



Cinch's Modular Integrated Connector Enclosures offer high quality sealed packaging solutions for rugged electronic control module applications. The Cinch 1.5mm SHS system is the base interconnect technology.

The ModICE product line consists of two distinct enclosure sizes and 6 header configurations allowing 18, 30, 48 and 60 I/O. Snap-in header simplifies module assembly. Integrated ferrite filtering, integrated heat sink and vented enclosures are available options.



## **Product Specification**

## **Operating Temperature**

-40°C to +85°C

#### **Contact Resistance**

 $< 10 \text{ m}\Omega$ 

#### **Insulation Resistance**

 $>1000 M\Omega$ 

#### Sealing

IP65, IP66, IP67, IP69K

## **Temperature Life**

1008 Hrs @ 125<sup>O</sup>C

## **Current Cycling**

500 Hrs @ 10 Amp 500 cycles 45 min ON – 15 min OFF

#### **Vibration**

10 to 2000 to 10 Hz with 15 g's peak level

#### **Shock**

50 g/s - 20 pulses

## **Salt Spray**

96 Hrs

## **Temperature Humidity Cycling**

320 Hrs

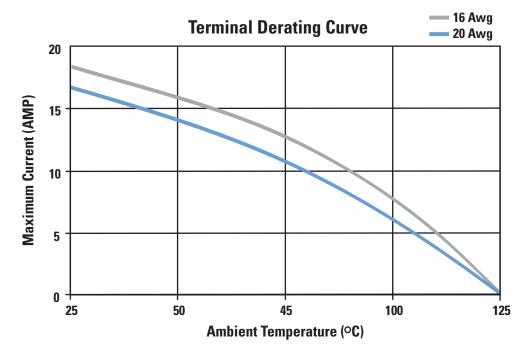
40 - 8 Hrs cycles  $-40^{\rm O}$ C to  $+85^{\rm O}$ C @ 85%RH to  $+125^{\rm O}$ C

#### **Fluid Resistance**

Resists to most fluids used in industrial applications

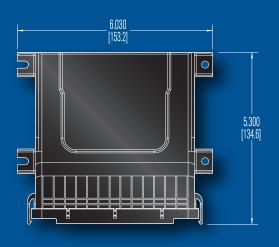
#### **RoHs Compliant**

**Consult factory for options** 





## **Enclosure - SE**



Without heat sink	P/N: <b>581 01 30 043</b>
With 1 heat sink	P/N: <b>581 01 30 042</b>
Use with spring plate	P/N: <b>581 00 00 021</b>
With 2 heat sink	P/N: <b>581 01 30 041</b>
Use with spring plate	P/N: <b>581 00 00 021</b>
	P/N: <b>581 00 00 020</b>

## Header - SE







18 I/O P/N: **581 01 18 032** 

18 I/O P/N: **581 01 18 033** 

30 I/O P/N: **581 01 30 044** 

30 I/O P/N: 581 01 30 046

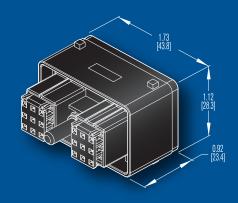
48 I/O P/N: **581 01 48 005** 

48 I/O P/N: **581 01 48 007** 

Without Ferrites

**With Ferrites** 

# Mating SHS Harness Connectors



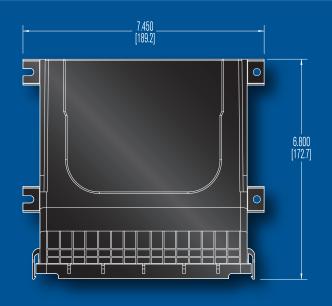
48 I/O P/N: **581 01 18 023** 

P/N: **581 01 30 029** 

30 I/O P/N: **581 01 30 029** 

18 I/O P/N: **581 01 18 023** 

## **Enclosure - LE**

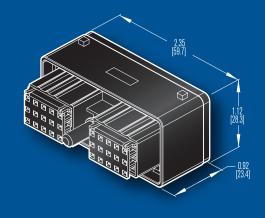


Without heat sink	P/N: <b>581 01 60 033</b>
With 1 heat sink	P/N: <b>581 01 60 032</b>
Use with spring plate	P/N: <b>581 00 00 021</b>
With 2 heat sink	P/N: <b>581 01 60 031</b>
Use with spring plate	P/N: <b>581 00 00 021</b>
	P/N: <b>581 00 00 020</b>

## Header - LE



# Mating SHS Harness Connectors



60 I/O P/N: **581 01 30 028** 

P/N: **581 01 30 029** 

48 I/O P/N: **581 01 30 029** 

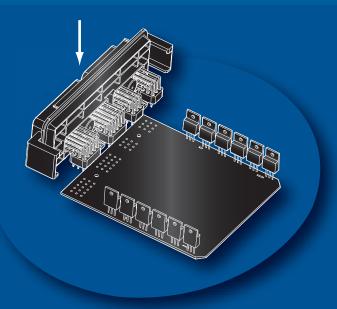
P/N: **581 01 18 023** 

30 I/O P/N: 581 01 30 029

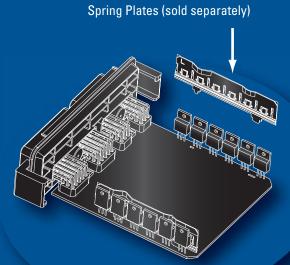
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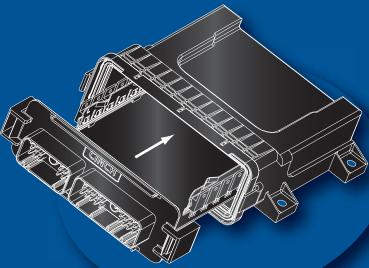
# **Enclosure Assembly**

# ModICE



**Mount header to PCB** 

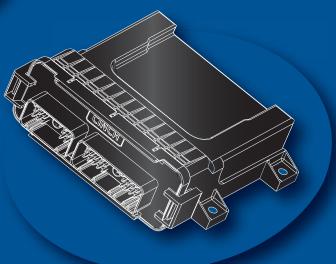




Assemble header/board into enclosure Push to lock and seal

## **Soldering Process**

- Process PCB
- For heat sink options:
  - Install heat sink spring plates
  - Apply conductive medium to mosfets





## Proven Excellence

For over 70 years, Cinch has been a reliable supplier of a variety of quality connector products to various industries. We are a multi-national manufacturer with manufacturing facilities in the U.S., U.K. and Mexico.

Cinch has applied its extensive expertise in interconnection technology to engineer and manufacture connectors of various complexities using state-of-the-art technology and tooling.

Mechanical design is accomplished using Pro/E® 3D solid modeling and AutoCAD® supported by nonlinear and linear Finite Element Analysis, and Mold Flow software.

Our engineers utilize in-house capabilities in high frequency interconnect simulation, SPICE model generation and high frequency testing to develop the optimum product.

All products are validated in Cinch's First Article, mechanical, electrical, and environmental test facilities ensuring the finished products meet our customers' most stringent specifications.

Simply, your connectors are manufactured in state-of-the-art facilities that are committed to customer satisfaction and continuous improvement.



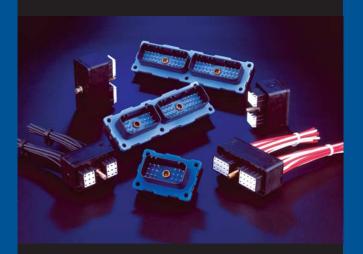
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## 1.5 mm Sealed Header System

The SHS product family is designed to perform on electronic control modules that must function in extreme environmental conditions commonly found on commercial and off-road vehicles and equipment. SHS headers and harness connectors were developed on a highly reliable 1.5mm terminal platform.



## For More Information

Contact the Cinch Transportation Marketing department at 1.800.323.9612 or e-mail directly to transportation@cinch.com