



Shields

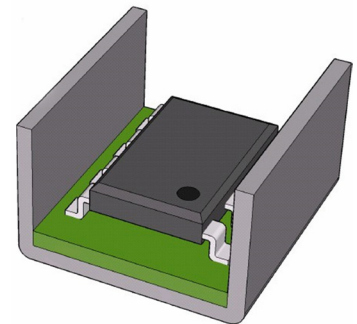
Soft Ferromagnetic Shield

The U-Shield and laminated U-shield are soft ferromagnetic shields using nickel, Silicone, or Iron to support characteristics such as high linearity and very low hysteresis. The shield is designed for planar current sensing in combination with a Hall sensor, AMR sensor, and a busbar conductor. The design can be iron laminated to support designs needing additional protection.



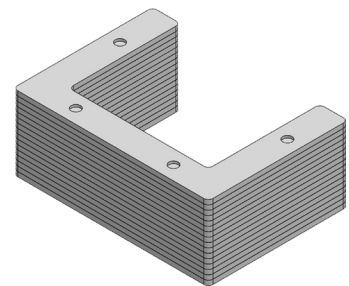
Designed to Protect and Improve

The U-Shield protects the sensor from parasitic magnetic fields caused by nearby conductors or other magnetic field sources while at the same time it enhances sensitivity and signal-to-offset ratio of the sensor. Laminated versions are available to support tough conditions and high speed applications.



Infinite Range of Options

This shield design has an extensive list of dimensions, assembly methods, and attachment options to ensure easy installment into practically any system. The laminate density and materials can be customized as well.



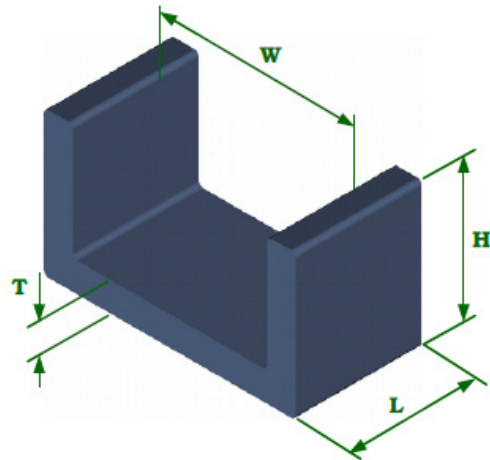
Components to Full Sensor Design

We support our customers with choosing the best style shield to fit their application or current sensor design. We can take choosing the right shield to the next level and support you in designing the entire sensor from top to bottom following any requirements.

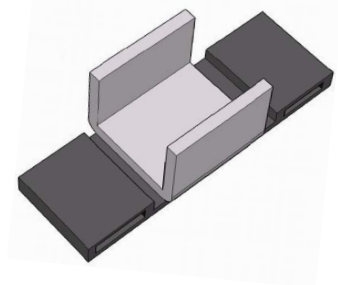
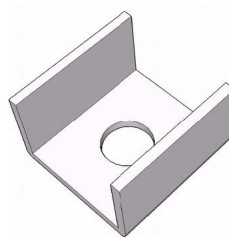
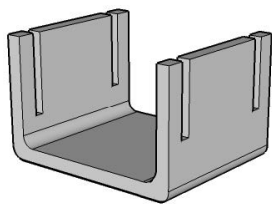
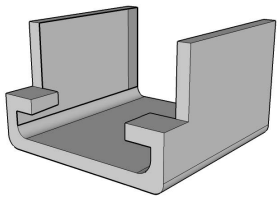
Technical Diagrams:

| Parameter | Typical Sizes |
|----------------------|---------------|
| Width | 12 - 25mm |
| Length | 13 - 26mm |
| Height | 12 - 15mm |
| Thickness | 0.8 - 1.5mm |
| Lamination Thickness | 0.5 - 1.5mm |

Sizes can be completely customized on request



Shield Design Examples:



Technical Specifications Table:

| Parameter | Material | Data |
|-------------------------------|----------|---|
| Relative Permeability | Ni-Fe | 100.000 a.u. |
| | Si-Fe | 40.000 a.u. |
| Initial Relative Permeability | Ni-Fe | 7000 a.u. |
| | Si-Fe | 2500 a.u. |
| Saturation Flux Density | Ni-Fe | 1 T |
| | Si-Fe | 1.5 T |
| Hysteresis | Ni-Fe | 2.8A/m |
| | Si-Fe | n/a |
| Curie Temperature | Ni-Fe | 450 °C |
| | Si-Fe | 450 °C |
| Assembly Options | --- | Glue, Plastic Mold, PCB/Soldering, Crimp, Screw |

Years of Temperature Sensing Experience

CTS Corporation has been building sensors since the mid 1970s to support automotive and industrial products but has since grown into various areas of sensing technology.

As electric vehicles and industrial equipment have come into demand, we have implemented our years of sensor expertise to improve current sensing technology. We have supported customers from power plant current sensing, to transportation and industrial equipment.

Contact Information

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