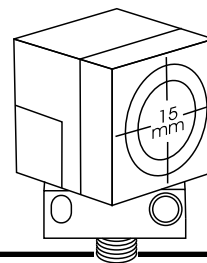


Weld  
Field  
Immune

# HammerHead™ Proximity Sensor

DC  
AC/DC



Proximity Sensors

## Introducing the Namco HammerHead™ Proximity Sensor: Evolution Means Survival of the Fittest.

### All Metal Body Stands up to Abuse

To evolve means to adapt to your surroundings. The HammerHead sensor is completely enclosed in a rugged die-cast body. All metal means more strength in the face of abuse.

### 9-Way Position Flexibility

Eight-point indexed side-sense, plus top sense configuration make the HammerHead sensor "9-sensors-in-one."

### Positive Grip Compression Clamp Bracket

Provides superior mounting strength.



*"Show us your metal!" The HammerHead sensor has an all-metal body so it is not prone to mechanical breakage like other user-configurable sensors with plastic housings.*

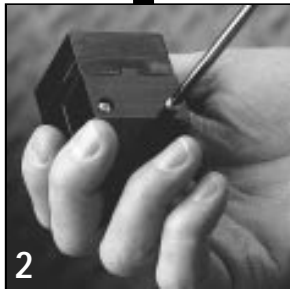
## Streamlined Design Shakes off Weld Slag . . . Without Protective "Boots"

The HammerHead sensor's face is weld slag resistant, so even heavy deposits roll right off. Plus, because it has no nooks or crevices for slag to accumulate, you'll never have to worry about "false triggering" from slag build-up.

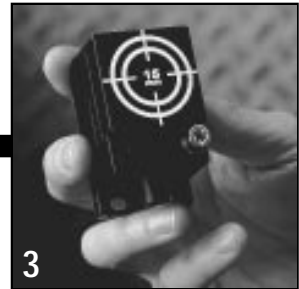


## An Easy Upgrade. Directly Replaces Other Configurable Sensors

Two sets of mounting holes on bracket allow easy retrofit of traditional rectangular sensors (using lower pair of holes), or retrofit of limit switch-style sensors (using the upper pair).



*Adjustment screws go straight in . . . no difficult angles to slow things down.*



## Configuring is as easy as "1-2-3"

The HammerHead sensor is field-adaptable to positions for top, front, left or right sensing. This means you can site-adapt sensors to changing application conditions.

## Simplifies Ordering

Because it is "9-sensors-in-one," the HammerHead sensor makes things easy for your Purchasing Department. A single part number replaces as many as five conventional rectangular proximity sensors.



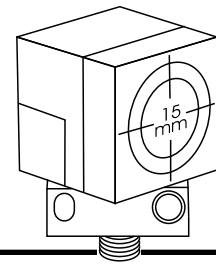
### 360° Connector Swivel

Allows for convenient cordset routing, especially with 90° cordsets.

**Weld  
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Proximity Sensors

- Nine-way position flexibility
- Weld Field Immune circuitry is designed to operate within 1" of a resistance welding electrode carrying 20,000 Amperes RMS (45,000 Amperes peak) without changing state
- Will not exhibit false turn-ons from walkie-talkies or other in-plant sources of RF noise
- Patented Short Circuit Protection
- Covered by Namco Lifetime Replacement Program
- Rugged metal body and clamp bracket

The HammerHead sensor is field-configurable to sense in nine different positions: top, front, back, left, right, and four 45° side sense positions.

The HammerHead sensor features Namco's famous weld field immune circuit proven reliable the world over in the harshest conditions. Totally epoxy encapsulated, the electronics are truly "automotive grade."



## 9-Way Configurable Proximity Sensors

Connector Type	Circuit Description	Housing Dimensions	Non-latching SCP Model No.	Latching SCP Model No.	Maximum Load Current	Leakage Current	Voltage Drop	Short Circuit Protected
<b>15mm SENSING RANGE DC 10-30V (SHIELDED)</b>								
4-pin Mini	3W, PNP, NO	40x40x68.5mm	EE510-90000	EE510-90400	200mA	< 10µA	2.5V	Yes
4-pin Euro	3W, PNP, NO	40x40x68.5mm	EE510-90040	EE510-90440	200mA	< 10µA	2.5V	Yes
<b>20mm SENSING RANGE DC 10-30V (SHIELDED)</b>								
4-pin Mini	3W, PNP, NO	40x40x68.5mm	EE510-91000	EE510-91400	200mA	< 10µA	2.5V	Yes
4-pin Euro	3W, PNP, NO	40x40x68.5mm	EE510-91040	EE510-91440	200mA	< 10µA	2.5V	Yes
<b>25mm SENSING RANGE DC 10-30V (UNSHIELDED)</b>								
4-pin Mini	3W, PNP, NO	40x40x68.5mm	EE510-92000	EE510-92400	200mA	< 10µA	2.5V	Yes
4-pin Euro	3W, PNP, NO	40x40x68.5mm	EE510-92040	EE510-92440	200mA	< 10µA	2.5V	Yes
<b>15mm SENSING RANGE AC/DC 20-150V (SHIELDED)</b>								
3-pin Mini	2W, NO, LL	40x40x68.5mm		EE530-90400	200mA	1.7mA	10V	Yes
3-pin Micro <sup>3</sup>	2W, NO, LL	40x40x68.5mm		EE530-90420	200mA	1.7mA	10V	Yes
<b>20mm SENSING RANGE AC/DC 20-150V (SHIELDED)</b>								
3-pin Mini	2W, NO, LL	40x40x68.5mm		EE530-91400	200mA	1.7mA	10V	Yes
3-pin Micro <sup>3</sup>	2W, NO, LL	40x40x68.5mm		EE530-91420	200mA	1.7mA	10V	Yes
<b>25mm SENSING RANGE AC/DC 20-150V (UNSHIELDED)</b>								
3-pin Mini	2W, NO, LL	40x40x68.5mm		EE530-92400	200mA	1.7mA	10V	Yes
3-pin Micro <sup>3</sup>	2W, NO, LL	40x40x68.5mm		EE530-92420	200mA	1.7mA	10V	Yes

<sup>3</sup>Consult factory for availability.

- ▶ "LL" indicates *Low Leakage* and "HL" indicates *High Leakage*.
- ▶ Consult factory for normally closed model availability.

## Common Sensor Characteristics

HAMMERHEAD SENSORS		
	2 Wire AC/DC	3 Wire DC
Supply Voltage	20-150V	10-30V
Voltage Drop	10V	2.5V
Max. Load Current	200mA	200mA
Current Consumption	N/A	11mA
Leakage Current	1.7mA	< 10µA
Mis-wiring Protected	Yes <sup>1</sup>	Yes <sup>2</sup>
Response Time	30ms	30ms
Output Circuit	2 Wire	Sourcing
Ambient Temperature Range	-25°C to 70°C (-13°F to 158°F)	

## LED Functions

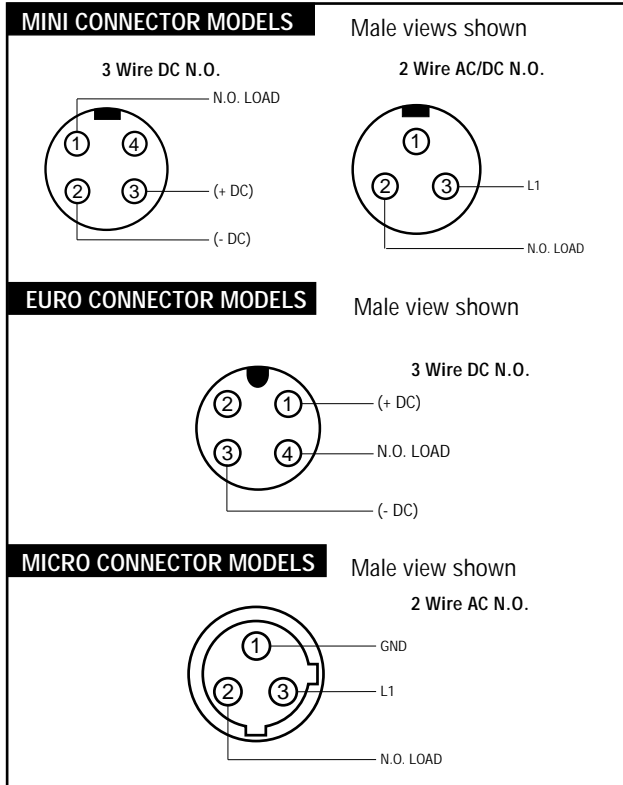
	2 Wire AC/DC		3 Wire DC	
	Red	Green	Green	Amber
Power Off	Off	Off	Off	Off
Power On Load De-energized	On	Off	On	Off
Power On Load Energized	Off	On	On	On
*SCP Mode Activated	Both Flashing		Both Flashing	

\*Short Circuit Protection: If the sensor is shorted, the sensor's Short Circuit Protection (SCP) will be activated. When this occurs, both LEDs will flash and the sensor will limit current flow to about 2.0mA.

<sup>1</sup> Namco 2-wire AC/DC sensors are bipolar by design - they cannot be mis-wired.

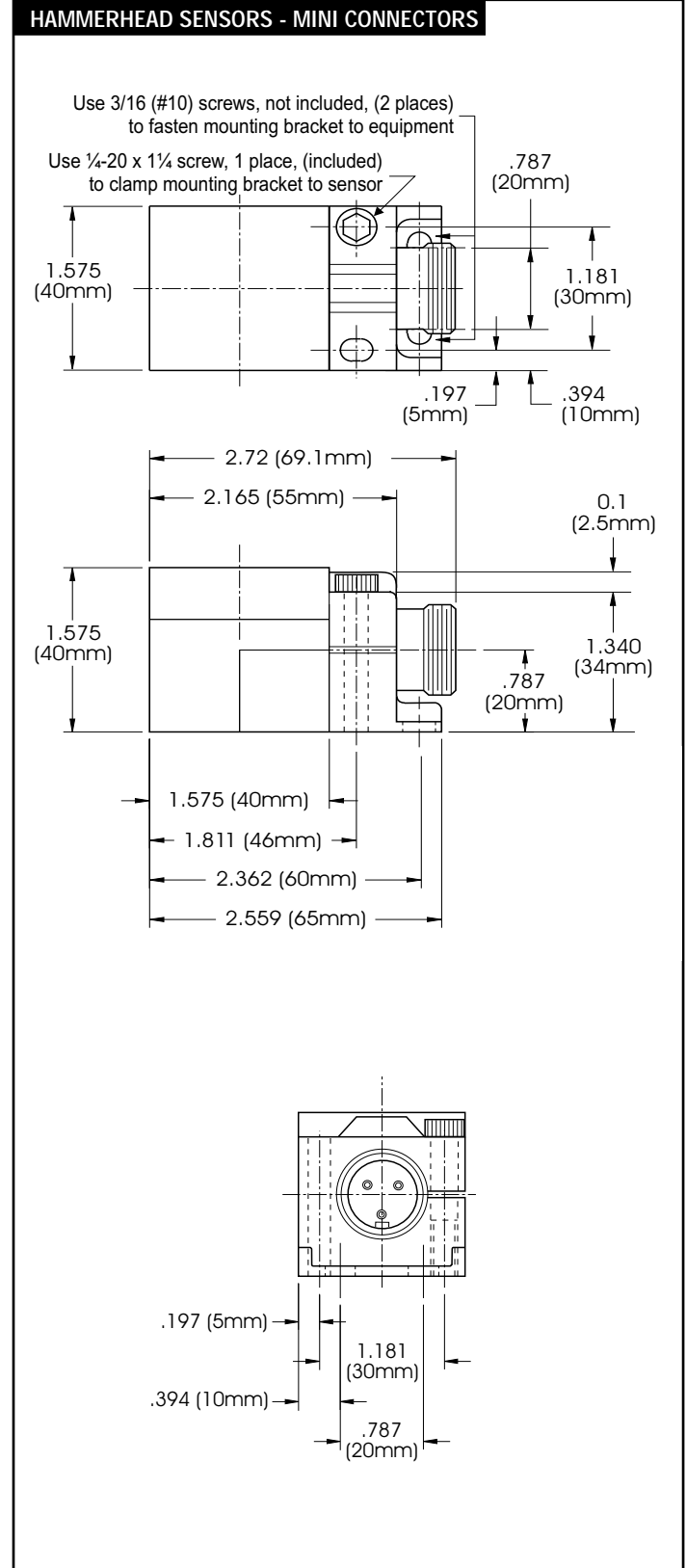
<sup>2</sup> Namco 3-wire DC sensors incorporate reverse polarity protection.

## Wiring Diagrams



## Dimensional Drawings

## DC, AC/DC



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