Connectivity & Network Media

Seamlessly Connect Your Integrated Architecture and Components

A·B Allen-Bradley · Rockwell Software

Rockwell
Automation

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 ─────────────────

ETHERNETMEDIA

- 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
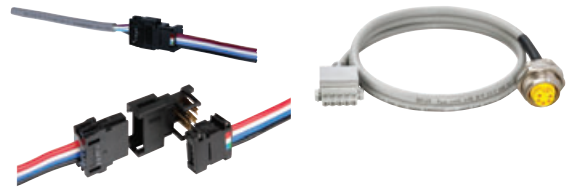
DEVICENETMEDIA

- 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
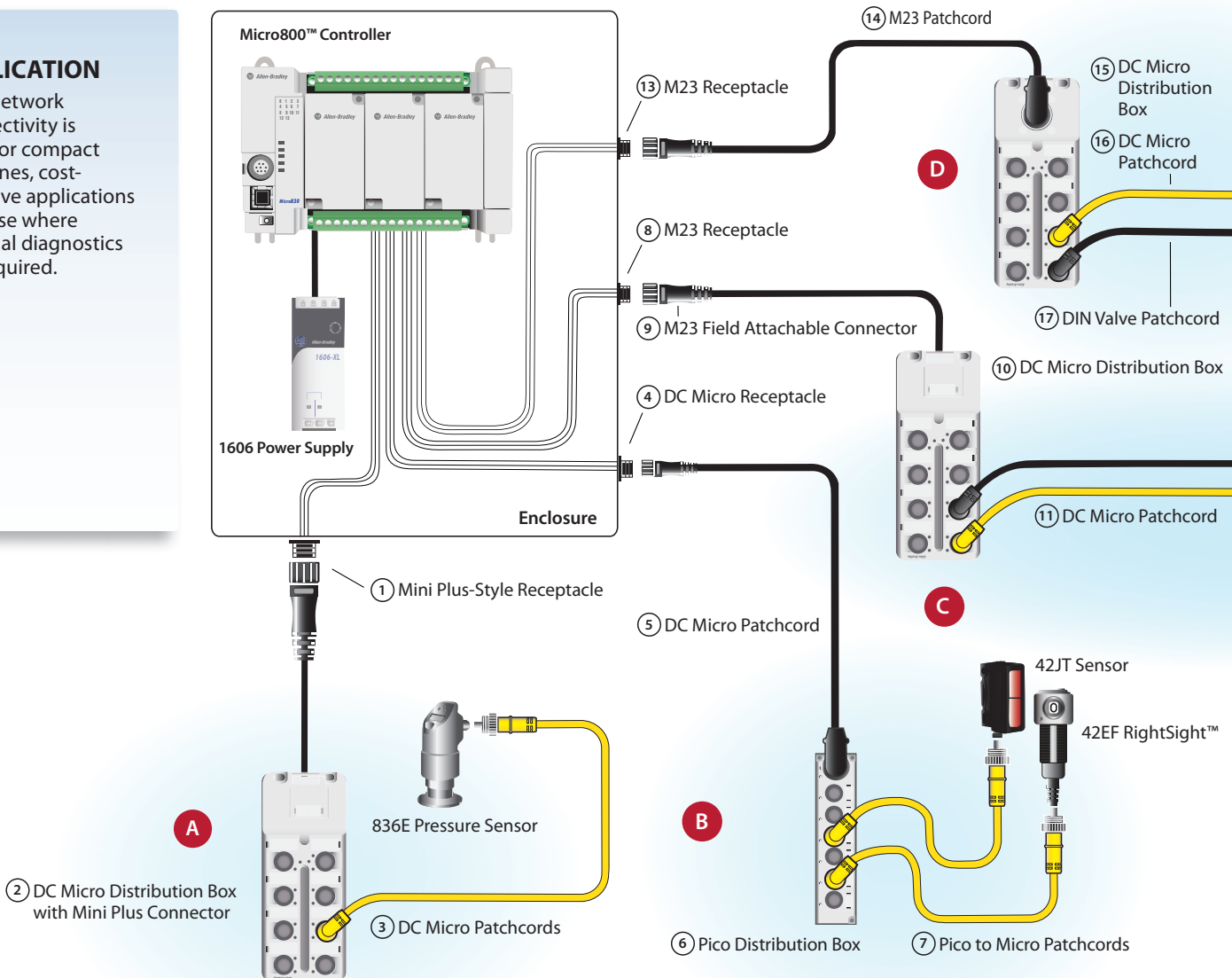
Safety Connectivity ─────────────────

- 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.
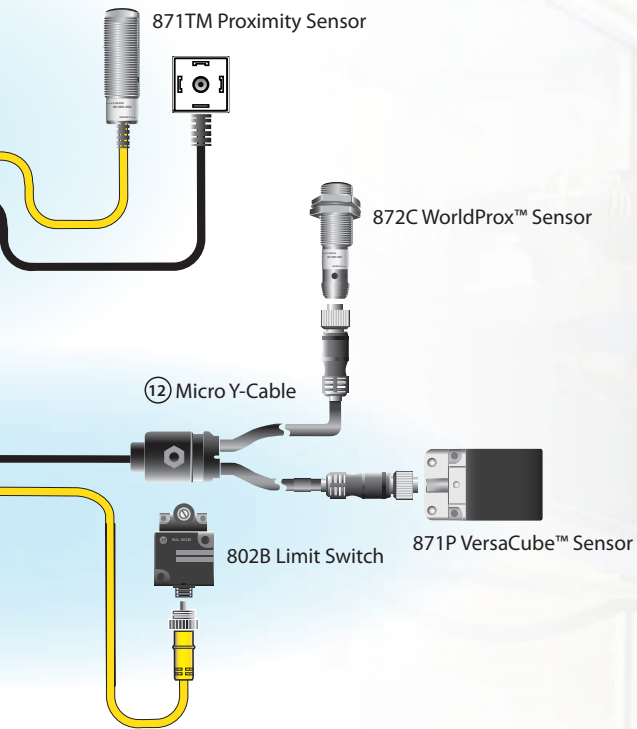

Micro800™ Controller

1606 Power Supply

Enclosure

(14) M23 Patchcord

(13) M23 Receptacle

(15) DC Micro Distribution Box

(16) DC Micro Patchcord

D

(8) M23 Receptacle

(9) M23 Field Attachable Connector

(17) DIN Valve Patchcord

(10) DC Micro Distribution Box

(4) DC Micro Receptacle

(11) DC Micro Patchcord

C

(1) Mini Plus-Style Receptacle

(5) DC Micro Patchcord

42JT Sensor

42EF RightSight™

A

836E Pressure Sensor

B

(2) DC Micro Distribution Box with Mini Plus Connector

(3) DC Micro Patchcords

(6) Pico Distribution Box

(7) Pico to Micro Patchcords

A M12 Distribution Box with Mini Connector

Illus. #	Part #	Product
1	888N-F12AF1*	Mini Plus-Style Receptacle – Female
2	898D-P58PT-N12	DC Micro Distribution Box with Mini Plus Connector
3	889D-F4ACDE-*	DC Micro – 4-pin (Straight Female to Right Angle Male)

B Pico Distribution Box and Cables

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

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

871TM Proximity Sensor

872C WorldProx™ Sensor

⑫ Micro Y-Cable

802B Limit Switch

871P VersaCube™ Sensor

NON-NETWORK CONNECTIVITY

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
- V- and Y-cables
- Splitters and tees
- Raw cable spools

CONNECTIVITY STYLES

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

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

C — M12 Distribution Box with Cables

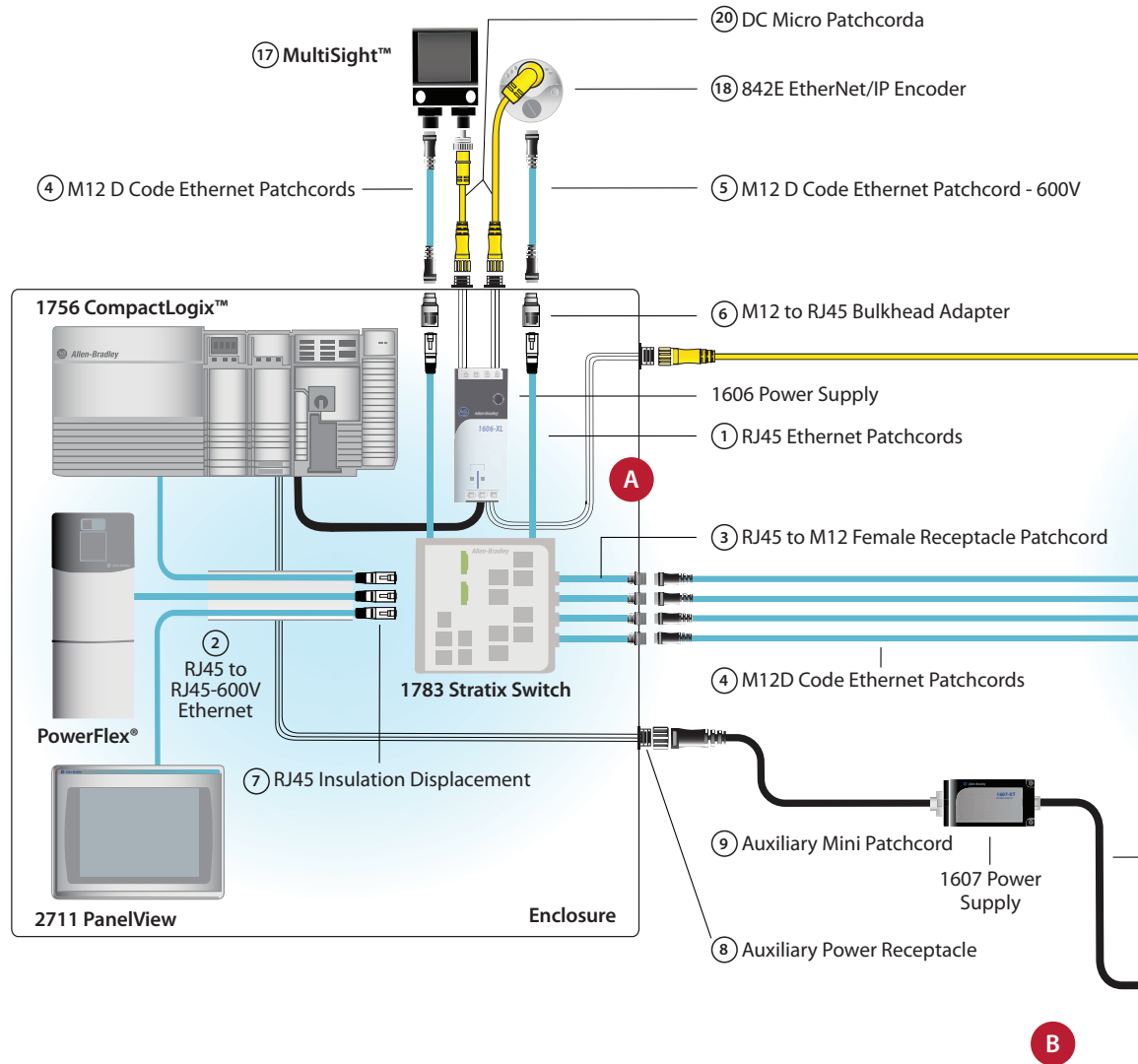| Illus. #	Part #	Product
8	888M-F19AE-*	M23 Receptable - Female
9	889M-M19AH-T	M23 Field Attachable Connector -Male
10	898D-58DT-B*	DC Micro Distribution Box with Cable Connector
11	889D-F4ACDE-*	DC Micro–4-pin (Straight Female to Right Angle Male)
12	879D-F4ACDM-*	DC Micro V-Cable - Female to Male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

D — M23 Distribution Box and Cables

Illus. #	Part #	Product
13	888M-F11AE-*	M23 Receptacle - Female
14	889M-R11RMMU-*	M23 11-pin (Right Angle Female to Straight Male)
15	898D-58PT-M12	DC Micro Distribution Box with M23 Main connector
16	889D-F4ACDE-*	DC Micro–4-pin (Straight Female to Right Angle Male)
17	889V, 889W, 889Z	Din Valve Patchcords

Ethernet Media Solutions

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

20 DC Micro Patchcorda

17 **MultiSight™**

18 842E EtherNet/IP Encoder

4 M12 D Code Ethernet Patchcords

5 M12 D Code Ethernet Patchcord - 600V

1756 CompactLogix™

6 M12 to RJ45 Bulkhead Adapter

APPLICATION

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

1606 Power Supply
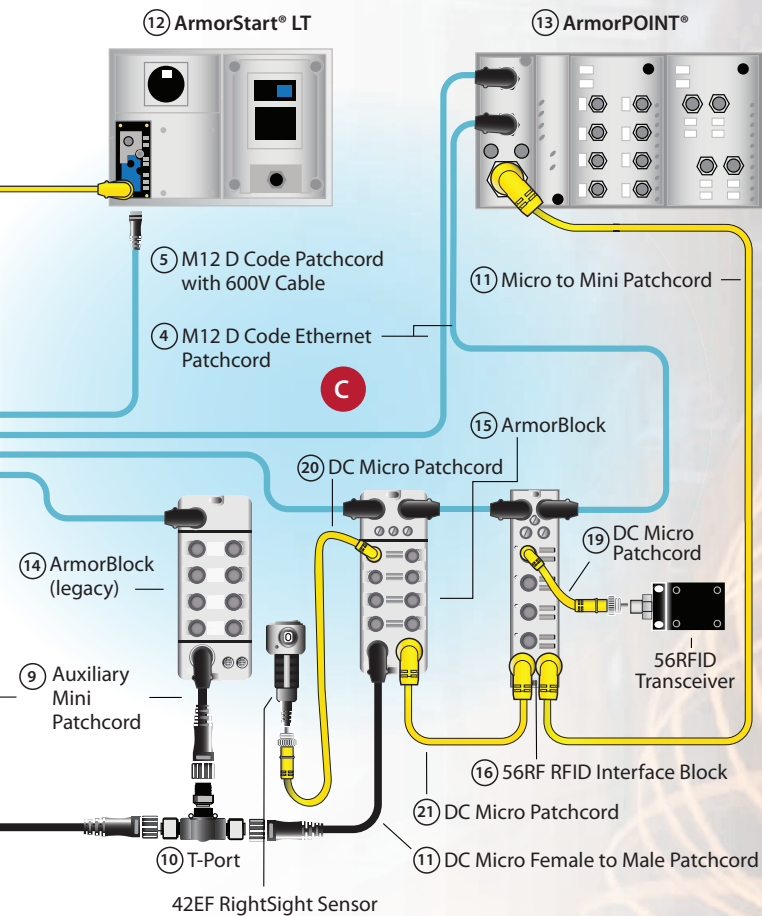
1 RJ45 Ethernet Patchcords

A

3 RJ45 to M12 Female Receptacle Patchcord

2 RJ45 to RJ45-600V Ethernet

1783 Stratix Switch

4 M12D Code Ethernet Patchcords

PowerFlex®

7 RJ45 Insulation Displacement

9 Auxiliary Mini Patchcord

1607 Power Supply

2711 PanelView

Enclosure

8 Auxiliary Power Receptacle

B

A Ethernet Media

Illus. #	Part #	Product
1	1585J-M8TBJM-*	RJ45 to RJ45 Patchcord
2	1585J-M8HBJM-*	RJ45 to RJ45 Patchcord - 600V
3	1585D-D4TBJM-*	RJ45 to M12 Female Panel Mount
4	1585D-M4TBDM-*	M12 D Code to M12 D Code Patchcord - Male to Male
5	1585D-M4HBDM-*	M12 D Code to M12 D Code Patchcord - Male to Male - 600V
6	1585A-DD4JD	M12 to RJ45 Bulkhead Adapter
7	1585J-M8CC-H	RJ45 Insulation Displacement

B Auxiliary Power

Illus. #	Part #	Product
8	888N-D4AF1-*	Auxiliary Power Receptacle – Female
9	889N-F4AENM-*	Auxiliary Power Mini Patchcord – Straight Female to Straight Male
10	889N-43PB-N4KT	Auxiliary Power T-port
11	889D-F4AENM-*	DC Micro Female to Mini Male Patchcord

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

(12) **ArmorStart® LT**

(13) **ArmorPOINT®**

(5) M12 D Code Patchcord with 600V Cable

(4) M12 D Code Ethernet Patchcord

C

(11) Micro to Mini Patchcord

(15) ArmorBlock

(20) DC Micro Patchcord

(19) DC Micro Patchcord

(14) ArmorBlock (legacy)

(9) Auxiliary Mini Patchcord

56RFID Transceiver

(16) 56RF RFID Interface Block

(21) DC Micro Patchcord

(11) DC Micro Female to Male Patchcord

(10) T-Port

42EF RightSight Sensor

ETHERNETMEDIA

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)

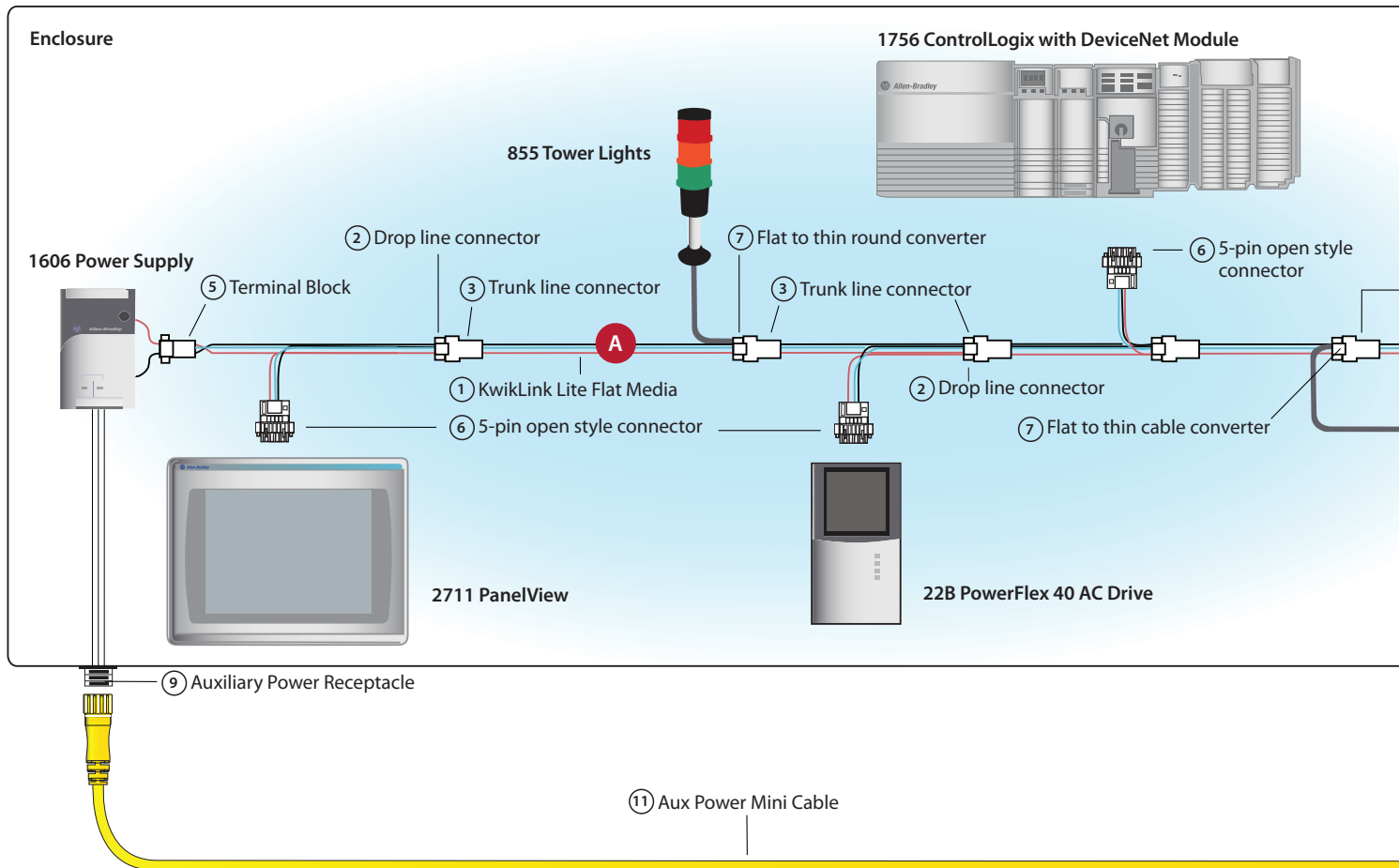### 2-pair or 4-pair shielded and unshielded cable options in multiple cable jackets:

- 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

C **On-Machine Ethernet-Enabled Devices**

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

DeviceNet Media Solutions

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

Enclosure

1756 ControlLogix with DeviceNet Module

855 Tower Lights

② Drop line connector

1606 Power Supply

⑤ Terminal Block

③ Trunk line connector

⑦ Flat to thin round converter

③ Trunk line connector

⑥ 5-pin open style connector

Ⓐ

① KwikLink Lite Flat Media

⑥ 5-pin open style connector

② Drop line connector

⑦ Flat to thin cable converter

2711 PanelView

22B PowerFlex 40 AC Drive

⑨ Auxiliary Power Receptacle

⑪ Aux Power Mini Cable

APPLICATION

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

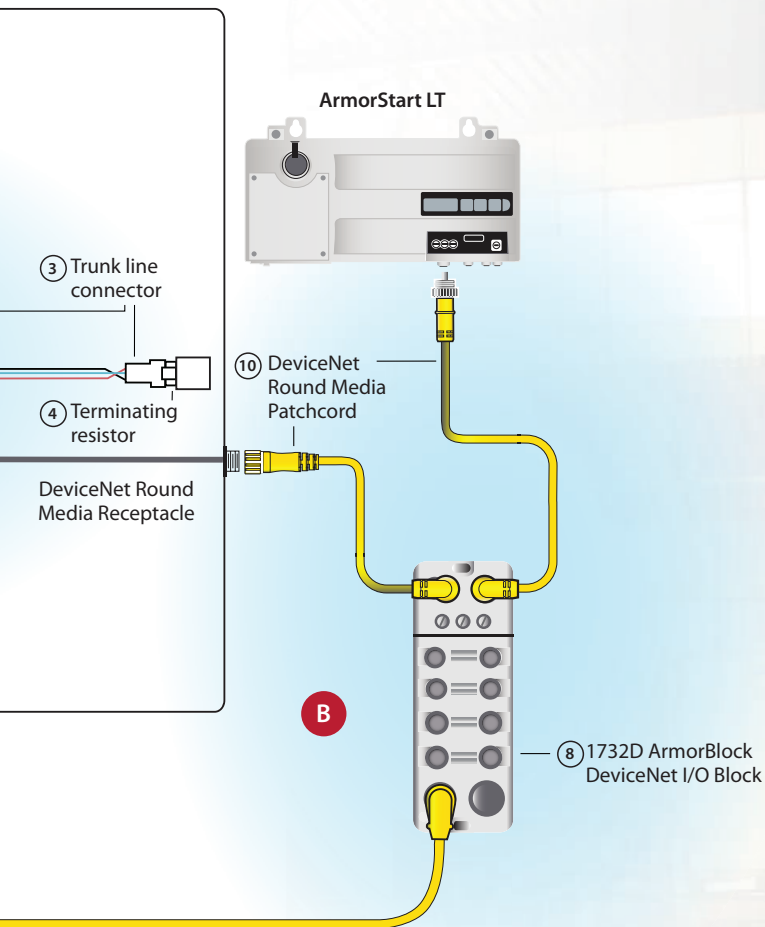**Ⓐ KwikLink Lite Media Solution**

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

Ⓑ On-Machine DeviceNet Products

Illus. #	Part #	Product
8	1732D	DeviceNet ArmorBlock
9	888N-D4AF1-*	Mini Aux Power
10	1485R-P*R5-F5	DeviceNet Thin Round patchcord - Micro Right Angle Female to Micro Right Angle Male
11	889N-F4AENM-*	Mini Patchcord - Aux

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

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

ArmorStart LT

③ Trunk line connector

④ Terminating resistor

DeviceNet Round Media Receptacle

⑩ DeviceNet Round Media Patchcord

B

⑧ 1732D ArmorBlock DeviceNet I/O Block
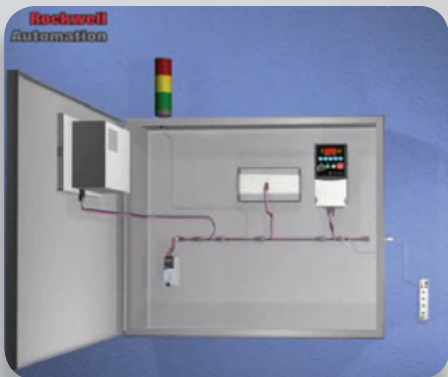
Learn more... Watch the KwikLink Lite video at: ab.com/Connection-Devices/DeviceNet-Media

DEVICENETMEDIA

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
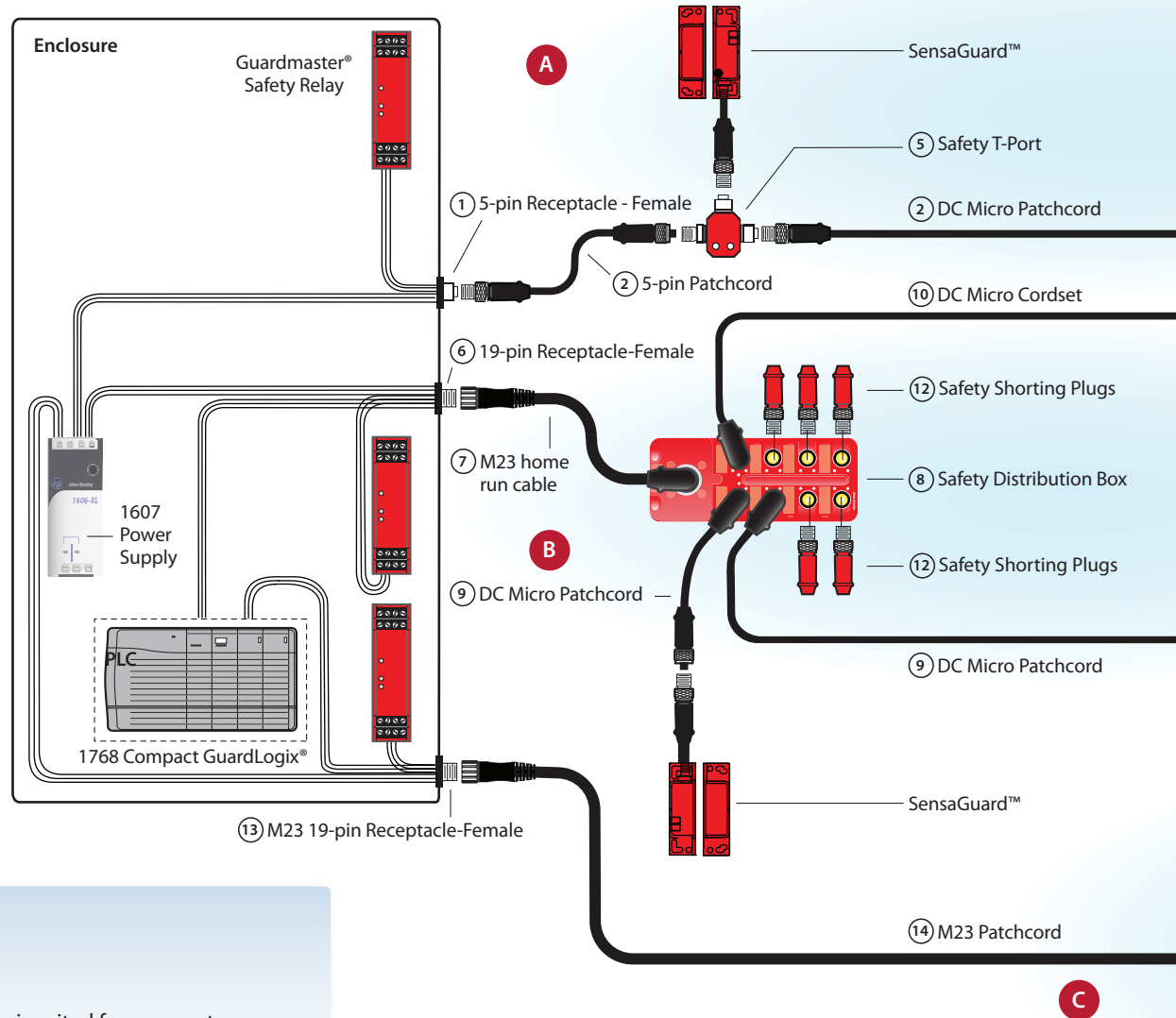   - Terminating resistor and blank cover

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

Safety Connectivity

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

Enclosure

Guardmaster® Safety Relay

1607 Power Supply

1768 Compact GuardLogix®

PLC

1606-XL

(1) 5-pin Receptacle - Female
(2) 5-pin Patchcord
(6) 19-pin Receptacle-Female
(7) M23 home run cable
(9) DC Micro Patchcord
(13) M23 19-pin Receptacle-Female

A

B

(A) SensaGuard™
(5) Safety T-Port
(2) DC Micro Patchcord
(10) DC Micro Cordset
(12) Safety Shorting Plugs
(8) Safety Distribution Box
(12) Safety Shorting Plugs
(9) DC Micro Patchcord
SensaGuard™
(14) M23 Patchcord

C

APPLICATION

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

A On-Machine Safety Using Shorting Plugs

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

B On-Machine Safety with M23 Safety Distribution Box

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

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

SensaGuard™

⑤ Safety T-Port

④ Safety Shorting Plug

⑪ Terminal Chamber

SensaGuard with QD

SensaGuard

Tongue Switch

Safety Limit Switch

⑯ 8-pin Patchcord

⑮ Distribution Box

⑯ 8-pin Patchcord

Guardlocking Switch

SensaGuard

C **On-Machine Safety with M23 Safety Distribution Box**

Illus. #	Part #	Product
13	888M-F19AE-*	M23 19-pin Receptacle - Female
14	889M-R19RMMU-*	M23 home run cable
15	898D-P84RT-M19	Safety Distribution Box - 4 port
16	889D-F8ABDM-*	8-pin Patchcord
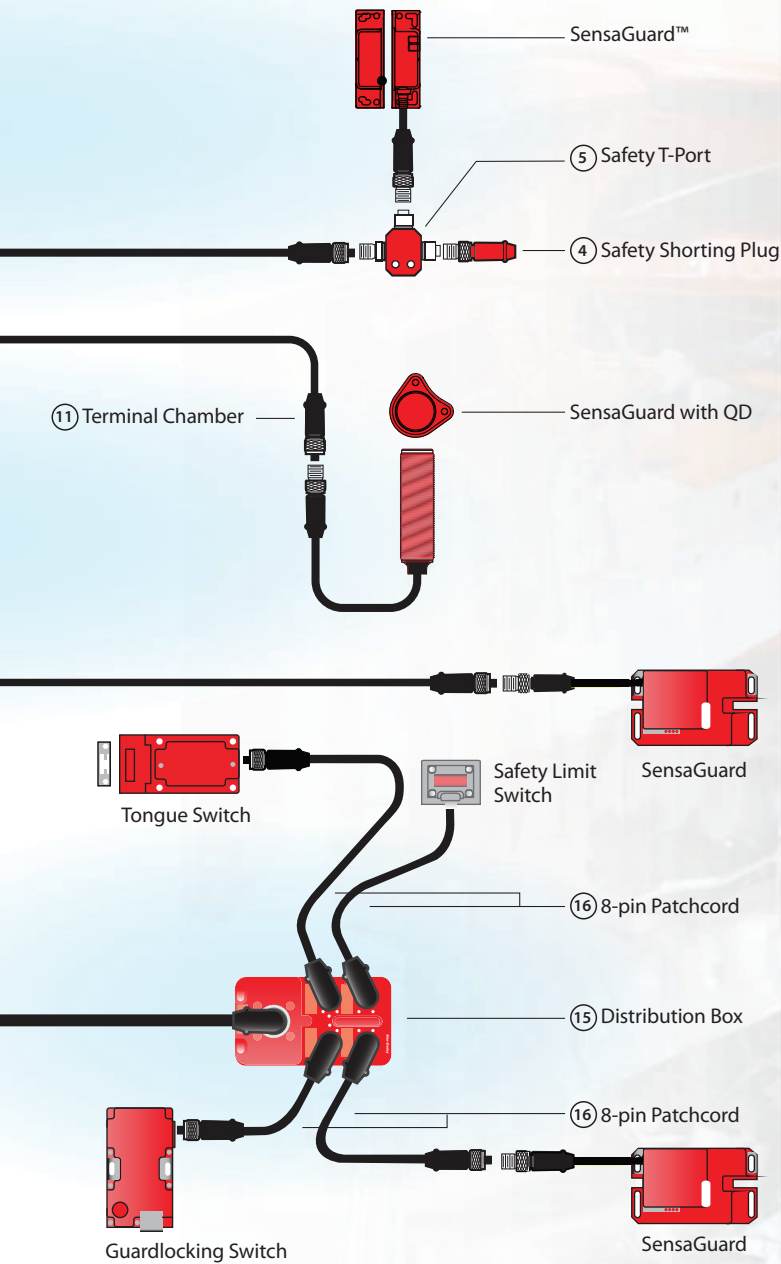
SAFETYCONNECTIVITY

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

CONNECTOROPTIONS:

- DC Micro (M12)
- M23

Flexible and reliable connections for safety:

- Interlock switches
- E-Stops
- Cable pull switches
- Safety relays
- SensaGuard
- Safety limit switches
- Guardlocking switches
- 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

Product Selection Toolbox™ – ProposalWorks™ and Integrated Architecture™ Builder

- Our powerful range of product selection and system configuration tools assist you in choosing and applying our products. Go to http://www.rockwellautomation.com/en/e-tools/

- Configure and generate bills of material for NetLinx-based networks with Integrated Architecture Builder

- Easy-to-use ProposalWorks interface makes it a snap to determine the exact Allen-Bradley products and services you need and current list pricing

- Software automatically selects the appropriate informational documents, photos, etc.

Product Selection Toolbox™

ProposalWorks™ Create Proposals and Submittals

Integrated Architecture Builder™ Automation System Configurator

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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.
http://www.rockwellautomation.com/en/e-tools/

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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