

# AUTOMOTIVE > AUTOMATION & ELECTRICAL SOLUTIONS

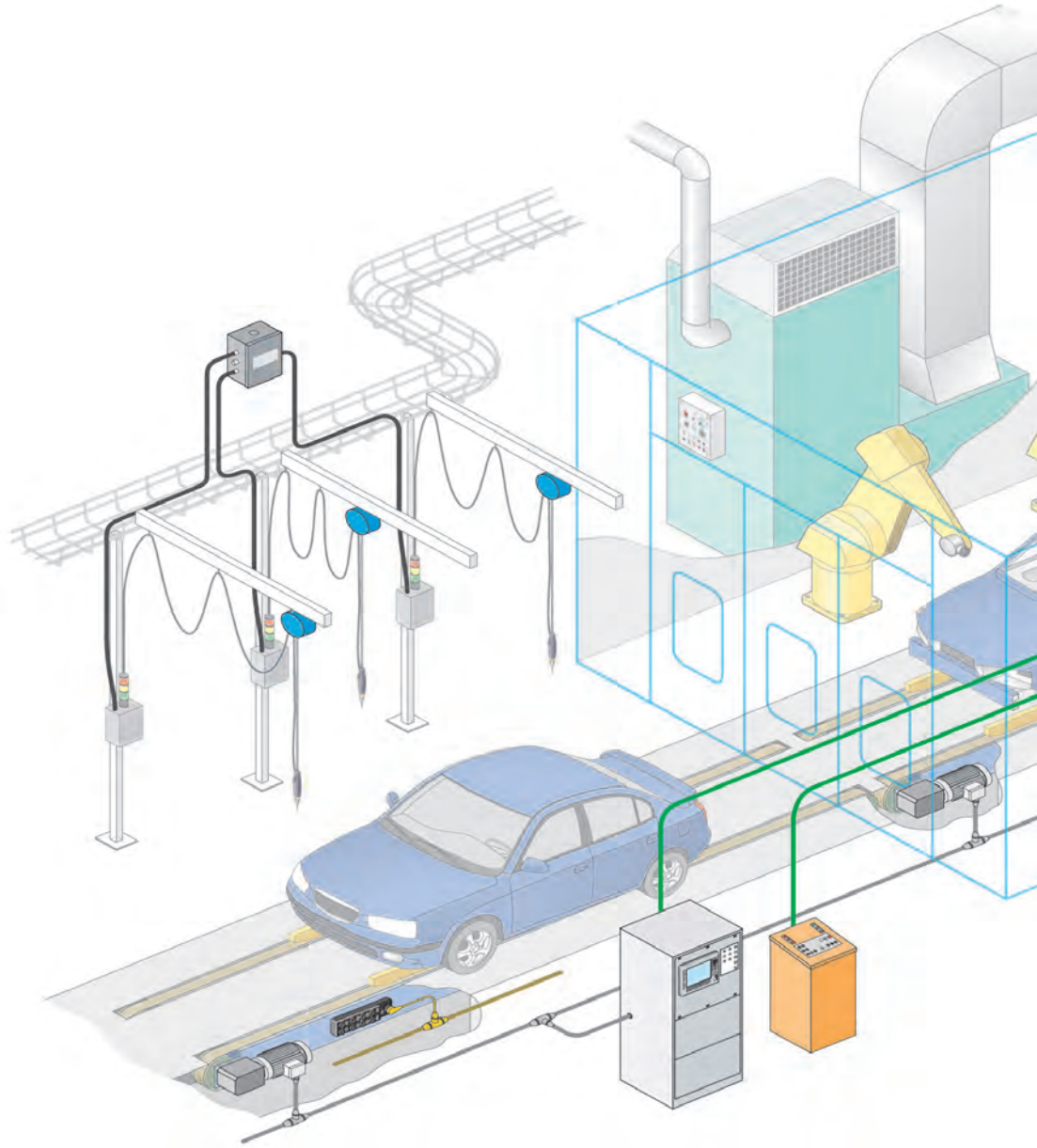


**molex**<sup>®</sup>

## **MOLEX PROVIDES SOLUTIONS > FOR AUTOMOTIVE AUTOMATION PLANT INFRASTRUCTURES GLOBALLY**



**Brad® products have been the standard for harsh duty connectivity systems in the automotive industry since the invention of the Mini-Change® connector in the late 1960s. Our industrial communication and connectivity products have been time tested for toughness and durability in automobile manufacturing plants worldwide. Our team of highly-skilled experts is focused on designing and developing innovative product solutions for reliable communication, power distribution, and control aimed at reducing capital equipment costs and downtime and increasing worker safety.**



## PRODUCTS >



### In Cabinet

- Network Interface Cards
- IP30 Ethernet Switches
- CIP Safety Software Kits
- SST™ Communication Modules

### I/O and Network

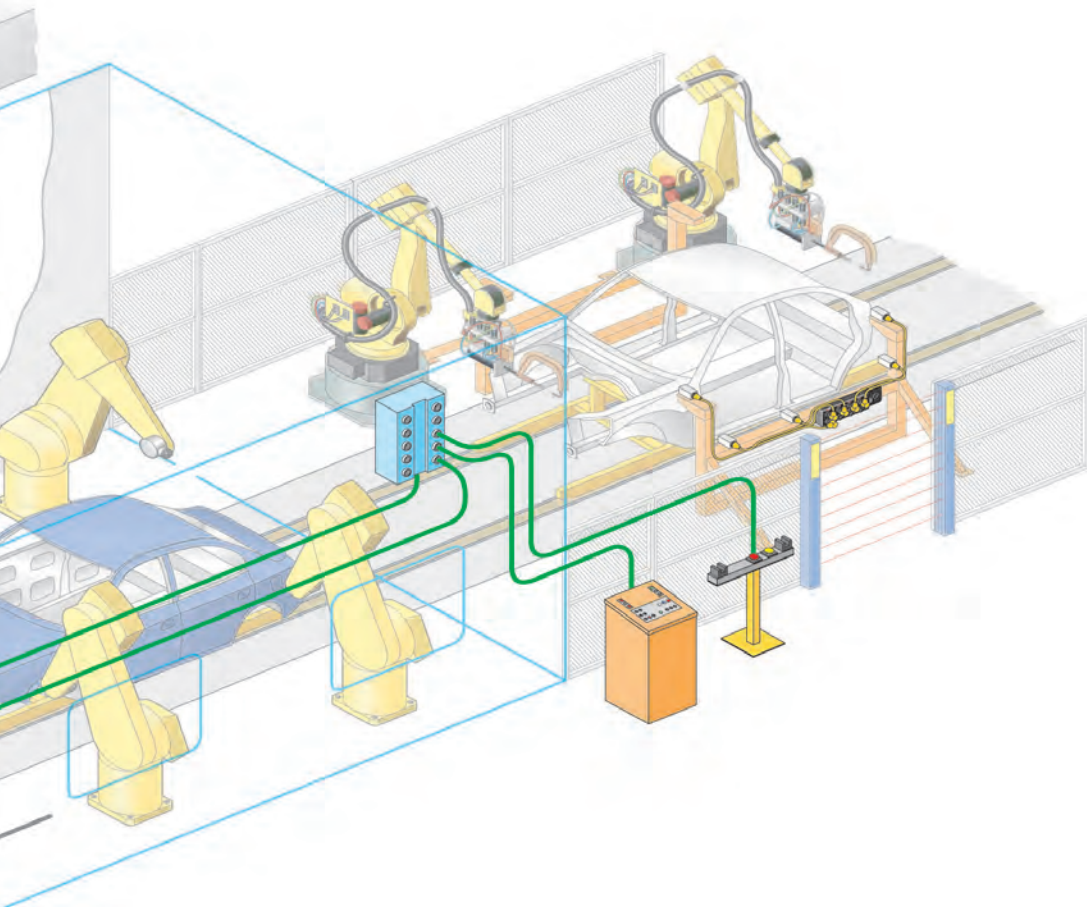
- Harsh I/O IP67 Modules
- IP67 Ethernet Switches
- Factory-made network cabling solutions for Ethernet, DeviceNet\*, PROFIBUS†, and more.

### Connectivity

- Brad® Micro-Change® (M12) Sensor Cordsets
- Brad mPm® DIN Valve Connectors
- Brad Nano-Change® (M8) Sensor Cordsets
- MPIS Distribution Boxes

\* DeviceNet is a trademark of Open DeviceNet Vendor Association (ODVA)

† PROFIBUS is a trademark of PROFIBUS International



### Power and Distribution

- Brad® Power Products
- Brad Micro-Change® (M12) Power Products
- Molded cables, field attachable connectors, tees, MPIS and receptacles
- Brad Mini-Change® Products

### Tool Support

- Aero-Motive® Balancers
- Aero-Motive Retractors
- Cord Grips and Strain Reliefs
- Cable Reels

# PRODUCT INFORMATION

## IN CABINET

### Network Interface Cards:

- SST™, applicom®, and Direct-Link™ Network Interface Cards (NICs) are intelligent communication solutions for SCADA, PC control, and IO applications
- Facilitates communication with most popular controls platforms (Rockwell, Siemens, Schneider, Omron, Mitsubishi, GE and with older legacy networks)

### Ethernet Switches:

- Managed and unmanaged Brad® Direct-Link® Ethernet switches provide reliable, robust performance across complex networks in a wide range of control and monitoring applications
- 5-, 8-, 16-, 18-port versions
- Available with copper and fiber connectors

### CIP Safety Software Kits:

- Meets IEC 61508, SIL3 standard
- Approved by TUV and complies with the CIP Safety Edition 2.1 ODVA standard

### SST Communication Modules:

- Rockwell Encompass Partner products connect Rockwell controllers for SCADA and real-time control using Modbus Serial, Modbus TCP, PROFIBUS DP, and AS-interface
- Add-on Profiles (AOP) for ControlLogix\* modules make configuration quick and easy

## I/O and NETWORK

### Harsh I/O IP67 Modules:

- Machine mount IO modules reduce cabinet space and wiring costs
- Brad Ultra-Lock® (M12) connection system provides fast and secure connections
- Support numerous fieldbuses such as PROFINET†, Ethernet IP, Modbus TCP/IP, DeviceNet‡, PROFIBUS§, and CANopen\*\*

### IP67 Ethernet Switches:

- 5- and 8-port un-managed switches

\* ControlLogix is a registered trademark of Rockwell Automation

† PROFINET is a registered trademark of PROFIBUS and PROFITNET International (PI)

‡ DeviceNet is a trademark of Open DeviceNet Vendor Association (ODVA)

§ PROFIBUS is a trademark of PROFIBUS International

\*\* CANopen is a registered trademark of CAN in Automation (CiA)

All other trademarks are the property of their respective owners

### Brad Networking Cables and Accessories:

- Plug-and-play wiring systems ensure fast and easy integration and simplify production line maintenance
- Designed to withstand the rigors of the automotive production environment to protect against down-time
- Solutions to support PROFINET, Ethernet, DeviceNet, PROFIBUS, CANopen, and CC-Link
- RJ45, M12 D-code, Brad Micro-Change® (M12) CHT (power and communication hybrid), Brad Micro-Change (M12) Cat6A, Brad Mini-Change®, and Brad Nano-Change® (M8) connector solutions for communication
- Field attachable connectors and factory molded solutions
- Standard threaded and quick connect push-pull Ultra-Lock® (M12) versions available

## CONNECTIVITY

### Brad Micro-Change® (M12)

#### Sensor Cordset:

- IP67, IP69K compliant
- PTFE (polytetrafluoroethylene) coated coupling nuts for weld and corrosion resistance
- Oil resistant, weld resistant, and hi-flex cable options

### Brad Nano-Change (M8)

#### Sensor Cordsets:

- Threaded and snap style coupling nuts available
- PVC, PUR, and TPE cable options

### Brad mpm® DIN Valve Connectors:

- Conforms to EN175301-803
- IP67 sealing properties
- Used with solenoid valves in all hydraulic and pneumatic applications

### MPIS Distribution Boxes:

- Available with Brad Ultra-Lock (M12) and Brad Nano-Change (M8) IO connections
- Weld resistant, oil resistant, and shock/vibration ratings make them suitable for most any automotive application

## POWER and DISTRIBUTION

### Brad Power Products:

- Plug-and-play wiring alternative to hard wiring for power distribution in 3-phase motor control and control power applications
- Ensures fast and easy installation and start-up, reduces downtime
- 3- and 4-pole molded products up to 32.0A/600V
- NFPA-79 compliant, UL 2237/2238 listed

### Brad Mini-Change Products:

- Plug-and-play wiring alternative to hard wiring for control power applications up to 15A
- 3-, 4-, 5-pole products for 120V/AC and 24V/DC requirements

### Brad M12 Power:

- M12 form factor supporting up to 16.0A
- Helps to reduce space used and cost in control power distribution applications

### Molded cables, field attachable connectors, tees, MPIS and receptacles:

- Low-cost PVC and high-performing TPE or PUR molded cables for motor power and control power
- Molded tees and MPIS boxes support linear and star topologies

## TOOL SUPPORT

### Aero-Motive® Balancers:

- Automatic drum lock to secure load if unit tension drops
- Corrosion and impact resistant drums coated to prevent premature failure to cable and cable drum
- High-tensile-strength cast-aluminum housing providing high-durability in abusive environments

### Aero-Motive Retractors:

- Retracts tool to original installed position to prevent tool from harmful falls
- Easy-to-use tension adjustment control
- Provides ideal ergonomics within work zone to minimize operator fatigue and reduces repetitive motion injuries

### Strain Relief and Support Grips:

- Strain-relief grips provide relief for cords or flexible conduit on plugs, connectors and enclosures or portable equipment
- Stainless steel mesh support grips are designed to withstand the most abusive plant environments

### Cable Reels:

- Holds up to 5.4m (50') of standard-duty cord for flexibility for higher ceiling heights or longer distant use
- Adjustable spring tension which modifies tension depending on weight of accessory
- Built-in ratchet locks to allow user to position cord at desired location

Get customized insights at: <http://www.molex.com/industry/industrial.html>