ix Industrial™ connectors enable IoT connectivity for Ethernet and other industrial protocols through all levels of an operation from the Enterprise/Cloud to the sensors/actuators at the factory floor. These 10mm pitch connectors featuring 2-point metal latches are just 25% of the size of an RJ45 connector, and as such allow much greater port density and mating security. They are PoE capable, provide data performance to Cat6A level (10GBASE-T), and feature 360° shielding through the mated pair for superior EMI protection.

**TARGET MARKETS**

- Increased port density compared to RJ45
- High data rate performance for 10G Ethernet, with PoE capability
- Excellent EMI protection for noisy environments
- Robust 2 point metal latches for secure mating
- Fully intermateable with ix Industrial™ products from other authorized vendors

**FEATURES**

- Complies with IEC61076–3–124
- 75% smaller than RJ45
- 10 position connector with Cat6A 10GBASE-T performance and PoE capability
- 360° shielding through mated pair
- 2-point metal latching
- Heavy duty shield solder hold–down tabs on PCB mount receptacles
- 5000 mating cycles
- Field terminable IDC plugs with solder options
- Keyed housings (Type–A, −B, −C)

**BENEFITS**

- Fully qualified second source intermateable with other vendors’ products
- 10mm connector pitch provides greater port density
- Supports Ethernet/IP and common protocols including Profinet, DeviceNet, EtherCAT, Modbus and others
- Provides excellent EMI immunity for use in electrically noisy environments
- Extremely robust mating to prevent accidental disconnection, and more durable than RJ45 latch
- Provides secure connection to the PCB protecting SMT joint integrity under mechanical stresses
- Ease of custom cabling or repair in the field with IDC contacts
- Solder version for high volume assembly
- Controlled mating for Ethernet, Signal/Bus, other ports
ix Industrial™ IP20 Connectors

TECHNICAL INFORMATION

MATERIAL
- External Shields: Stainless steel, nickel plated (plugs) or tin plated (receptacles)
- Insulators: Thermoplastic, UL94V-0
- Contacts: Copper alloy plated with gold over nickel (mating area)

MECHANICAL PERFORMANCE
- Insertion/Withdrawal Force: 25N (5.6 lbs-force) max. (IEC 60512–13–2, Test 13b)
- Pull-Out Force: 80N (18 lbs-force) min. (IEC 60512–15–6, Test 15f)
- Mechanical Shock: 300m/s², half-sine pulses, 11ms (IEC 60512–6–3, Test 6c)
- Vibration, Sinusoidal: 10Hz – 500Hz, 0.35mm, 50m/s² (IEC 60512–6–4, Test 6d)
- Durability: 5000 mating cycles (IEC 60512–9–1, Test 9a)

ELECTRICAL PERFORMANCE
- Current Rating: 1.5A @ 40°C (per IEC 60512–5–2, Test 5b)
- Voltage Rating: 50V AC max., 60V DC max.
- Initial Contact Resistance: 30mΩ max. (per IEC 60512–2–1, Test 2a)
- Shielding Resistance: 100mΩ max. (per IEC 60512–2–1, Test 2a)
- Insulation Resistance: 500MΩ min. @ 500V DC (per IEC 60512–3–1, Test 3a)
- Dielectric Withstanding Voltage: 500V DC (per IEC 60512–4–1, Test 4a, Method A)

PACKAGING
- Tray (Plug Connectors)
- Carton (Cables)
- Tape & Reel (SMT Receptacles)

SPECIFICATION
- IEC–61076–3–124
- Amphenol Specification: S6168C

ENVIRONMENTAL
- Thermal Shock: 10 cycles between –55°C and +85°C (IEC 60512–11–4, test 11d)
- Humidity: Low temperature +25°C, high temperature +65°C, cold sub-cycle –10°C, 93% humidity (IEC 60068–2–38, Test Z/AD)
- Operating Temperature Range: –55°C to +85°C

APPROVALS AND CERTIFICATIONS
- RoHS
- UL Pending

TARGET MARKETS/APPLICATIONS
- Switches
- Traffic Control
- Monitoring systems
- Industrial Internet of Things (IIoT)
- Factory/Process Automation – Machine to Machine, Sensors, Actuators, Nodes
- Robotics
- Building Automation
- Test Equipment
- Healthcare
- Medical Equipment

PART NUMBERS

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Numbers</th>
</tr>
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<tbody>
<tr>
<td>Receptacle, Type-X, Plating Y, Right Angle Flag, SMT</td>
<td>ND9–XS1Y–00</td>
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<tr>
<td>Receptacle, Type-X, Plating Y, Right Angle Horizontal, SMT</td>
<td>ND9–XS3Y–00</td>
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<td>Receptacle, Type-X, Plating Y, Vertical SMT</td>
<td>ND9–XS2Y–00</td>
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<td>ND9–XP6Y–00</td>
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<tr>
<td>Plug, Type-X, Plating Y, IDC Termination, 28AWG</td>
<td>ND9–XP7Y–00</td>
</tr>
<tr>
<td>Plug, Type-X, Plating Y, Solder Pad</td>
<td>ND9–XP5Y–00</td>
</tr>
</tbody>
</table>

X = Key (A, B or C)
Y = Contact Plating: 1=Gold Flash; 2=8µin Gold; 3=30µin Gold; 4=50µin Gold; 7=30µin PdNi+Gold Flash

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Disclaimer
Please note that the above information is subject to change without notice.