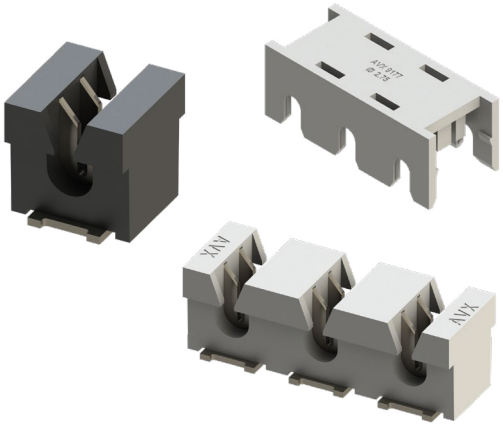
STANDARD 14-20 AWG: 9177-000

General Information



The 917X Series of Surface Mount Insulation Displacement Connectors (IDC) are designed to meet the harsh requirements of automotive and industrial applications. This industry proven connector series provides a rugged, reliable and efficient method of connecting single wires from 12 AWG to 30 AWG directly to a printed circuit board. The single contact design can function as a stand-alone component. It gives our designers access to IDC technology in an easy-to-use form factor, allowing them to bring power and signal to a PCB in a wide range of applications. These connectors have been tested to various levels of shock, vibration and temperature cycling to prove their reliability and ruggedness. The ease of inserting a wire into an SMT contact with a small tool or optional retention/ termination cap allows a wide range of devices to be connected to the PCB without soldering. The IDC contact provides a gas-tight connection to the wire and the optional cap provides positive strain relief even in the harshest conditions. In the event of a repair, the wires can be removed and replaced up to three times.

The 9177 Series accepts 14 AWG to 20 AWG wires with insulation diameters ranging from 2.75 mm to 4.25 mm. These dual-contact connectors support a 16A current rating with two large SMT solder tails per wire for maximum PCB stability. Available in 1p-3p configurations, these connectors can be end-stacked for higher pin counts.

APPLICATIONS

- Connecting discrete wire components directly to the PCB
- Bringing power and signals onto a PCB
- Daisy chaining PCB's together to create a continuous string of boards
- Application Notes: Refer to 201-01-124
- Product Specification: Refer to 201-01-109

FEATURES AND BENEFITS

- IDC contact provides a gas-tight connection to the PCB for long term reliability
- Connector housing captures the wire insulation for positive strain relief
- Tested to various levels of shock, vibration, and temperature cycling for reliability
- Low and high volume assembly tools to match production volumes
- Reduced total applied cost versus solder or crimp processes
- High temperature insulator capable to 260°C reflow soldering processes

ELECTRICAL

- Current Rating: Up to 16 Amp / Contact
- Voltage Rating: 600 VAC (RMS) or DC Equivalent

ENVIRONMENTAL

- Operating Temperature: -40°C to +125°C (UL rated to +120°C)
- Storage Temperature: -40°C to +70°C

MECHANICAL

- Insulator Material: Nylon 46: UL94V-0
- Contact Material: Phosphor Bronze
- Plating: Tin over Nickel
- Durability: 3 Cycles

HOW TO ORDER – CONNECTOR OPTIONS

00 — Prefix

9177 — Series

00X — Number of Ways
001 = 1
002 = 2
003 = 3

0XX — Wire Gauge Size

Code	Accepted Wire Gauge	Wire Insulation
001	14 AWG Solid or Stranded	Ø 4.25
012	16 AWG Solid or Stranded	Ø 3.50
022	18 AWG Solid or Stranded	Ø 3.50
033	20 AWG Solid or Stranded	Ø 2.75

X — Color/Approval

Code	Color	Approval
8	Black	UL Approved
9	White	UL Approved (Standard)

06 — Plating Option
06 = Pure Tin all Over

RoHS compliant

HOW TO ORDER – CAP OPTIONS – THROUGH WIRE

60 — Prefix
60 = Cap

9177 — Series

00X — Number of Ways
001 = 1
002 = 2
003 = 3

0XX — Wire Gauge Size

Code	Wire Insulator Diameter (Note 3)	A	B
027	2.10mm - 2.75mm	Ø2.75	2.00
035	2.75mm - 3.50mm	Ø3.50	2.65
042	3.50mm - 4.25mm	Ø4.25	3.40

X00 — Insulator Color

Code	Color
000	Black
100	White

HOW TO ORDER – CAP OPTIONS – WIRE STOP

60 — Prefix
60 = Cap

9177 — Series

00X — Number of Ways
001 = 1
002 = 2
003 = 3

0XX — Wire Gauge Size

Code	Wire Insulator Diameter (Note 3)	A	B
027	2.10mm - 2.75mm	Ø2.75	2.00
035	2.75mm - 3.50mm	Ø3.50	2.65
042	3.50mm - 4.25mm	Ø4.25	3.40

X99 — Insulator Color

Code	Color
099	Black
199	White

SALES DRAWINGS
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Safety Standards: UL 1059-File #E320991

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CONNECTOR/TOOLING PART NUMBER MATRIX

SERIES 9177 IDC					HAND INSERTION TOOLING*		ACCESSORY CAPS	
AWG	Wire Insulation	Positions	Color	Part Number	Plastic (low volume)	Metal (high volume)	Through Wire	Wire Stop
14	Ø 4.25	1p	White	009177001001906	069177701601001	069177701701001	609177001042100	609177001042199
			Black	009177001001806			609177001042000	609177001042099
		2p	White	009177002001906	069177701601002	069177701701002	609177002042100	609177002042199
			Black	009177002001806			609177002042000	609177002042099
		3p	White	009177003001906	069177701601003	069177701701003	609177003042100	609177003042199
			Black	009177003001806			609177003042000	609177003042099
16	Ø 3.50	1p	White	009177001012906	069177701602001	069177701702001	609177001035100	609177001035199
			Black	009177001012806			609177001035000	609177001035099
		2p	White	009177002012906	069177701602002	069177701702002	609177002035100	609177002035199
			Black	009177002012806			609177002035000	609177002035099
		3p	White	009177003012906	069177701602003	069177701702003	609177003035100	609177003035199
			Black	009177003012806			609177003035000	609177003035099
18		1p	White	009177001022906	069177701602001	069177701702001	609177001035100	609177001035199
			Black	009177001022806			609177001035000	609177001035099
		2p	White	009177002022906	069177701602002	069177701702002	609177002035100	609177002035199
			Black	009177002022806			609177002035000	609177002035099
		3p	White	009177003022906	069177701602003	069177701702003	609177003035100	609177003035199
			Black	009177003022806			609177003035000	609177003035099
20	Ø 2.75	1p	White	009177001033906	069177701603001	069177701703001	609177001027100	609177001027199
			Black	009177001033806			609177001027000	609177001027099
		2p	White	009177002033906	069177701603002	069177701703002	609177002027100	609177002027199
			Black	009177002033806			609177002027000	609177002027099
		3p	White	009177003033906	069177701603003	069177701703003	609177003027100	609177003027199
			Black	009177003033806			609177003027000	609177003027099

* Insertion Tooling - Requires Hand Press with Plates; Consult Application Notes 201-01-124.
Uninsulated/magnet wire with 1-way tooling: 069177701704001.

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