Connectivity & Network Media

 Seamlessly Connect Your Integrated Architecture and Components
Connectivity & Network Media Solutions

Rockwell Automation offers a full portfolio of Connection Systems and Network Media solutions that provide seamless connectivity for your Integrated Architecture and components. There’s no need to call all over town to get connected, because you can meet all your connection needs with just one call to Rockwell Automation.

Flexibility

Allen-Bradley® Connectivity and Network Media products offer an extensive selection in the industry. Whether it’s a standard cable or customized length, you can get the product you need, when you need it. Minimized delivery time is our focus – so high-demand products are stocked for immediate delivery while custom or non-stocked items are shipped within 14 days.

Availability

We know there’s very seldom a “standard” control system when it comes to connectivity. You need a variety of standard products, but also room to customize. Our range of standard and custom cables allows you to easily mix and match components to suit your control architecture.

Quality

Allen-Bradley Connectivity and Network Media solutions are electrically and mechanically tested internally and through third-party agencies such as CSA and UL to comply with the latest standards and certifications.

Compatibility

Our Connectivity and Network Media products are compatible with other Allen-Bradley products from sensors, switches, safety components and Distributed I/O to Ethernet-enabled products such as Stratix Switches, PLCs, Drives and MCC products.
Non-Network Connectivity

- A wide range of connection styles and cable jacket options to suit any application or environment
- Standard and customized cable lengths plus raw cable and field-attachable connectors for optimal flexibility
- Reduce installation and commissioning time while reducing the risk of wiring errors outside cabinet
- Minimal Mean Time to Repair (MTTR) in event of field device or cable failure

Network Media

**ETHERNET MEDIA**
- More robust than standard off-the-shelf Ethernet cabling, Allen-Bradley Ethernet media components are constructed for excellent reliability, flexibility and noise reduction
- Specially designed cable with rugged connector construction to preserve network integrity and performance
- Easily connect with Allen-Bradley Ethernet switches, programmable controllers, PanelView™ graphic terminals and drives

**DEVICENET MEDIA**
- Multiple trunk and drop cable options for optimal flexibility in your network topology
- Plug and play solutions that minimize installation time
- KwikLink™ Lite Flat Media provides up to 50% savings in installation costs by offering a drastic reduction in labor and materials

Safety Connectivity

- A safety-wired, quick disconnect-based system that reduces installation cost and simplifies troubleshooting
- Increased system modularity promotes system expansion
- Flexible connections between safety interlock switches, E-stops, cable pull switches, safety relays, light curtains and safety mats
- Single or dual-channel options with or without enunciation
Non-network Connectivity Solutions

Allen-Bradley passive connectivity components make up a complete plug & play solution that simplifies and consolidates wiring while providing secure connections for proximity sensors, limit switches, photoelectric sensors and other field devices.

**APPLICATION**

Non-network Connectivity is ideal for compact machines, cost-sensitive applications or those where minimal diagnostics are required.

**M12 Distribution Box with Mini Connector**

<table>
<thead>
<tr>
<th>Illus. #</th>
<th>Part #</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>888N-F12AF1*</td>
<td>Mini Plus-Style Receptacle – Female</td>
</tr>
<tr>
<td>2</td>
<td>898D-PS8PT-N12</td>
<td>DC Micro Distribution Box with Mini Plus Connector</td>
</tr>
<tr>
<td>3</td>
<td>889D-F4ACDE-*</td>
<td>DC Micro – 4-pin (Straight Female to Right Angle Male)</td>
</tr>
</tbody>
</table>

**Pico Distribution Box and Cables**

<table>
<thead>
<tr>
<th>Illus. #</th>
<th>Part #</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>888D-F8AB3*</td>
<td>DC Micro Receptacle-Female</td>
</tr>
<tr>
<td>5</td>
<td>889D-R8ABDM-*</td>
<td>DC Micro 8-pin - Right Angle Female to Straight Male</td>
</tr>
<tr>
<td>6</td>
<td>898P-P36PT-D8</td>
<td>Pico Distribution Box with DC Micro Main Connector</td>
</tr>
<tr>
<td>7</td>
<td>889D-F4ABP3E-*</td>
<td>DC Micro Female to Pico Patchcord Male</td>
</tr>
</tbody>
</table>

Note: Replace * with 2 (2 meter), 5 (5 meter), or 10 (10 meter) for standard lengths.

Refer to the On-Machine™ Connectivity catalog at ab.com/catalogs for detailed ordering information.
A complete connectivity solution, including:

- Cordsets (connector at one end, leads on the other)
- Patchcords (connectors at each end)
- Field-attachable connectors
- Panel-mount receptacles
- Distribution boxes
- Splitters and tees
- V- and Y-cables
- Raw cable spools

**CONNECTIVITY STYLES**

- DC Micro (M12), 2-, 3-, 4-, 5- and 8-pin
- EAC Micro
- AC Micro (1/2"), 3-, 4-, 5-, and 6-pin
- Pico 3- and 4-pin
- M23
- Mini (7/8"), 2-, 3-, 4-, 5- and 6-pin
- DIN Valve
- Mini Plus 7-, 8-, 9-, 10- and 12-pin

Various cable jacket materials and flex ratings for a wide range of applications and environments:

- PVC – General purpose applications
- TPE – Bending and flexing applications, temperature extremes
- PUR – Bending and flexing applications, chemical environments, water submersion
- ToughWeld™ (CPE) – Welding applications, chemical environments
- ToughLink™ (TPE) – UV and water resistant, chemical environments
- High Flex TPE and PUR – Rated to 5 million, 9 million, and 10 million flex cycles

**Notes:**

- Cordsets and Patchcords are offered in standard and customized lengths for optimal flexibility
- Standard connector cables meet IP69K enclosure ratings for use in harsh environments
- Connectors feature epoxy-coated zinc coupling nuts as standard; stainless steel and nickel-plated brass also available
- LED indicators are available for Micro, Pico, and Mini connectors

### M12 Distribution Box with Cables

<table>
<thead>
<tr>
<th>Illus. #</th>
<th>Part #</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>888M-F19AE-*</td>
<td>M23 Receptacle - Female</td>
</tr>
<tr>
<td>9</td>
<td>889M-M19AH-T</td>
<td>M23 Field Attachable Connector - Male</td>
</tr>
<tr>
<td>10</td>
<td>898D-58DT-B*</td>
<td>DC Micro Distribution Box with Cable Connector</td>
</tr>
<tr>
<td>11</td>
<td>889D-F4ACDE-*</td>
<td>DC Micro –4-pin (Straight Female to Right Angle Male)</td>
</tr>
<tr>
<td>12</td>
<td>879D-F4ACDM-*</td>
<td>DC Micro V-Cable - Female to Male ends</td>
</tr>
</tbody>
</table>

### M23 Distribution Box and Cables

<table>
<thead>
<tr>
<th>Illus. #</th>
<th>Part #</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>888M-F11AE-*</td>
<td>M23 Receptacle - Female</td>
</tr>
<tr>
<td>14</td>
<td>889M-R11RMU-*</td>
<td>M23 11-pin (Right Angle Female to Straight Male)</td>
</tr>
<tr>
<td>15</td>
<td>898D-58PT-M12</td>
<td>DC Micro Distribution Box with M23 Main connector</td>
</tr>
<tr>
<td>16</td>
<td>889D-F4ACDE-*</td>
<td>DC Micro –4-pin (Straight Female to Right Angle Male)</td>
</tr>
<tr>
<td>17</td>
<td>889V, 889W, 889Z</td>
<td>Din Valve Patchcords</td>
</tr>
</tbody>
</table>
Ethernet Media Solutions

We offer a complete portfolio of industrial-grade Ethernet physical media specifically designed for use in harsh environments.

APPLICATION
Ethernet Network Connectivity is ideal for highly distributed machines that require extensive diagnostics at the PLC.

Note: Replace * with 2 (2 meter), 5 (5 meter), or 10 (10 meter) for standard lengths. Refer to the On-Machine Connectivity catalog at ab.com/catalogs for detailed ordering information.
Allen-Bradley Ethernet media components combine specially-designed cable with rugged connector construction to preserve network integrity and performance.

COMPONENTS:
- Cordsets and patchcords
- Receptacles/outlets
- Bulkhead adapters
- Raw cable spools
- Field-attachable connectors

CONNECTOR OPTIONS:
- RJ45 (IP20)
- M12 D-Coded (IP67)
- Variant 1 (IP67)

2-pair or 4-pair shielded and unshielded cable options in multiple cable jackets:
- 2-pair for 10/100BaseT and On-Machine applications
- 4-pair for backbone and uplink ports or any areas requiring data rates greater than 100BaseT
- PVC Cable – General Purpose Applications
- PUR Cable – High flex, Halogen-free
- TPE Cable – High Flex Applications
- Plenum Cable – Air Handling Applications
- 600V PVC – Use in cable trays with up to 600V rated cables

Notes:
- Allen-Bradley Ethernet media is designed to ODVA Ethernet/IP standards for enhanced performance in industrial applications
- 600V Rated cable has a 600V AWM rating as well as PLTC (Power Limited Tray Cable) – NEC Type PLTC Listed, which is approved for cable tray use in Class 1, Division 2, hazardous areas and non-hazardous areas, cable trays, raceways, conduit and supported by messenger wires
- Transition from inside the cabinet to on-machine can be accomplished with an RJ45-to-M12 bulkhead adapter or an RJ45-to-M12 female panel mount patchcord. Both solutions provide a sealed solution mounted onto the cabinet and enables an easy transition from IP20 to IP67
- High flex cables rated to 10 million flexing cycles

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**On-Machine Ethernet-Enabled Devices**

<table>
<thead>
<tr>
<th>Illus. #</th>
<th>Part #</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>294E*</td>
<td>ArmorStart LT</td>
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<tr>
<td>13</td>
<td>1738*</td>
<td>ArmorPOINT</td>
</tr>
<tr>
<td>14</td>
<td>1732E*</td>
<td>ArmorBlock* (legacy)</td>
</tr>
<tr>
<td>15</td>
<td>1732E*</td>
<td>ArmorBlock</td>
</tr>
<tr>
<td>16</td>
<td>56RF-IN-IPD22</td>
<td>RFID Interface Block</td>
</tr>
<tr>
<td>17</td>
<td>48MS*</td>
<td>MultiSight Vision Sensor</td>
</tr>
<tr>
<td>18</td>
<td>842E*</td>
<td>EtherNet/IP Encoder</td>
</tr>
<tr>
<td>19</td>
<td>889D-F5FCDE-J*</td>
<td>DC Micro Patchcord - Right Angle Female to Straight Male Shielded</td>
</tr>
<tr>
<td>20</td>
<td>889D-R4ACDM-*</td>
<td>DC Micro Patchcord - Right Angle Female to Straight Male</td>
</tr>
<tr>
<td>21</td>
<td>889D-R4ACDE-*</td>
<td>DC Micro Patchcord - Right Angle to Right Angle</td>
</tr>
</tbody>
</table>
**DeviceNet Media Solutions**

Allen-Bradley DeviceNet™ media systems include round and flat cable options to reduce your installation time and materials cost.

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**APPLICATION**

DeviceNet is a flexible network solution that saves installation time and is ideal for in-cabinet applications.

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**A KwikLink Lite Media Solution**

<table>
<thead>
<tr>
<th>Illus. #</th>
<th>Part #</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1485C-P1W♦</td>
<td>KwikLink Lite Flat Media</td>
</tr>
<tr>
<td>2</td>
<td>1485P-K1DL4</td>
<td>Drop Line Connector</td>
</tr>
<tr>
<td>3</td>
<td>1485P-K1TG4</td>
<td>Trunk Line Connector †</td>
</tr>
<tr>
<td>4</td>
<td>1485P-K1TR4</td>
<td>Terminating Resistor</td>
</tr>
<tr>
<td>5</td>
<td>1485P-K1TLR4</td>
<td>Terminal Block</td>
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<tr>
<td>6</td>
<td>1485P-K1G4-Y5</td>
<td>5-Pin Open Style Connector</td>
</tr>
<tr>
<td>7</td>
<td>1485P-K1GK4</td>
<td>Flat to Thin Cable Converter</td>
</tr>
</tbody>
</table>

Note: Replace * with 2 (2 meter), 5 (5 meter), or 10 (10 meter) for standard lengths
Replace † with 100 (100 meter), 300 (300 meter), 600 (600 meter) for cable spool lengths
† Must use trunk line connector with drop line or flat to thin connector

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**B On-Machine DeviceNet Products**

<table>
<thead>
<tr>
<th>Illus. #</th>
<th>Part #</th>
<th>Product</th>
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</thead>
<tbody>
<tr>
<td>8</td>
<td>1732D</td>
<td>DeviceNet ArmorBlock</td>
</tr>
<tr>
<td>9</td>
<td>888N-D4AF1-*</td>
<td>Mini Aux Power</td>
</tr>
<tr>
<td>10</td>
<td>1485R-P*RS-F5</td>
<td>DeviceNet Thin Round patchcord - Micro Right Angle Female to Micro Right Angle Male</td>
</tr>
<tr>
<td>11</td>
<td>889N-F4AENM-*</td>
<td>Mini Patchcord - Aux</td>
</tr>
</tbody>
</table>

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Refer to the On-Machine Connectivity catalog at ab.com/catalogs for detailed ordering information.
DEVICENET MEDIA

Our DeviceNet Media includes multiple trunk and drop cable options for optimal flexibility in your network topology.

ROUND DEVICENET MEDIA:
• Thick and thin (trunk and drop) cordsets and patchcords
• DevicePort and DeviceBox multi-port taps
• PowerTap • T-ports and accessories

CONNECTOR OPTIONS:
• Mini • Micro (M12)
• Open-style (terminal connections)

Notes:
• Allows for longest trunk line distance: 500m (1640 ft)
• Simplified troubleshooting and replacement of components
• PVC, CPE, and TPE cable jacket options for harsh applications
• Shielded cable provides optimal resistance to noise

KWIKLINK FLAT DEVICENET MEDIA:

COMPONENTS:
• 4-wire flat trunk cable • Drop cables
• Snap-on Insulation Displacement Connectors (IDCs) with multiple interface options:
  - Micro (M12)
  - Open-style (terminal connections)
  - Integral drop pigtail with Mini connector or flying leads
  - Terminating resistor and blank cover

SYSTEM OPTIONS:
• KwikLink General Purpose (IP67)
• KwikLink Heavy Duty (IP67, 1200 PSI Washdown)
• KwikLink Lite (IP20)

Notes:
• Snap-on Insulation Displacement Connectors (IDCs) provide fast, tool-free assembly
• 50% cost savings compared to daisy-chaining
• Optimal plug-and-play capability
• Keyed cable snap-on connectors prevent wiring errors
• Devices can be added anywhere along the trunk—no need for predetermined cable lengths

Learn more... Watch the KwikLink Lite video at: ab.com/Connection-Devices/DeviceNet-Media
Safety Connectivity

Allen-Bradley safety connection systems offer a complete wiring solution dedicated to machine safety.

APPLICATION
Safety Connectivity is suited for compact machines with limited number of safety components using safety relays for monitoring.

### On-Machine Safety Using Shorting Plugs

<table>
<thead>
<tr>
<th>Illus. #</th>
<th>Part #</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>888D-F5AC1-1</td>
<td>5-pin Receptacle - Female</td>
</tr>
<tr>
<td>2</td>
<td>889D-F5ACDM-*</td>
<td>5-pin DC Micro Patchcord</td>
</tr>
<tr>
<td>3</td>
<td>889D-F8ABDM-*</td>
<td>8-pin DC Micro Patchcord</td>
</tr>
<tr>
<td>4</td>
<td>898D-418U-DM</td>
<td>4-pin shorting plug</td>
</tr>
<tr>
<td>5</td>
<td>898D-438Y-D8</td>
<td>Safety T-port</td>
</tr>
</tbody>
</table>

### On-Machine Safety with M23 Safety Distribution Box

<table>
<thead>
<tr>
<th>Illus. #</th>
<th>Part #</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>888M-F19AE-*</td>
<td>M23 19-pin Receptacle - Female</td>
</tr>
<tr>
<td>7</td>
<td>889M-R19RMMU-*</td>
<td>M23 home run cable</td>
</tr>
<tr>
<td>8</td>
<td>898D-P88RT-M19</td>
<td>Safety Distribution Box - 8 port</td>
</tr>
<tr>
<td>9</td>
<td>889D-F8ABDM-*</td>
<td>8-pin DC Micro Patchcord</td>
</tr>
<tr>
<td>10</td>
<td>889D-F8AB-5*</td>
<td>8-pin DC Micro Patchcord</td>
</tr>
<tr>
<td>11</td>
<td>871A-TS8-DM1</td>
<td>8-pin terminal chamber - Male</td>
</tr>
<tr>
<td>12</td>
<td>898D-81RU-DM</td>
<td>Shorting Plug</td>
</tr>
</tbody>
</table>

Note: Replace * with 2 (2 meter), 5 (5 meter), or 10 (10 meter) for standard lengths
Refer to the On-Machine Connectivity catalog at ab.com/catalogs for detailed ordering information.
SAFETY CONNECTIVITY

Allen-Bradley Guardmaster safety connection systems are complete quick-disconnect wiring solutions dedicated to machine safety.

COMPONENTS:
- Safety-wired T-ports
- Safety-wired distribution boxes
- Safety-wired shorting plugs
- Patchcords
- Receptacles

CONNECTOR OPTIONS:
- DC Micro (M12)
- M23

Flexible and reliable connections for safety:
- Interlock switches
- E-Stops
- Cable pull switches
- Guardlocking switches
- Safety relays
- Safety mats

Not Suitable for:
- Pressure-sensitive safety edges

Notes:
- Designed to simplify the installation of safety devices
- Reduced installation costs, simplified expansion and troubleshooting, increased modularity
- Single- or dual-channel options with or without enunciation
- Enunciation systems allow direct feedback on individual systems in the system and provide an auxiliary contact as input for tower lights, audible alarms, PLC input cards, etc.
- Shorting plugs must be installed in all unused distribution box ports for the system to operate

On-Machine Safety with M23 Safety Distribution Box

<table>
<thead>
<tr>
<th>Illus. #</th>
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</thead>
<tbody>
<tr>
<td>13</td>
<td>888M-F19AE-*</td>
<td>M23 19-pin Receptacle - Female</td>
</tr>
<tr>
<td>14</td>
<td>889M-R19RMU-*</td>
<td>M23 home run cable</td>
</tr>
<tr>
<td>15</td>
<td>898D-P84RT-M19</td>
<td>Safety Distribution Box - 4 port</td>
</tr>
<tr>
<td>16</td>
<td>889D-F8ABDM-*</td>
<td>8-pin Patchcord</td>
</tr>
</tbody>
</table>
Rockwell Automation offers a breadth of quality Allen-Bradley® components to fit your specific needs. In order to assist you with your component selection, we offer a variety of configuration and selection tools.

**Local Distributor**
Call 1.800.223.3354 to contact your local Distributor today.
http://www.rockwellautomation.com/distributor/

**On-Line Product Directory**
Our extensive product portfolio is designed to improve your processes through every stage of your manufacturing cycle.
http://www.rockwellautomation.com/products/

**Product Selection Toolbox**
Our powerful range of product selection and system configuration tools assist you in choosing and applying our products.

**Catalogs**
Within our catalogs you’ll find an extensive selection of essential Allen-Bradley component products.
http://www.ab.com/catalogs/

Rockwell Automation, Inc. (NYSE:ROK), the world’s largest company dedicated to industrial automation, makes its customers more productive and the world more sustainable. Throughout the world, our flagship Allen-Bradley® and Rockwell Software® product brands are recognized for innovation and excellence.

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