

Calmark offers the Series 230 "Card-Lok" retainer for cold plate-heat exchanger applications. A mid-width configuration, to meet Board Module Assembly retainer expansion requirements between the Series 225 and 240.

FEATURES

- Maximum Reliability – Screw-actuated wedge action locks Board Module Assembly in place
- Maximum Thermal Transfer – Wedge action design provides maximum contact between thermal paths on Board Module Assembly and the heat sinking surface
- Maximum Resistance to Shock & Vibration – Wedge action design locks Board Module Assembly in place to provide maximum resistance to shock and vibration
- Zero Insertion & Extraction Forces – Screw actuation provides zero insertion and extraction force on Board Module Assembly
- Design Flexibility – Special lengths, finishes or other design variations available on request

BODIES & WEDGES

Material:

Aluminum Alloy 6061-T6,
ASTM-B221

Finish:

See Part No. Code

SCREW

Material:

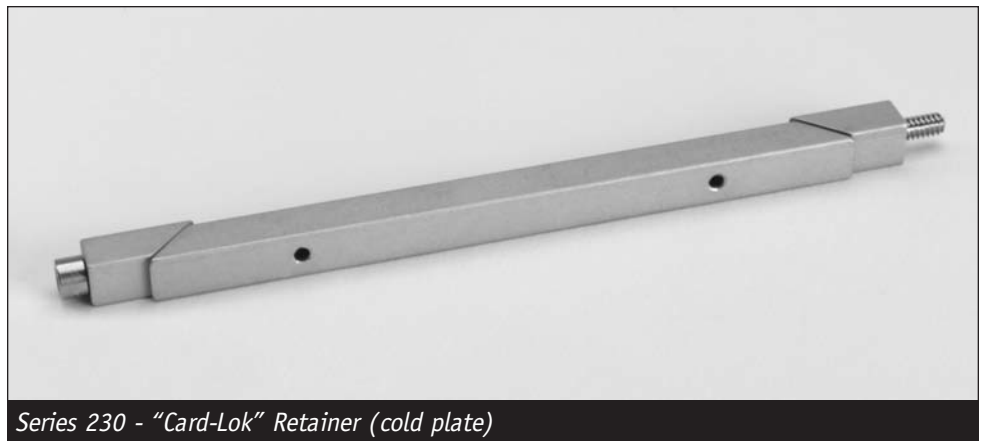
Stainless Steel
QQ-S-763 or ASTM-A582

Finish:

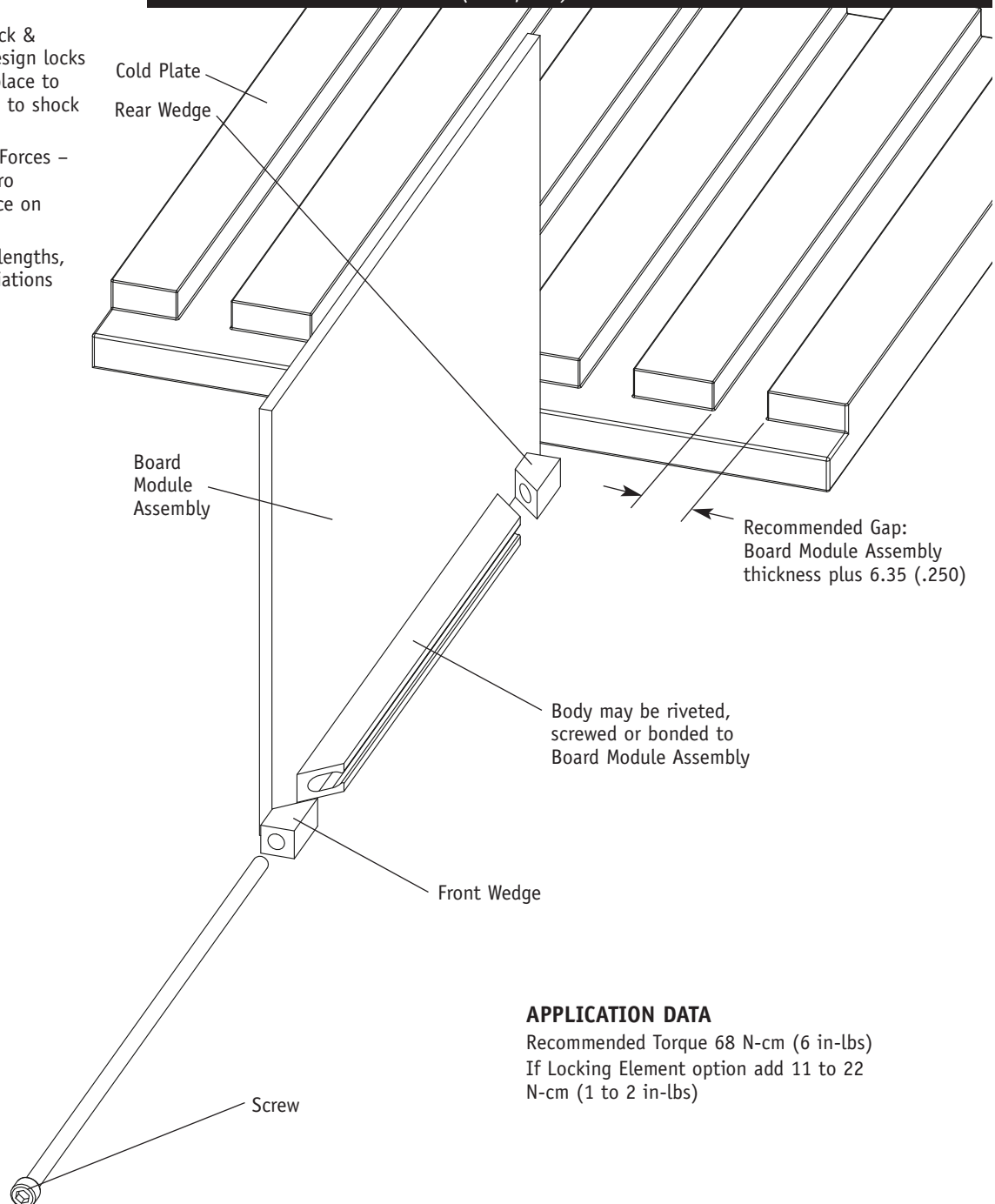
Passivate per MIL-S-5002

WEIGHT

1.34 g/cm (.120 oz/in)



Series 230 - "Card-Lok" Retainer (cold plate)



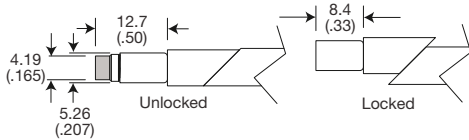
APPLICATION DATA

Recommended Torque 68 N-cm (6 in-lbs)
If Locking Element option add 11 to 22
N-cm (1 to 2 in-lbs)

OPTION PREFIX

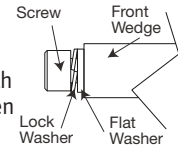
Detail "V"

Provides visual lock indication.



Detail "W"

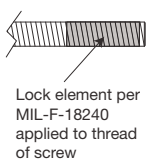
Provides added resistance to loosening from shock and vibration. This option adds no additional screw length unless included with "CR" then 1.5 (.06) or with "R" option, then 4 (.16) total.



OPTION SUFFIX

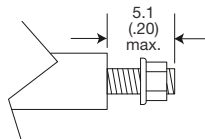
Detail "L"

Provides prevailing torque for resistance to loosening from shock and vibration.



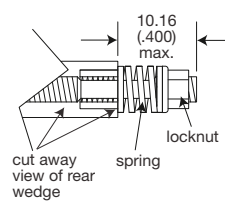
Detail "R"

Reduces the possibility of unintentional disassembly of the screw from rear wedge. This option adds no additional screw length unless included with "CR" then 2.5 (.10) or with "W" option, then 4 (.16) total.



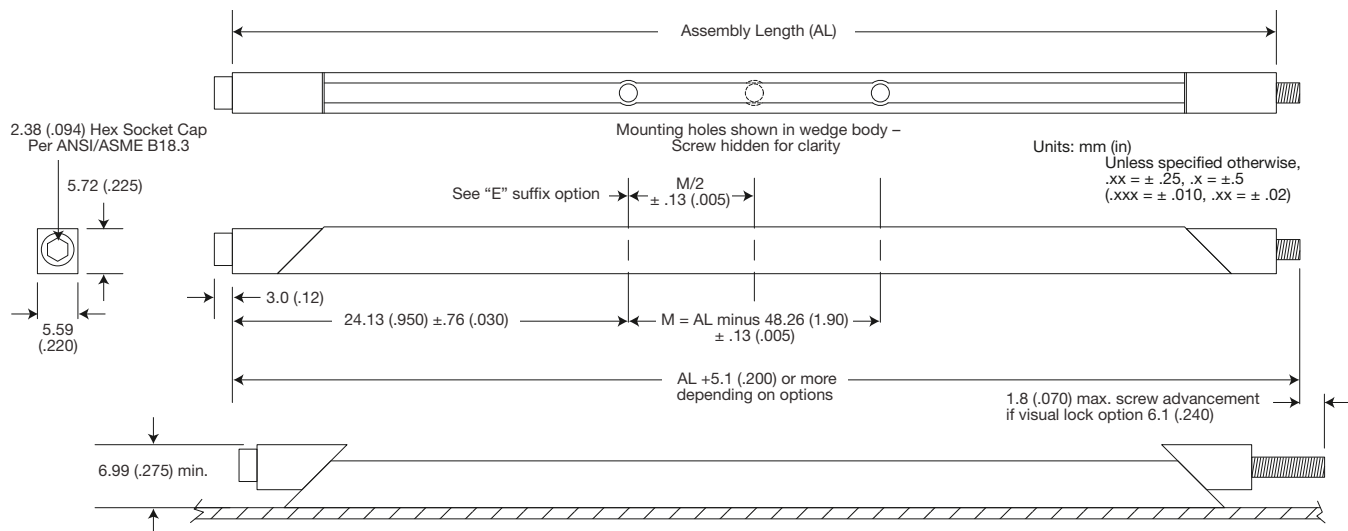
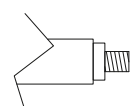
Detail "K"

Prevents the unintentional disassembly of screw from rear wedge. This option adds 5.1 (.20) to the screw length.



Detail "CR"

Includes a stainless steel captive nut on the rear wedge. If the "R" option is included with this "CR" option, then the locknut is also stainless steel.



Part Number Code Series 230 Card-Lok Three Piece

M	W	V	A	230	-	3.80	E	H	L	R
<p>Prefix options</p> <p>Metric Screw Head M2.5 Hex Drive <u> </u> M</p> <p>Standard Screw Head 3/32 Hex Drive <u>[blank]</u></p> <p>Lock and Flat Washer <u> </u> W</p> <p>None <u> </u> [blank]</p> <p>Visual Indicator <u> </u> V</p> <p>No Visual Indicator <u> </u> [blank]</p> <p>Black Anodize <u> </u> A</p> <p>or choose from Finish Table <u> </u> see table</p> <p>Suffix options</p> <p>Stainless Steel Lock Nut if "R" option is selected <u> </u> CR</p> <p>Standard Steel Lock Nut <u> </u> "-"</p> <p>Assembly length in inches. Standard lengths range from 54.6 (2.15) to 329.9 (12.99) <u>length.xx</u></p> <p>Preferred lengths are 71.1 (2.80), 96.5 (3.80) and 121.9 (4.80)</p> <p>Other lengths available upon request</p> <p>Additional Center Mounting Hole <u> </u> E</p> <p>None <u> </u> [blank]</p> <p>Mounting Options - holes for rivet mounting or choose from Mounting Option Table <u> </u> see table</p> <p>Lock Element <u> </u> L</p> <p>None <u> </u> [blank]</p> <p>Lock Nut <u> </u> R</p> <p>Captive Screw <u> </u> K</p> <p>None <u> </u> [blank]</p>										

Part Number Code Example:

VA230CR4.80HR

Series 230 Card-Lok three piece 121.9 (4.80) long with visual indicator, black anodize finish, standard rivet mounting holes and stainless steel lock nut option.

FINISH TABLE	
Code Letter	Finish
[blank]	Chemical Film per Mil-C-5541 Class 1A, Gold
"R"	Chemical Film per Mil-DTL-5541 Class 3, Type II, Clear
"A"	Black Anodize per Mil-A-8625 Type II, Class 2
"HA"	Hard Black Anodize per Mil-A-8625 Type III, Class 2
"EN"	Electroless Nickel per Mil-C-26074 Class 4, Grade B, Bright

MOUNTING METHOD TABLE	
Code Letter	Method
[blank]	No mounting holes
"H"	Rivet Mounting Ø1.70 (.067) hole with 3.96 (.156) counterbore x 4.19 (.165) deep and 100° x 3.56 (.140) countersink.
"T0"	0-80 tapped hole
"T2"	2-56 tapped hole
"TM2"	M2 x 0.40 tapped hole
"TM2.5"	M2.5 x 0.45 tapped hole