |
|   |   | MB3TNN0900-S3 | M23, B Series, 9 position (4+5), panel connector with strain relief, male thread, less contacts, <b>cable diameter 14.5-17mm</b> |
|  |  | MB1LKN0600    | M23, B Series, 6 position, jam nut receptacle, less contacts   |
|  |  | MB1LKN0800    | M23, B Series, 8 position (4+4), jam nut receptacle, less contacts   |
|  |  | MB1LKN0900    | M23, B Series, 9 position (4+5), jam nut receptacle, less contacts   |

| Part  | Face View   | Part Number | Description  |
|---|---|-------------|--|
|    |    | MB1JJN0600  | M23, B Series, 6 position, straight extension connector, less contacts.  |
|    |    | MB1JJN0800  | M23, B Series, 8 position (4+4), straight extension connector, less contacts.  |
|    |    | MB1JJN0900  | M23, B Series, 9 position (4+5), straight extension connector, less contacts   |
|   |   | MB1LLN0600  | M23, B Series, 6 position, straight receptacle, flange mount, less contacts  |
|  |  | MB1LLN0800  | M23, B Series, 8 position (4+4), straight receptacle, flange mount, less contacts  |
|  |  | MB1LLN0900  | M23, B Series, 9 position(4+5), straight receptacle, flange mount, less contacts   |
|  |  | MB1LLNNG36  | M23, B Series, 9 position (3+6), straight receptacle, flange mount, less contacts<br>(Will accept 12AWG wire on the power) |

# MotionGrade™ M23 B Series | **Standard Products**, cont.

Below are a listing of all available M23 B Series standard products. Contact your Sales Representative for more information.

| Part   | Face View  | Part Number | Description   |
|--|--|-------------|---|
|   |   | MB1RJN0601  | M23, B Series, 6 position, 90° rotatable recep., less contacts  |
|   |   | MB1RJN0801  | M23, B Series, 8 position (4+4), 90° rotatable recep., less contacts  |
|   |   | MB1RJN0901  | M23, B Series, 9 position (4+5), 90° rotatable recep., less contacts  |
|  |  | MB1RJNNG36  | M23, B Series, 9 position (3+6), 90° rotatable recep., less contacts<br>(will accept 12AWG wire on the power) |

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# MotionGrade™ M23 Hybrid (DMC) Decentralized Motion Connector Series

## Overview



## Features & Benefits

|                            |   |
|----------------------------|---|
| Superior Shielding         | First quality components coupled with a simplistic design provide maximum EMI/RFI shielding capabilities while reducing assembly preparation times.                                   |
| Cable Strain Relief        | Your choice of either the innovative design features of FlexGrip™ or traditional cable strain relieving similar to existing standard systems.   |
| Fluid Resistance & Sealing | In combination with our strain relief systems, Amphenol utilizes advanced sealing technologies & materials to ensure highest reliability when subjected to the harshest environments. |
| RoHS Compliant Approvals   | <b>RoHS</b> All materials meet the requirements of the European Directive 2002/95/EC, Issue 13.2.2003.<br><b>ISO 9001/2000</b> <b>UL &amp; cUL Recognized</b> <b>ECBT2/ECBT8</b>      |

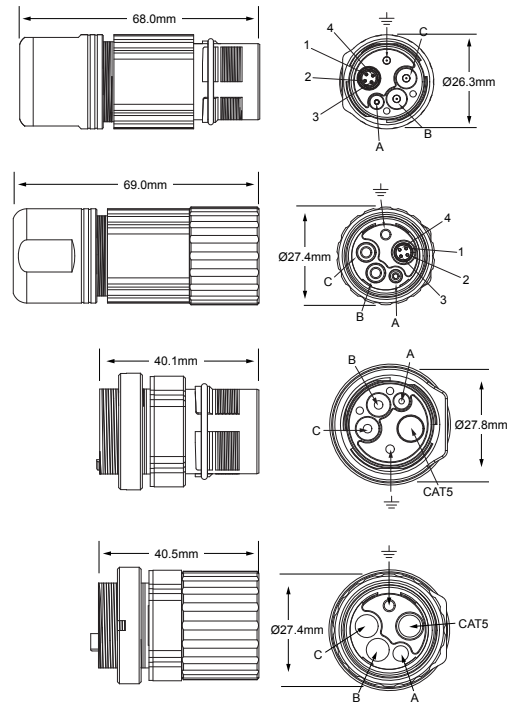
## Technical Specifications

|                        |  |
|------------------------|--|
| Temperature Range      | -20 to 130°C                                   |
| Max. Current (AMP)     | 18A (2.0mm); 1A (1.0mm); 0.5A (Quad Element)   |
| Voltage Rating (AC/DC) | 850 (2.0mm/1.0mm Contacts); 30V (Quad Element) |
| Contact Resistance     | < 15mΩ   |
| Min. Mating Cycles     | > 500  |
| Transmission Rate      | Quad Element -100MBit (CAT 5)                  |

Technical Specifications, cont.

|                           |   |
|---------------------------|---|
| Test Voltage Rating       | 6000V (2.0mm); 1500V (1.0mm);<br>500V (Quad Element)  |
| Sealing Protection        | IP66/67 (plugged condition)   |
| Protective Grounding      | Per VDE 0627  |
| Safety Protection         | Per VDE 0623  |
| Degree of Protection      | 3   |
| Overvoltage Category      | III   |
| Strain Relief Clamp Range | 7.5-11mm  |
| Number of Contact (mm)    | 2 Power + PE (2.0mm) + 1 Signal (1.0mm)<br>4 Quad Element Ethernet (.7mm)   |
| Wire Range (AWG)          | 14-18: 2.5 - 1.0mm <sup>2</sup> (2.0mm)<br>18-22: 1.0 - 0.34mm <sup>2</sup> (1.0mm)<br>28: 0.34 - 0.08mm <sup>2</sup> (0.7mm) |
| <b>Product Material</b>   |   |
| Housing Body/Coupling Nut | Zinc Die-cast; Nickel-plate   |
| Insulation Inserts        | PA66, UL94/V0   |
| Contacts                  | Brass, Gold-plated  |
| Sealing Material          | DuPont Viton®   |

### Dimensional Drawings



## MotionGrade™ M23 Hybrid DMC | Standard Products

Below are a listing of all available M23 Hybrid DMC Series standard products. Contact your Sales Representative for more information.

| Part | Face View | Part Number | Description  |
|------|-----------|-------------|--|
|      |           | MB3ZSN8HS1  | M23, Hybrid, 2 Power + PE (2.0mm) + 1 Signal (1.0mm), 4 Quad Element Ethernet (.7mm), straight plug, male, less contacts         |
|      |           | MB3XSN8HS1  | M23, Hybrid, 2 Power + PE (2.0mm) + 1 Signal (1.0mm), 4 Quad Element Ethernet (.7mm), straight plug, female, less contacts       |
|      |           | MB1YSN8H00  | M23, Hybrid, 2 Power + PE (2.0mm) + 1 Signal (1.0mm), 4 Quad Element Ethernet (.7mm), straight receptacle, male, less contacts   |
|      |           | MB1WSN8H00  | M23, Hybrid, 2 Power + PE (2.0mm) + 1 Signal (1.0mm), 4 Quad Element Ethernet (.7mm), straight receptacle, female, less contacts |

# MotionGrade™ M40 Series

## Overview



## Features & Benefits

|                            |   |
|----------------------------|---|
| Superior Shielding         | First quality components coupled with a simplistic design provide maximum EMI/RFI shielding capabilities while reducing assembly preparation times.                                   |
| Cable Strain Relief        | Your choice of either the innovative design features of FlexGrip™ or traditional cable strain relieving similar to existing standard systems.   |
| Fluid Resistance & Sealing | In combination with our strain relief systems, Amphenol utilizes advanced sealing technologies & materials to ensure highest reliability when subjected to the harshest environments. |
| RoHS Compliant             | <b>RoHS</b> All materials meet the requirements of the European Directive 2002/95/EC, Issue 13.2.2003.  |
| Approvals                  | ISO 9001/2000, UL Listed, E224856, CYJV/CYJV7   |
| Pending Approvals          | VDE   |



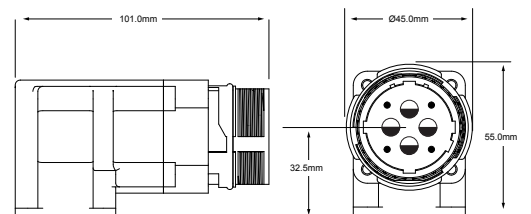
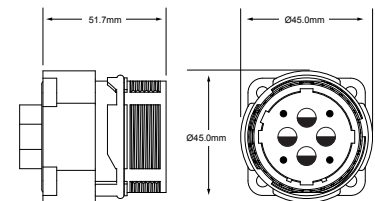
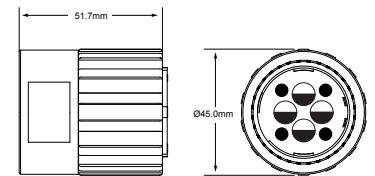
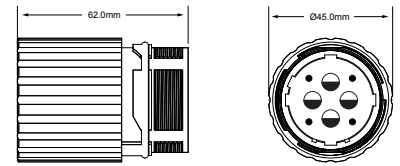
## Technical Specifications

|                           |   |
|---------------------------|---|
| Temperature Range         | -20°C to 130°C  |
| Max. Current (AMP)        | 75A (Power), 30A (Signal)   |
| Voltage Rating (AC/DC)    | 630V (Power), 250V (Signal)   |
| Contact Resistance        | < 1mΩ (Power), < 3mΩ (Signal)   |
| Min. Mating Cycles        | > 50  |
| Test Voltage Rating       | 6000V (Power), 4000V (Signal)   |
| Sealing Protection        | IP67 (plugged condition)  |
| Degree of Protection      | 3   |
| Overvoltage Category      | III   |
| Strain Relief Clamp Range | 7.5-11.0mm; 11.0-14.5mm; 14.5-17.0mm;<br>14.5-20.5mm; 20.5-26.0mm                     |
| Number of Contact (mm)    | 6 Pos: 2 (2.0mm) + 4 (3.6mm)<br>8 Pos: 4 (2.0mm) + 4 (3.6mm)                          |
| Wire Range (AWG)          | Pins: 14-18AWG (2.0mm), 8-12AWG (3.6mm)<br>Sockets: 14-18AWG (2.0mm), 8-12AWG (3.6mm) |

## Product Material

|                           |                                    |
|---------------------------|------------------------------------|
| Housing Body/Coupling Nut | Zinc Die-cast/Brass, Nickel-plated |
| Insulation Inserts        | PA66 / PBT, UL94/V0                |
| Contacts                  | Brass, Gold-plated                 |
| Sealing Material          | DuPont Viton®                      |

## Dimensional Drawings



# MotionGrade™ M40 | C Series Standard Products

Below are a listing of all available M40 C Series standard products. Contact your Sales Representative for more information.

| Part  | Face View   | Part Number | Description   |
|---|---|-------------|---|
|    |    | MC1CJN0600  | M40, Series C, 6 pos. (4+2), straight plug, less contacts                     |
|    |    | MC1CJN0800  | M40, Series C, 8 pos. (4+4), straight plug, less contacts                     |
|    |    | MC1JJN0600  | M40, Series C, 6 pos. (4+2), extension connector, less contacts               |
|   |   | MC1JJN0800  | M40, Series C, 8 pos. (4+4), extension connector, less contacts               |
|  |  | MC1LKN0600  | M40, Series C, 6 pos. (4+2), straight receptacle, flange mount, less contacts |
|  |  | MC1LKN0800  | M40, Series C, 8 pos. (4+4), straight receptacle, flange mount, less contacts |
|  |  | MC1NJN0600  | M40, Series C, 6 pos. (4+2), 90° fixed receptacle, less contacts              |
|  |  | MC1NJN0800  | M40, Series C, 8 pos. (4+4), 90° fixed receptacle, less contacts              |

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# MotionGrade™ | Cord Grip & FlexGrip™ Backshell Options

Below are a listing of all available Cord Grip and FlexGrip™ backshells for both M23 and M40. Contact your Sales Representative for more information.

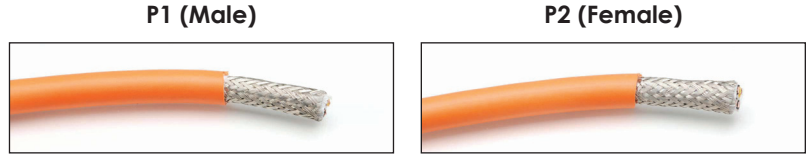
| Part  | Part Number  | Description   |
|---|--------------|---|
|    | MA3CG-S1     | M23, A Series, cord grip, <b>cable range 4.5-7.5mm</b>  |
|    | MA3CG-S2     | M23, A Series, cord grip, <b>cable range 7.5-11mm</b>   |
|    | MA3CG-S3     | M23, A Series, cord grip, <b>cable range 11.0-15.0mm</b>  |
|   | MA4FSR-A8.5  | M23, A Series, FlexGrip™, <b>cable range 7.5-8.5mm</b><br><b>Note:</b> FlexGrip™ Backshells must be potted to achieve IP67 ratings.   |
|  | MA4FSR-A10.5 | M23, A Series, FlexGrip™, <b>cable range 9.5-10.5mm</b><br><b>Note:</b> FlexGrip™ Backshells must be potted to achieve IP67 ratings.  |
|  | MA4FSR-A12.8 | M23, A Series, FlexGrip™, <b>cable range 11.5-12.8mm</b><br><b>Note:</b> FlexGrip™ Backshells must be potted to achieve IP67 ratings. |
|  | MB3CG-S1     | M23, B Series, cord grip, <b>cable range 7.5-11mm</b>   |
|  | MB3CG-S2     | M23, B Series, cord grip, <b>cable range 11.0-14.5mm</b>  |
|  | MB3CG-S3     | M23, B Series, cord grip, <b>cable range 14.5-17mm</b>  |

| Part  | Part Number  | Description   |
|---|--------------|---|
|    | MB4FSR-B10.3 | M23, B Series, FlexGrip™, <b>cable range 9.5-10.3mm</b><br><b>Note:</b> FlexGrip™ Backshells must be potted to achieve IP67 ratings.  |
|    | MB4FSR-B12.5 | M23, B Series, FlexGrip™, <b>cable range 11.5-12.5mm</b><br><b>Note:</b> FlexGrip™ Backshells must be potted to achieve IP67 ratings. |
|    | MB4FSR-B14.5 | M23 B Series, FlexGrip™, <b>cable range 13.5-14.5mm</b><br><b>Note:</b> FlexGrip™ Backshells must be potted to achieve IP67 ratings.  |
|    | MB4FSR-B17   | M23 B Series, FlexGrip™, <b>cable range 15.5-17mm</b><br><b>Note:</b> FlexGrip™ Backshells must be potted to achieve IP67 ratings.    |
|   | MC3CG-S1     | M40, C Series, cord grip, <b>cable range 9.0-12.5mm</b>   |
|  | MC3CG-S2     | M40, C Series, cord grip, <b>cable range 12.5-14.5mm</b>  |
|  | MC3CG-S3     | M40, C Series, cord grip, <b>cable range 14.5-17.0mm</b>  |
|  | MC3CG-S4     | M40, C Series, cord grip, <b>cable range 17-19.5mm</b>  |
|  | MC3CG-S5     | M40, C Series, cord grip, <b>cable range 19-21.5mm</b>  |
|  | MC3CG-S6     | M40, C Series, cord grip, <b>cable range 21.5-24mm</b>  |
|  | MC3CG-S7     | M40, C Series, cord grip, <b>cable range 25.5-26mm</b>  |
|  | MC4FSR-C18.5 | M40, C Series, FlexGrip™, <b>cable range 17.5-18.5mm</b><br><b>Note:</b> FlexGrip™ Backshells must be potted to achieve IP67 ratings. |

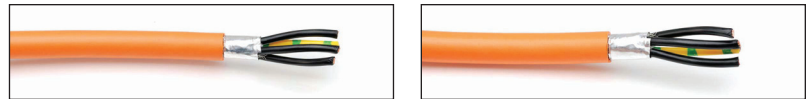
# Cable Prep & Assembly

Steps 1-6 below show how to properly prepare a cable/connector using either a Cord Grip or FlexGrip™ backshell. Steps 7A-10A refer specifically to the Cord Grip option, while 7B-10B refer to the FlexGrip option. Contact Sales Representative for more information.

**Step 1:** Strip jacket material of P1 (Male) or P2 (Female) to 40mm (+/-1.0mm)



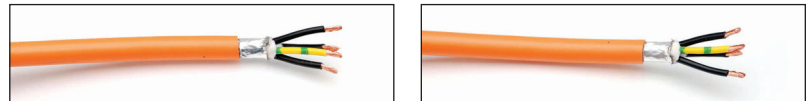
**Step 2:** Clean P1 (Male) or P2 (Female). Wrap copper foil (1/2") tightly onto shield braid, avoiding damage to foil. Cut excess braid wire off.



**Step 3:** Slide Cord Grip onto cable for P1 (Male) or P2 (Female).



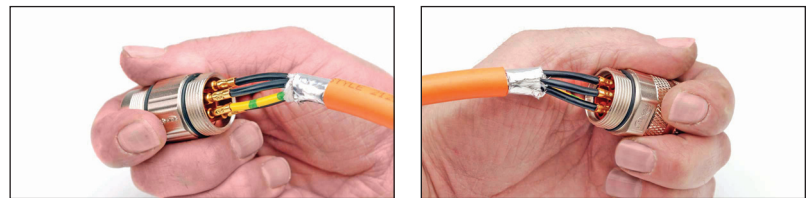
**Step 4:** Strip P1 (Male) or P2 (Female) jacket material to 4mm (+/- 0.5mm)



**Step 5:** Crimp contacts onto P1 (Male) or P2 (Female)



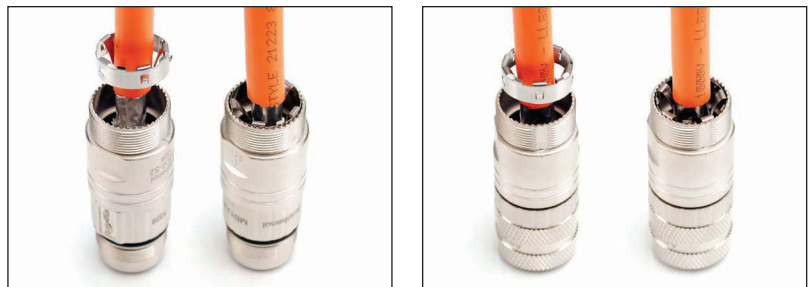
**Step 6:** Insert crimped wires into backend of P1 (Male) or P2 (Female) connector body.



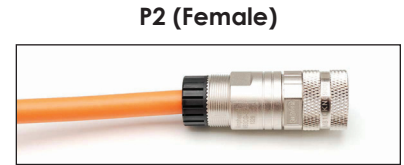
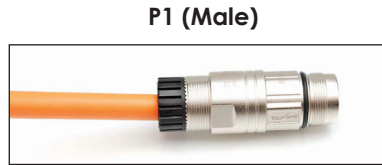
**Step 7A: (Cord Grip Only)** Thread Cord Grip Body onto backend of connector body tightly.



**Step 8A: (Cord Grip Only)** Slide EMI Shielding Ring onto copper foil surface, making sure EMI fines are seated properly onto copper foil.



**Step 9A: (Cord Grip Only)** Push Rubber Seal Grommet into backend of Cord Grip Body.



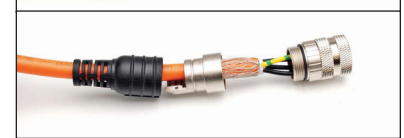
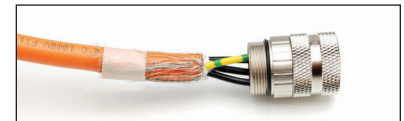
**Step 10A: (Cord Grip Only)** Thread Cord Grip Cap onto Cord Grip Body and tighten to torque specs. (insert torque specs here)



**FlexGrip™ Prep Details:** During cable prep specific to using the FlexGrip backshell, be sure excess shielding material is pulled back over the cable jacket and taped down. This allows for ease of sliding FlexGrip™ parts into place.

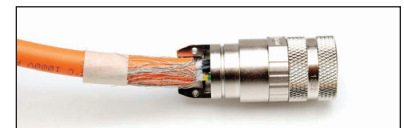
**Note:** \*\* Cable prep is same for P1 (Male) connectors using FlexGrip™ backshells as P2 (Female).

\*\*



**Step 7B: (FlexGrip™ Only)** Thread into position the bottom part of the Two-Piece Clamp onto the backend of the connector body tightly, ensuring excess shielding material is still exposed underneath the Two-Piece Clamp.

\*\*



**Step 8B: (FlexGrip™ Only)** Place the top portion of the Two-Piece Clamp into position and use the enclosed screws to tighten into place.

\*\*



**Step 9B: (FlexGrip™ Only)** Cut off excess shielding material behind Two-Piece Clamp.

\*\*



**Step 10B: (FlexGrip™ Only)** Slide FlexGrip™ Shell over the backend portion of the Two-Piece Clamp hardware.

\*\*



# Receptacle Assembly

## Assembly for M23 90° Receptacle

**Step 1:** Unscrew the backing of the 90° receptacle assembly.



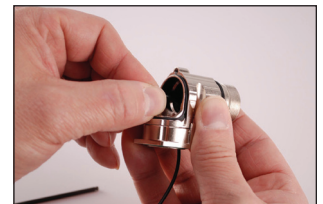
**Step 2:** Remove the backing of the 90° receptacle assembly.



**Step 3:** Thread the crimped contact through the bottom and backing of the 90° receptacle assembly.



**Step 4:** Insert crimped wire into backend of the connector body.



**Step 5:** Insert the remainder of the crimped wires into backend of the connector body.



**Step 6:** Replace the backing of the 90° receptacle assembly.



**Step 7:** Screw the backing of the 90° receptacle assembly into position and tighten.

Complete.





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# Contacts & Tooling

## Contact Options

Below are a listing of all available machined contacts for the M23 and M40 product lines.

| Series | Size  | AWG   | Type     | Plating           | Part Number | Contact | Extraction Tool |
|--------|-------|-------|----------|-------------------|-------------|---------|-----------------|
| M23 A  | 1.0mm | 18-22 | Machined | Brass, Gold-plate | SC000035    | Pin     | 50-54931-1      |
| M23 A  | 1.0mm | 24-28 | Machined | Brass, Gold-plate | SC000146    | Pin     | 50-54931-1      |
| M23 A  | 1.0mm | 18-22 | Machined | Brass, Gold-plate | SC000044    | Socket  | 50-54931-1      |
| M23 A  | 1.0mm | 24-28 | Machined | Brass, Gold-plate | SC000030    | Socket  | 50-54931-1      |

**NOTE:** M23 A Series connector configurations will accept pins or sockets.

|       |       |       |          |                   |          |        |            |
|-------|-------|-------|----------|-------------------|----------|--------|------------|
| M23 B | 1.0mm | 18-22 | Machined | Brass, Gold-plate | SC000035 | Pin    | 50-54931-1 |
| M23 B | 2.0mm | 14-16 | Machined | Brass, Gold-plate | SC000036 | Pin    | 50-54931-2 |
| M23 B | 1.0mm | 18-22 | Machined | Brass, Gold-plate | SC000044 | Socket | 50-54931-1 |
| M23 B | 1.0mm | 24-28 | Machined | Brass, Gold-plate | SC000030 | Socket | 50-54931-1 |
| M23 B | 2.0mm | 14-16 | Machined | Brass, Gold-plate | SC000045 | Socket | 50-54931-2 |

**NOTE:** M23 B Series plugs accept sockets only. M23 B Series receptacles and extension connectors will accept pins only.



|                     |       |       |          |                   |          |        |            |
|---------------------|-------|-------|----------|-------------------|----------|--------|------------|
| M23 Hybrid          | #20   | 18-22 | Machined | Brass, Gold-plate | SC000261 | Pin    | 50-54931-1 |
| M23 Hybrid          | #14   | 14-18 | Machined | Brass, Gold-plate | SC000262 | Pin    | 50-54931-2 |
| M23 Hybrid          | #20   | 18-22 | Machined | Brass, Gold-plate | SC000259 | Socket | 50-54931-1 |
| M23 Hybrid          | #14   | 14-18 | Machined | Brass, Gold-plate | SC000260 | Socket | 50-54931-2 |
| M23 Hybrid/Ethernet | 0.7mm | 22-28 | Machined | Brass, Gold-plate | SC000263 | Pin    | N/A        |
| M23 Hybrid/Ethernet | 0.7MM | 22-28 | Machined | Brass, Gold-plate | SC000264 | Socket |            |

|       |       |       |          |                   |          |        |            |
|-------|-------|-------|----------|-------------------|----------|--------|------------|
| M40 C | 2.0mm | 14-16 | Machined | Brass, Gold-plate | SC000036 | Pin    | 50-54931-2 |
| M40 C | 2.0mm | 14-16 | Machined | Brass, Gold-plate | SC000040 | Pin    | 50-54931-2 |
| M40 C | 3.6mm | 8-12  | Machined | Brass, Gold-plate | SC000041 | Pin    | 50-54931-3 |
| M40 C | 2.0mm | 14-16 | Machined | Brass, Gold-plate | SC000045 | Socket | 50-54931-2 |
| M40 C | 3.6mm | 8-12  | Machined | Brass, Gold-plate | SC000039 | Socket | 50-54931-3 |
| M40 C | 3.6mm | 8-12  | Machined | Brass, Gold-plate | SC000046 | Socket | 50-54931-3 |


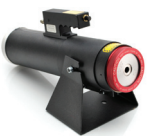
**NOTE:** M40 C Series plugs accept sockets only. M40 C Series receptacles and extension connectors will accept pins only.

## Crimp Tools

Below are a listing of all available crimp tools for the M23 and M40 product lines: Hand Crimp and Pneumatic. For each tool you must order the corresponding positioner separately.

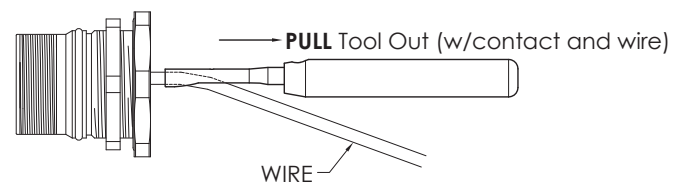
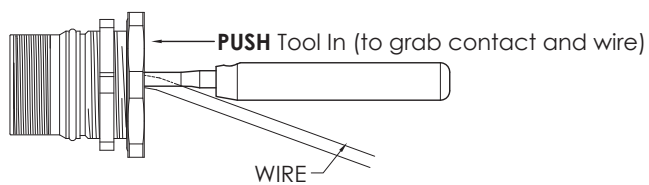
| Part  | Part Number | Description  |
|---|-------------|--|
|  | AFM8        | Universal Hand Crimp Tool, 1.0mm, <b>wire range 20-32AWG</b><br>*Uses Universal Positioner, P/N: SK2/2 |
|   | AF8         | Universal Hand Crimp Tool, 2.0mm, <b>wire range 12-26AWG</b><br>*Uses Universal Positioner, P/N: UH2-5 |
|  | WA22        | Pneumatic Crimp Tool, 1.0mm, <b>wire range 20-32AWG</b><br>*Uses Universal Positioner, P/N: SK2/2      |




## Crimp Tools, cont.

| Part  | Part Number | Description  |
|---|-------------|--|
|  | WA27F       | Pneumatic Crimp Tool, 2.0mm, <b>wire range 12-26AWG</b><br>*Uses Universal Positioner, P/N: UH2-5                  |
|  | WA23        | Pneumatic Crimp Tool, 3.6mm, <b>wire range 8-10AWG</b><br>*Uses Universal Positioner, P/N: WA23-101DA and MFX-3966 |

## Extraction Tools

Below are a listing of all available extraction tools to assist with your contact/wire removal needs.



| Part  | Part Number | Description                                      |
|---|-------------|--|
|  | 50-54931-1  | Used for removal of 1.0mm contacts from inserts. |
|  | 50-54931-2  | Used for removal of 2.0mm contacts from inserts. |
|  | 50-54931-3  | Used for removal of 3.0mm contacts from inserts. |

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Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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