

# Insulation Displacement Contact (IDC)

Our IDC technology provides an efficient method for creating robust, solder-free interfaces to a wide range of magnet wire diameters and coatings.

# ENNOVI™

## HIGH RELIABILITY, SOLDERLESS CONNECTION



Meet automotive requirements for vibration, mechanical & thermal shock as defined by IEC 60352-3.

## RESILIENT HIGH NORMAL FORCE



IDC's spring force beams generate high normal forces and create gas tight, corrosion resistant connection to the wire.

## LOW RESISTANCE, HIGH CURRENT



Delivers low contact resistance (<math><2\text{m}\Omega</math> at 20mV) for high current capacity and complies with RoHS standards.

## APPLICATIONS

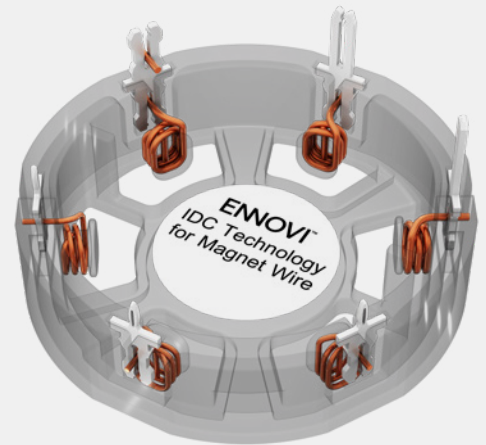
Winding assemblies and magnet wire connection in electric motors, generators, transformers and other power applications.

## MARKETS

- + Automotive
- + Aerospace
- + Datacom
- + Industrial
- + Medical

## IDC TECHNOLOGY

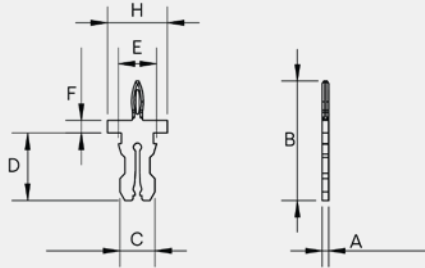
- + **High reliability and repeatability** – our IDC's integrated insulation stripper removes the heavy coated varnish on magnet wire to provide full surface contact with the bare stripped wire, resulting in strong, repeatable, and highly reliable interfaces.
- + **Optimized for low resistance and high current** – consistently deliver contact resistance of less than  $2\text{m}\Omega$  at 20mV to optimize current capacity.
- + **High normal force** – spring force beams generate high normal forces and create gas tight, corrosion resistant connection to the wire.
- + **Rated for high temperature environments** –  $150^\circ\text{C}$ 
  - + Made of highly conductive, spring-based alloys
- + **Highly configurable** – option for integration with connectors, solder tails, sockets, jumpers/shorts, and Press-Fit technology; in either continuous reeled or individual piece formats.
- + **Fast assembly** – easy and fast wire connection system that eliminates the separated step of stripping the wire before connecting.
- + **Easy termination process** – enhanced pocket design enables easy termination by holding the wire before and during termination process and acts as strain relief in the application.
- + **IEC 60352-3 compliant** – meets automotive standard for temperature, vibration and environmental factors.
- + **RoHS compliant**



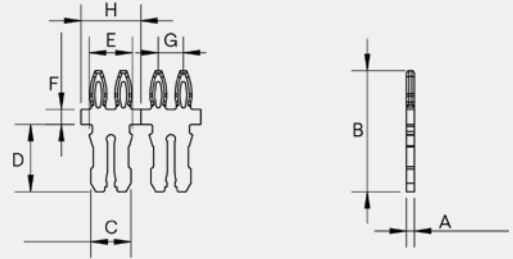
| IDC TYPE | PICTURE | WIRE TYPE   | WIRE GAUGE    | BARE COPPER WIRE SIZE (MM) |
|----------|---------|-------------|---------------|----------------------------|
| 0.4 PLX  |         | Dual wire   | 23 – 24 AWG   | 0.57 - 0.51                |
| 0.64     |         | Single wire | 19.5 – 23 AWG | 0.86 - 0.57                |
| 0.8      |         | Single wire | 15 – 16.5 AWG | 1.45 - 1.22                |
| 0.8      |         | Dual wire   | 18 – 19 AWG   | 1.02 - 0.91                |
| 0.8      |         | Single wire | 17 – 19 AWG   | 1.15 - 0.91                |

| Image | Magnet Wire Size | Copper Bare Wire Diameter (mm) | Ennovi IDC Serial | Wire Type   | P/N    | A         | B      | H         | Material | Plating Material                            |
|-------|------------------|--------------------------------|-------------------|-------------|--------|-----------|--------|-----------|----------|---|
|       |                  |                                |                   |             |        | Thickness | Length | IDC Pitch |          |   |
| 01    | 19.5-23 AWG      | 0.86 - 0.57                    | 0.64 IDC          | Single Wire | -      | 0.64      | 11.91  | 6         | C19010   | 0.25 - 1.5 µm MATTE Sn OVER 1.0 - 3.0 µm Ni |
| 02    | 19.5-23 AWG      | 0.86 - 0.57                    | 0.64 IDC          | Single Wire | -      | 0.64      | 11.91  | 6         | C19010   | 0.25 - 1.5 µm MATTE Sn OVER 1.0 - 3.0 µm Ni |
| 03    | 18-19 AWG        | 1.02 - 0.91                    | 0.8 IDC           | Dual Wire   | -      | 0.8       | 12.11  | 6         | C19010   | 0.25 - 1.5 µm MATTE Sn OVER 1.0 - 3.0 µm Ni |
| 04    | 18-19 AWG        | 1.02 - 0.91                    | 0.8 IDC           | Dual Wire   | IA7843 | 0.8       | 12.11  | 6         | C19010   | 0.25 - 1.5 µm MATTE Sn OVER 1.0 - 3.0 µm Ni |
| 05    | 18-19 AWG        | 1.02 - 0.91                    | 0.8 IDC           | Dual Wire   | -      | 0.8       | 22.81  | 8         | C19010   | 0.25 - 1.5 µm MATTE Sn OVER 1.0 - 3.0 µm Ni |

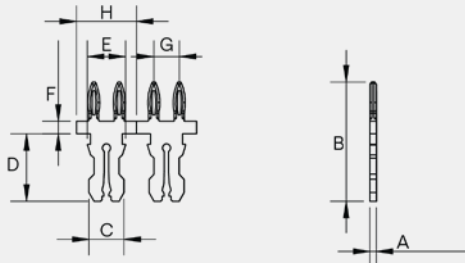
01 0.64 IDC 19.5~23 AWG SINGLE WIRE SINGLE EYE



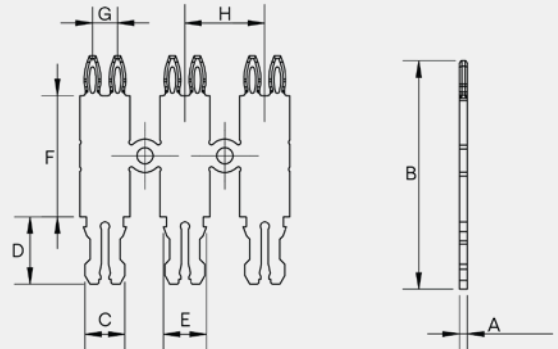
04 0.8 IDC 18~19 AWG DUAL WIRE DUAL EYE



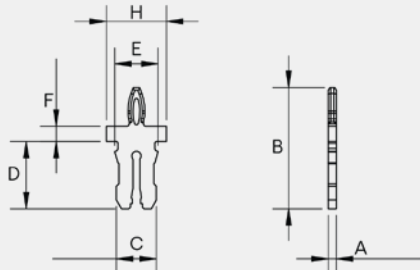
02 0.64 IDC 19.5~23 AWG SINGLE WIRE DUAL EYE



05 0.8 IDC 18~19 AWG DUAL WIRE DUAL EYE LONG



03 0.8 IDC 18~19 AWG DUAL WIRE SINGLE EYE



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