Suited for harsh and high-vibration applications, the Brad® Micro-Change® CAT6A Connector System delivers next-gen speeds of up to 10 Gigabit Ethernet and superior signal integrity through a 360° shielded X-code interface.

**Features and Benefits**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete 360° shielded design</td>
<td>Provides optimal signal performance without system noise interference via the two shielding crosses of the M12 connector. Achieves superior signal-integrity values when compared to current RJ45 CAT6 systems.</td>
</tr>
<tr>
<td>Recessed male pins within die-cast X-code shield</td>
<td>Prevents damage to pins during mating. Eliminates scooping.</td>
</tr>
<tr>
<td>Factory overmolded and tested cable assemblies in 26 AWG wire gauge</td>
<td>Assures uncompromised reliability in harsh environments.</td>
</tr>
<tr>
<td>IDC wire termination</td>
<td>Ensures a secure and reliable wire connection. Enhances speed and simplicity in assembly.</td>
</tr>
<tr>
<td>Nickel-plated die-cast housings</td>
<td>Performs reliably in harsh, demanding environments. Utilizes corrosion-resistant hardware.</td>
</tr>
<tr>
<td>Standard M12-threaded coupling nut mating interface with internal and external o-ring seals</td>
<td>Guarantees IP67 protection from dust and water. Conforms to TIA-568 and IEC 61076-2-10x.</td>
</tr>
<tr>
<td>Receptacle PCB standoffs</td>
<td>Secures the receptacle to the PCB. Prevents damaging of the PCB and contacts. Prevents connector rotation.</td>
</tr>
<tr>
<td>Through-Hole Reflow (THR) mounting technology</td>
<td>Allows for automated assembly process for attaching the receptacle to the PCB.</td>
</tr>
</tbody>
</table>

**Applications**

**Commercial Vehicle**
- GPS
- Telematics
- Mobile Data Acquisition
- Railway Data Networks
- Video Protection Systems

**Military**
- Vision Systems
- High-Speed Video Communication
- Vehicle Open-System Architecture
- Mobile Data Acquisition
- Sensor Networks
- Unmanned Vehicles

**Industrial Automation**
- Robotic Welding
- Food and Beverage Production

**Automation**

**Railways**

**Vision Systems**
Brad® Micro-Change® CAT6a Connector System

Specifications

REFERENCE INFORMATION
Packaging:
Receptacles – Blister Pack
Cables – Bag
Field Attachables – Individual
UL File No.: E200650 Pending
RoHS: Yes
Halogen Free: Yes
NEMA Rating:
M12: IP67
RJ45: IP20

ENVIRONMENTAL
Protection: IP67 for M12, IP20 for RJ45
Operating Temperature: -40 to +85ºC

ELECTRICAL
Voltage (max.): 48V
Current (max.): 0.5A
Contact Resistance (max.):
M12 – 10 milliohms
RJ45 – 20 milliohms
Insulation Resistance (min.):
M12 – 100 Megohms
RJ45 – 500 Megohms
Transmission Characteristics (Category): CAT6a
POE+ According to IEEE 802.3AT

PHYSICAL
Housing:
Receptacles and Cables – Nickel-Plated Brass
Field-Attachables – Nickel Plated Zinc Die-cast
Coupling Nut: Nickel-Plated Brass
Contact: Gold Over Nickel
Connector Body: PUR Black
Insertion Force (max.): 30 N
Durability (mating cycles):
M12 – 100
RJ45 – 750
Cable Jacket (Outer): Blue PUR
Wire Type: 4 Twisted Pairs
Wire Gauge: 26 AWG
Pair Shielding: Aluminum-Bonded Polyester Tape
Cable Shielding: Tinned Copper Wire Braid
Operating Temperature: -40 to +75ºC

WIRE TERMINATION
IDC Technology

Ordering Information

Field Attachables

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Description</th>
<th>Orientation</th>
<th>Number of Positions</th>
<th>MOQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>120341-0806</td>
<td>M12 Male X-Coded Shielded Field-Attachable</td>
<td>Straight</td>
<td>8 Pole</td>
<td>10</td>
</tr>
<tr>
<td>130047-8008</td>
<td>RJ45 Male RJ-45 STR Shielded Field-Attachable (AWG 22)</td>
<td>Straight</td>
<td>8 Pole</td>
<td>10</td>
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<tr>
<td>130047-8010</td>
<td>RJ45 Male RJ-45 STR Shielded Field-Attachable (AWG 26)</td>
<td>Straight</td>
<td>8 Pole</td>
<td>10</td>
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<tr>
<td>130047-8009</td>
<td>RJ45 Male RJ-45 90° Shielded Field-Attachable (AWG 22)</td>
<td>Right Angle</td>
<td>8 Pole</td>
<td>10</td>
</tr>
<tr>
<td>130047-8011</td>
<td>RJ45 Male RJ-45 90° Shielded Field-Attachable (AWG 26)</td>
<td>Right Angle</td>
<td>8 Pole</td>
<td>10</td>
</tr>
</tbody>
</table>

Receptacles

<table>
<thead>
<tr>
<th>Order Number</th>
<th>Mounting Style</th>
<th>Poles</th>
<th>Ethernet Protocol</th>
<th>MOQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>120341-0075</td>
<td>Front Panel</td>
<td>8</td>
<td>CAT6a</td>
<td>100</td>
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<tr>
<td>120341-0150</td>
<td>Back Panel</td>
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<td>CAT6a</td>
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</table>

Cable Assemblies

<table>
<thead>
<tr>
<th>Order Number</th>
<th>Cable Length</th>
<th>Poles</th>
<th>Ethernet Protocol</th>
<th>MOQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>120341-0300</td>
<td>0.5m</td>
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<td>CAT6a</td>
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</tr>
<tr>
<td>120341-0301</td>
<td>1.0m</td>
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<td>CAT6a</td>
<td>8</td>
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<tr>
<td>120341-0302</td>
<td>2.0m</td>
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<td>CAT6a</td>
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<tr>
<td>120341-0303</td>
<td>3.0m</td>
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<td>CAT6a</td>
<td>8</td>
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<tr>
<td>120341-0304</td>
<td>4.0m</td>
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<td>CAT6a</td>
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<tr>
<td>120341-0305</td>
<td>5.0m</td>
<td>8</td>
<td>CAT6a</td>
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</tr>
<tr>
<td>120341-0306</td>
<td>10.0m</td>
<td>8</td>
<td>CAT6a</td>
<td>8</td>
</tr>
</tbody>
</table>

www.molex.com/link/bradindustrialethernet.html