Amphenol



ix Industrial[™] IP20 Connectors & Cables

ix Industrial": Next Generation Industrial IoT Connectivity

ix Industrial[™] connectors and cables 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, allowing 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. Cables are available in straight, right angle upward, and downward orientations with many options including Low Smoke Zero Halogen (LSZH) jacket material.

- 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
- Available PVC or Low Smoke Zero Halogen (LSZH) cables
- Right Angle Cabling Upward and Downward exits

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
- Low Smoke Zero Halogen (LSZH) cable option
- 5000 mating cycles
- Field terminable IDC Right Angle plugs with solder options
- Right Angle / 90 Degree cable orientation

BENEFITS

- Fully qualified second source intermateable with other vendors
- 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
- Free from harmful halogen compounds. Reduce toxic emissions, damage to equipment and risk of downtime
- High durability
- Ease of custom cabling or repair in the field with IDC contacts
- Solder version for high volume assembly
- Improves accessibility allows for more compact routing





www.amphenol-cs.com

TECHNICAL INFORMATION

MATERIAL

- External Shields: Stainless Steel, Nickel plated
- Cable Jacket: PVC / LSZH
- 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: 50VAC max., 60VDC 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: 500M Ω min. @ 500VDC (per IEC 60512-3-1, Test 3a)
- Dielectric Withstanding Voltage: 500VDC (per IEC 60512-4-1, Test 4a, Method A)

PACKAGING

- Carton (Single & Double ended Cables in poly bag)

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, Text Z/AD)
- Operating Temperature Range: -55°C to +85°C

APPROVALS AND CERTIFICATIONS

- RoHS
- ULE64911 Vol. 1

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



Healthcare Medical Equipment

Test Equipment

PART NUMBERS

Find part number details using the search box on www.amphenol-cs.com

Description	Part Numbers
Cable, Type-X, Plating Y, Length-Z, Jacket & Wire Size-W	ND9-XCBY-ZZW
Cable, Type-X, Plating Y, Length-Z, Jacket & Wire Size-W, Right Angle Up bend-F	ND9-XCJY-ZZWF
Pigtail Cable, Type-X, Plating Y, Length-Z, Jacket & Wire Size-W	ND9-XCAY-ZZW

X = Key (A, B or C). W = Cable Jacket (8-wire, 10-wire, PVC or LSZH), F=Right Angle Cable End Plug Upward Bend to Pigtail

Y = Contact Plating: 1=Gold Flash; 2=8µin Gold; 3=30µin Gold; 4=50µin Gold; 7=30µin PdNi+Gold Flash

www.amphenol-cs.com

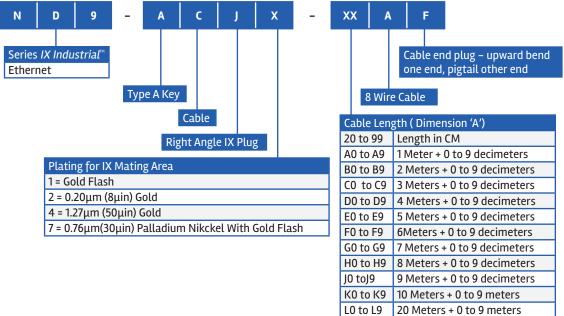
PART NUMBER SELECTOR

хх Ν D 9 В С В Х В Series IX Industrial 10 Wire Cable I/O Applications Туре В Кеу Cable Plug on both ends Plating for IX Mating Area 1 = Gold Flash 2 = 0.20µm (8µin) Gold 4 = 1.27µm (50µin) Gold 7 = 0.76µm(30µin) Palladium Nikckel With Gold Flash

Find part number details using the search box on <u>www.amphenol-cs.com</u>

Cable Length (Dimension 'A')		
20 to 99	Length in CM	
A0 to A9	1 Meter + 0 to 9 decimeters	
B0 to B9	2 Meters + 0 to 9 decimeters	
C0 to C9	3 Meters + 0 to 9 decimeters	
D0 to D9	4 Meters + 0 to 9 decimeters	
E0 to E9	5 Meters + 0 to 9 decimeters	
F0 to F9	6Meters + 0 to 9 decimeters	
G0 to G9	7 Meters + 0 to 9 decimeters	
H0 to H9	8 Meters + 0 to 9 decimeters	
J0 toJ9	9 Meters + 0 to 9 decimeters	
K0 to K9	10 Meters + 0 to 9 meters	
L0 to L9	20 Meters + 0 to 9 meters	
M0 to M9	30 Meters + 0 to 9 decameters	

Find part number details using the search box on www.amphenol-cs.com



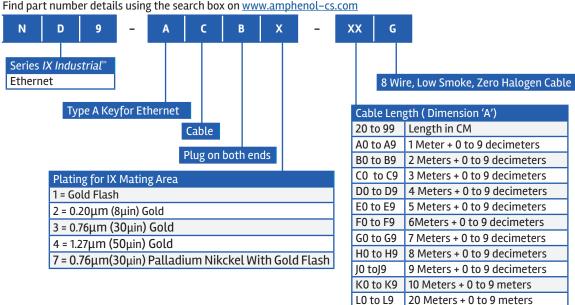
Cable Length Ordering Code Examples: 75cm=75 6.3m=F3 25m=L5 80m=M5

M0 to M9 30 Meters + 0 to 9 decameters

www.amphenol-cs.com

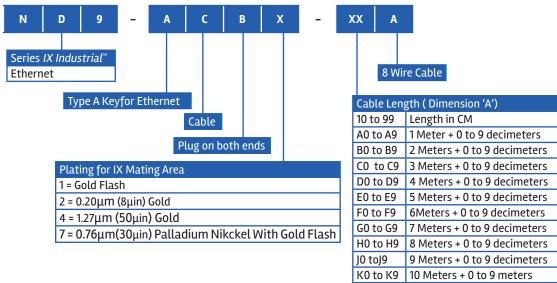
Please note that the above information is subject to change without notice.

PART NUMBER SELECTOR



Find part number details using the search box on www.amphenol-cs.com

Find part number details using the search box on <u>www.amphenol-cs.com</u>



Cable Length Ordering Code Examples: 75cm=75 6.3m=F3 25m=L5 80m=M5

20 Meters + 0 to 9 meters M0 to M9 30 Meters + 0 to 9 decameters

M0 to M9 30 Meters + 0 to 9 decameters

www.amphenol-cs.com

L0 to L9