

Series 40 Card-Lok



Meets **VITA** 46, 48.2, 48.4, 48.5
In alignment with the
SOSA® Technical Standard

RECOMMENDED GAP WIDTH

PCB + 7.62 (.300)

RECOMMENDED TORQUE

80 N-cm (7 in-lbs)

WEIGHT

1.07 g/cm (.096 oz/in)

MATERIALS AND FINISH

Wedges

- Material:** Aluminum Alloy 6061-T6 per QQ-A-200/8
- Finish:** See finish table on opposite page

Screw, Lock and Flat Washer

.09 in. or 2.5 mm hex. socket head cap screw, depending on mounting configuration

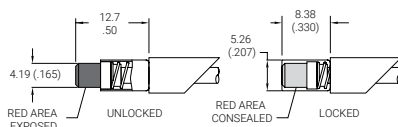
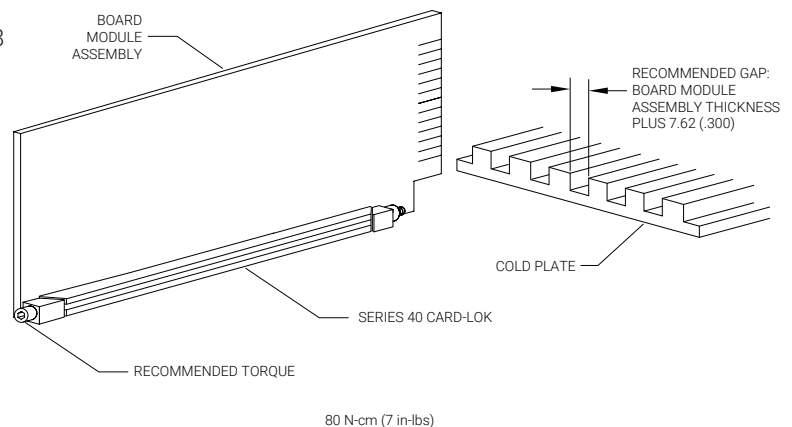
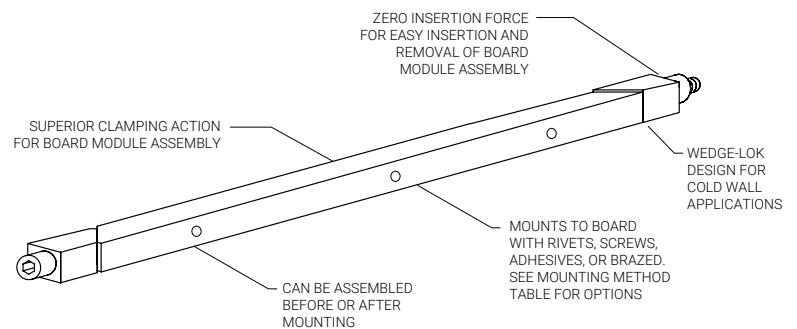
- Material:** Series 300 stainless steel per QQ-S-763 ASTM A-582
- Finish:** Passivated per AMS2700

Optional Lock and Flat Washer

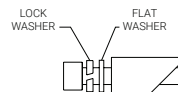
- Material:** 300 series stainless steel per QQ-S-763 and ASTM A-582
- Finish:** Passivated per AMS2700

Optional Locknut

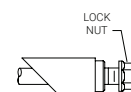
- Material:** Type A286 stainless steel per ASTM AMS 5525
- Finish:** Silver plate per AMS 2410



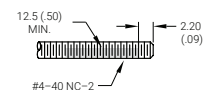
VI OPTION
Indicates assembly is unlocked (adds 5.1 (.20) to screw length)



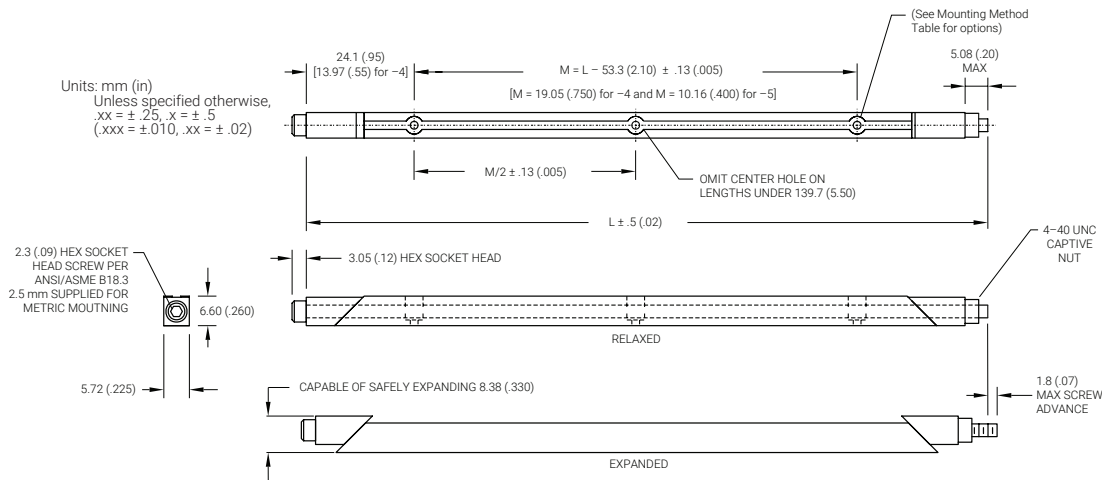
LF OPTION
Provides additional resistance to shock and vibration (adds 2.5 (.10) in screw length)



LN OPTION
Captivates rear wedge when untorqued (adds 2.5 (.10) to screw length)



L OPTION
Provides additional resistance to shock and vibration



Part Number Code	
Series 40 Card-Lok Three-piece	
Optional Visual Indicator	40 VI-10-B-LF-LN-S-L
Visual Indicator _____	VI
None _____	[Blank]
Length	
Length in 12.7 (.50) increments _____	4 [50.8 (2.00)]
_____ to 24 [304.8 (12.00)]	
Finish	
Black Anodized _____	B
or select code letter from Finish Table	
Lock/Flat Washers and Locknut	
Lock Washer and Flat Washer _____	LF
None _____	[Blank]
Lock Nut _____	LN
None _____	[Blank]
Mounting	
2-56 UNC-2B Tapped Holes _____	S
Or select code letter from Mounting Method Table	
Lock Patch	
Lock Patch _____	L
None _____	[Blank]

Part Number Code Example:
40VI-12-LF

Series 40 Card-Lok Three-piece, 152.4 (6.00) long, with Visual Indicator option, Chem Film finish, standard rivet hole mounting, and Lock and Flat Washer option.

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Finish Table

Code letter	Surface
[blank]	CHEMICAL FILM PER MIL-DTL-5541, TYPE I, CLASS 1A, GOLD, NON ROHS COMPLIANT
"CC"	CHEMICAL FILM PER MIL-DTL-5541, TYPE II, CLASS 1A, CLEAR
"EN"	ELECTROLESS NICKEL PER MIL-C-26074, CLASS 4, GRADE B, BRIGHT
"N"	NICKEL PLATE PER QQ-N-290, CLASS 1, GRADE G, BRIGHT
"B"	BLACK ANODIZE PER MIL-A-8625, TYPE II, CLASS 2
"B3"	HARD BLACK ANODIZE PER MIL-A-8625, TYPE III, CLASS 2 HARD
"B3D"	BLACK ANODIZE WITH DRY FILM LUBE PER MIL-L-46010

Mounting Method Table

Code letter	Method
[blank]	RIVET MOUNT (ø1.70 + .10/- .03 (.067 + .004/.001) THRU □ ø3.96 (.156) v 5.08 (.200) v 3.56 (.140) x (100°)
"A"	NO MOUNTING HOLES
"S"	2-56 UNC-2B TAPPED HOLE
"T"	0-80 UNF-2B TAPPED HOLE
"M2"	M2 X .40 TAPPED HOLE
"M"	M2.5 X .45 TAPPED HOLE



Our powerful portfolio of brands:

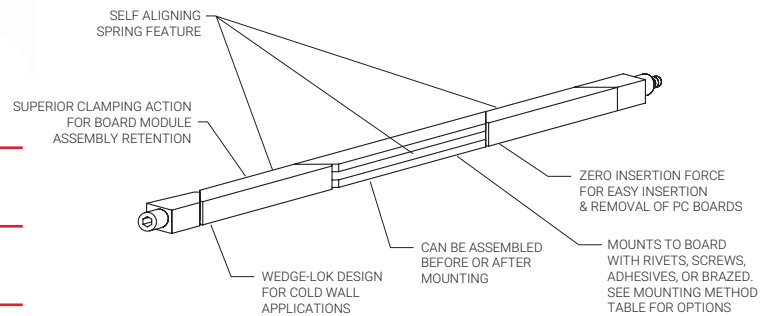
CADDY ERICO HOFFMAN ILSCO SCHROFF TRACHTE

BIRTCHETM

Series 40-5 Wedge-Lok



Meets **VITA** 46, 48.2, 48.4, 48.5
In alignment with the
SOSA® Technical Standard



RECOMMENDED GAP WIDTH

PCB + 7.62 (.300)

RECOMMENDED TORQUE

80 N-cm (7 in-lbs)

WEIGHT

1.16 g/cm (.104 oz/in)

MATERIALS AND FINISH

Wedges

- Material:** Aluminum Alloy 6061-T6 per QQ-A-200/8
- Finish:** See finish table on opposite page

Screw

.09 in or 2.5 mm hex. socket head cap screw, depending on mounting configuration

- Material:** 300 series stainless steel per QQ-S-763
ASTM A-582 A286 per FF-S-86 with dry film lube per MIL-L-46010 for "TLC" option
- Finish:** Passivated per AMS2700

Alignment Springs

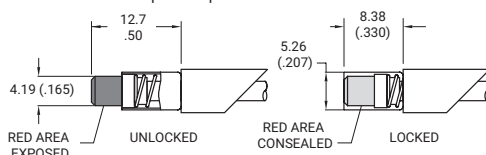
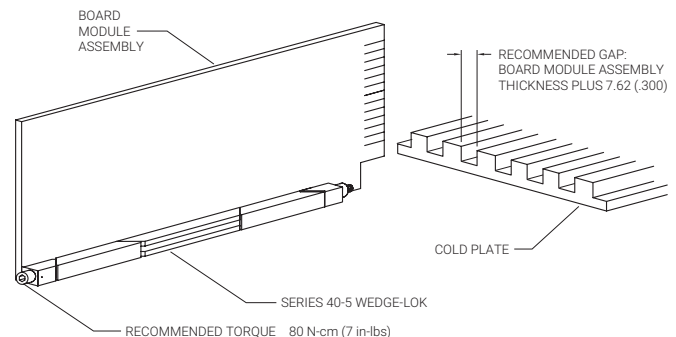
- Material:** 301 stainless steel half hard per AMS 5518
- Finish:** Passivated per AMS2700

Optional Lock and Flat Washer

- Material:** 300 series stainless steel per QQ-S-763 and ASTM A-582
- Finish:** Passivated per AMS2700

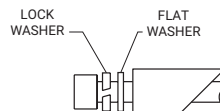
Optional Lock Nut

- Material:** Type A286 stainless steel per ASTM AMS 5525
- Finish:** Silver plate per AMS 2410



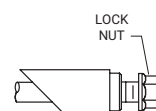
VI OPTION

Indicates assembly is unlocked (adds 5.1 (.20) to screw length)



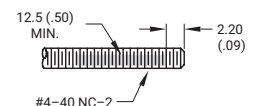
LF OPTION

Provides additional resistance to shock and vibration (adds 2.5 (.10) in screw length)



LN OPTION

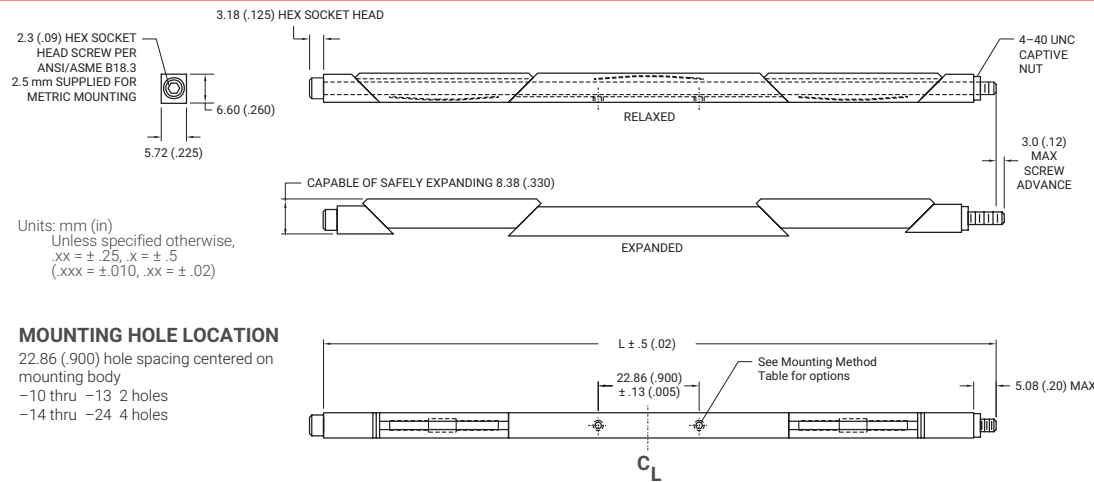
Captivates rear wedge when untorqued (adds 2.5 (.10) to screw length)



L OPTION

Provides additional resistance to shock and vibration

SERIES 40-5 WEDGE-LOK



Part Number Code	40-5	VI	-	10	-	B	-	LF	-	LN	-	T	-	L
Type	Torque Limiting Version* TLC Standard version with Visual Indicator VI Standard version [Blank]													
Length	Length in 12.7 (.50) increments 10 [127.0 (5.00)] to 24 [304.8 (12.00)]													
Finish	Black Anodized B or select code letter from Finish Table													
Lock/Flat Washers and Locknut	Lock Washer and Flat Washer LF None [Blank]													
	Lock Nut LN None [Blank]													
Mounting	Standard 2-56 UNC-2B Tapped Holes [Blank] Or select code letter from Mounting Method Table													
Lock Patch	Lock Patch L None [Blank]													

Dash #	Surface Finish
[Blank]	CHEMICAL FILM PER MIL-DTL-5541, TYPE I, CLASS 1A, GOLD, NON ROHS COMPLIANT
CC	CHEMICAL FILM PER MIL-DTL-5541, TYPE II, CLASS 1A, CLEAR
EN	ELECTROLESS NICKEL PER MIL-C-26074, CLASS 4, GRADE B, BRIGHT
N	NICKEL PLATE PER QQ-N-290, CLASS 1, GRADE G, BRIGHT
B	BLACK ANODIZE PER MIL-A-8625, TYPE II, CLASS 2
B3	HARD BLACK ANODIZE PER MIL-A-8625, TYPE III, CLASS 2 HARD
B3D	BLACK ANODIZE WITH DRY FILM LUBE PER MIL-L-46010

Code Letter	Method
[Blank]	2-56 UNC-2B TAPPED HOLE
R	RIVET MOUNT (ø 1.70 + .10/- .03 (.067 + .004/.001) THRU u ø 3.96 (.156) √ 5.08 (.200) √ 3.56 (.140) × 100°) RIVET "R" PARTS ARE SHIPPED UNASSEMBLED AND EXCLUDE ALIGNMENT PINS
A	NO MOUNTING HOLES
T	0-80 UNF-2B TAPPED HOLE
M2	M2 × .40 TAPPED HOLE
M	M2.5 × .45 TAPPED HOLE

*NOTE: FOR TORQUE LIMITING (TLC) VERSION: VISUAL INDICATOR (VI) LOCK/FLAT WASHER (LF), LOCK PATCH (L) OPTIONS NOT AVAILABLE ONE ALIGNMENT SPRING FOR -10 TO -15 LENGTHS MUST CLICK 3+ TIMES FOR PROPER INSTALLATION

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BIRTCHER™



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Series 41 Wedge-Lok

Meets **VITA** 26, 48.2, 48.4
In alignment with the
SOSA® Technical Standard



RECOMMENDED GAP WIDTH

PCB + 5.33 (.210)

RECOMMENDED TORQUE

45 N-cm (4 in-lbs)

WEIGHT

.93 g/cm (.083 oz/in)

MATERIALS AND FINISH

Wedges

- **Material:** Aluminum Alloy 6061-T6 per QQ-A-200/8
- **Finish:** See finish table on opposite page

Screw

.09-in. or 2.5-mm hex. socket head cap screw, depending on mounting configuration

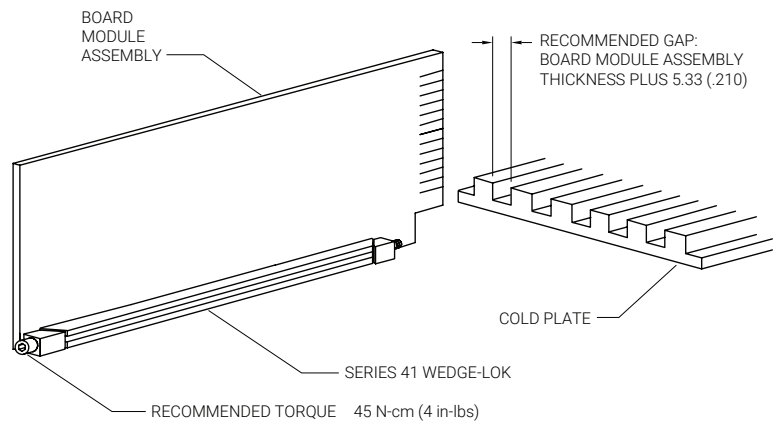
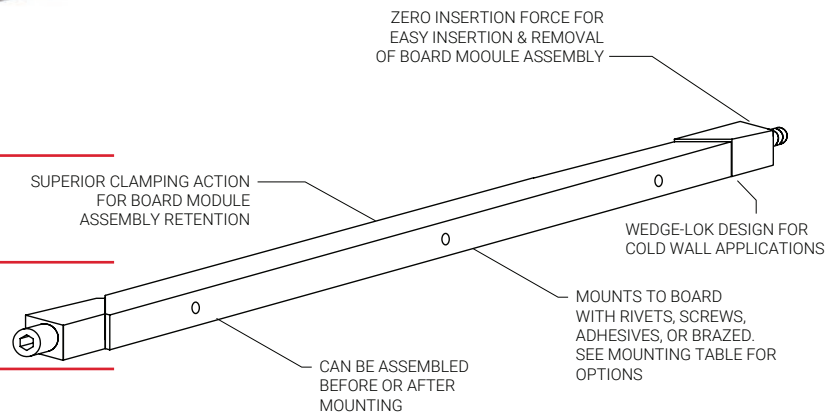
- **Material:** 300 series stainless steel per QQ-S-763 ASTM A-582
- **Finish:** Passivated per AMS2700

Optional Lock and Flat Washer

- **Material:** 300 series stainless steel per QQ-S-763 and ASTM A-582
- **Finish:** Passivated per AMS2700

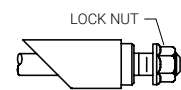
Optional Locknut

- **Material:** Type A286 stainless steel per ASTM AMS 5525
- **Finish:** Silver plate per AMS 2410



LF OPTION

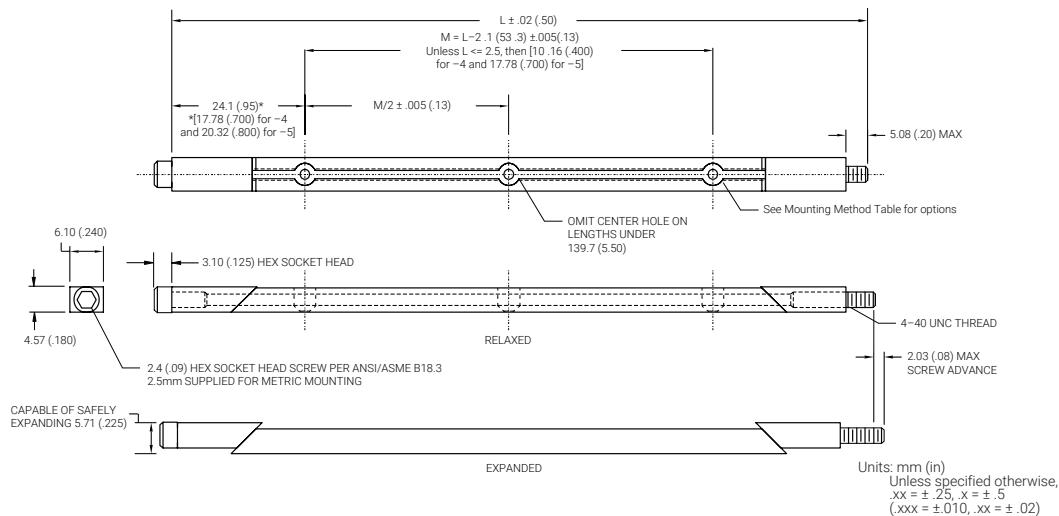
Provides additional resistance to shock and vibration (adds 5.1 (.20) to screw length)



LN OPTION

Captivates rear wedge when untorqued (adds 2.5 (.10) to screw length)

SERIES 41 WEDGE-LOK



Part Number Code

Series 41 WEDGE-LOK Three-piece

Optional Visual Indicator

Visual Indicator

None

Length

Length in 12.7 (.50) increments

Finish

Black Anodized

or select code letter from Finish Table

Lock/Flat Washers and Locknut

Lock Washer and Flat Washer

None

Lock Nut

None

Mounting

2-56 UNC-2B Tapped Holes

Or select code letter from Mounting Method Table

Lock Patch

Lock Patch

None

41 VI-10-B-LF-LN-S-L

VI

[Blank]

4

[50.8 (2.00)]

[304.8 (12.00)]

B

LF

[Blank]

LN

[Blank]

S

L

[Blank]

Part Number Code example: 41VI-12-LF
Series 41 WEDGE-LOK Three-piece, 152.4 (6.00) long, with Visual Indicator option, Chem Film finish, standard rivet hole mounting, and Lock and Flat Washer option.

Dash #	Surface Finish
[Blank]	CHEMICAL FILM PER MIL-DTL-5541, TYPE I, CLASS 1A, GOLD, NON ROHS COMPLIANT
CC	CHEMICAL FILM PER MIL-DTL-5541, TYPE II, CLASS 1A, CLEAR
EN	ELECTROLESS NICKEL PER MIL-C-26074, CLASS 4, GRADE B, BRIGHT
N	NICKEL PLATE PER QQ-N-290, CLASS 1, GRADE G, BRIGHT
B	BLACK ANODIZE PER MIL-A-8625, TYPE II, CLASS 2
B3	HARD BLACK ANODIZE PER MIL-A-8625, TYPE III, CLASS 2 HARD
B3D	BLACK ANODIZE WITH DRY FILM LUBE PER MIL-L-46010

Code Letter	Method
[Blank]	RIVET MOUNT ($\phi 1.70 + .10 / -.03 (.067 + .004 / .001)$ THRU $\phi 3.96 (.156) \sqrt{5.08 (.200)} \vee 3.56 (.140) \times 100^\circ$)
A	NO MOUNTING HOLES
S	2-56 UNC-2B TAPPED HOLE
T	0-80 UNF-2B TAPPED HOLE
M2	M2 X .40 TAPPED HOLE
M	M2.5 X .45 TAPPED HOLE
NOTE:	RIVET (BLANK) PARTS ARE SHIPPED UNASSEMBLED

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Series 41-5 Wedge-Lok

Meets **VITA** 46, 48.2, 48.4
In alignment with the
SOSA® Technical Standard



RECOMMENDED GAP WIDTH

PCB + 5.33 (.210)

RECOMMENDED TORQUE

45 N-cm (4 in-lbs)

WEIGHT

.93 g/cm (.083 oz/in)

MATERIALS AND FINISH

Wedges

- **Material:** Aluminum Alloy 6061-T6 per QQ-A-200/8
- **Finish:** See finish table on opposite page

Screw

.09 in. or 2.5 mm hex. socket head cap screw, depending on mounting configuration

- **Material:** 300 series stainless steel per QQ-S-763 ASTM A-582
- **Finish:** Passivated per AMS2700

Alignment Springs

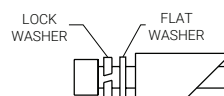
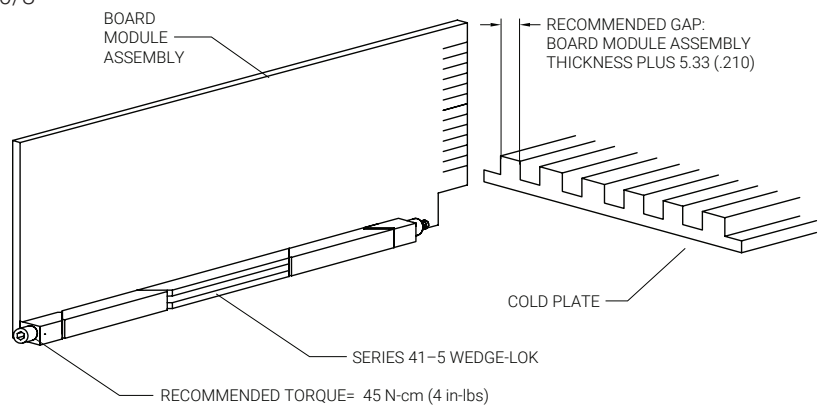
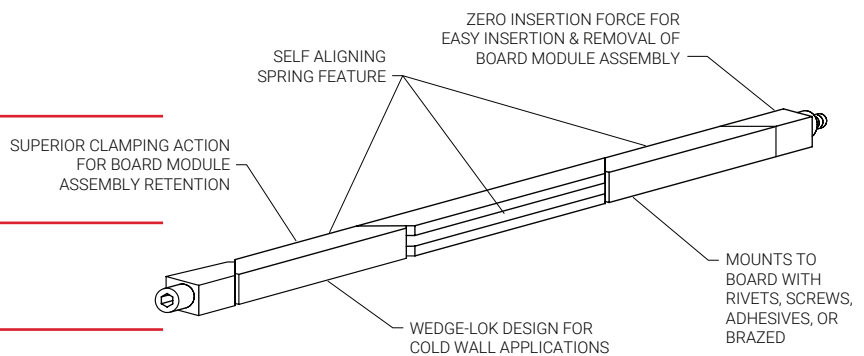
- **Material:** Beryllium Copper QQ-C-533
- **Finish:** Nickel QQ-N-290 Class I, Grade G, Bright

Optional Lock And Flat Washer

- **Material:** 300 series stainless steel per QQ-S-763 and ASTM A-582
- **Finish:** Passivated per AMS2700

Optional Locknut

- **Material:** Type A286 stainless steel per ASTM AMS 5525
- **Finish:** Silver plate per AMS 2410



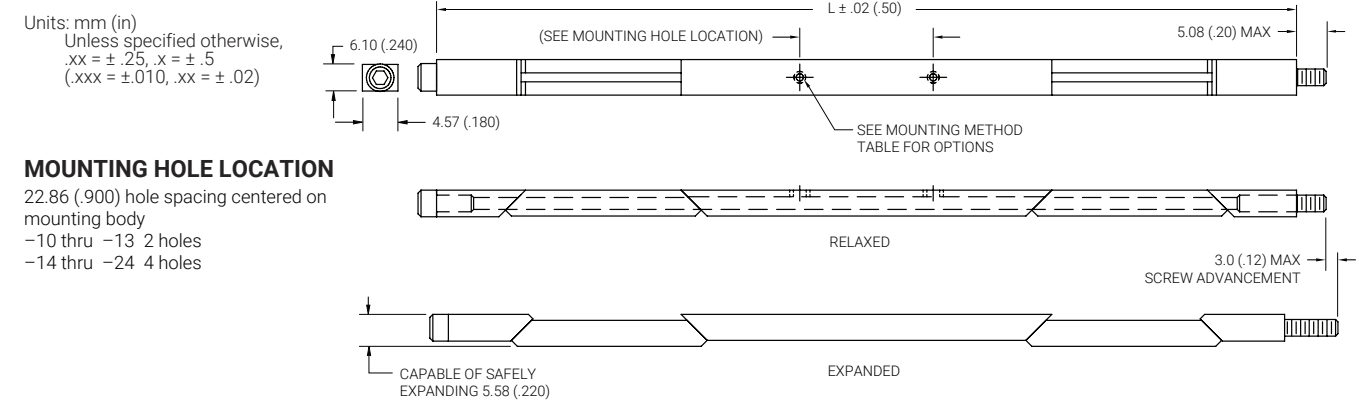
LF OPTION

Provides additional resistance to shock and vibration (adds 2.5 (.10) to screw length)



LN OPTION

Captivates rear wedge when untorqued (adds 2.5 (.10) to screw length)



Part Number Code	41-5 VI - 10 - B - LF - LN - T - L
Type	
Standard version with Visual Indicator	VI
Standard version	[Blank]
Length	
Length in 12.7 (.50) increments	10 [127.0 (5.00)] to 24 [304.8 (12.00)]
Finish	
Black Anodized	B
or select code letter from Finish Table	
Lock/Flat Washers and Locknut	
Lock Washer and Flat Washer	LF
None	[Blank]
Lock Nut	LN
None	[Blank]
Mounting	
Standard 2-56 UNC-2B Tapped Holes	[Blank]
or choose from Mounting Method Table	
Lock Patch	
Lock Patch	L
None	[Blank]

Part Number Code example: 41-5-8-LF
Series 41-5 WEDGE-LOK 5-piece, 101.6-mm (4.00-in.) long, chem film finish, with Lock Washer and Flat Washer option, and standard rivet hole mounting.

Dash #	Surface Finish
[Blank]	CHEMICAL FILM PER MIL-DTL-5541, TYPE I, CLASS 1A, GOLD, NON ROHS COMPLIANT
CC	CHEMICAL FILM PER MIL-DTL-5541, TYPE II, CLASS 1A, CLEAR
EN	ELECTROLESS NICKEL PER MIL-C-26074, CLASS 4, GRADE B, BRIGHT
N	NICKEL PLATE PER QQ-N-290, CLASS 1, GRADE G, BRIGHT
B	BLACK ANODIZE PER MIL-A-8625, TYPE II, CLASS 2
B3	HARD BLACK ANODIZE PER MIL-A-8625, TYPE III, CLASS 2 HARD
B3D	BLACK ANODIZE WITH DRY FILM LUBE PER MIL-L-46010

Code Letter	Method
[Blank]	2-56 UNC-2B TAPPED HOLE
R	RIVET MOUNT (ø 1.70 + .10/- .03 (.067 + .004/-.001) THRU ø3.96 (.156) √ 5.08 (.200) √ 3.56 (.140) x 100°) RIVET "R" PARTS ARE SHIPPED UNASSEMBLED AND EXCLUDE ALIGNMENT PINS
A	NO MOUNTING HOLES
T	0-80 UNF-2B TAPPED HOLE
M2	M2 X .40 TAPPED HOLE
M	M2.5 X .45 TAPPED HOLE

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Series 42 Card-Lok

Meets **VITA** 46, 48.2, 48.4
In alignment with the
SOSA® Technical Standard



RECOMMENDED GAP WIDTH

PCB + 6.35 (.250)

RECOMMENDED TORQUE

80 N cm (7 in-lbs)

WEIGHT

.89 g/cm (.080 oz/in)

MATERIALS AND FINISH

Wedges

- **Material:** Aluminum Alloy 6061-T6 per QQ-A-200/8
- **Finish:** See finish table on opposite page

Screw

.09-in. or 2.5 mm hex. socket head cap screw, depending on mounting configuration

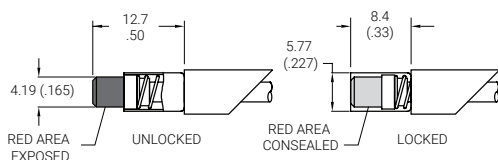
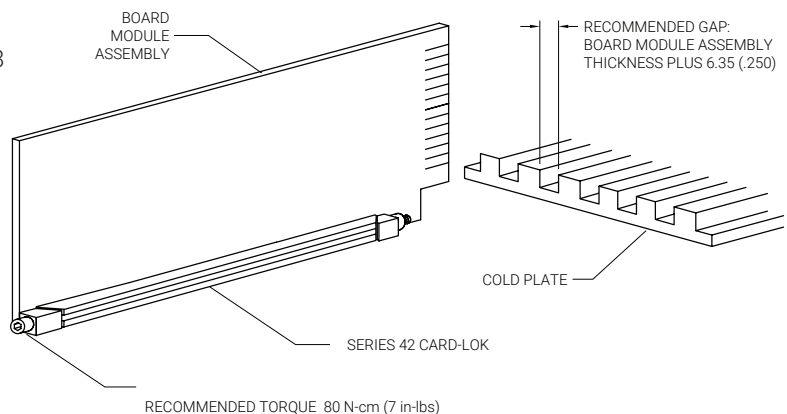
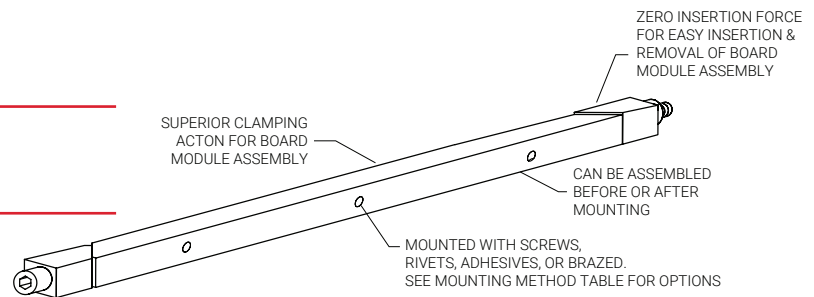
- **Material:** 300 series stainless steel per QQ-S-763 ASTM A-582
- **Finish:** Passivated per AMS2700

Optional Lock and Flat Washer

- **Material:** 300 series stainless steel per QQ-S-763 and ASTM A-582
- **Finish:** Passivated per AMS2700

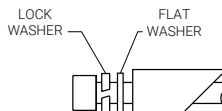
Optional Locknut

- **Material:** Type A286 stainless steel per ASTM AMS 5525
- **Finish:** Silver plate per AMS 2410



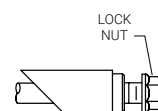
VI OPTION

Indicates assembly is unlocked (adds 5.1 (.20) to screw length)



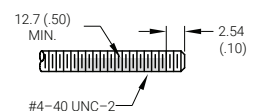
LF OPTION

Provides additional resistance to shock and vibration (adds 2.5 (.10) in screw length)



LN OPTION

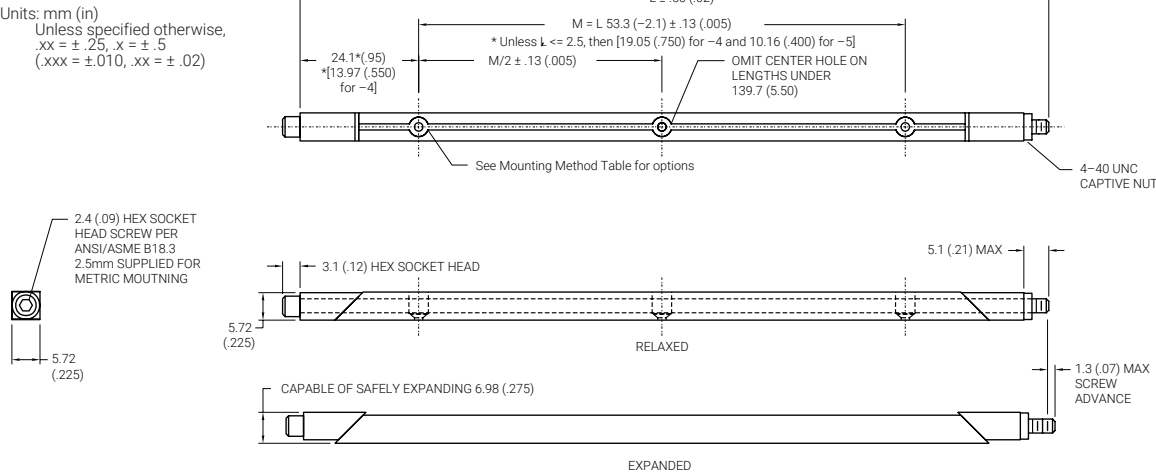
Captivates rear wedge when untorqued (adds 2.5 (.10) to screw length)



L OPTION

Provides additional resistance to shock and vibration

SERIES 42 CARD-LOK



Part Number Code

Series 42 CARD-LOK Three-piece **42 VI-10-B-LF-LN-S-L**

Optional Visual Indicator
Visual Indicator _____ **VI**
None _____ **[Blank]**

Length
Length in 12.7 (.50) increments ____ 4 [50.8 (2.00)]
_____ to 24 [304.8 (12.00)]

Finish
Black Anodized _____ **B**
or select code letter from Finish Table

Lock/Flat Washers and Locknut
Lock Washer and Flat Washer _____ **LF**
None _____ **[Blank]**

Lock Nut _____ **LN**
None _____ **[Blank]**

Mounting
2-56 UNC-2B Tapped Holes _____ **S**
Or select code letter from Mounting Method Table

Lock Patch
Lock Patch _____ **L**
None _____ **[Blank]**

Part Number Code example: 42VI-12-LF

Series 42 CARD-LOK Three-piece, 152.4 (6.00) long, with Visual Indicator option, Chem Film finish, standard rivet hole mounting, and Lock and Flat Washer option.

Finish Table

Dash #	Surface Finish
[Blank]	CHEMICAL FILM PER MIL-DTL-5541, TYPE I, CLASS 1A, GOLD, NON ROHS COMPLIANT
CC	CHEMICAL FILM PER MIL-DTL-5541, TYPE II, CLASS 1A, CLEAR
EN	ELECTROLESS NICKEL PER MIL-C-26074, CLASS 4, GRADE B, BRIGHT
N	NICKEL PLATE PER QQ-N-290, CLASS 1, GRADE G, BRIGHT
B	BLACK ANODIZE PER MIL-A-8625, TYPE II, CLASS 2
B3	HARD BLACK ANODIZE PER MIL-A-8625, TYPE III, CLASS 2 HARD
B3D	BLACK ANODIZE WITH DRY FILM LUBE PER MIL-L-46010

Mounting Method Table

Code Letter	Method
[Blank]	RIVET MOUNT (ø 1.70 + .10 / -.03 (.067 + .004 / .001) THRU n ø3.96 (.156) √ 5.08 (.200) √ 3.56 (.140) × 100°)
A	NO MOUNTING HOLES
S	2-56 UNC-2B TAPPED HOLE
T	0-80 UNF-2B TAPPED HOLE
M2	M2 × .40 TAPPED HOLE
M	M2.5 × .45 TAPPED HOLE

NOTE: RIVET (BLANK) PARTS ARE SHIPPED UNASSEMBLED

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Our powerful portfolio of brands:

CADDY ERICO HOFFMAN ILSCO SCHROFF TRACHTE

Series 42-5 Wedge-Lok



Meets **VITA** 46, 48.2, 48.4
In alignment with the
SOSA® Technical Standard

RECOMMENDED GAP WIDTH

PCB + 6.35 (.250)

RECOMMENDED TORQUE

80 N-cm (7 in-lbs)

WEIGHT

.98 g/cm (.088 oz/in)

MATERIALS AND FINISH

Wedges

- **Material:** Aluminum Alloy 6061-T6 per QQ-A-200/8
- **Finish:** See finish table on opposite page

Screw

.09-in. or 2.5-mm hex. socket head cap screw, depending on mounting configuration

- **Material:** 300 series stainless steel per QQ-S-763 ASTM A-582
- **Finish:** Passivated per AMS2700

Alignment Springs

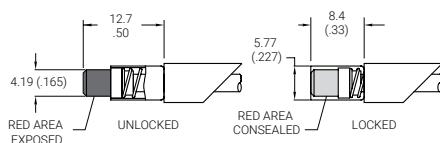
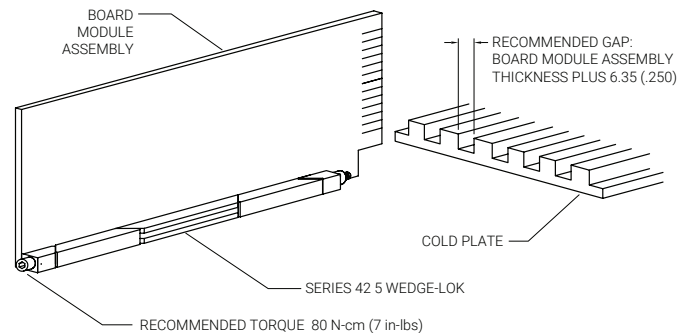
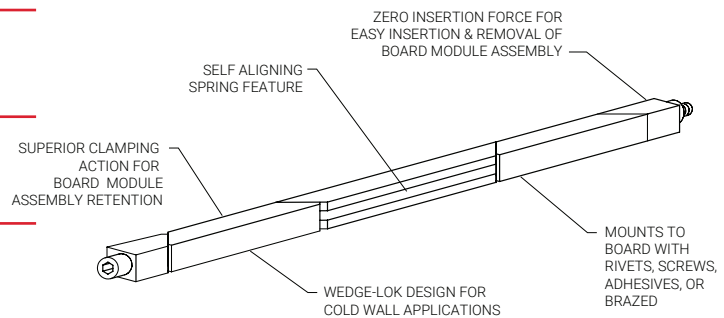
- **Material:** 301 stainless steel half hard per AMS 5518
- **Finish:** Passivated per AMS2700

Optional Lock and Flat Washer

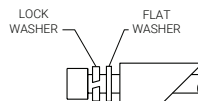
- **Material:** 300 series stainless steel per QQ-S-763 and ASTM A-582
- **Finish:** Passivated per AMS2700

Optional Locknut

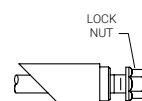
- **Material:** Type A286 stainless steel per ASTM AMS 5525
- **Finish:** Silver plate per AMS 2410



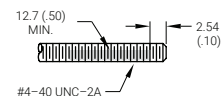
VI OPTION
Indicates assembly is unlocked (adds 5.1 (.20) to screw length)



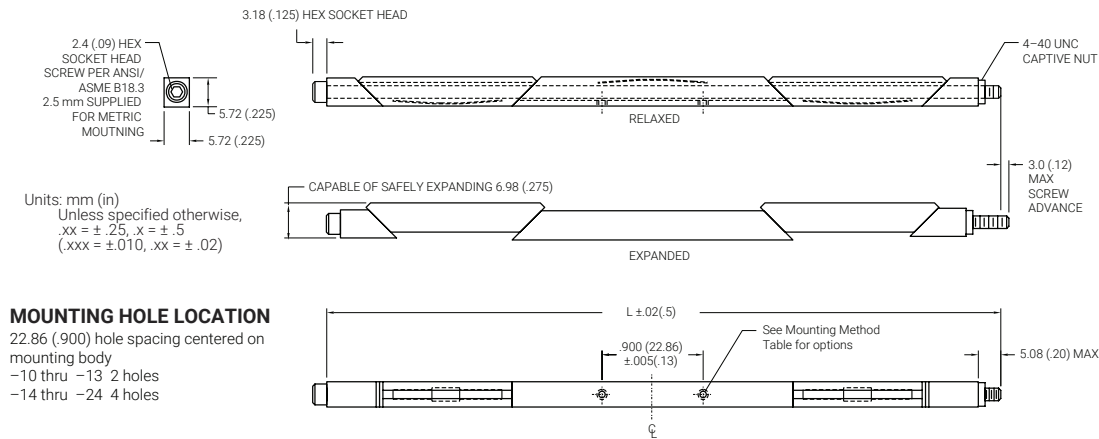
LF OPTION
Provides additional resistance to shock and vibration (adds 2.5 (.10) in screw length)



LN OPTION
Captivates rear wedge when untorqued (adds 2.5 (.10) to screw length)



L OPTION
Provides additional resistance to shock and vibration



Part Number Code	44-5 VI - 10 - B - LF - LN - T - L
Type	
Torque Limiting Version* _____	TLC
Standard version with Visual Indicator _____	VI
Standard version _____	[Blank]
Length	
Length in 12.7 (.50) increments _____	10 [127.0 (5.00)]
_____	to 24 [304.8 (12.00)]
Finish	
Black Anodized _____	B
or select code letter from Finish Table	
Lock/Flat Washers and Locknut	
Lock Washer and Flat Washer _____	LF
None _____	[Blank]
Lock Nut _____	LN
None _____	[Blank]
Mounting	
Standard 2-56 UNC-2B Tapped Holes _____	[Blank]
Or select code letter from Mounting Method Table	
Lock Patch	
Lock Patch _____	L
None _____	[Blank]

Finish Table

Dash #	Surface Finish
[Blank]	CHEMICAL FILM PER MIL-DTL-5541, TYPE I, CLASS 1A, GOLD, NON ROHS COMPLIANT
CC	CHEMICAL FILM PER MIL-DTL-5541, TYPE II, CLASS 1A, CLEAR
EN	ELECTROLESS NICKEL PER MIL-C-26074, CLASS 4, GRADE B, BRIGHT
N	NICKEL PLATE PER QQ-N-290, CLASS 1, GRADE G, BRIGHT
B	BLACK ANODIZE PER MIL-A-8625, TYPE II, CLASS 2
B3	HARD BLACK ANODIZE PER MIL-A-8625, TYPE III, CLASS 2 HARD
B3D	BLACK ANODIZE WITH DRY FILM LUBE PER MIL-L-46010

Mounting Method Table

Code Letter	Method
[Blank]	2-56 UNC-2B TAPPED HOLE
R	RIVET MOUNT (ø 1.70 + .10/- .03 (.067 + .004/.001) THRU Ø3.96 (.156) √ 5.08 (.200) √ 3.56 (.140) x 100°) RIVET "R" PARTS ARE SHIPPED UNASSEMBLED AND EXCLUDE ALIGNMENT PINS
A	NO MOUNTING HOLES
T	0-80 UNF-2B TAPPED HOLE
M2	M2 X .40 TAPPED HOLE
M	M2.5 X .45 TAPPED HOLE

NOTE: FOR TORQUE LIMITING (TLC) VERSION: VISUAL INDICATOR (VI) LOCK/FLAT WASHER (LF) , LOCK PATCH (L) OPTIONS NOT AVAILABLE ONE ALIGNMENT SPRING FOR -10 TO -15 LENGTHS MUST CLICK 3+ TIMES FOR PROPER INSTALLATION

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Series 44-5 Card-Lok

Meets **VITA 48.2**
In alignment with the
SOSA® Technical Standard



RECOMMENDED GAP WIDTH

PCB + 10.80 (.425)

RECOMMENDED TORQUE

180 N-cm (16 in-lbs)

WEIGHT

2.79 g/cm (.250 oz/in)

MATERIALS AND FINISH

Wedges

- Material:** Aluminum Alloy 6061-T6 per QQ-A-200/8
- Finish:** See finish table on opposite page

Screw

.14-in. or 3.6-mm hex. socket head cap screw, depending on mounting configuration

- Material:** 300 series stainless steel per QQ-S-763 ASTM A-582
- Finish:** Passivated per AMS2700

Alignment springs

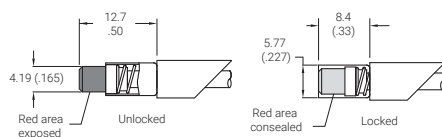
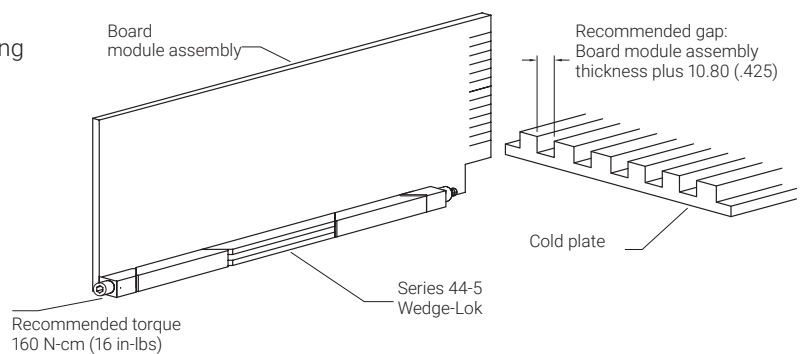
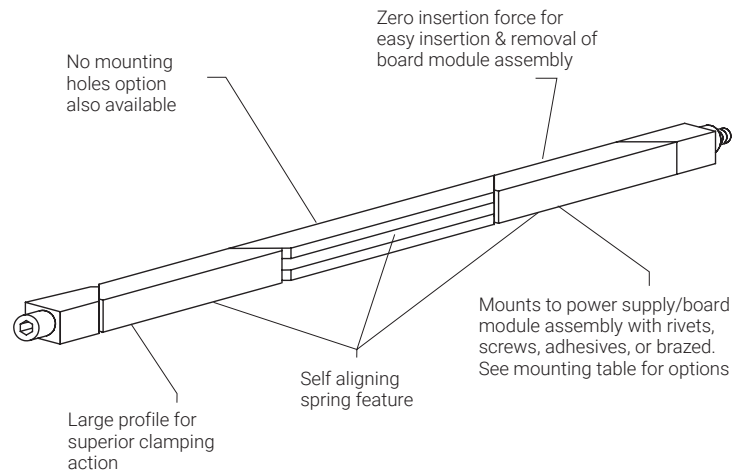
- Material:** Beryllium Copper QQ-C-533
- Finish:** Nickel QQ-N-290, Class I, Grade G, Bright

Optional lock and flat washer

- Material:** 300 series stainless steel per QQ-S-763 and ASTM A-582
- Finish:** Passivated per AMS2700

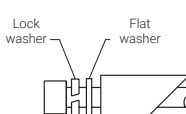
Optional locknut

- Material:** Type A286 stainless steel per ASTM AMS 5525
- Finish:** Silver plate per AMS 2410



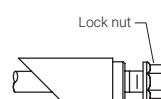
VI Option

Indicates assembly is unlocked (adds 5.1 (.20) to screw length)



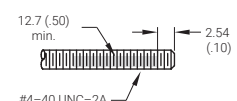
LF Option

Provides additional resistance to shock and vibration (adds 2.5 (.10) in screw length)



LN Option

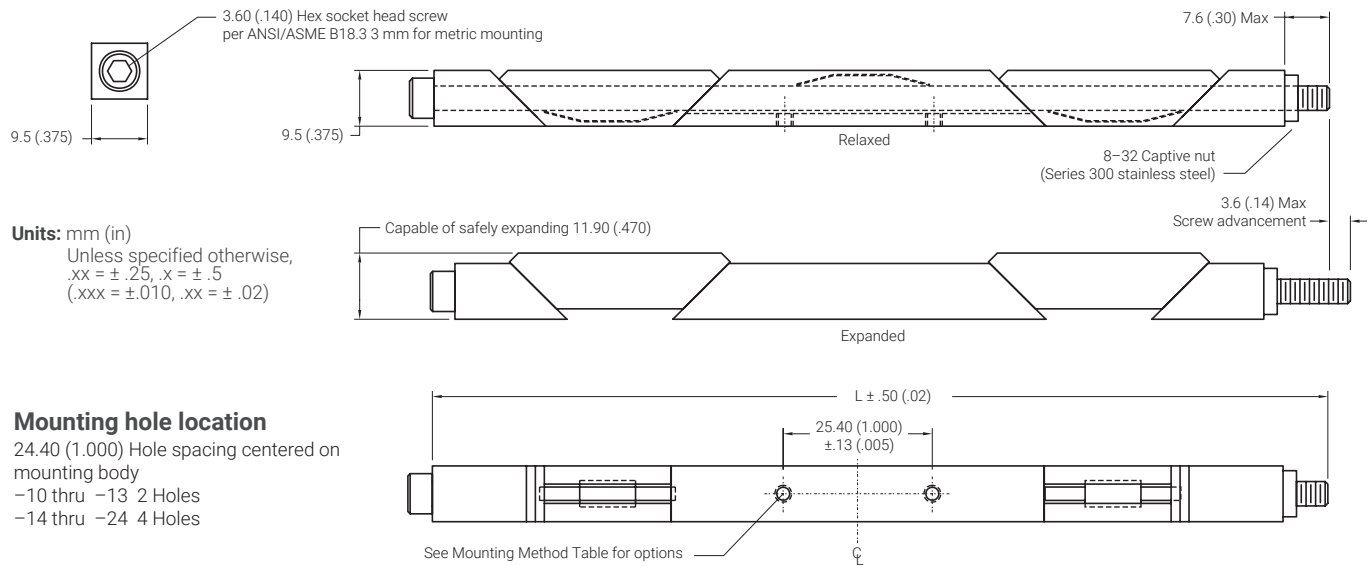
Captivates rear wedge when untorqued (adds 2.5 (.10) to screw length)



L Option

Provides additional resistance to shock and vibration

DIMENSIONS



PRODUCT CONFIGURATION

Part Number Code	44-5	VI	-	10	-	B	-	LF	-	LN	-	T	-	L
Type														
Torque Limiting Version*														
Standard version with Visual Indicator		VI												
Standard version		[Blank]												
Length														
Length in 12.7 (.50) increments				10										
				[127.0 (5.00)]										
				to 24										
				[304.8 (12.00)]										
Finish														
Black Anodized														B
or select code letter from Finish Table														
Lock/Flat Washers and Locknut														
Lock Washer and Flat Washer														LF
None														[Blank]
Lock Nut														LN
None														[Blank]
Mounting														
Standard 2-56 UNC-2B Tapped Holes														[Blank]
Or select code letter from Mounting Method Table														
Lock Patch														
Lock Patch														L
None														[Blank]

Note:

For Torque Limiting (TLC) version:
Visual Indicator (VI) Lock/Flat Washer (LF), Lock Patch (L)
options not available one alignment spring for -10 to -15
lengths must click 3+ times for proper installation.

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Finish Table

Code Letter	Surface Finish
[Blank]	Chemical Film per MIL-DTL-5541, Type I, Class 1A, Gold, Non Rohs Compliant
CC	Chemical Film per MIL-DTL-5541, Type II, Class 1A, Clear
EN	Electroless Nickel per MIL-C-26074, Class 4, Grade B, Bright
N	Nickel Plate per QQ-N-290, Class 1, Grade G, Bright
B	Black Anodize per MIL-A-8625, Type II, Class 2
B3	Hard Black Anodize per MIL-A-8625, Type III, Class 2 Hard
B3D	Black Anodize with Dry Film Lube per MIL-L-46010

Mounting Method Table

Code Letter	Method
[Blank]	4-40 UNC-2B Tapped Holes
A	No Mounting Holes
M	M2.5 x .45 Tapped Hole
M2	M2 x .40 Tapped Hole
M3	M3 x .50 Tapped Hole
R	Rivet Mount (ø 1.70 + .10/- .03 (.067 + .004/.001) thru ø 3.96 (.156) V 5.08 (.200) ø 3.56 (.140) x 100°) Rivet "R" parts are shipped unassembled and exclude alignment pins
S	2-56 UNC-2B Tapped Hole
T	0-80 UNF-2B Tapped Hole



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CADDY ERICO HOFFMAN ILSCO SCHROFF TRACHTE

Series 48-5 Wedge-Lok

Meets **VITA** 48.2, 48.4, 48.5
In alignment with the
SOSA® Technical Standard



RECOMMENDED GAP WIDTH

PCB + 7.11 (.280)

RECOMMENDED TORQUE

45 N-cm (4 in-lbs)

WEIGHT

1.42 g/cm (.120 oz/in)

MATERIALS AND FINISH

Channel, Wedges and End Pieces

- Material:** Aluminum Alloy 6061-T6 per QQ-A-200/8
- Finish:** See finish table on opposite page

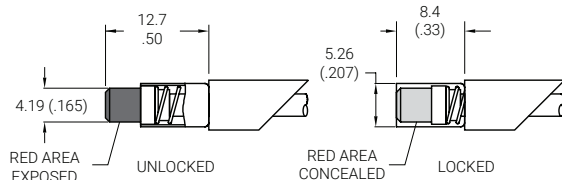
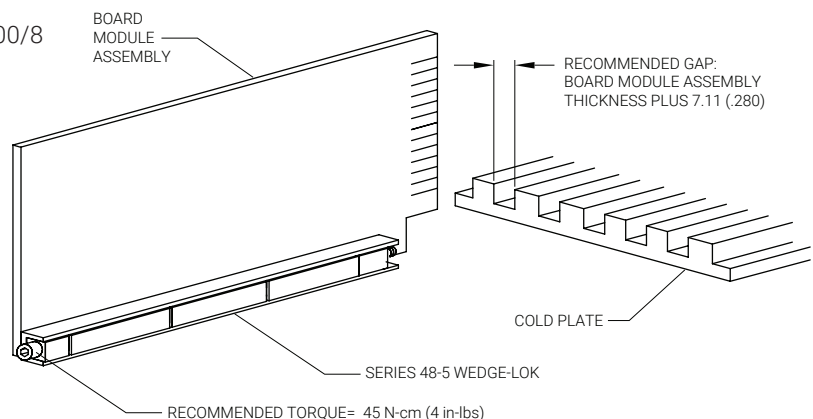
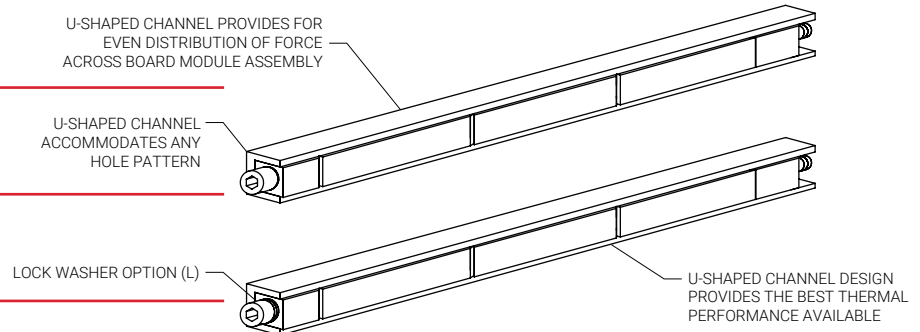
Screw and Washers

.09-in. or 2.5-mm hex. socket head cap screw, depending on mounting configuration

- Material:** 300 series stainless steel per QQ-S-763 ASTM A-582
- Finish:** Passivated per AMS2700

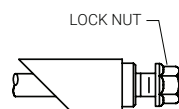
Optional Lock and Flat Washer

- Material:** 300 series stainless steel per QQ-S-763 and ASTM A-582
- Finish:** Passivated per AMS2700



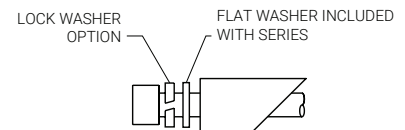
VI OPTION

Indicates assembly is unlocked
(adds 5.1 (.20) to screw length)



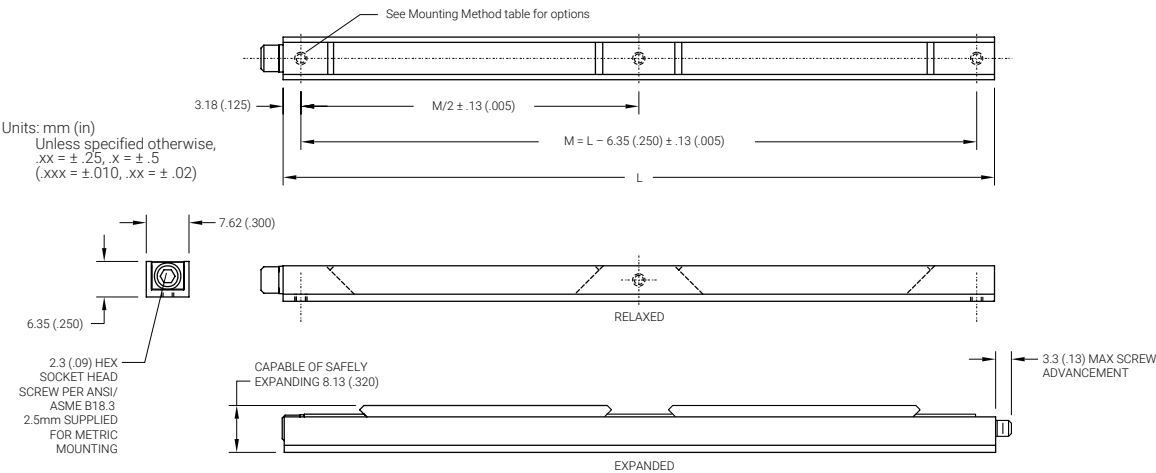
LN OPTION

Captivates rear wedge when untorqued
(adds 2.5 (.10) to screw length)



L OPTION

Provides additional resistance to
shock and vibration
(adds 2.5 (.10) in screw length)



Part Number Code	48-5 VI S-10-B-L-LN
Type	
Torque Limiting version _____	TLC
Standard version with Visual Indicator _____	VI
Standard version _____	[Blank]
Mounting	
2-56 UNC-2B Tapped Holes _____	S
or choose from Mounting Method Table	
Length	
Length in 12.7 (.50) increments _____	6 [76.2 (3.00)]
	to 24 [304.8 (12.00)]
Finish	
Black Anodized _____	B
or select code letter from Finish Table	
Lock/Flat Washers	
Lock Washer and Flat Washer _____	L
None _____	[Blank]
Optional Lock Nut	
Lock Nut _____	LN
None _____	[Blank]

Finish Table

Code Letter	Surface Finish
[Blank]	HOUSING CHEMICAL FILM PER MIL-DTL-5541, CLASS 1A GOLD, NON ROHS COMPLIANT, WEDGES BLACK ANODIZE PER MIL-A-8625, TYPE II, CLASS 2
C	CHEMICAL FILM PER MIL-C-5541, CLASS 1A, GOLD, NON ROHS COMPLAINT
CC	CHEMICAL FILM PER MIL-C-5541, CLASS 1A, CLEAR
EN	ELECTROLESS NICKEL PER MIL-C-26074, CLASS 4, GRADE B, BRIGHT
N	NICKEL PLATE PER QQ-N-290, CLASS 1, GRADE G, BRIGHT
B	BLACK ANODIZE PER MIL-A-8625, TYPE II, CLASS 2
B3	HARD BLACK ANODIZE PER MIL-A-8625, TYPE III, CLASS 2
B3D	HARD BLACK ANODIZE WITH DRY FILM LUBE PER MIL-L-46010

Mounting Method Table

Code Letter	Method
A	NO MOUNTING HOLES
M	2-56 UNC-2B TAPPED HOLE
M2	0-80 UNF-2B TAPPED HOLE
S	M2 X .40 TAPPED HOLE
T	M2.5 X .45 TAPPED HOLE

*NOTE: FOR THE TORQUE LIMITING "TLC" VERSION: THE MINIMUM LENGTH IS 8 (101.6 (4.00)) LOCK/ FLAT WASHER "L" OPTION IS NOT AVAILABLE VISUAL INDICATOR "VI" OPTIONS IS NOT AVAILABLE MUST CLICK 3+ TIMES FOR PROPER INSTALLATION

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BIRTCHER™



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CADDY ERICO HOFFMAN ILSCO SCHROFF TRACHTE

Series 48SL Wedge-Lok



RECOMMENDED GAP WIDTH

PCB + 7.62 (.300)

RECOMMENDED TORQUE

80 N-cm (7 in-lbs)

WEIGHT

1.28 g/cm (.115 oz/in)

MATERIALS AND FINISH

CHANNEL, WEDGES AND END PIECES

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B-221
- **Finish:** See finish table on opposite page

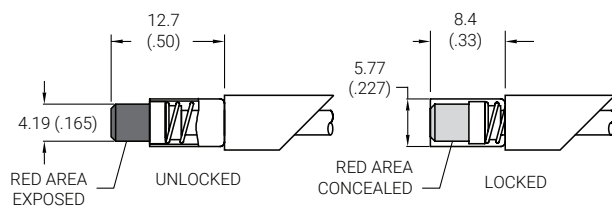
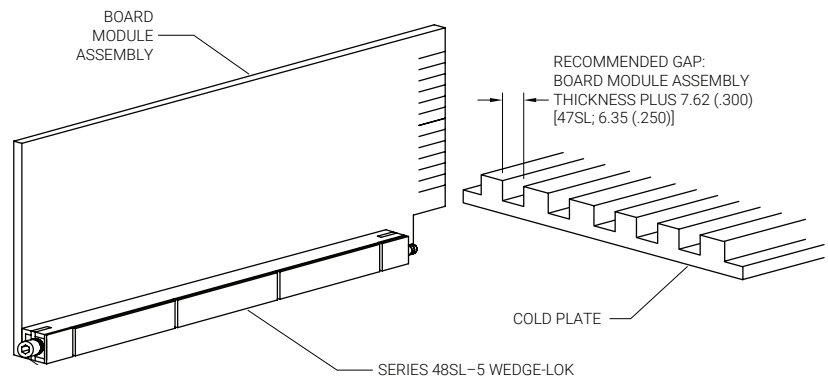
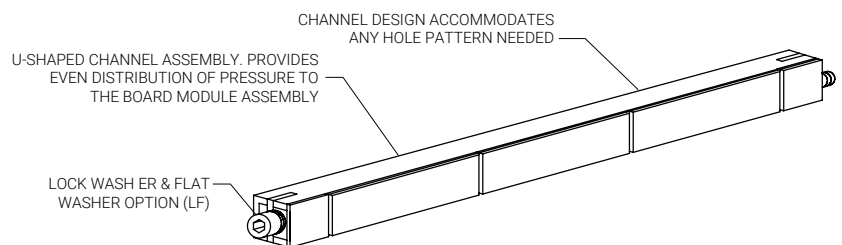
SCREW AND WASHERS

.09-in. or 2.5-mm hex. socket head cap screw, depending on mounting configuration

- **Material:** 300 series stainless steel per QQ-S-763 ASTM A-582
- **Finish:** Passivated per AMS2700

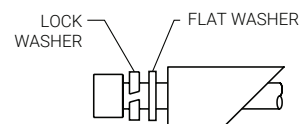
OPTIONAL LOCK AND FLAT WASHER

- **Material:** 300 series stainless steel per QQ-S-763 and ASTM A-582
- **Finish:** Passivated per AMS2700



VI OPTION

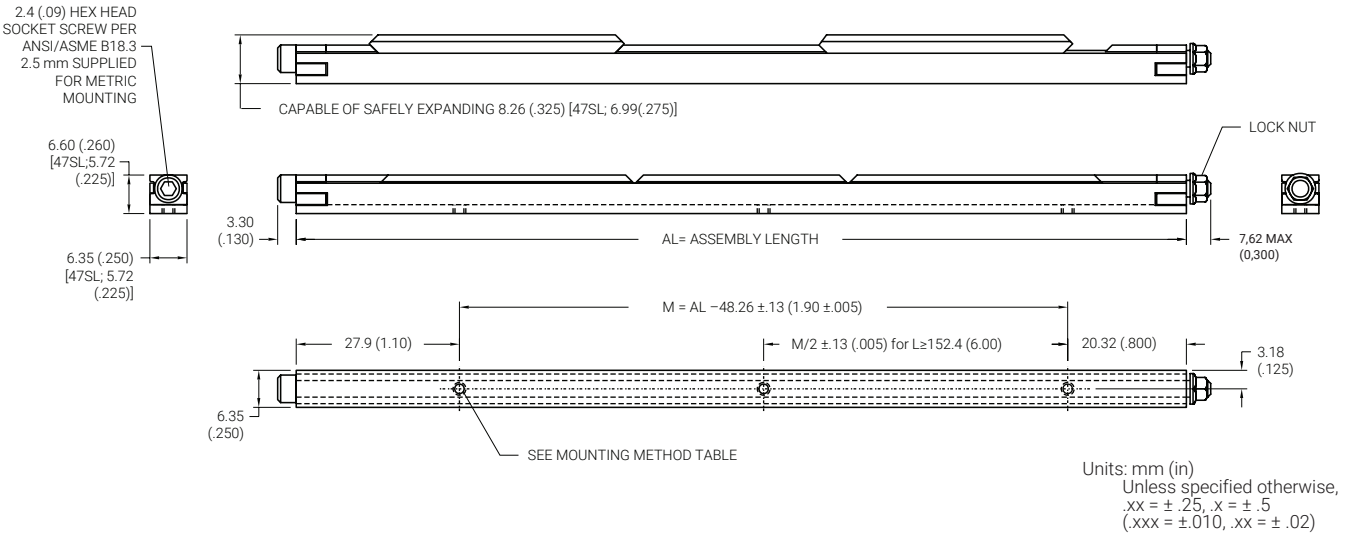
Indicates assembly is unlocked (adds 5.1 (.20) to screw length)



LF OPTION

Provides additional resistance to shock and vibration (adds 2.5 (.10) to screw length)

SERIES 48SL WEDGE-LOK



Part Number Code (See example below)

Series 48SL-5 WEDGE-LOK Five-piece **48SL-5 VI** **S-50-B-LF**

Optional Visual Indicator

Visual Indicator _____ **VI**

None _____ **[Blank]**

Mounting

2-56 UNC-2B tapped Holes _____ **S**

or choose from Mounting Method Table

Length

Length in 2.54 (.10) increments _____ **50 [127.0 (5.00)]**

_____ **to 120 [304.8 (12.00)]**

Finish

Black Anodized _____ **B**

Or choose from Finish Table

Washers

Lock Washer and Flat Washer _____ **LF**

None _____

Part Number Code example: 48SL-5S-48-C-LF

Series 48SL-5 WEDGE-LOK Five-piece High Thermal Transfer, 2-56 screw mount, 121.9-mm (4.80-in.) long, chem film, with lock washer and flat washer.

MOUNTING METHOD TABLE	
DASH #	METHOD
A	No Mounting Holes
s	2-56 UNC-2B
T	0-80 UNF-2B
M	M2.5 X .45 tapped hole
M2	M2 X .40 tapped hole

FINISH TABLE	
CODE LETTER	METHOD
C	Chemical Film per MIL-C-5541, Class Ia, Gold, non RoHS compliant
CC	Chemical Film per MIL-C-5541, Class 1A, Clear
EN	Electroless Nickel per MIL-C-26074, Class 4, Grade B, Bright
N	Nickel Plate per QQ-N-290, Class 1, Grade G, Bright (.0002")
B	Black Anodize per MIL-A-8625, Type II, Class 2, (.00005" - .0003")
B3	Hard Black Anodize per MIL-A-8625, Type III, Class 2 (.002")
B3D	Hard Black Anodize with Dry Film Lube per MIL-L46010

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Series 223 Card-Lok

Series 223 Torque Limiting Card-Lok

Meets **VITA** 46, 48.2, 48.4, 48.5
In alignment with the
SOSA® Technical Standard



Patent no. 7,883,289

RECOMMENDED GAP WIDTH

PCB + 7.62 (.300)

WEIGHT

1.12 g/cm (.10 oz/in)

MATERIALS AND FINISH

Torque Limiting Mechanism

- **Material:** Stainless Steel 17-4 PH
- **Finish:** Dry Film Lube per Mil-L-46010 Type 1

Wedges

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Screw

.09-in. or 2.5-mm hex. socket head cap screw, depending on mounting configuration

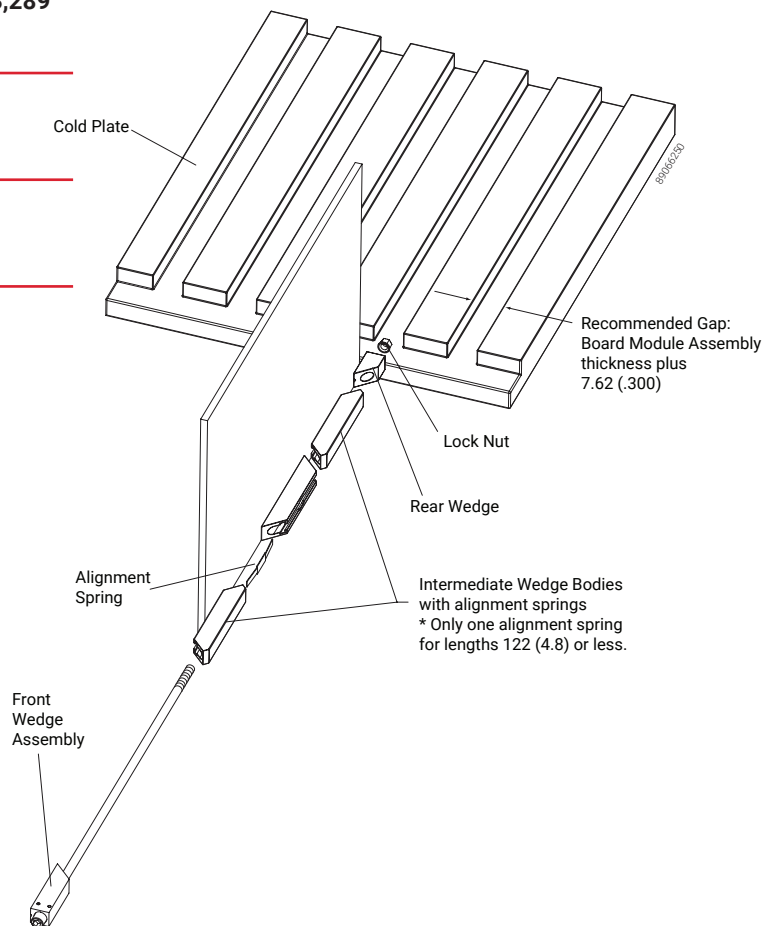
- **Material:** Stainless steel per ASTM A-582
- **Finish:** Passivated per AMS2700

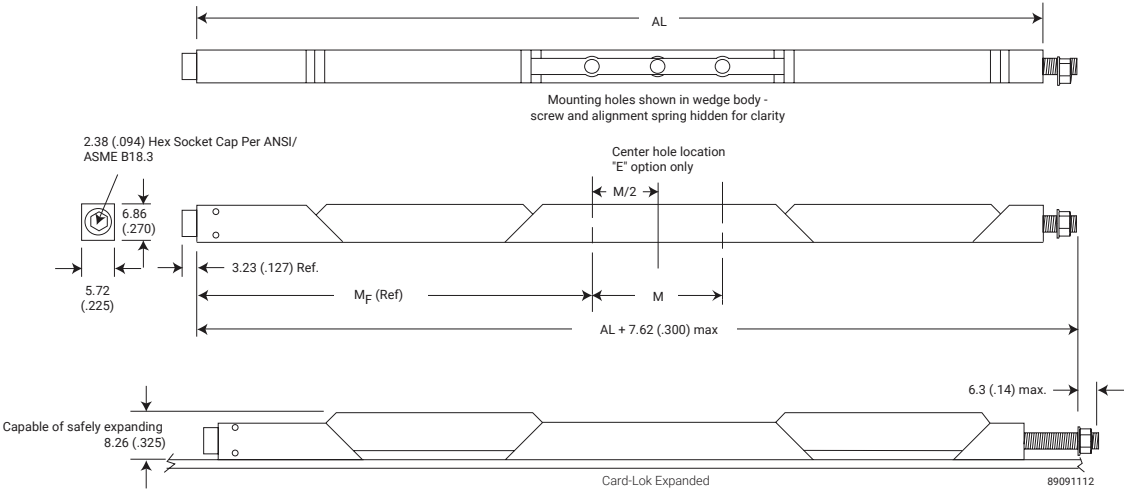
Lock Nut

- **Material:** Stainless steel per MS21043-04
- **Finish:** Silver plate per AMS 2410

Alignment Springs

- **Material:** 301 stainless steel half hard per AMS 5518
- **Finish:** Passivated per AMS2700





AL range ± 1.3 (.050)	M ± .13 (.005)	MF ± .76 (.030)
From 97 (3.8) - 185 (7.3)	22.86 (.90)	
From 198 (7.8) - 211 (8.3)	48.26 (1.90)	$\frac{AL+12.5 (.500)-M}{2}$
From 224 (8.8) - 325 (12.8)	73.66 (2.90)	

Units: mm (in)
Unless otherwise specified:
.xx ± .25, .x ± .5 (.xxx ± .010, .xx ± .02)
Note: Each piece has a tolerance of ± .010

Part Number Code

Series 223 TL Card-Lok Five Piece

Prefix options

Metric Screw Head 2.5 mm Hex Drive_____M

Standard Screw Head 3/32 Hex Drive_____ [blank]

Black Anodize_____A

or choose from Finish Table_____see table

Suffix options

Min length. = 97 (3.8), Max length = 325 (12.8),
in 13 (0.5) increments _____length.xx

Additional Center Mounting Hole_____E

None_____ [blank]

Mounting options

2-56 tapped mounting hole or choose from
Mounting Method Table_____T2

M A 223 - 4.80 E T2

Part Number Code example: A223- 4.80T2
Series 223 Card-Lok 121.9 (4.8) long assembly length, black anodized with two 2-56 threaded mounting holes

Finish Table

Code Letter	Finish
[blank]	Chemical Film Finish Gold per Mil-DTL-5541, Type 1 Class 1A
"R"	Chemical Film Finish Clear per Mil-DTL-5541, Class 3 Type II
"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	Finish
[blank]	No mounting holes
"R"	Chemical Film Finish Clear per Mil-DTL-5541,
"A"	Rivet Mounting Ø1.70 (.067) hole with 3.96 (.156) counterbore x 5.08 (.200) 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

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Series 224 Torque Limiting Card-Lok

Meets **VITA** 46, 48.2, 48.4, 48.5
In alignment with the
SOSA® Technical Standard



Patent no. 7,883,289

RECOMMENDED GAP WIDTH

PCB + 8.00 (.315)

WEIGHT

1.12 g/cm (.10 oz/in)

MATERIALS AND FINISH

Wedges

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Torque Limiting Mechanism

- **Material:** Stainless Steel 17-4 PH
- **Finish:** Dry Film Lube per Mil-L-46010 Type 1

Screw

.09-in. or 2.5-mm hex. socket head cap screw, depending on mounting configuration

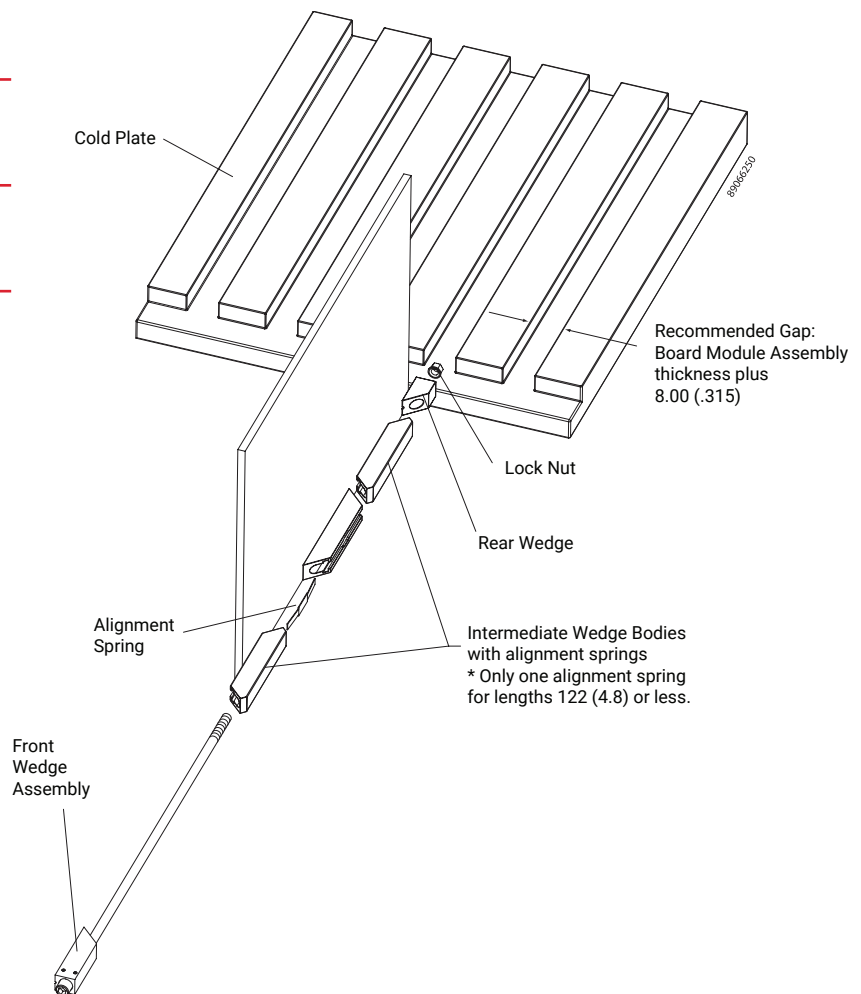
- **Material:** Stainless steel per ASTM A-582
- **Finish:** Passivated per AMS2700

Lock Nut

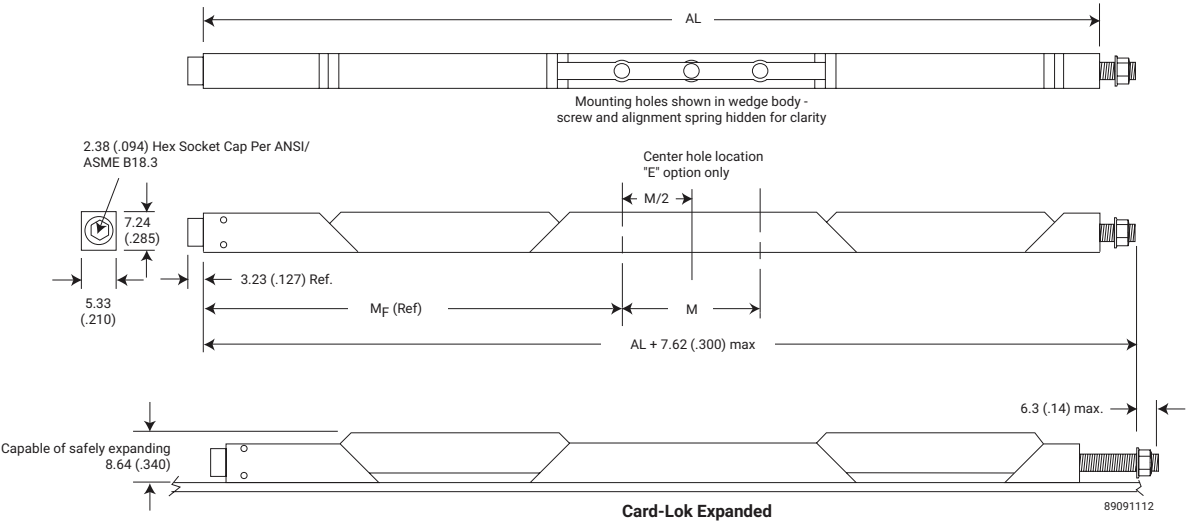
- **Material:** Stainless steel per MS21043-04
- **Finish:** Silver plate per AMS 2410

Alignment Springs

- **Material:** 301 stainless steel half hard per AMS 5518
- **Finish:** Passivated per AMS2700



SERIES 224 CARD-LOK



AL range ± 1.3 (.050)	M ± .13 (.005)	M _F ± .76 (.030)
From 97 (3.8) – 185 (7.3)	22.86 (.90)	
From 198 (7.8) – 211 (8.3)	48.26 (1.90)	$\frac{AL+12.5 (.500)-M}{2}$
From 224 (8.8) – 325 (12.8)	73.66 (2.90)	

Units: mm (in)
Unless otherwise specified:
.xx ± .25, .x ± .5 (.xxx ± .010, .xx ± .02)
Note: Each piece has a tolerance of ± .010

Part Number Code

Series 224 TL Card-Lok Five Piece

M A 224 - 4.80 E T2

Prefix options

Metric Screw Head 2.5 mm Hex Drive_____M

Standard Screw Head 3/32 Hex Drive_____ [blank]

Black Anodize_____A

or choose from Finish Table_____see table

Suffix options

Min length. = 97 (3.8), Max length = 325 (12.8),

in 13 (0.5) increments_____length.xx

Additional Center Mounting Hole_____E

None_____ [blank]

Mounting options

2-56 tapped mounting hole or choose from

Mounting Method Table_____T2

Part Number Code example: A224 - 4.80T2
Series 224 Card-Lok 121.9 (4.8) long assembly length, black anodized with two 2-56 threaded mounting holes

Finish Table

Code Letter	Finish
[blank]	Chemical Film Finish Gold per Mil-DTL-5541, Type 1 Class 1A
"R"	Chemical Film Finish Clear per Mil-DTL-5541, Class 3 Type II
"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	Finish
[blank]	No mounting holes
"H"	Rivet Mounting ø 1.70 (.067) hole with 3.96 (.156) counterbore × 5.08 (.200) deep and 100° × 3.56 (.140) countersink
"T0"	0–80 tapped hole
"T2"	2–56 tapped hole
"TM2"	M2 × 0.40 tapped hole
"TM2.5"	M2.5 × 0.45 tapped hole

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Series 225 Card-Lok

Meets **VITA** 46, 48.2, 48.4, 48.5
In alignment with the
SOSA® Technical Standard



RECOMMENDED GAP WIDTH

PCB + 7.62 (.300)

RECOMMENDED TORQUE

68 N-cm (6 in-lbs) With "L" option 90 N-cm (8 in-lbs)

WEIGHT

1.34 g/cm (.120 oz/in)

MATERIALS AND FINISH

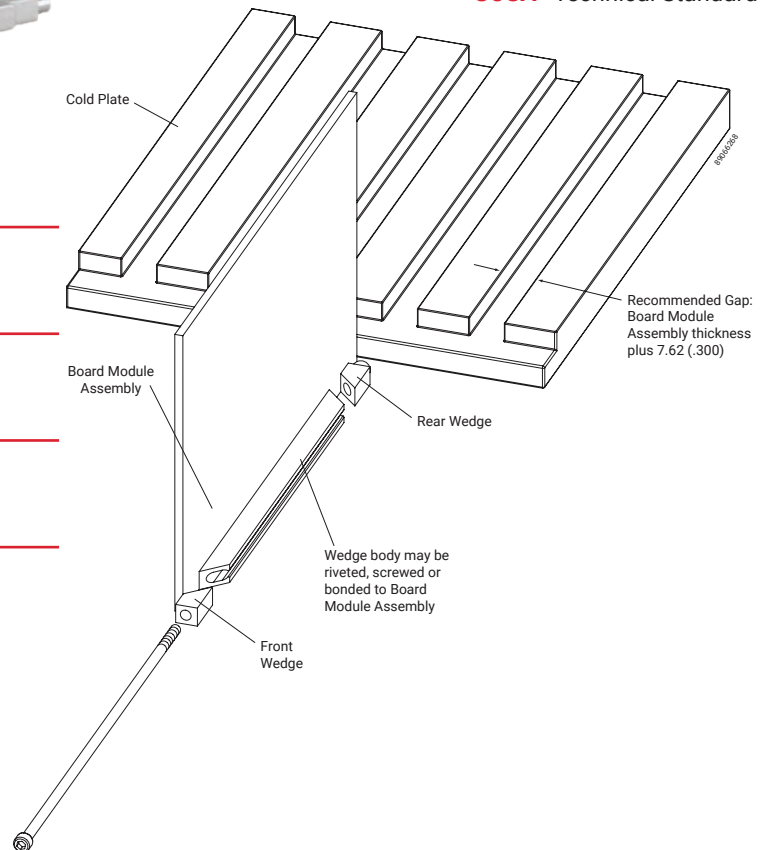
Wedges

- **Material:** Aluminum Alloy 6061-T6 per per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Screw

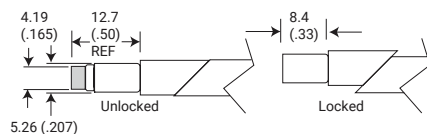
.09 in. or 2.5 mm hex. socket head cap screw, depending on mounting configuration

- **Material:** Stainless steel per ASTM-A582
- **Finish:** Passivated per AMS2700



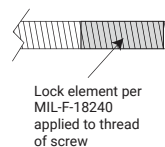
Detail "V"

Provides visual lock indication.



Detail "L"

Provides prevailing torque for resistance to loosening from shock and vibration. Adds 22 N-cm (2 in-lbs) of torque to assembly.

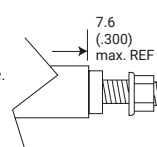


Detail "R"

Reduces the possibility of unintentional disassembly of the screw from rear wedge. This option adds 2.5 (.10) to the screw length unless combined with the "W" suffix option, then 5.1 (.20) total.

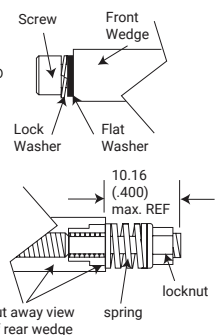
Detail "W"

Provides added resistance to loosening from shock and vibration. This option adds 2.5 (.10) to the screw length unless combined with the "R" suffix option, then adds 5.1 (.20) total.

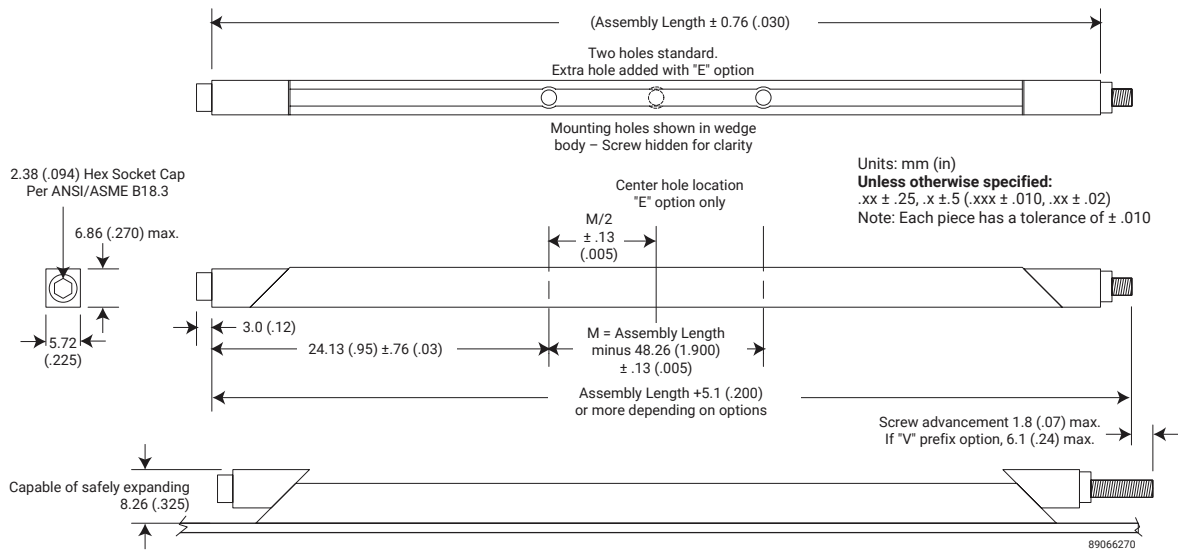


Detail "K"

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



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Part Number Code
Series 225 Card-Lok Five Piece

Metric Screw Head 2.5 mm Hex Drive_M
Standard Screw Head 3/32 [blank]
Lock and Flat Washer W
None [blank]
Visual Indicator V
No Visual Indicator [blank]
Black Anodize A
or choose from Finish Table. see table

Suffix options
Stainless Steel Captive (and Lock Nut if "R" option is also selected) CR
Standard Plated Steel "-"

Assembly length in inches. Standard lengths are 71.12 (2.80), 96.52 (3.80) and 121.9 (4.80).
Other lengths available upon request. length.xx

Additional Center Mounting Hole E
None [blank]
Mounting Options - holes for rivet mounting H
or choose from Mounting Option Table. see table
Lock Element L
None [blank]
Lock Nut R
Captive Screw K
None [blank]

M W V A 225 - 3.80 E H L R

Part Number Code Example:
VA225CR-4.80HR

Series 225 Card-Lok three piece 121.9 (4.80) long with Visual Indicator, Black Anodized Finish, standard rivet mounting hole and stainless steel captive nut and lock nut option.

Finish Table

Code Letter	Finish
[blank]	Chemical Film Finish Gold per Mil-DTL-5541, Type 1 Class 1A
"R"	Chemical Film Finish Clear per Mil-DTL-5541, Class 3 Type II
"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 $\varnothing$ 1.70 (.067) hole with 3.96 (.156) counterbore $\times$ 5.08 (.200) deep and $100^\circ \times 3.56$ (.140) countersink
"T0"	0-80 tapped hole
"T2"	2-56 tapped hole
"TM2"	M2 $\times$ 0.40 tapped hole
"TM2.5"	M2.5 $\times$ 0.45 tapped hole

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Series E225 Card-Lok



Meets **VITA** 46, 48.2, 48.4, 48.5
In alignment with the
SOSA® Technical Standard

RECOMMENDED GAP WIDTH

PCB + 7.62 mm (.300 in)

RECOMMENDED TORQUE

68 N-cm (6 in-lbs)

WEIGHT

1.34 g/cm (.120 oz/in)

MATERIALS AND FINISH

Wedges and Shaft

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Screw

- **Material:** Stainless Steel per ASTM-A582 or QQ-S-763
- **Finish:** Passivated per AMS2700

Retainer Ring

- **Material:** Stainless Steel per ASTM-A582
- **Finish:** Passivated per AMS2700

Threaded Insert

- **Material:** MS122116, MS21209-CO210 (locking), 50253-1064

APPLICATION DATA

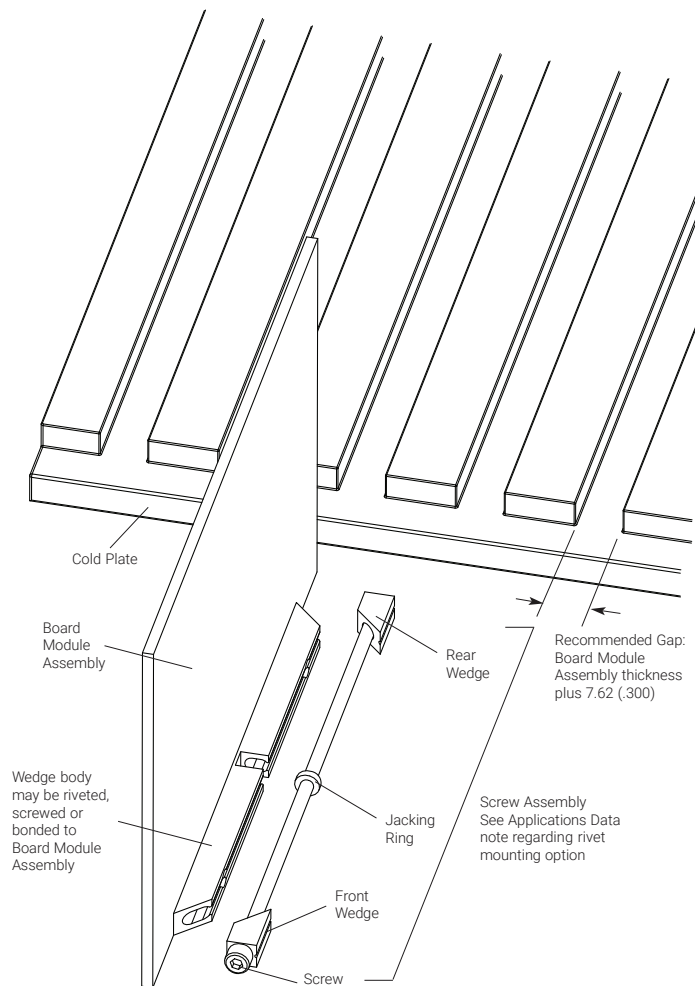
All mounting options except for "H" (rivet mounting), parts are completely assembled for shipping.

For "H" (rivet) Mounting Option, the screw assembly and wedge body are shipped unassembled.

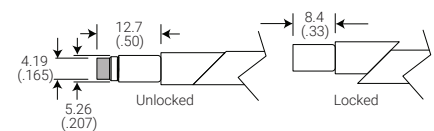
Assemble parts as follows:

1. Rivet Wedge Body to Printed Circuit Board
2. Insert Screw Assembly into Wedge Body
3. Collapse Wedge Body to captivate screw assembly

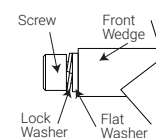
SOSA is a registered trademark of The Open Group



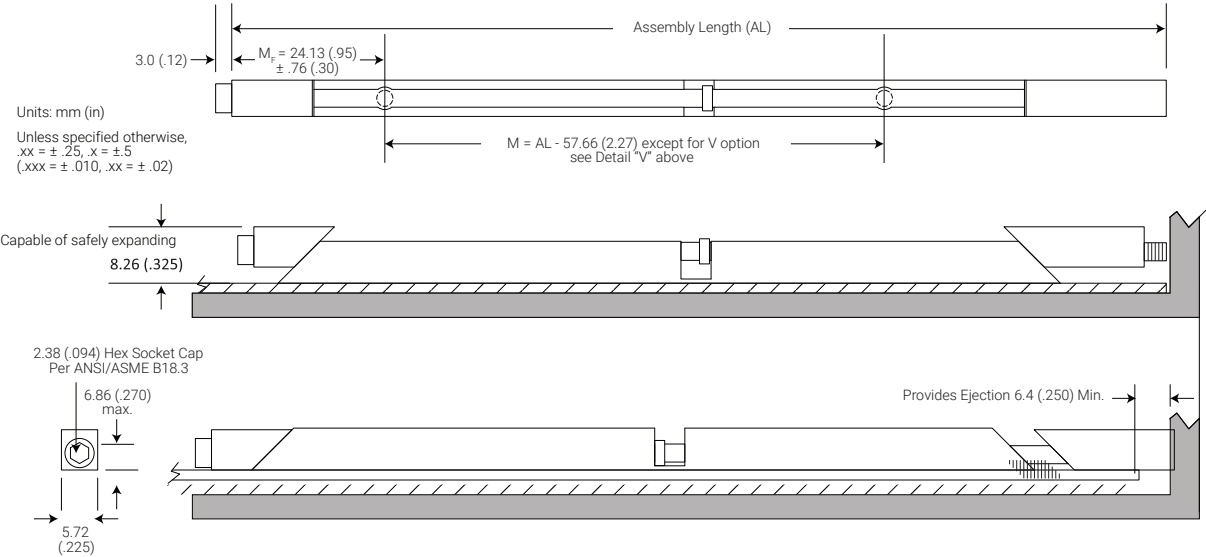
Detail "V"
Provides visual lock indicator.



Detail "W"
Provides added resistance to loosening from shock and vibration.



SERIES E225 CARD-LOK



Part Number Code
Series E225 Card-Lok Three Piece

Prefix options
Metric Screw Head 2.5 mm Hex Drive _____ M
Standard Screw Head 3/32 Hex Drive _____ [blank]
Lock and Flat Washer _____ W
None _____ [blank]
Visual Indicator _____ V
No Visual Indicator _____ [blank]
Black Anodize _____ A
or choose from Finish Table

Suffix options
Assembly length in inches. Standard lengths _____ length.xx
range from 71.12 (2.80) to 329.9 (12.99).
Other lengths available upon request
Mounting Options holes for rivet mounting _____ H
or choose from Mounting Method Table

M W V E A 225-3.80 H

Part Number Code Example:
WVE225-4.80T2

Series E225 Ejecting Card-Lok three piece 121.9 (4.80) long with Lock and Flat Washer, Visual Indicator, Gold Chemical Film Finish, mounting holes drilled and tapped for 2-56 screw.

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
"H"	HARD BLACK ANODIZE PER MIL-A-8625 TYPE III, CLASS 2
"EN"	ELECTROLESS NICKEL PER MIL-C-26074 CLASS 4, GRADE B, BRIGHT

Code letter	Method
[blank]	NO MOUNTING HOLES
"H"	RIVET MOUNTING $\varnothing 1.70 (.067)$ HOLE WITH 3.96 (.156) COUNTERBORE $\times$ 5.08 (.200) DEEP AND $100^\circ \times 3.56 (.140)$ COUNTERSINK.
"T0"	0-80 TAPPED HOLE
"T2"	2-56 TAPPED HOLE
"TM2"	M2 $\times$ 0.40 TAPPED HOLE
"TM2.5"	M2.5 $\times$ 0.45 TAPPED HOLE

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CONNECT AND PROTECT



RECOMMENDED GAP WIDTH

PCB + 7.62 mm (.300 in)

WEIGHT

1.65 g/cm (.15 oz/in)

MATERIALS AND FINISH

WEDGES

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** Black Anodize per MIL-A-8625, Type II, Class 2

SCREW

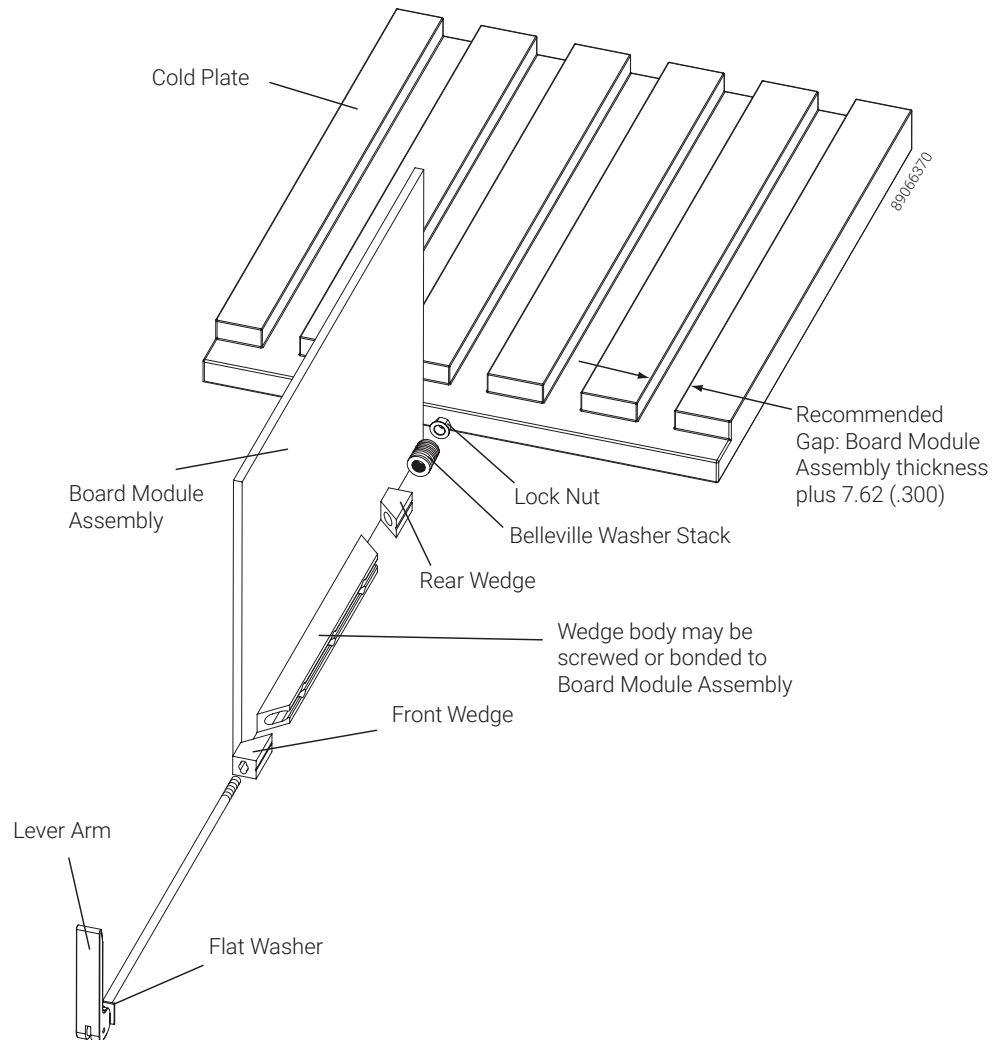
- **Material:** Stainless steel per QQ-S-763
- **Finish:** Passivated per AMS2700

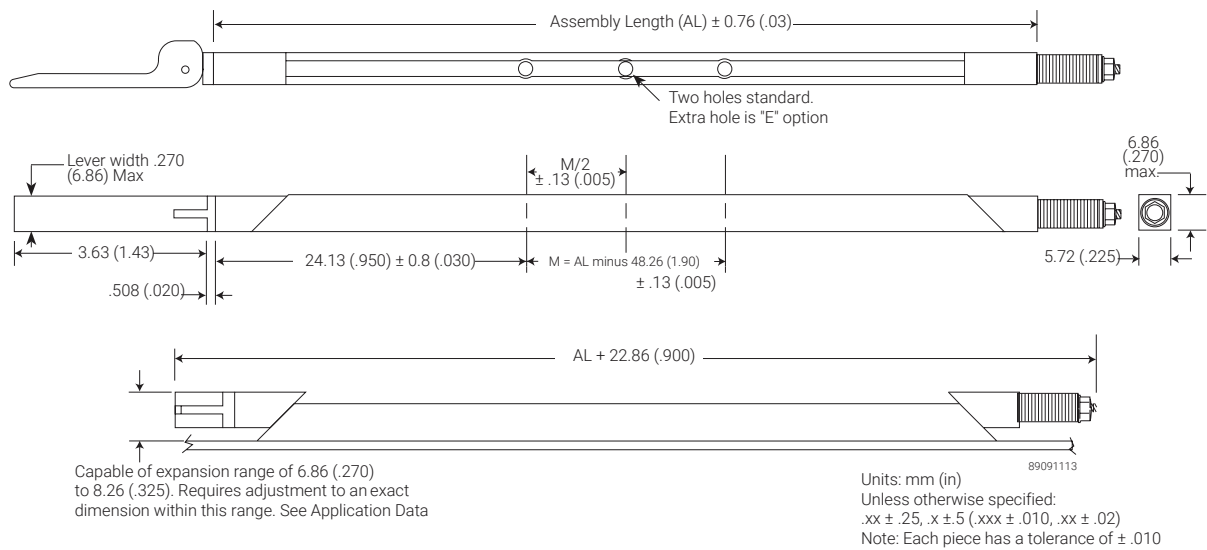
LEVER ARM

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** Hard Black Anodize per MILA-8625, Type III, Class 2

FLAT WASHER AND BELLEVILLE WASHERS

- **Material:** Stainless steel per QQ-S-763
- **Finish:** Passivated per AMS2700





APPLICATION DATA

CLAMPING FORCE ADJUSTMENT PROCEDURE

NOTE: Lever-Lok furnished assembled but not adjusted.

1. Fasten Lever-Lok to Board Module Assembly
 2. Insert Board Module Assembly into slot in cold plate.
 3. Actuate lever to locked/closed position.
 4. Tighten locknut on end of screw until wedges initially contact wall of cold plate slot, or slight insertion/ extraction drag id felt.
 5. Additionally tighten locknut two (2) full turns. DO NOT EXCEED TWO (2) TURNS.
- Lever-lok is now ready for use

NOTE: Factory adjustment of clamping force availabe on

CLAMPING FORCE

Direct force of assembly is approximately 534N (120 lbs), when adjusted per recommended procedure.

Direct force of assembly is affected as follows: 8N (1.8 lbs) per each .025 (.001) variation of cold plate slot width, or 200N (45 lbs) per each full turn of locknut.

Part Number Code

Series L225 Card-Lok Three Piece _____ **L225** - **3.80** **E** **TO**

Suffix options

Assembly length in inches. Standard lengths range from 71.12 (2.80), 96.52 (3.80) and 121.9 (4.80)._____ length.xx

Other lengths available upon request

Additional Center Mounting Hole _____ **E**

No additional center mounting hole _____ [blank]

Mounting Options - 0-80 tapped holes _____ **TO**

or choose from Mounting Option Table

Part Number Code Example:

L225-2.80

Series L225 Ejecting Card-Lok three piece 71.12 (2.80) long with black

MOUNTING METHOD TABLE	
Code Letter	Method
[blank]	2-56` tapped hole
"TO"	0-80 tapped hole
"TM2"	M2 x 0.40 tapped hole
"TM2.5"	M2.5 x 0.45 tapped hole

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Series 230 Card-Lok

Meets **VITA** 46, 48.2, 48.4
In alignment with the
SOSA® Technical Standard



RECOMMENDED GAP WIDTH

PCB + 6.35 (.250)

RECOMMENDED TORQUE

68 N-cm (6 in-lbs). With "L" option 90 N-cm (8 in-lbs)

WEIGHT

1.34 g/cm (.120 oz/in)

MATERIALS AND FINISH

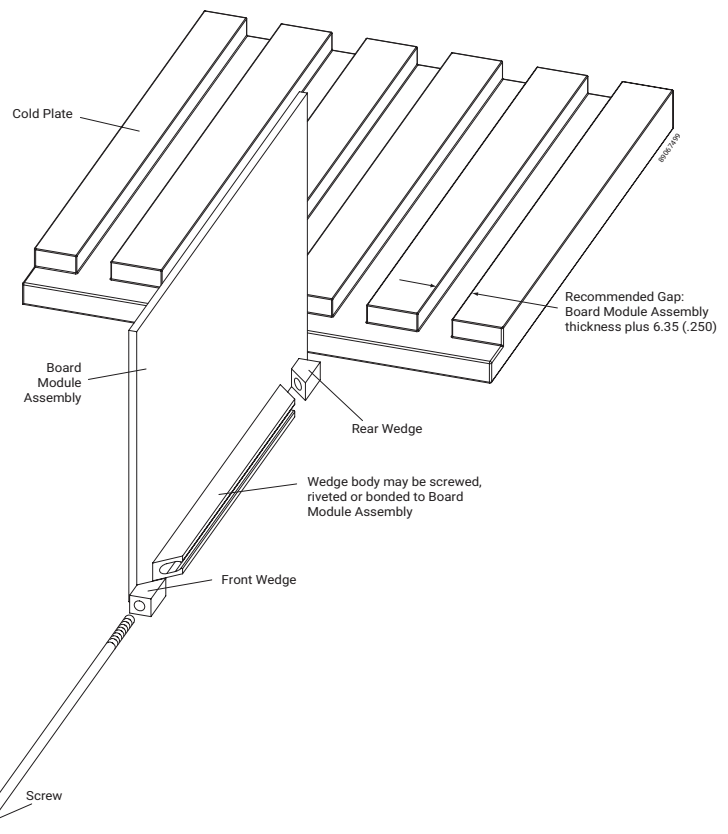
Wedges

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Screw

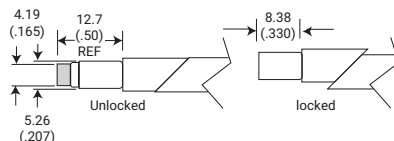
.09-in. or 2.5-mm hex. socket head cap screw, depending on mounting configuration

- **Material:** Stainless steel per ASTM A-582
- **Finish:** Passivated per AMS2700



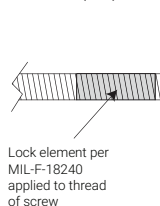
Detail "V"

Provides visual lock indication.



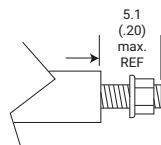
Detail "L"

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



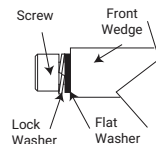
Detail "R"

Reduces the possibility of unintentional disassembly of the screw from rear wedge. This option adds no additional screw length with or without "CR" unless included with "W" option, then 2.5 (.10) total.



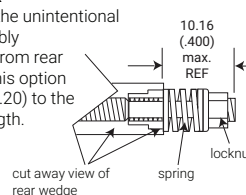
Detail "W"

Provides added resistance to loosening from shock and vibration. This option adds no additional screw length unless combined with the "R" suffix option, then adds 2.5 (.10) total.



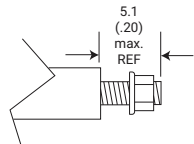
Detail "K"

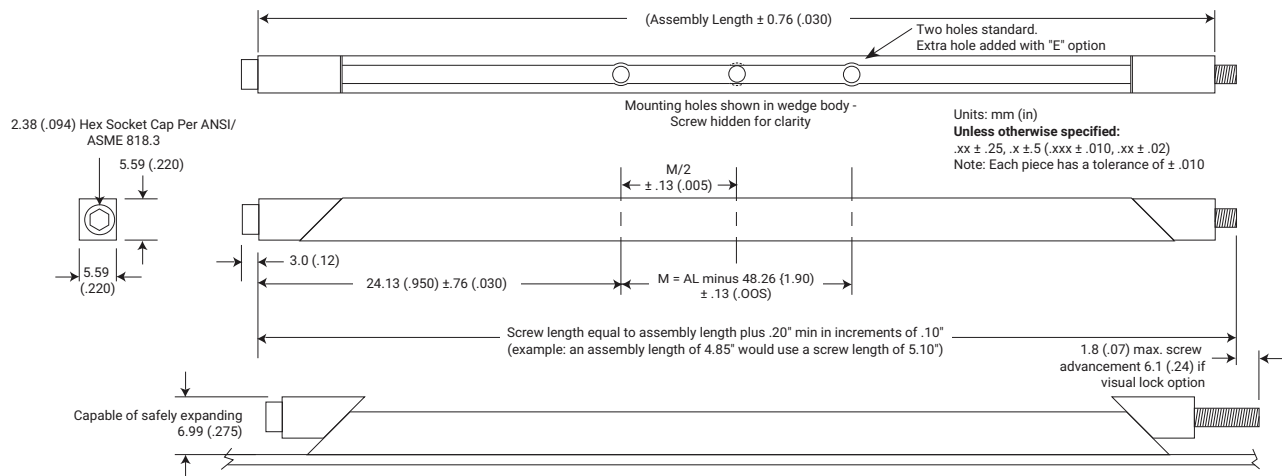
Prevents the unintentional disassembly of screw from rear wedge. This option adds 5.1 (.20) to the screw length.



Detail "CR"

If the "R" option is included with this "CR" option, then the locknut is stainless steel.





Part Number Code
Series 230 Card-Lok Three Piece

M W V A 230 - 3.80 E H L R

Prefix options
Metric Screw Head 2.5 mm Hex Drive _ M
Standard Screw Head 3/32 [blank]
Lock and Flat Washer _ W
None [blank]
Visual Indicator _ V
No Visual Indicator [blank]
Black Anodize _ A
or choose from Finish Table see table

Suffix options
Stainless Steel Captive (and Lock Nut if "R" option is also selected) CR
Standard Plated Steel "-"

Assembly length in inches. Standard lengths are 71.12 (2.80), 96.52 (3.80) and 121.9 (4.80).
Other lengths available upon request length.xx

Additional Center Mounting Hole E
None [blank]
Mounting Options - holes for rivet mounting H
or choose from Mounting Option Table see table
Lock Element L
None [blank]
Lock Nut R
Captive Screw K
None [blank]

Part Number Code Example:
VA230CR-4.80HR

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]	CHEM FILM PER MIL-DTL-5541 CLASS 1A, TYPE 1, GOLD
"R"	CHEM 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 ϕ 1.70 (.067) HOLE WITH 3.96 (.156) COUNTERBORE $\times$ 4.19 (.165) DEEP AND 1002 $\times$ 3.56 (.140) COUNTERSINK
"T0"	0-80 TAPPED HOLE
"T2"	2-56 TAPPED HOLE
"TM2"	M2 $\times$ 0.40 TAPPED HOLE
"TM2.5"	M2.5 $\times$ 0.45 TAPPED HOLE

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Series 235 Card-Lok

CONNECT AND PROTECT



RECOMMENDED GAP WIDTH

PCB + 8.00 (.315)

RECOMMENDED TORQUE

68 N-cm (6 in-lbs)

WEIGHT

1.34 g/cm (.120 oz/in)

MATERIALS AND FINISH

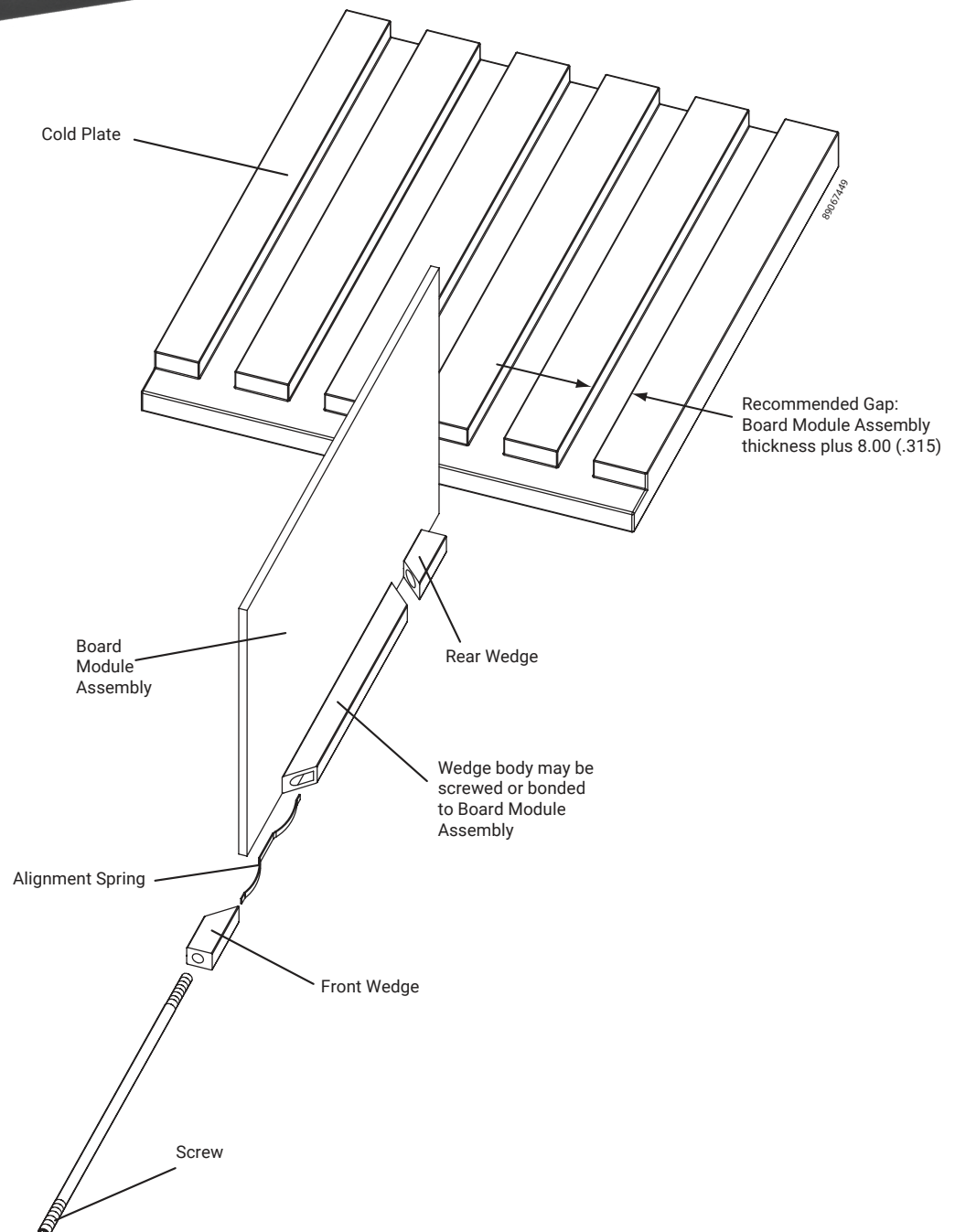
WEDGES

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

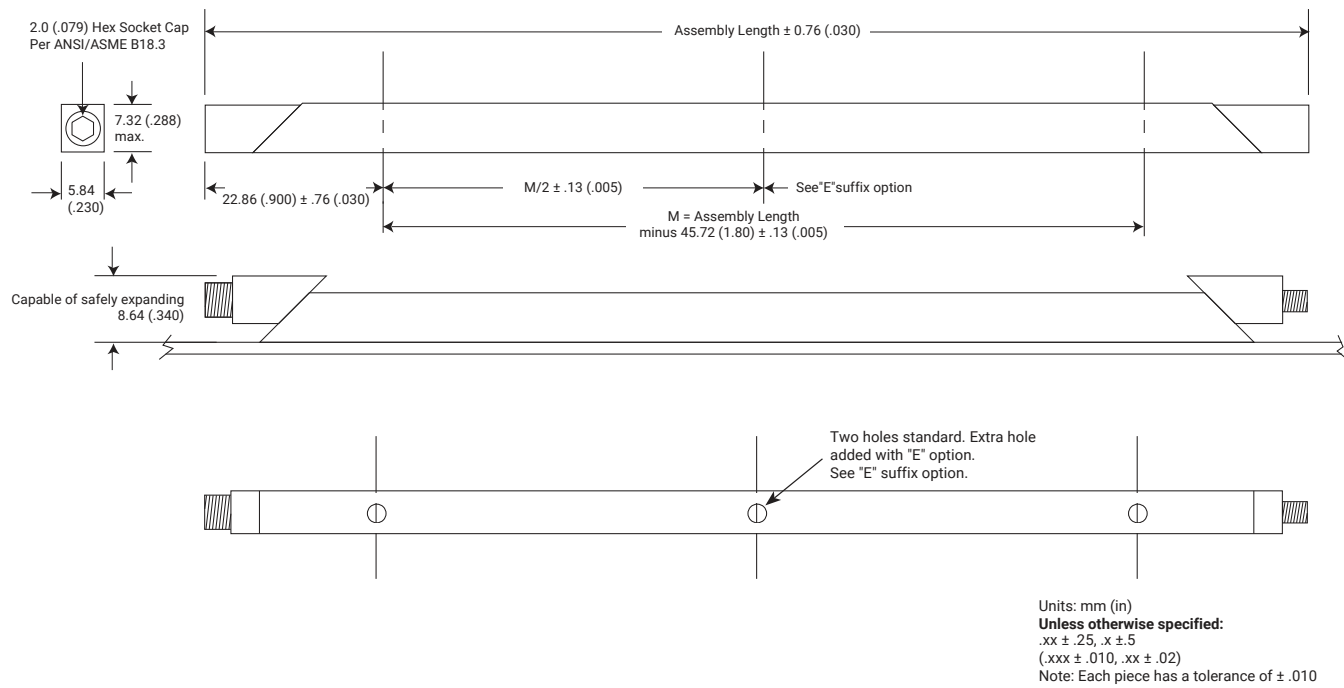
SCREW

.09-in. or 2.5-mm hex. socket head cap screw, depending on mounting configuration

- **Material:** Stainless steel per ASTM A-582
- **Finish:** Passivated per AMS2700



SERIES 235 CARD-LOK



Part Number Code
Series 235 Card-Lok Three Piece

Prefix options _____ S A 225 4.80 E TM2.5 P

Slotted Drive _____ S

2mm Hex Drive _____ [blank]

Finish options _____ A

Black Anodize _____ A

or choose from Finish Table

Assembly length in inches. Standard lengths range from
71.12 (2.80), 96.52 (3.80) and 121.9 (4.80). _____ length.xx

Other lengths available upon request

Additional Center Mounting Hole _____ E

None _____ [blank]

Mounting Options - M2.5 tapped hole _____ TM2.5

or choose from Mounting Option Table _____ see table

Locking Insert Option _____ P

None _____ [blank]

Part Number Code Example:

A235-2.80ETM2.5

Series 235 Card-Lok three piece, black anodized, 71.12 (2.80) assembly length, with three M2.5 tapped mounting holes.

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FINISH TABLE

Code Letter	Finish
[blank]	Chemical Film per Mil-DTL-5541 Class 1A, Type 1, 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
"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



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Series 236 Card-Lok

Meets **VITA** 46, 48.2, 48.4
In alignment with the
SOSA® Technical Standard



RECOMMENDED GAP WIDTH

PCB + 8.00 (.315)

RECOMMENDED TORQUE

68 N-cm (6 in-lbs)

WEIGHT

1.34 g/cm (.120 oz/in)

MATERIALS AND FINISH

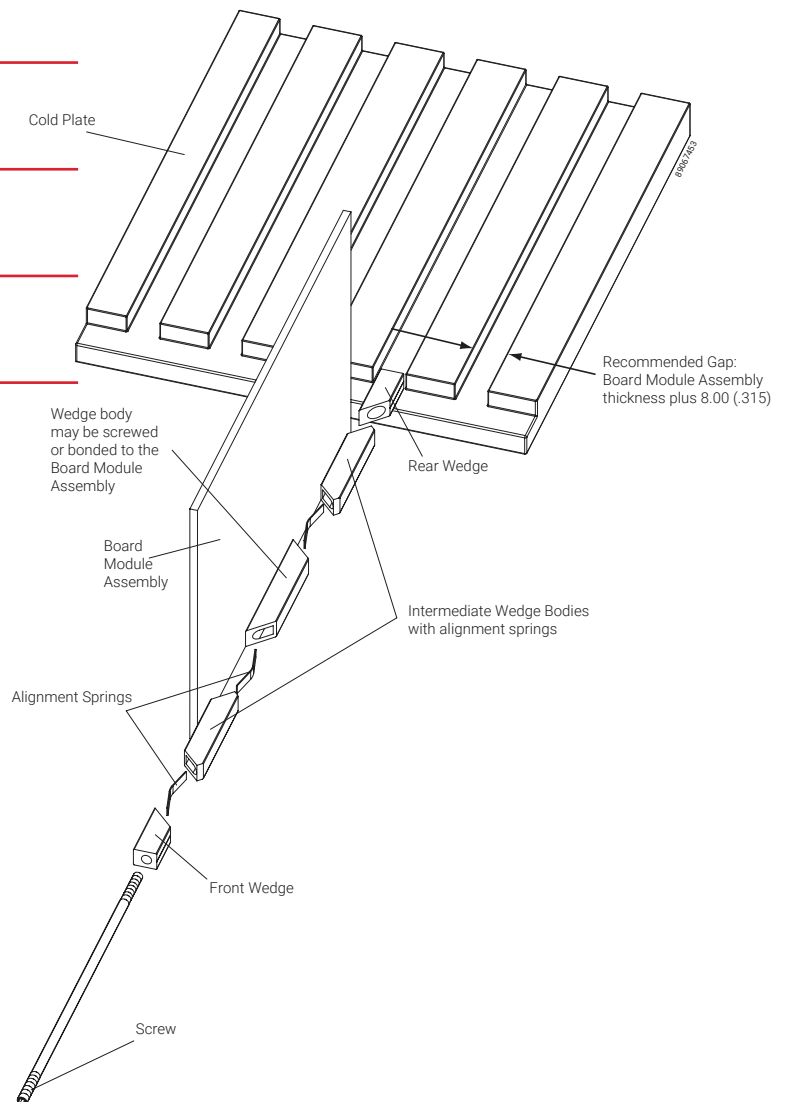
Wedges

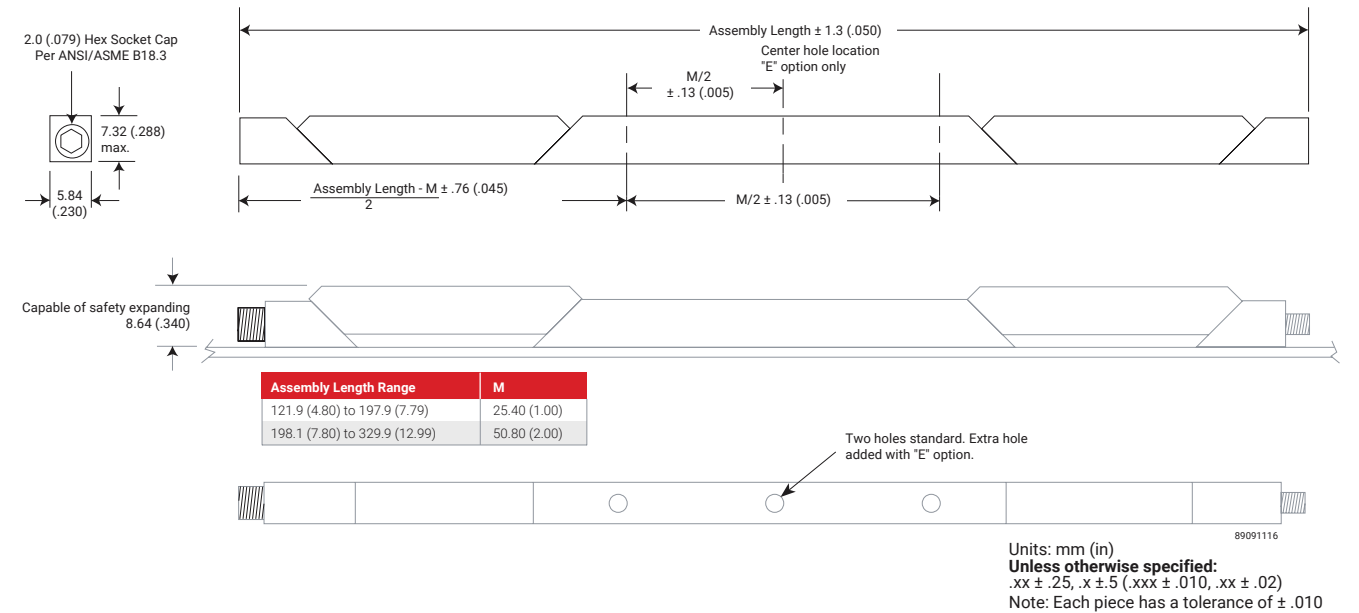
- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Screw

.09-in. or 2.5-mm hex. socket head cap screw, depending on mounting configuration

- **Material:** Stainless steel per ASTM A-582
- **Finish:** Passivated per AMS2700





Part Number Code

Series 236 Card-Lok Five Piece

Prefix options

Slotted Drive

2 mm Hex Drive

Finish options

Black Anodize

or choose from Finish Table

Assembly length in inches. Standard lengths range from 121.9 (4.80) to 325.12 (12.8) in 12.7 (0.5) increments

Other lengths available upon request

Additional Center Mounting Hole

None

Mounting Options—M2.5 tapped hole

or choose from Mounting Option Table

Locking Insert Option

None

S

A

236

5.80

E

TM2.5

P

Part Number Code Example:
A236-2.80ETM2.5
Series 236 Card-Lok five piece, black anodized, 71.12 (2.80) assembly length, with three M2.5 tapped mounting holes.

Code Letter	Finish
[blank]	Chemical Film per Mil-DTL-5541 Class 1A, Type 1, 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

Code Letter	Method
[blank]	No mounting holes
"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

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Series 240 Card-Lok

Meets **VITA** 46, 48.2, 48.4
In alignment with the
SOSA® Technical Standard



RECOMMENDED GAP WIDTH

PCB + 5.33 (.210)

RECOMMENDED TORQUE

68 N-cm (6 in-lbs)

WEIGHT

0.86 g/cm (.077 oz/in)

MATERIALS AND FINISH

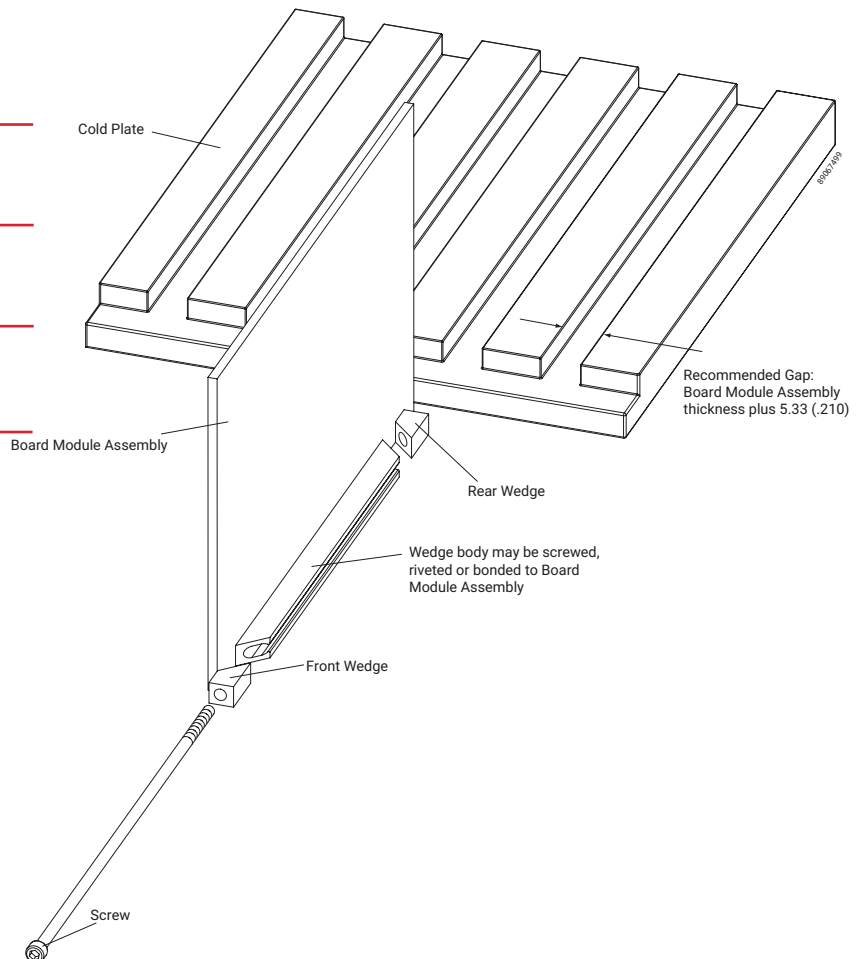
Wedges

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Screw

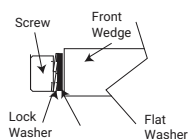
.09 in or 2.5 mm hex. socket head cap screw, depending on mounting configuration

- **Material:** Stainless steel per ASTM A-582
- **Finish:** Passivated per AMS2700



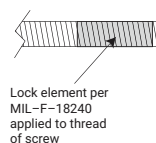
Detail "W"

Provides added resistance to loosening from shock and vibration. This option adds 2.54 (.100) to the screw length when combined with the "R" option.



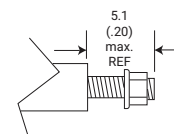
Detail "L"

Provides prevailing torque for resistance to loosening from shock and vibration. Adds 22 N-cm (2 in-lbs) torque to assembly. See application data on previous sheet.



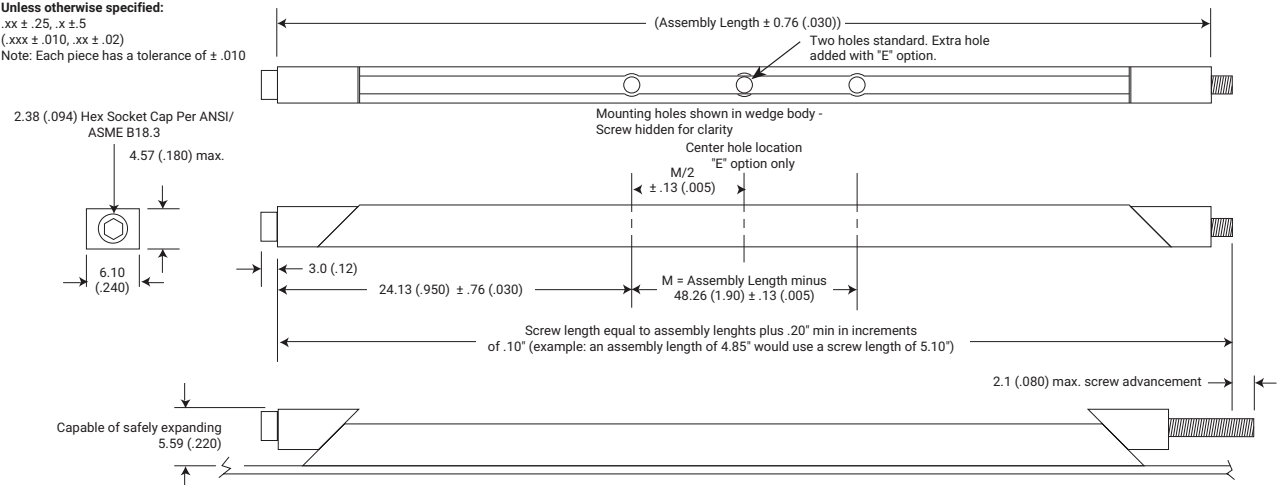
Detail "R"

Reduces the possibility of unintentional disassembly of the screw from rear wedge. This option adds 2.54 (.100) to the screw length when combined with the "W" option. Lock Nut material: stainless steel.



SERIES 240 CARD-LOK

Units: mm (in)
Unless otherwise specified:
.xx ± .25, .x ± .5
(.xxx ± .010, .xx ± .02)
Note: Each piece has a tolerance of ± .010



Part Number Code

Series 240 Card-Lok Three Piece

MW A 240 - 4.80 E H L R

Prefix options

Metric Screw Head 2.5 mm Hex Drive **M**

Standard Screw Head 3/32

Hex Drive **[blank]**

Lock and Flat Washer **W**

None **[blank]**

Black Anodize **A**

or choose from Finish Table **see table**

Suffix options

Assembly length in inches. Standard lengths range from 71.12 (2.80), 96.52 (3.80) and 121.9 (4.80) **length.xx**

Other lengths available upon request

Additional Center Mounting Hole **E**

None **[blank]**

Mounting Options – holes for rivet mounting **H**

or choose from Mounting Option Table **see table**

Lock Element **L**

None **[blank]**

Lock Nut **R**

None **[blank]**

Finish Table

Code Letter	Finish
[blank]	Chemical Film per Mil-DTL-5541 Class 1A, Type 1, 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 $\varnothing$ 1.70 (.067) hole with 3.96 (.156) counterbore $\times$ 5.08 (.200) deep and 100° $\times$ 3.56 (.140) countersink
"T0"	0–80 tapped hole
"T2"	2–56 tapped hole
"TM2"	M2 $\times$ 0.40 tapped hole
"TM2.5"	M2.5 $\times$ 0.45 tapped hole

Part Number Code Example: A240–3.80EHLR

Series 240 three piece Card-Lok, black anodized finish, 96.52 (3.80) long, holes for rivet mounting including an extra center mounting hole, with locking element on the screw thread and a stainless steel locknut

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Series 245 Card-Lok



Meets **VITA** 46, 48.2, 48.4 and 48.5
In alignment with the
SOSA® Technical Standard

RECOMMENDED GAP WIDTH

PCB + 7.62 (.300)

RECOMMENDED TORQUE

113 N-cm (10 in-lbs). With "L" option 147 N-cm (13 in-lbs)

WEIGHT

1.77 g/cm (.159 oz/in)

MATERIALS AND FINISH

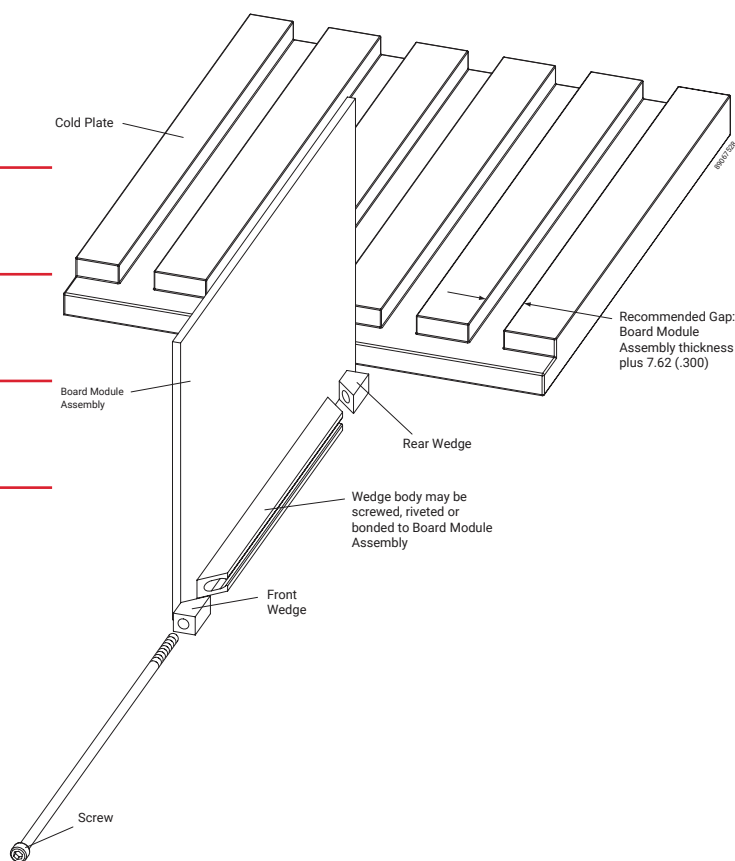
Wedges

- Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- Finish:** See finish table on opposite page

Screw

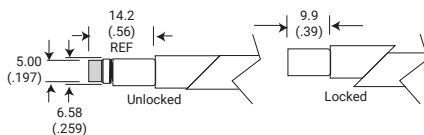
.09 in. or 2.5 mm hex. socket head cap screw, depending on mounting configuration

- Material:** Stainless steel per ASTM A-582
- Finish:** Passivated per AMS2700



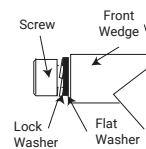
Detail "V"

Provides visual lock indication. Changes hex drive to 2.38 (.094). This option adds 5.08 (.20) to screw length.



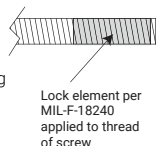
Detail "W"

Provides added resistance to loosening from shock and vibration. This option adds 2.5 (.10) to the screw length when combined with the "R" suffix option.



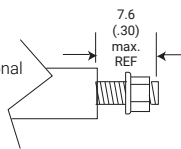
Detail "L"

Provides prevailing torque for resistance to loosening from shock and vibration. Adds 34 N-cm (3 in-lbs) torque to assembly. See application data on previous sheet.



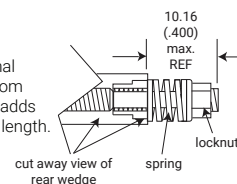
Detail "R"

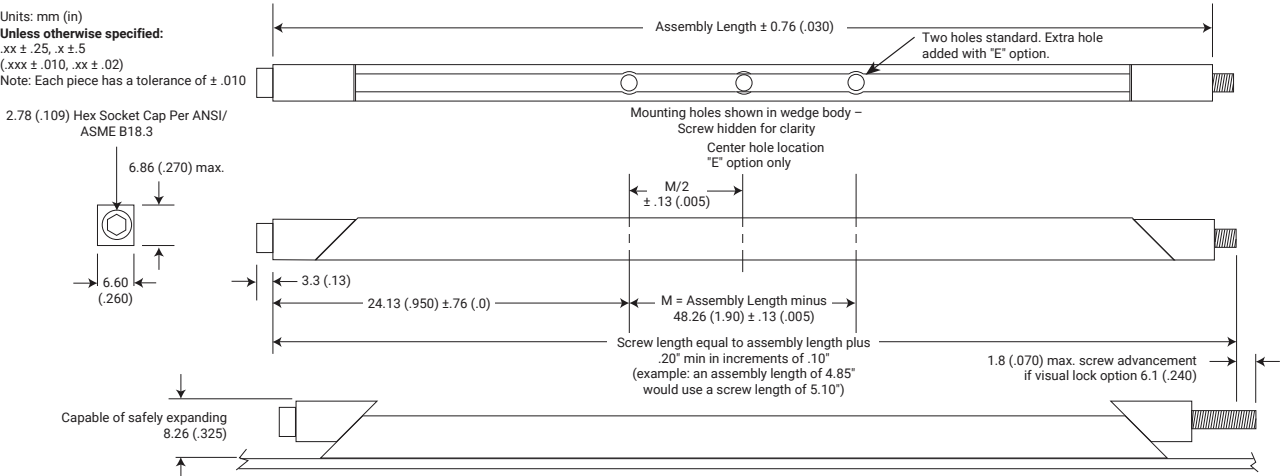
Reduces the possibility of unintentional disassembly of the screw from rear wedge. This option adds 2.54 (.10) to the screw length unless when combined with the "W" suffix option, then it adds 5.08 (.20).



Detail "K"

Prevents the unintentional disassembly of screw from rear wedge. This option adds 5.08 (.200) to the screw length.





Part Number Code
Series 245 Card-Lok Three Piece

Prefix options

Metric Screw Head 2.5 mm _____ M

Standard Screw Head 7/64 _____ [blank]

Lock and Flat Washer _____ W

None _____ [blank]

Visual Indicator (changes hex drive to 3/32) _____ V

No Visual Indicator _____ [blank]

Black Anodize _____ A

or choose from Finish Table _____ see table

Suffix options

Stainless Steel Lock Nut if "R" option is selected _____ CR

Standard Plated Steel _____ "-"

Assembly length in inches. Standard lengths range from 71.12 (2.80), 96.52 (3.80) and 121.9 (4.80). _____ length.xx

Other lengths available upon request

Additional Center Mounting Hole _____ E

None _____ [blank]

Mounting Options - holes for rivet mounting _____ H

or choose from Mounting Option Table _____ see table

Lock Element _____ L

None _____ [blank]

Lock Nut _____ R

None _____ [blank]

Captive Screw _____ K

None _____ [blank]

M W V A 245 - 4.80 E H L R

Part Number Code Example:

245-3.80H
Series 245 three piece Card-Lok, 96.52 (3.80) long, gold chemical film finish with holes for rivet mounting

Finish Table

Code Letter	Finish
[blank]	Chemical Film per Mil-DTL-5541 Class 1A, Type 1, 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 5.08 (.200) 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

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RECOMMENDED GAP WIDTH

PCB + 10.80 (.425)

RECOMMENDED TORQUE

226 N-cm (20 in-lbs)

With "L" option 271 N-cm (24 in-lbs)

WEIGHT

3.63 g/cm (.325 oz/in)

MATERIALS AND FINISH

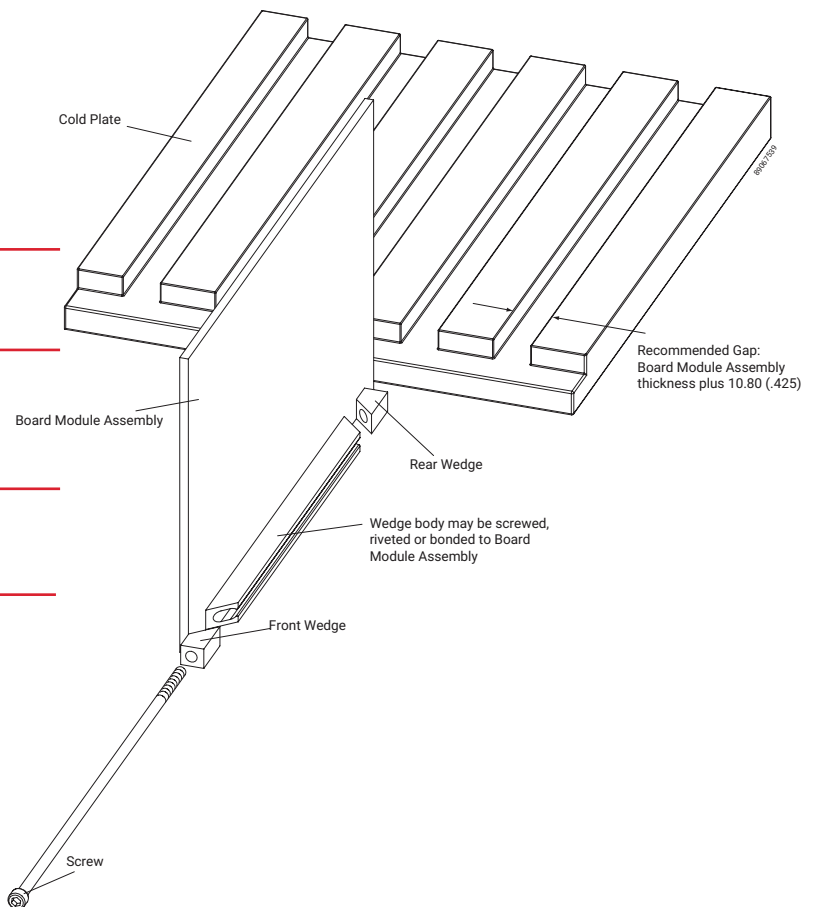
Wedges

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Screw

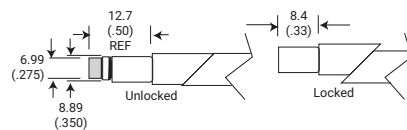
.125" or 4.0 mm hex. socket head cap screw, depending on mounting configuration

- **Material:** Stainless steel per ASTM A-582
- **Finish:** Passivated per AMS2700



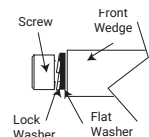
Detail "V"

Provides visual lock indication. This option adds 5.08 (.20) to the screw length.



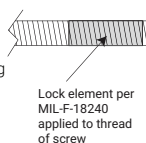
Detail "W"

Provides added resistance to loosening from shock and vibration. This option adds 5.08 (.20) to the screw length when combined with the "R" suffix option.



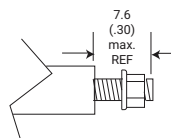
Detail "L"

Provides prevailing torque for resistance to loosening from shock and vibration. Adds 45 N-cm (4in-lbs) torque to assembly. See application data on previous sheet.



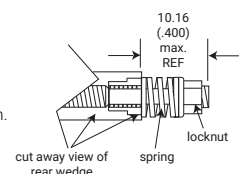
Detail "R"

Reduces the possibility of unintentional disassembly of the screw from rear wedge. This option adds no additional screw length unless included with "W" option, then 5.08 (.20) total.



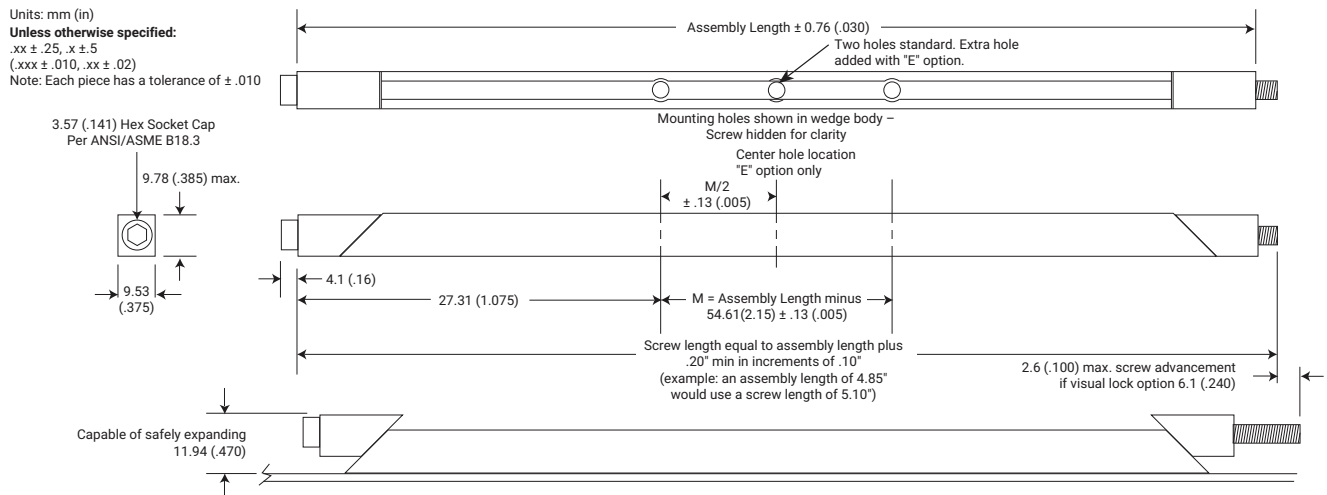
Detail "K"

Prevents the unintentional disassembly of screw from rear wedge. This option adds 5.08 (.200) to the screw length.



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SERIES 250 CARD-LOK



Part Number Code
Series 250 Card-Lok Three Piece

M W V A 250 - 3.80 E H L R

Prefix options
Metric Screw Head 4 mm Hex Drive M
Standard Screw Head 9/64
Hex Drive [blank]
Lock and Flat Washer W
None [blank]
Visual Indicator V
No Visual Indicator [blank]
Black Anodize A
or choose from Finish Table see table

Suffix options
Stainless Steel Lock Nut if "R" option is selected CR
Standard Plated Steel "_"
Assembly length in inches. Standard lengths range from 71.12 (2.80), 96.52 (3.80) and 121.9 (4.80). length.xx
Other lengths available upon request

Additional Center Mounting Hole E
None [blank]
Mounting Options - holes for rivet mounting H
or choose from Mounting Option Table see table
Lock Element L
None [blank]
Lock Nut R
Captive Screw K
None [blank]

Part Number Code Example:
V250CR-4.80HR
Series 250 Card-Lok three piece 121.9 (4.80) long with Visual Indicator, gold chemical film finish, standard rivet mounting hole and stainless steel lock nut option.

Code Letter	Finish
[blank]	Chemical Film per Mil-DTL-5541 Class 1A, Type 1, 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

Code Letter	Method
[blank]	No mounting holes
"H"	Rivet Mounting Ø3.45 (.136) hole with 4.95 (.195) counterbore x 7.62 (.300) deep and 100° x 4.95 (.195) 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

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Series 255 Card-Lok

CONNECT AND PROTECT



RECOMMENDED GAP WIDTH

PCB + 13.33 mm (.525 in)

RECOMMENDED TORQUE

350 N-cm (31 in-lbs)

With "L" option 407 N-cm (36 in-lbs)

WEIGHT

4.74 g/cm (.425 oz/in)

MATERIALS AND FINISH

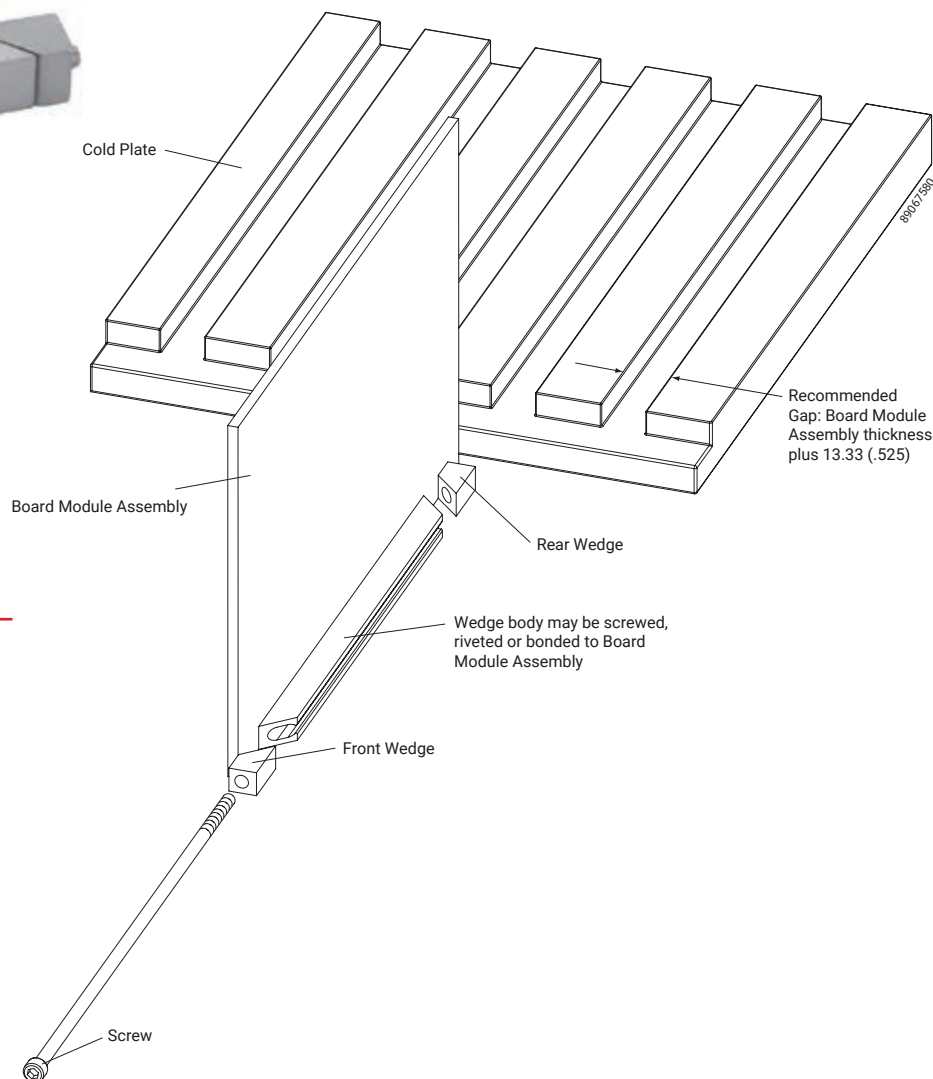
WEDGES

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

SCREW

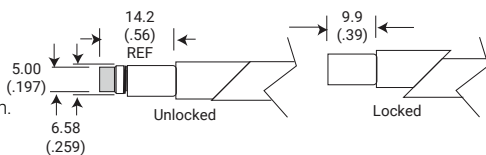
.09-in. or 2.5-mm hex. socket head cap screw, depending on mounting configuration

- **Material:** Stainless steel per ASTM A-582
- **Finish:** Passivated per AMS2700



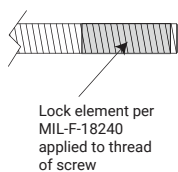
Detail "V"

Provides visual lock indication. option adds 5.08 (.20) to the screw length.



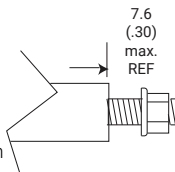
Detail "L"

Provides prevailing torque for resistance to loosening from shock and vibration. Adds 57 N-cm (5 in-lbs) torque to assembly. See application data on previous sheet.



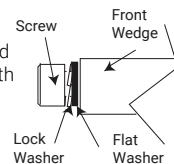
Detail "R"

Reduces the possibility of unintentional disassembly of the screw from rear wedge. This option adds no additional screw length unless included with "W" option, then 5.1 (.20) total.



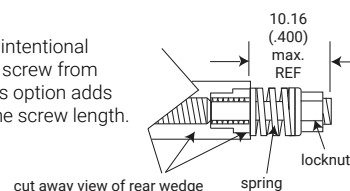
Detail "W"

Provides added resistance to loosening from shock and vibration. This option adds 5.08 (.20) to the screw length when combined with the "R" suffix option.

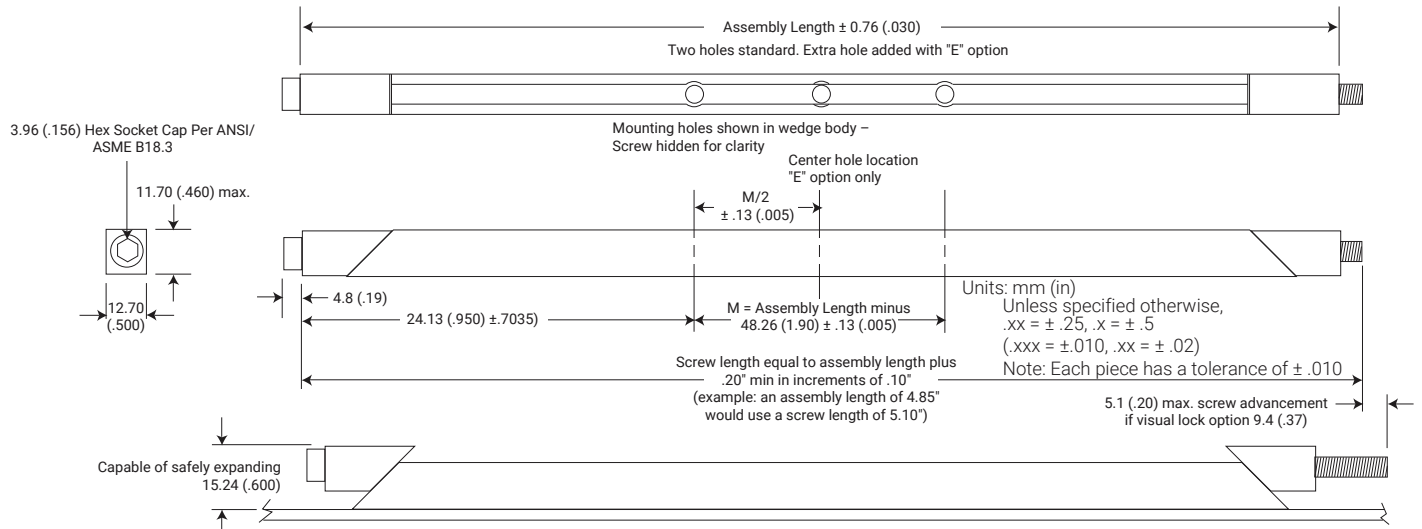


Detail "K"

Prevents the unintentional disassembly of screw from rear wedge. This option adds 5.08 (.200) to the screw length.



SERIES 255 CARD-LOK



Part Number Code

Series 255 Card-Lok Three Piece

Prefix options

Metric Screw Head M4 Hex Drive **M**
Standard Screw Head 5/32
Hex Drive [blank]
Lock and Flat Washer **W**
None [blank]
Visual Indicator **V**
No Visual Indicator [blank]
Black Anodize **A**
or choose from Finish Table **see table**

Suffix options

Stainless Steel Lock Nut if "CR" option is selected **CR**
Standard Plated Steel **"_"**
Assembly length in inches. Standard lengths range from 71.12 (2.80), 96.52 (3.80) and 121.9 (4.80). **length.xx**
Other lengths available upon request

Additional Center Mounting Hole **E**
None [blank]
Mounting Options - holes for rivet mounting **H**
or choose from Mounting Option Table **see table**
Lock Element **L**
None [blank]
Lock Nut **R**
Captive Screw **K**
None [blank]

Part Number Code Example:

V255CR-4.80HR

Series 255 Card-Lok three piece 121.9 (4.80) long with Visual Indicator, gold chemical film finish, standard rivet mounting hole and stainless steel lock nut option.

FINISH TABLE

Code Letter	Finish
[blank]	Chemical Film per Mil-DTL-5541 Class 1A, Type 1, 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 $\varnothing 3.45$ (.136) hole with 4.95 (.195) counterbore x 9.91 (.300) deep and 100° x 4.95 (.195) 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

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Series 260 Card-Lok

Meets **VITA** 46, 48.2, 48.4, 48.5
In alignment with the
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RECOMMENDED GAP WIDTH

PCB + 7.62 mm (.300 in)

RECOMMENDED TORQUE

68 N-cm (6 in-lbs) With "L" option 90 N-cm (8 in-lbs)

WEIGHT

.95 g/cm (.085 oz/in)

MATERIALS AND FINISH

Bodies and wedges

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Shaft

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Screw, lock and flat washer

.09 in or 2.5 mm hex. socket head cap screw, depending on mounting configuration

- **Material:** Stainless steel per ASTM A-582 or NAS1352C
- **Finish:** Passivated per AMS2700

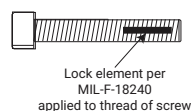
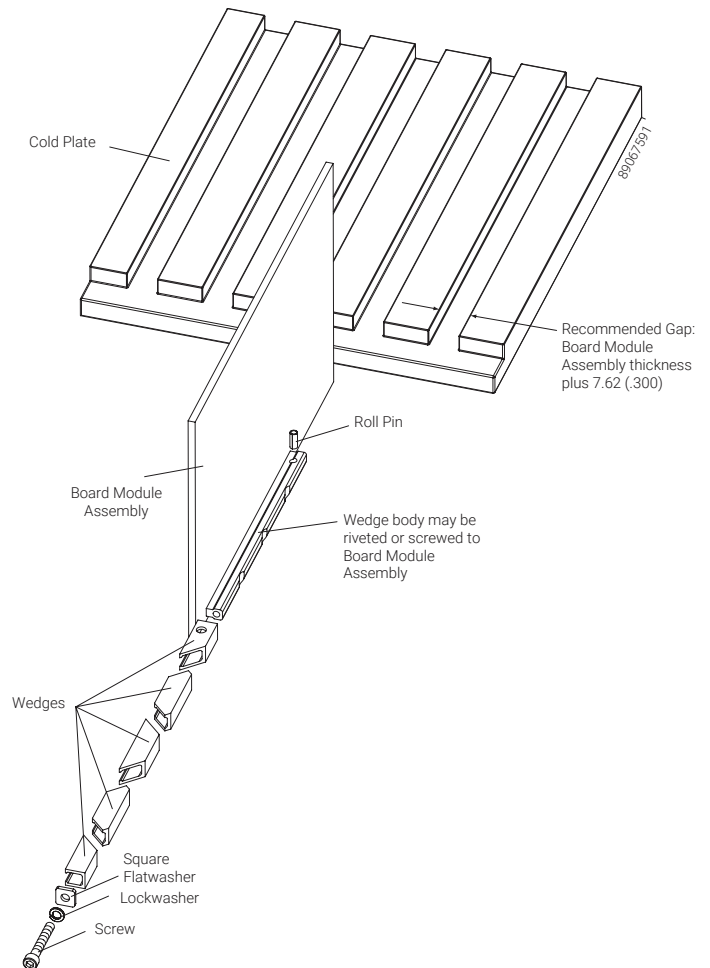
Roll pin

- **Material:** 400 series stainless steel
- **Finish:** Passivated per AMS2700



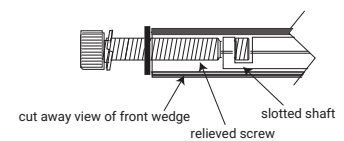
Detail "V"

Provides visual lock indication.



Detail "L"

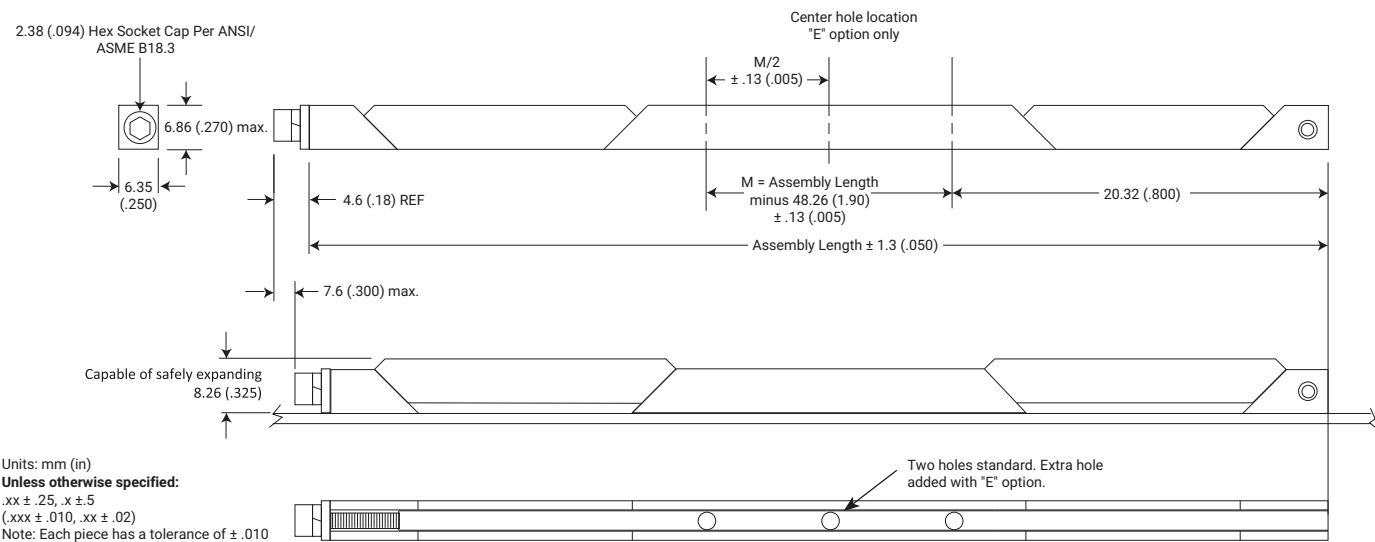
Provides prevailing torque for resistance to loosening from shock and vibration. Adds 22 N-cm (2 in-lbs) torque to assembly.



Detail "K"

Prevents the unintentional disassembly of screw from shaft.

SERIES 260 CARD-LOK



Part Number Code	M	V	A	260	-	2.80	E	H	L	K
Screw Metric Screw Head 2.5 mm Hex Drive _____ M Standard Screw Head 3/32 Hex Drive _____ [Blank]										
Type Torque Limiting Version* _____ TLC Standard version with Visual Indicator _____ V Standard version _____ [Blank]										
Finish Black Anodized _____ A or select code letter from Finish Table										
Length Length in 12.7 (.50) increments _____ 71.12 [2.80] _____ to 325.12 [12.80]										
Mounting Additional Center Mounting Hole _____ E None _____ [Blank] Mounting Options – through mounting holes _____ H Or choose from Mounting Method Table										
Lock Patch Lock Patch _____ L None _____ [Blank]										
Captive Screw _____ K None _____ [Blank]										

Part Number Code Example:

MVA260-4.80H

Series 260 Card-Lok with M2.5 hex drive and visual indicator, black anodized finish, 121.9 (4.80) long, and standard rivet hole mounting

FINISH TABLE

Code Letter	Surface finish
[blank]	Chemical Film per Mil-DTL-5541 Class3, 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
"H"	ø 1.73/1.85 (.068/.073) dia. through holes countersink 100° x 1.52 (.060) deep
"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

NOTE: For torque limiting "tlc" version:
the minimum length is 96.52 (3.80) the front mounting hole, nearest to the screw, will be replaced with an indexing pin.
visual indicator lock patch options not available.
must click 3+ times for proper installation

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Series 260HC Card-Lok

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In alignment with the
SOSA® Technical Standard



RECOMMENDED GAP WIDTH

PCB + 7.62 mm (.300 in)

RECOMMENDED TORQUE

68 N-cm (6 in-lbs) With "L" option 90 N-cm (8 in-lbs)

WEIGHT

.95 g/cm (.085 oz/in)

MATERIALS AND FINISH

Bodies and Wedges

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Shaft

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Screw

.09-in. or 2.5-mm hex. socket head

- **Material:** 300 series stainless steel with dry film lube per MIL-L-46010
- **Finish:** Passivated per AMS2700

Lock Washer

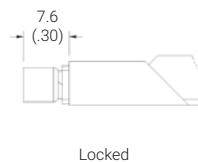
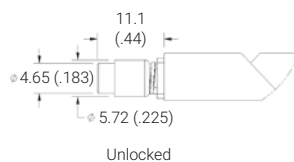
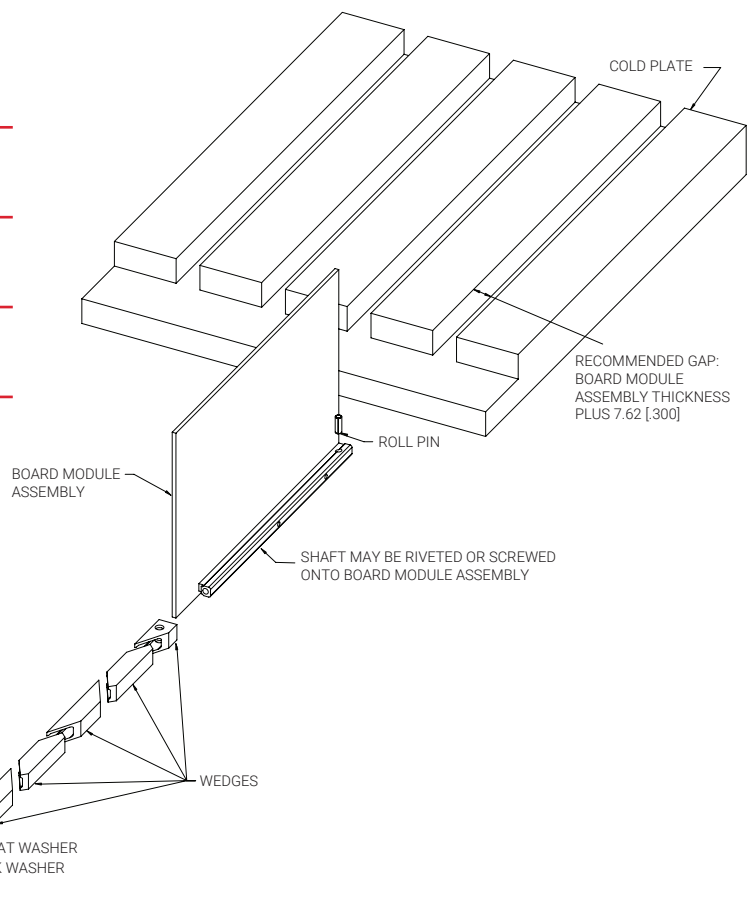
- **Material:** MS35338-135
- **Finish:** Passivated per AMS2700

Roll Pin

- **Material:** 400 series stainless steel
- **Finish:** Passivated per AMS2700

Indexing Pin

- **Material:** Aluminum Alloy 6061-T6
- **Finish:** See finish table on opposite page



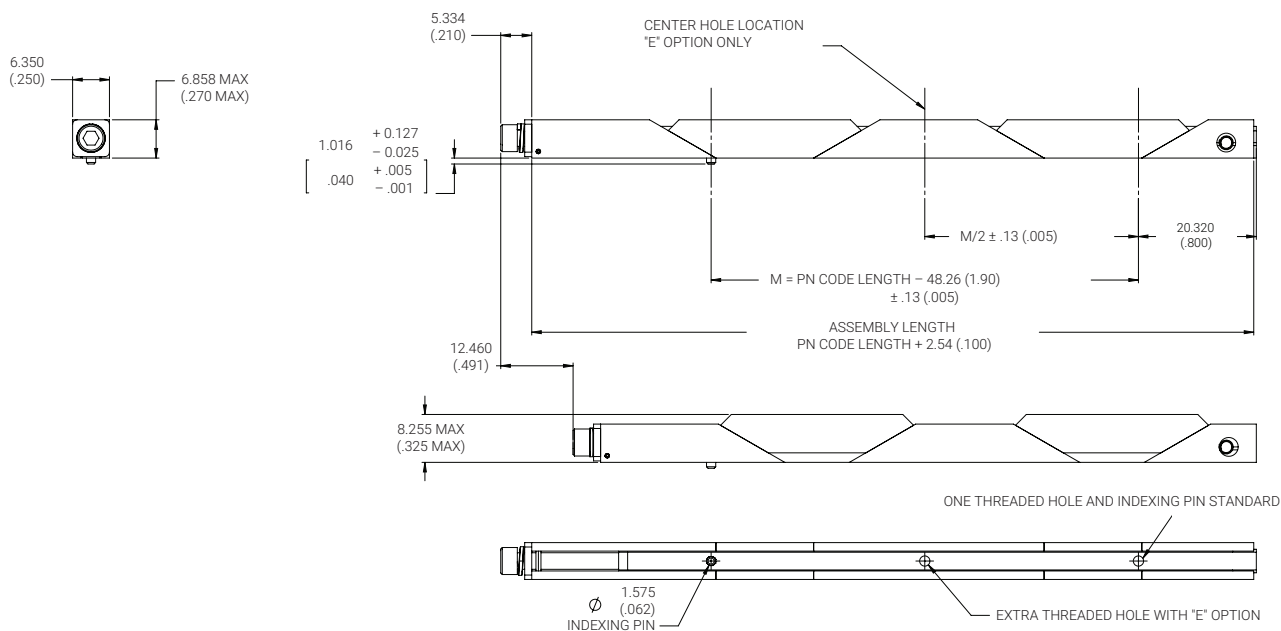
Detail "V"

Provides visual lock indication.



Detail "L"

Provides prevailing torque for resistance to loosening from shock and vibration. Adds 22 N-cm (2 in-lbs) torque to assembly.



Part Number Code

Series 260 HC Card-Lok Five Piece

Prefix options

Metric Screw Head 2.5 mm Hex Drive_M

Standard Screw Head 3/32

Hex Drive [blank]

Visual Indicator V

No Visual Indicator [blank]

Black Anodize A

or choose from Finish Table see table

Suffix options

Length in 12.7 (.50) increments 96.52 (3.80)

to 172.72(6.80)

Additional Center Mounting Hole E

None [blank]

Mounting Options - holes for rivet mounting H

or choose from Mounting Option Table see table

Lock Element L

None [blank]

M

V

A

260HC

-3.80

E

H

L

Part Number Code Example:
MVA26 HC-3.80ET2L
Series 260HC Card-Lok five piece 96.52 (3.80) long black anodized with M2.5 hex drive, visual indicator, mounting holes tapped for 2-56 thread, with locking element.

Code Letter	Finish
"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

Code Letter	Method
"H"	ø 1.73/1.85 (.068/.073) dia. through holes countersink 100° x 1.50 (.060) deep
"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

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Series 260HTS Card-Lok



Meets **VITA** 46, 48.2, 48.4, 48.5
In alignment with the
SOSA® Technical Standard

RECOMMENDED GAP WIDTH

PCB + 7.62 mm (.300 in)

RECOMMENDED TORQUE

68 N-cm (6 in-lbs)

WEIGHT

1.21 g/cm (.109 oz/in)

MATERIALS AND FINISH

Brackets and Front Wedge

- **Material:** Aluminum Alloy 6061-T6 or T6XXX per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Screw and Washers

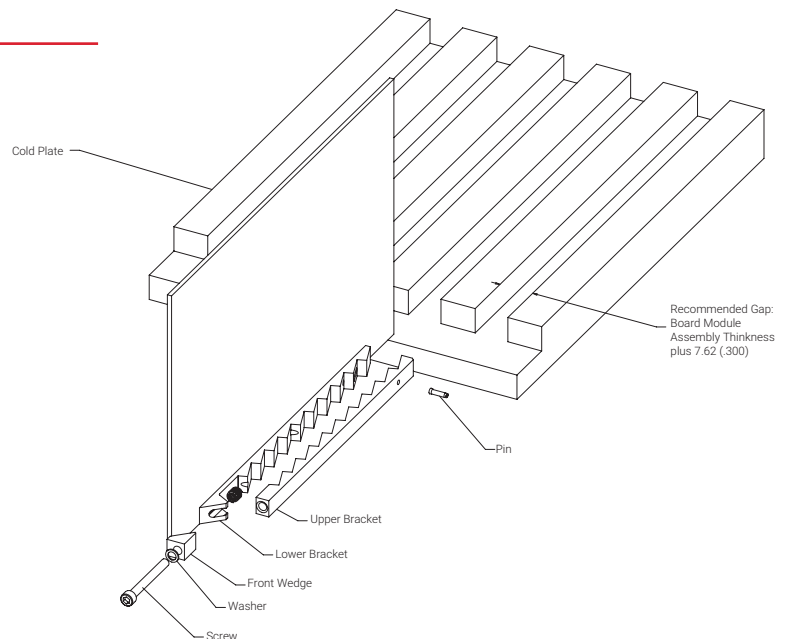
- **Material:** Stainless steel
- **Finish:** Passivated per AMS2700

Threaded Insert

- **Material:** Stainless steel
- **Finish:** Passivated per AMS2700

Pin

- **Material:** Stainless steel
- **Finish:** Passivated per AMS2700



DETAIL K (RELAXED VIEW)

Detail K

Prevents the unintentional disassembly of screw from shaft.

SOSA is a registered trademark of The Open Group

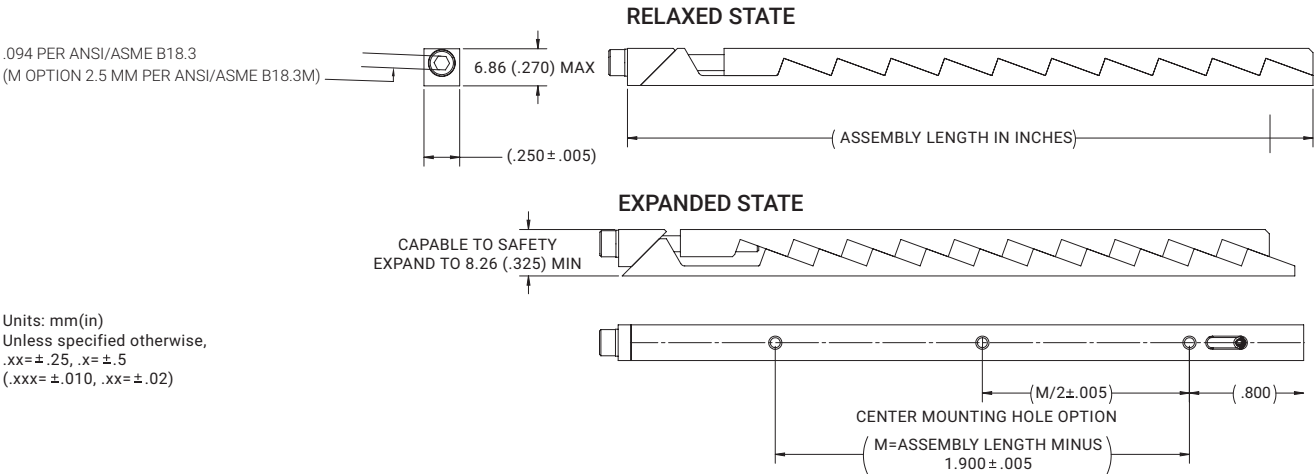


DETAIL L (RELAXED VIEW)

Detail L

SCREW LOCKING INSERT

Provides prevailing torque for resistance to loosening from shock and libration. Meets NASM 8846.



Part Number Code
Series 260HTS Card-Lok

Screw Drive

Metric Screw Head 2.5 mm Hex Drive

Standard Screw Head 3/32 Hex Drive

Surface Finish

Black Anodized

Electroless Nickel

Length

Length in 12.7 (.50 increments)

to 325.12 (12.80)

Mounting

Additional Center Mounting Hole

None

or choose from Mounting Method Table

Threaded Insert

Locking Insert

Free-Running Insert

Screw Type

Captive Screw

Standard

M

A

260HTS-2.80

E

L

K

Part Number Code example:
M A 260HTS – 4.80ET2LK
Series 260HTS Card-Lok with 2.5 mm hex drive, black anodized finish, 121.9 (4.80) long, with additional mounting hole, 2–56 tapped hole, locking insert and captive screw.

Code Letter	Surface Finish
A	Black Anodize Per MIL-A-8625 Type II, Class 2
EN	Electroless Nickel Per MIL-C-26074 Class 4, Grade B, Bright

Code Letter	Surface Finish
E	Additional Center Mounting Hole
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

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Series 260PR Card-Lok



Meets **VITA** 46, 48.2, 48.4, 48.5
In alignment with the
SOSA® Technical Standard

RECOMMENDED GAP WIDTH

PCB + 7.62 mm (0.300 in) with +/- 0.51 mm (0.020 in) tolerance

RECOMMENDED TORQUE

68 N-cm (6 in-lbs) With "L" option 90 N-cm (8 in-lbs)

WEIGHT

.95 g/cm (.085 oz/in)

MATERIALS AND FINISH

Bodies and Wedges

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Shaft

- **Material:** Aluminum Alloy 7075-T6 per ASTM-B221 or AMS-QQ-A-200/11
- **Finish:** See finish table on opposite page

Screw

.09 in or 2.5 mm hex. socket head cap screw, depending on mounting configuration

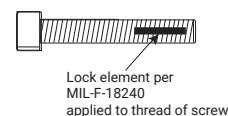
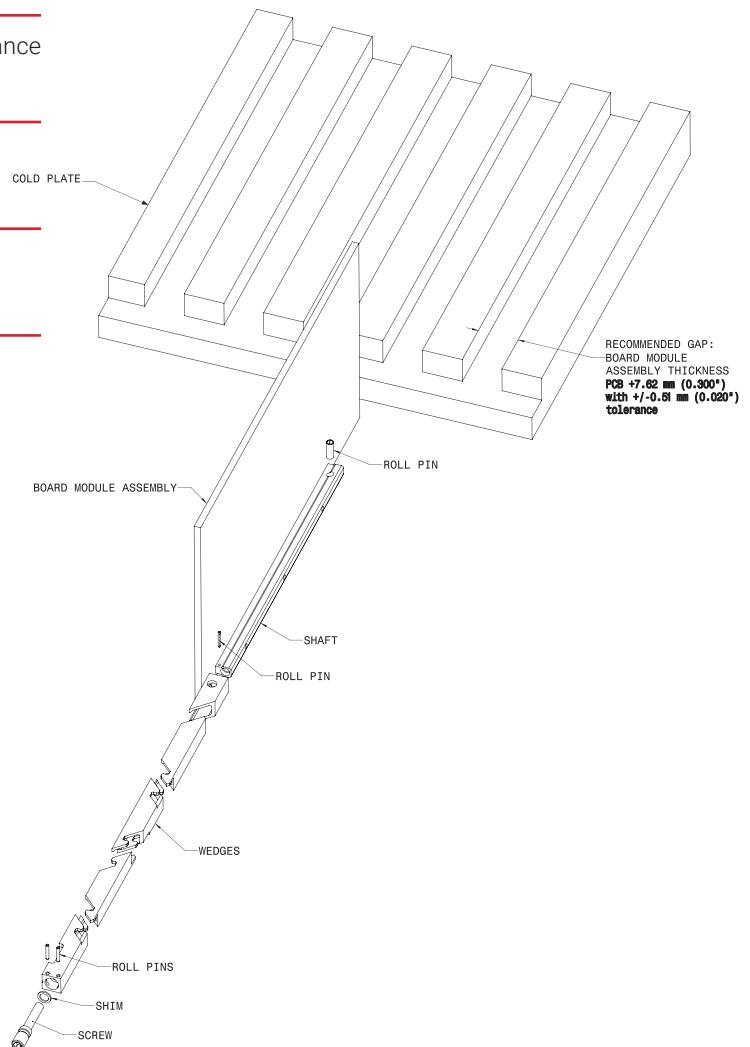
- **Material:** 300 Series Stainless Steel per ASTM-A582
- **Finish:** Passivated per AMS2700 with dry film lube per MIL-L-46010

Back and Front Roll Pins

- **Material:** 400 series Stainless Steel
- **Finish:** Passivated per AMS2700

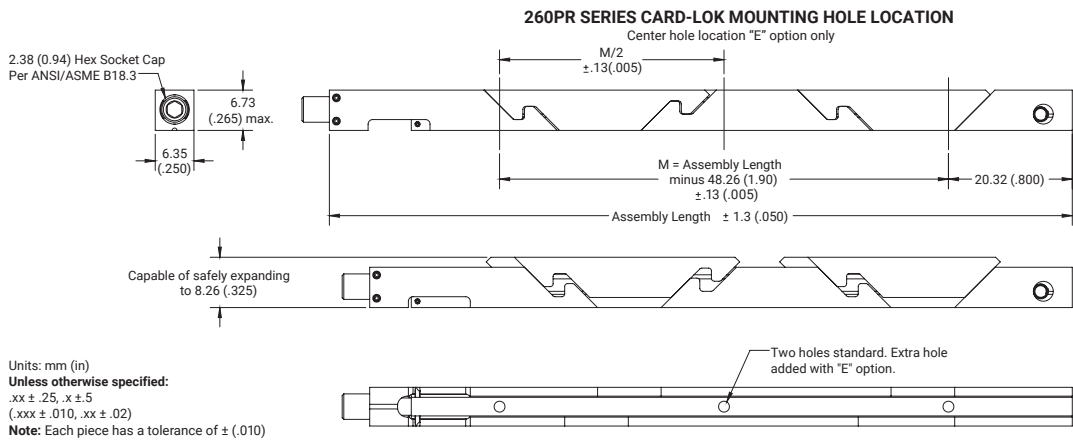
Shim

- **Material:** 300 Series Stainless Steel per QQ-S-766
- **Finish:** Passivated per ASTM A380



Detail "L"

Provides prevailing torque for resistance to loosening from shock and vibration. Adds 22 N-cm (2 in-lbs torque to assembly).



Part Number Code	M	A	260PR-3.80	E	H	L
Screw Metric Screw Head 2.5 mm Hex Drive _____ M Standard Screw Head 3/32 Hex Drive ____ [Blank]						
Finish Black Anodized _____ A or select code letter from Finish Table						
Length Length in 12.7 (.50) increments _____ 96.52 [3.80] _____ to 325.12 [12.80]						
Mounting Additional Center Mounting Hole _____ E None _____ [Blank]						
Mounting Options – through mounting holes _____ H Or choose from Mounting Method Table						
Lock Patch Lock Patch _____ L None _____ [Blank]						

Part Number Code Example:

MA260PR-4.80H

Series 260PR Card-Lok with M2.5 hex drive , black anodized finish, 121.9 (4.80) long, and standard rivet hole mounting

Finish Table

Code Letter	Surface Finish
[blank]	Chemical Film per Mil-DTL-5541 Type I, Class 3, Gold
"R"	Chemical Film per Mil-DTL-5541 Type II, Class 3, 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
"H"	ø 1.73/1.85 (.068/.073) dia. through holes countersink 100° x 1.52 (.060) deep
"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

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Series L260 Card-Lok

CONNECT AND PROTECT



RECOMMENDED GAP WIDTH

PCB + 7.62 mm (.300 in)

WEIGHT

1.17 g/cm (.105 oz/in)

MATERIALS AND FINISH

WEDGES, BODY, SHAFT

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Wedges:** Also have Dry Film Lube per MIL-PRF-46010
- **Finish:** Black Anodize per MIL-A-8625, Type II, Class 2

LEVER

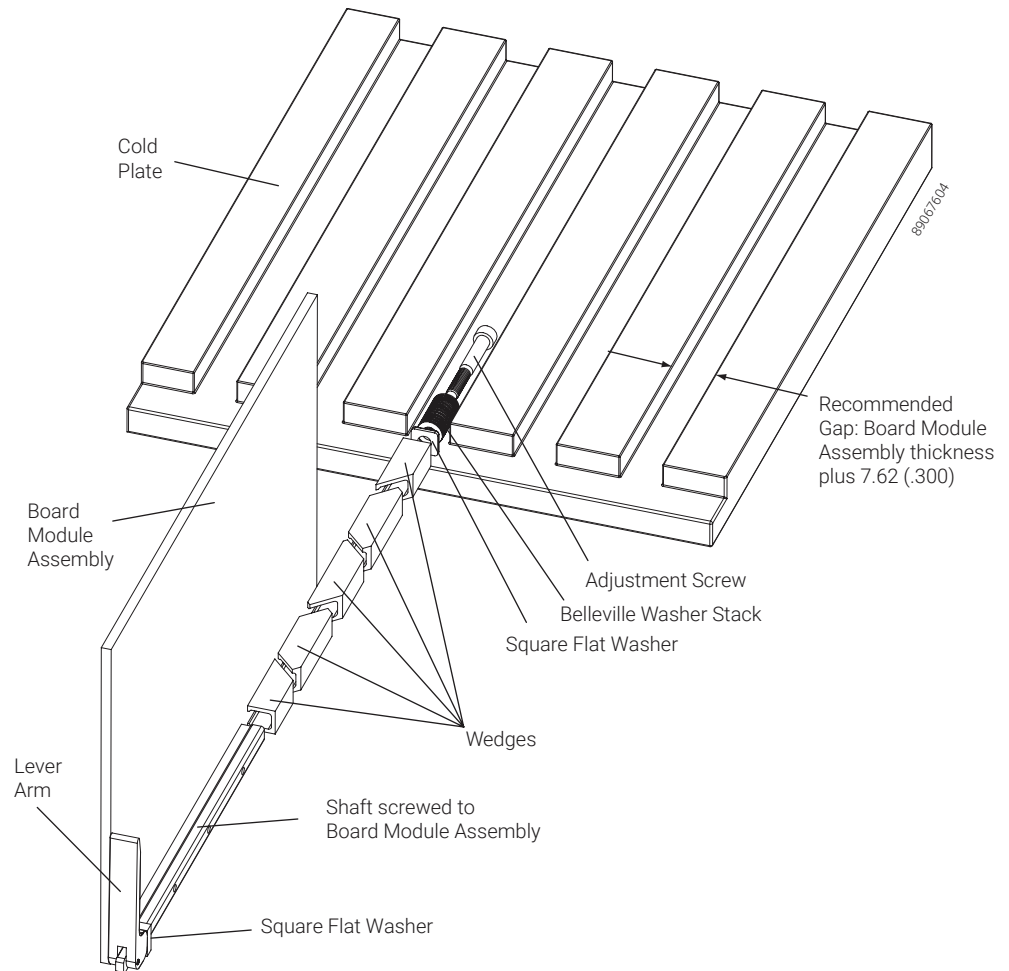
- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQA-200/8
- **Finish:** Hard Black Anodize per MIL-A-8625, Type III, Class 2

ADJUSTMENT SCREW

- **Material:** Stainless Steel per ASTM-A582\QQ-S-763
- **Finish:** Passivated per AMS2700

WASHERS

- **Front Washer:** MPIF Standard 35 (no finish)
- **Rear Washer:** ASTM-A240
- **Belleville Washers:** ASTM-A666
- **Finish:** Passivate per AMS2700



Technical drawing of the 1000 Series Hex Cap Screws, showing top and side views with dimensions and assembly length.

Top View Dimensions:

- Lever width 45.2 (6.86) Max
- Assembly Length (AL) ± 1.3 (.050)
- 2.67 (.105)
- 6.35 (.250)
- 6.86 (.270) max.
- 2.38 (.094) Hex Socket Cap Per ANSI/ASME B18.3

Side View Dimensions:

- Capable of expansion range of 6.86 (.270) to 8.26 (.325). Adjustment required to an exact dimension within this range.
- Assembly Length +26.4 (1.04) REF when fully relaxed and unadjusted. Dimension will shorten by approximately 5.3 (.21) when adjusted.
- 33.15 (1.305)
- M/2 $\pm .13$ (.005)
- 1.5 (.06) REF
- 7.04 (.277)
- 36.32 (1.43)
- M = Assembly Length minus 48.26 (1.90) $\pm .13$ (.005)

Notes:

- 1 Shown
- 2 Opposite
- Units: mm (in.)
- Unless other wise specified:
- .xx $\pm .25$, .x $\pm .5$
- (.xxx $\pm .010$, .xx $\pm .02$)
- Note: Each piece has a tolerance of $\pm .010$

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SCHROFF-DS-H82672-SeriesL260cardlok-EN-2101

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Series LE260 Card-Lok

CONNECT AND PROTECT



RECOMMENDED GAP WIDTH

PCB + 7.62 mm (.300 in)

WEIGHT

1.17 g/cm (.105 oz/in)

MATERIALS AND FINISH

WEDGES, BODY, SHAFT

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Wedges:** Also have Dry Film Lube per MIL-PRF-46010
- **Finish:** Black Anodize per MIL-A-8625, Type II, Class 2

LEVER

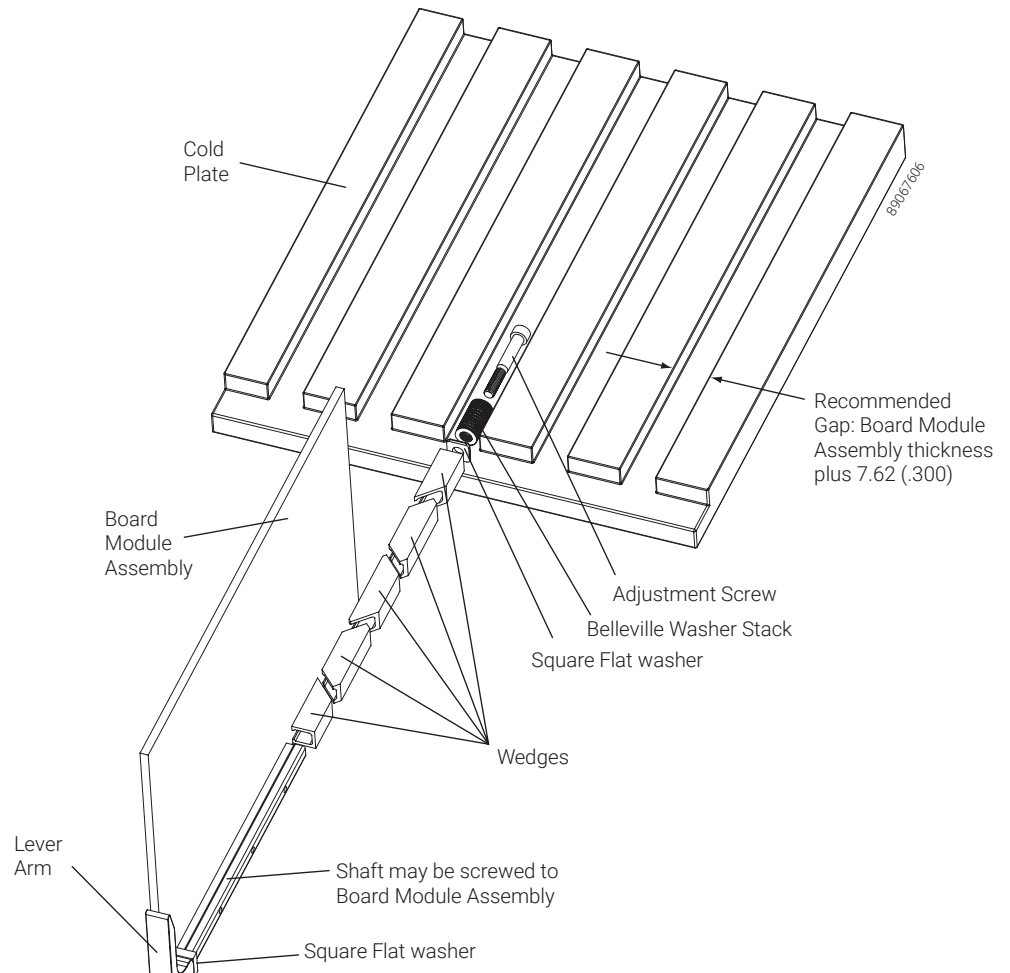
- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQA-200/8
- **Finish:** Hard Black Anodize per MILA-8625, Type III, Class 2

ADJUSTMENT SCREW

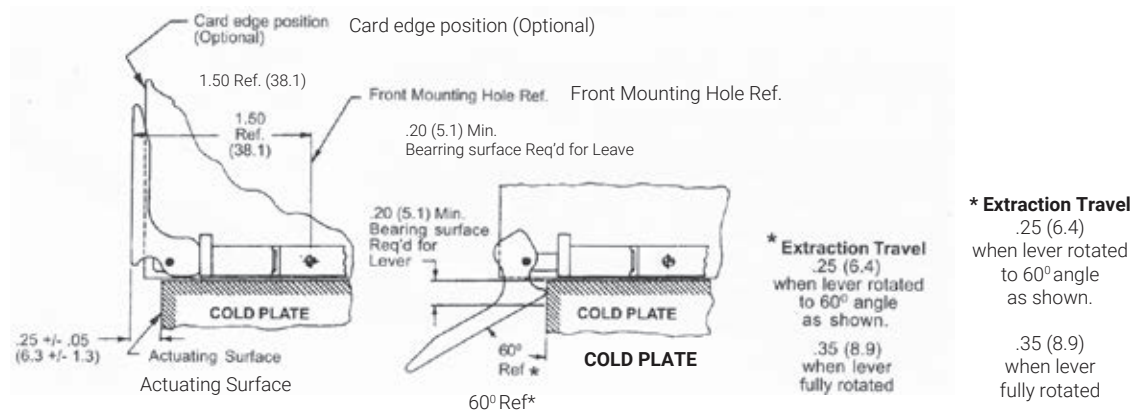
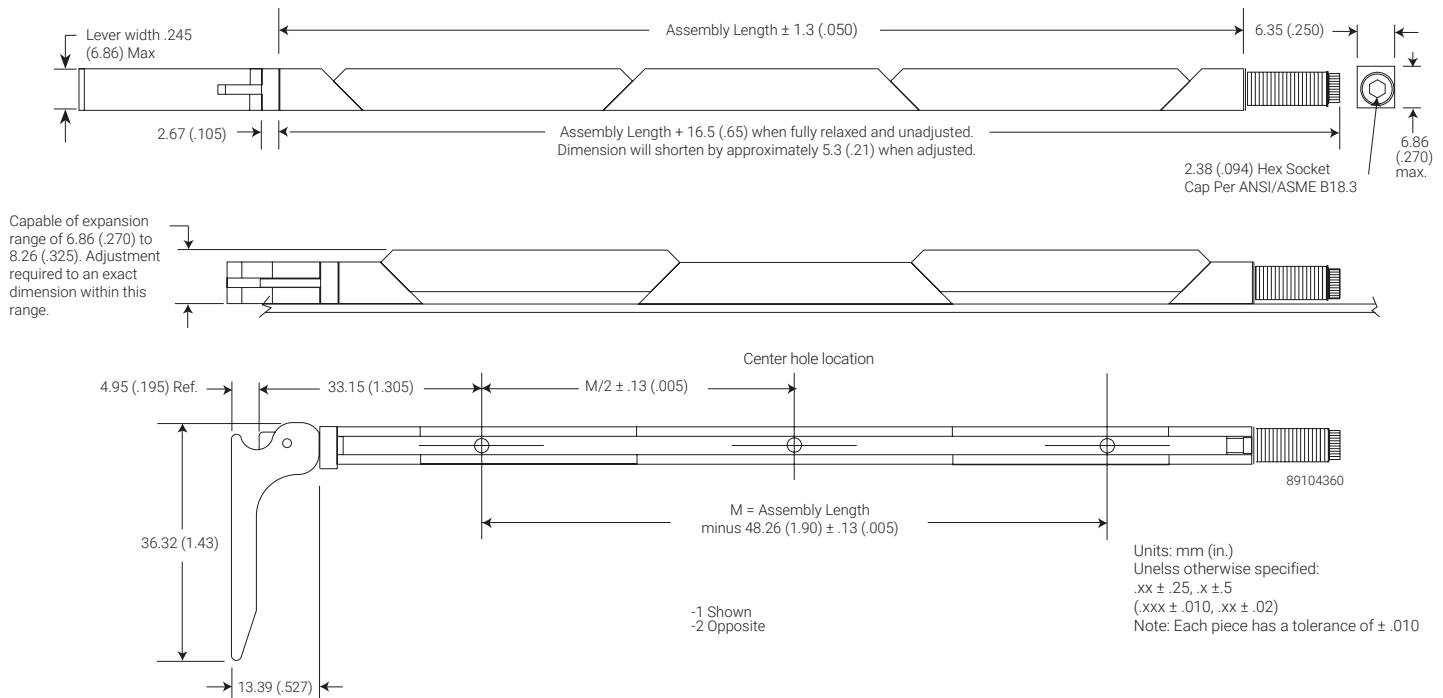
- **Material:** Stainless Steel per ASTM-A582\QQ-S-763
- **Finish:** Passivated per AMS2700

WASHERS

- **Front Washer:** MPIF Standard 35 (no finish)
- **Rear Washer:** ASTM-A240
- **Belleville Washers:** ASTM-A666
- **Finish:** Passivate per AMS2700



SERIES LE260 CARD-LOK



APPLICATION DATA

CLAMPING FORCE ADJUSTMENT PROCEDURE

Lever-Lok is furnished assembled with spring stack preloaded but not adjusted.

1. Fasten Lever-Lok to Board Module Assembly
2. Insert Board Module Assembly into slot in cold plate
3. Actuate lever to locked/closed position
4. Tighten screw on end of shaft until wedges initial contact wall of cold plate slot, or slight insertion extraction drag is felt
5. Additionally tighten screw 2 full turns.

DO NOT EXCEED TWO (2) TURNS

Lever-Lok is now ready to use

NOTE: Factory adjustment of clamping force available on request.
 See part number code

CLAMPING FORCE

Direct force of assembly is approximately 556N (125lbs), when adjusted per recommended procedure.

Direct force of assembly is affected approximately as follows:
 26.7N (6lbs) per each .025 (.001) variation of cold plate slot width,
 or 169N (38lbs) per each full turn of screw.

Part Number Code

Series LE260 Card-Lok Five Piece

Suffix options

Assembly length in inches. Standard lengths range from 71.12 (2.80), 96.52 (3.80) and 121.9 (4.80). length.xx
Other lengths available upon request

Mounting Options - 0-80 tapped holes
or choose from Mounting Option Table
Lever Direction
Factory Preset clamping force when expanded to 7.62 (.300)
556N (125lbs)
645N (145lbs)
None

LE260 - 3.80 T0 -1 P

length.xx

T0
see table
-1
-2

P
P2
[blank]

Part Number Code example:
LE260-2.80TM2-1P2
Series LE260 five piece lever actuated Card-Lok with extractor feature, 71.12 (2.80) long with M2 x .40 tapped mounting holes, -1 lever direction and factory preset for 645N (145lbs) clamping force when expanded to .300 DIM

MOUNTING METHOD TABLE	
Code Letter	Method
[blank]	2-56 tapped hole
"T0"	0-80 tapped hole
"TM2"	M2 x 0.40 tapped hole
"TM2.5"	M2.5 x 0.45 tapped hole

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Series 261 Card-Lok

Meets **VITA** 6, 48.2, 48.4, 48.5
In alignment with the
SOSA® Technical Standard



RECOMMENDED GAP WIDTH

PCB + 7.62 mm (.300 in)

RECOMMENDED TORQUE

68 N-cm (6 in-lbs) With
"L" option 90 N-cm (8 in-lbs)

WEIGHT

.95 g/cm (.085 oz/in)

MATERIALS AND FINISH

Screw, Lock And Flat Washer

.09-in. or 2.5-mm hex. socket head cap
screw, depending on mounting configuration

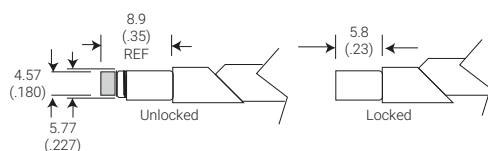
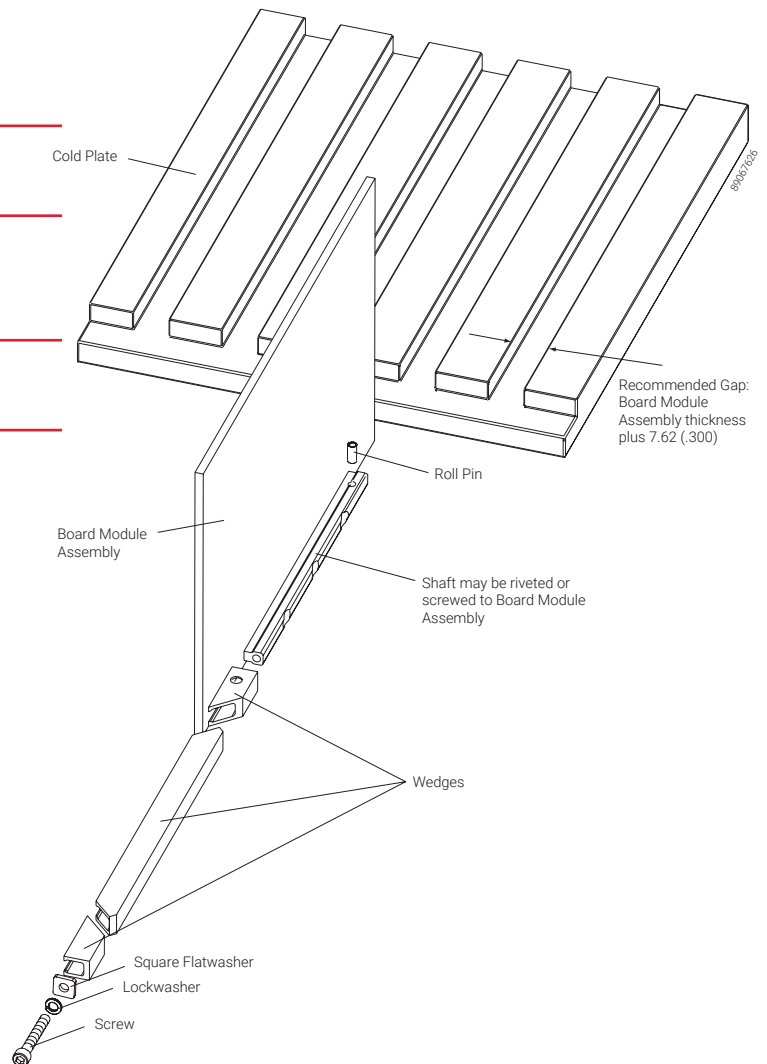
- **Material:** 300 series stainless steel
- **Finish:** Passivated per AMS2700

Bodies, Wedges And Shaft

- **Material:** Aluminum Alloy 6061-T6 per
ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

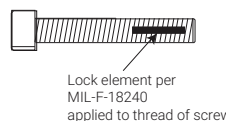
Roll Pin

- **Material:** MS39086-125
- **Finish:** Passivated per AMS2700



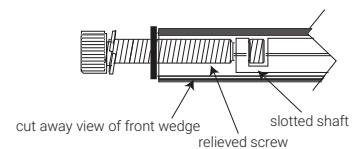
Detail "V"

Provides visual lock indication.



Detail "L"

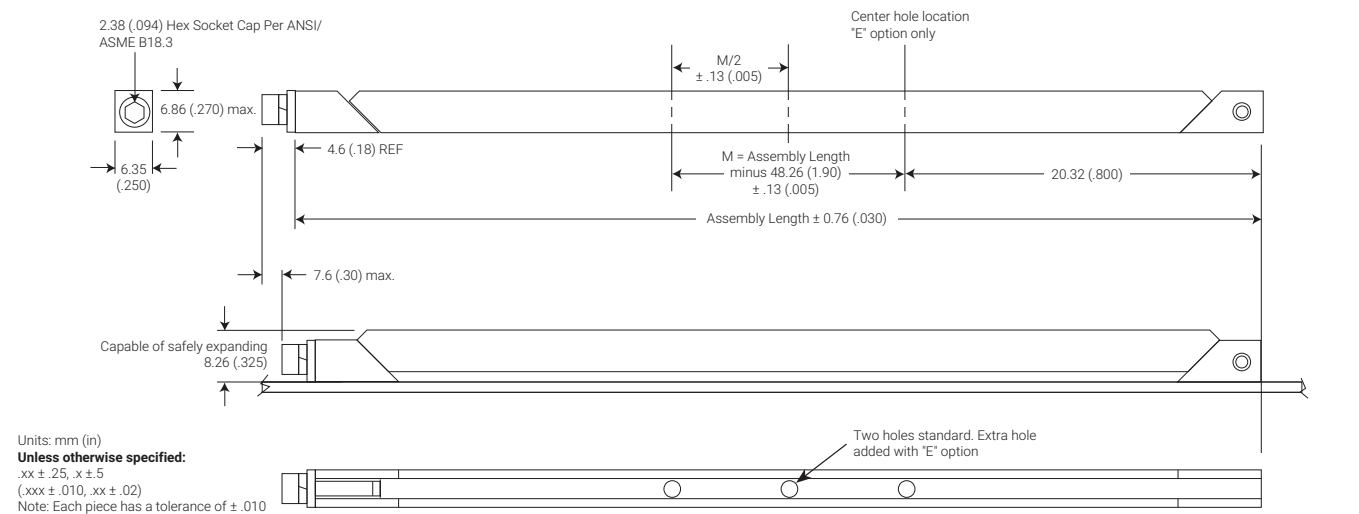
Provides prevailing torque for resistance to loosening from shock and vibration. Adds 22 N-cm (2 in-lbs) torque to assembly. See application data on previous sheet.



Detail "K"

Prevents the unintentional disassembly of screw from shaft.

SERIES 261 CARD-LOK



Part Number Code

Series 261 Card-Lok Three Piece

Prefix options

Metric Screw Head 2.5 mm Hex Drive___M

Standard Screw Head 3/32

Hex Drive___[blank]

Visual Indicator___V

No Visual Indicator___[blank]

Black Anodize___A

or choose from Finish Table___see table

Suffix options

Assembly length in inches. Standard lengths range from 71.12 (2.80), 96.52 (3.80) and 121.9 (4.80).___length.xx

Other lengths available upon request

Additional Center Mounting Hole___E

None___[blank]

Mounting Options - Through mounting holes___H

or choose from Mounting Option Table___see table

Lock Element___L

None___[blank]

Captive Screw___K

None___[blank]

M

V

A

261-

3.80

E

H

L

K

Part Number Code Example:

MVA261-3.80H

Series 261 Card-Lok three piece 96.52 (3.80) long with M2.5 socket head screw, visual indicator, black anodize finish and standard rivet mounting hole.

Finish Table

Code Letter	Finish
[blank]	Chemical Film per Mil-DTL-5541 Class 3, 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 Electroless
"EN"	Nickel per Mil-C-26074 Class 4, Grade B, Bright

Mounting Method Table

Code Letter	Method
"H"	ø 1.73/1.85 (.068/.073) dia. through holes countersink 100° x 1.50 (.060) deep
"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

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Series 263 Card-Lok

Meets **VITA** 46, 48.2, and 48.4
In alignment with the
SOSA® Technical Standard



RECOMMENDED GAP WIDTH

PCB + 8.25 mm (.325 in)

RECOMMENDED TORQUE

68 N-cm (6 in-lbs) With "L" option 90 N-cm (8 in-lbs)

WEIGHT

1.07 g/cm (.096 oz/in)

MATERIALS AND FINISH

Bodies, Wedges and Shaft

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Screw, Lock and Flat Washer

.09 in. or 2.5 mm hex. socket head cap screw, depending on mounting configuration

- **Material:** NAS1352C, Modified NAS1352C04 or 8-8 stainless steel
- **Finish:** Passivated per AMS2700

Lock Washer

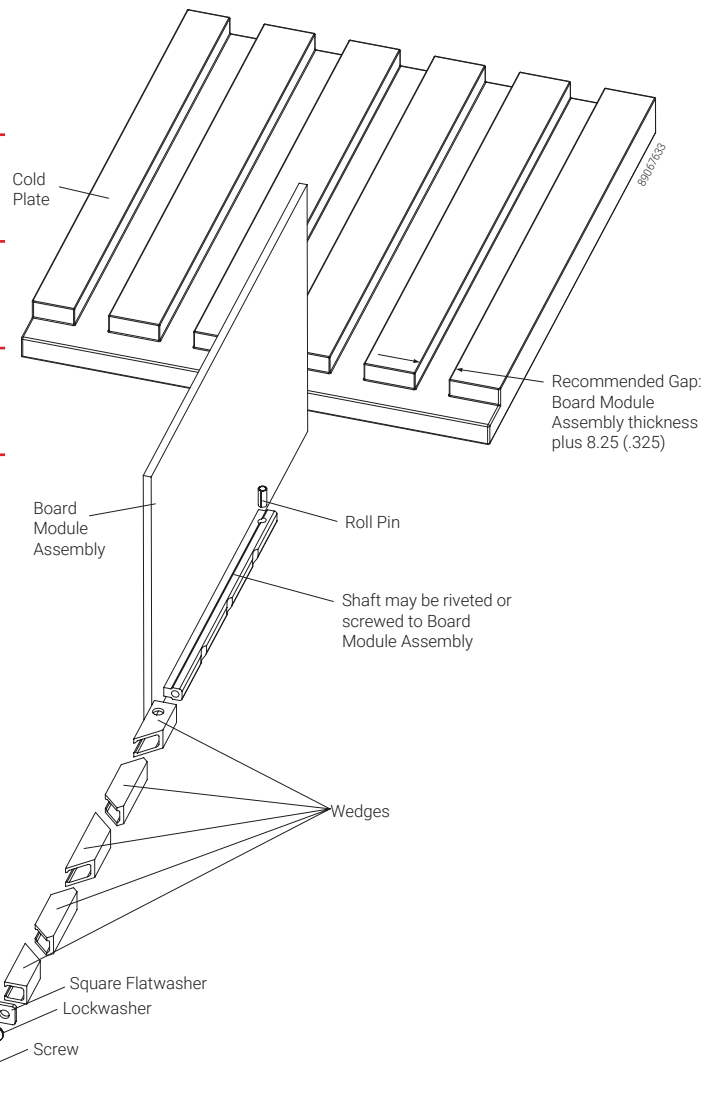
- **Material:** MS35338-135
- **Finish:** Passivated per AMS2700

Flat Washer

- **Material:** 300 series stainless steel
- **Finish:** Passivated per AMS2700

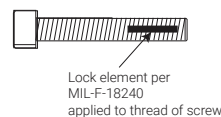
Roll Pin

- **Material:** 400 series stainless steel
- **Finish:** Passivated per AMS2700



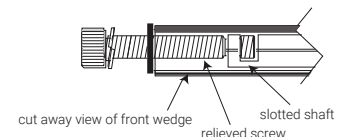
Detail "V"

Provides visual lock indication.



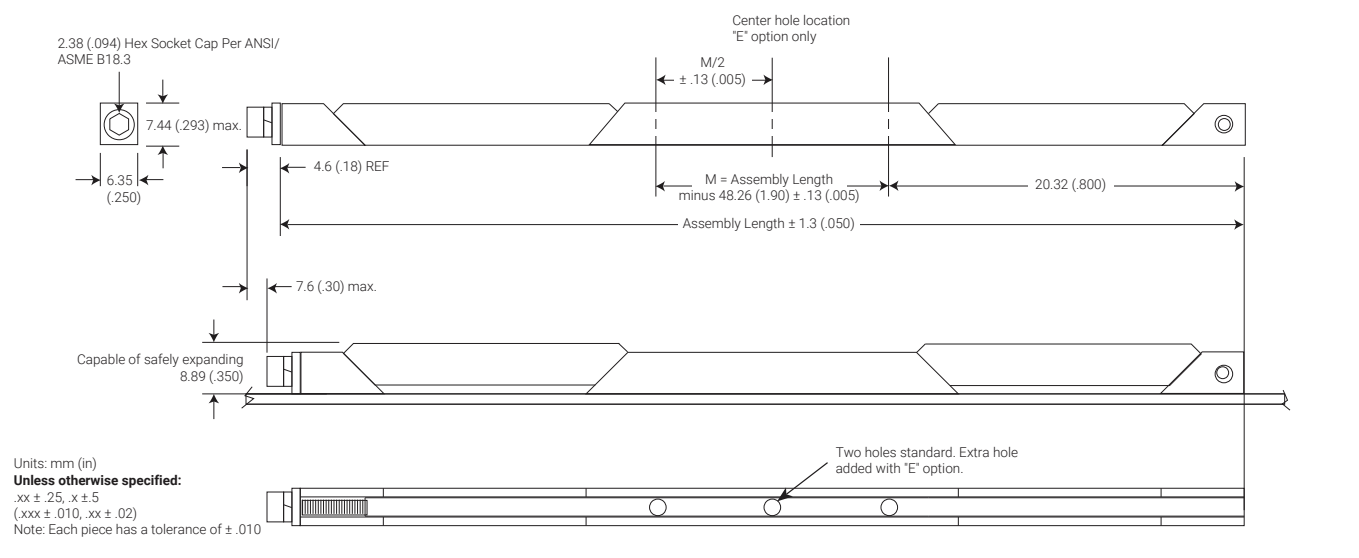
Detail "L"

Provides prevailing torque for resistance to loosening from shock and vibration. Adds 22 N-cm (2 in-lbs) torque to assembly.



Detail "K"

Prevents the unintentional disassembly of screw from shaft.



Part Number Code	M	V	A	263	-	2.80	E	H	L	K
Screw										
Metric Screw Head 2.5 mm Hex Drive							M			
Standard Screw Head 3/32 Hex Drive							[Blank]			
Type										
Torque Limiting Version*							TLC			
Standard version with Visual Indicator							V			
Standard version							[Blank]			
Finish										
Black Anodized							A			
or select code letter from Finish Table										
Length										
Length in 12.7 (.50) increments							71.12 [2.80]			
							to 325.12 [12.80]			
Mounting										
Additional Center Mounting Hole.								E		
None								[Blank]		
Mounting Options – through mounting holes.									H	
Or choose from Mounting Method Table										
Lock Patch										
Lock Patch									L	
None									[Blank]	
Captive Screw										K
None										[Blank]

Part Number Code Example:
TLC263-4.80TM2.5

Series 263 Card-Lok, with torque limiting option, gold chem film finish, 121.9 (4.80) long and M2.5 x 0.45 tapped holes for mounting.

Code Letter	Finish
[blank]	Chemical Film per Mil-DTL-5541 Class 3, 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

Code Letter	Method
"H"	Ø 1.73/1.85 (.068/.073) dia. through holes countersink 100° x 1.52 (.060) deep
"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

NOTE: For torque limiting "tlc" version: the minimum length is 96.52 (3.80) the front mounting hole, nearest to the screw, will be replaced with an indexing pin visual indicator lock patch options not available must click 3+ times for proper installation

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Series 263HC Card-Lok

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RECOMMENDED GAP WIDTH

PCB + 8.25 mm (.325 in)

RECOMMENDED TORQUE

68 N-cm (6 in-lbs) With "L" option 90 N-cm (8 in-lbs)

WEIGHT

1.07 g/cm (.096 oz/in)

MATERIALS AND FINISH

Bodies and Wedges

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Shaft

- **Material:** Aluminum alloy 7075-T6 per ASTM-B221 or AMS-QQ-A-200/11
- **Finish:** See finish table on opposite page

Screw

.09 in. or 2.5 mm hex. socket head

- **Material:** 300 series stainless steel with dry film lube per MIL-L-46010

Rollpins and Flat Washer

- **Material:** 400 series stainless steel
- **Finish:** Passivated per AMS2700

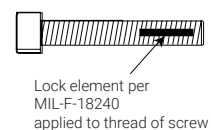
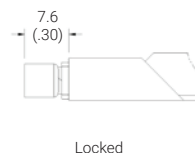
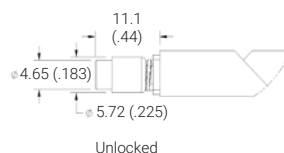
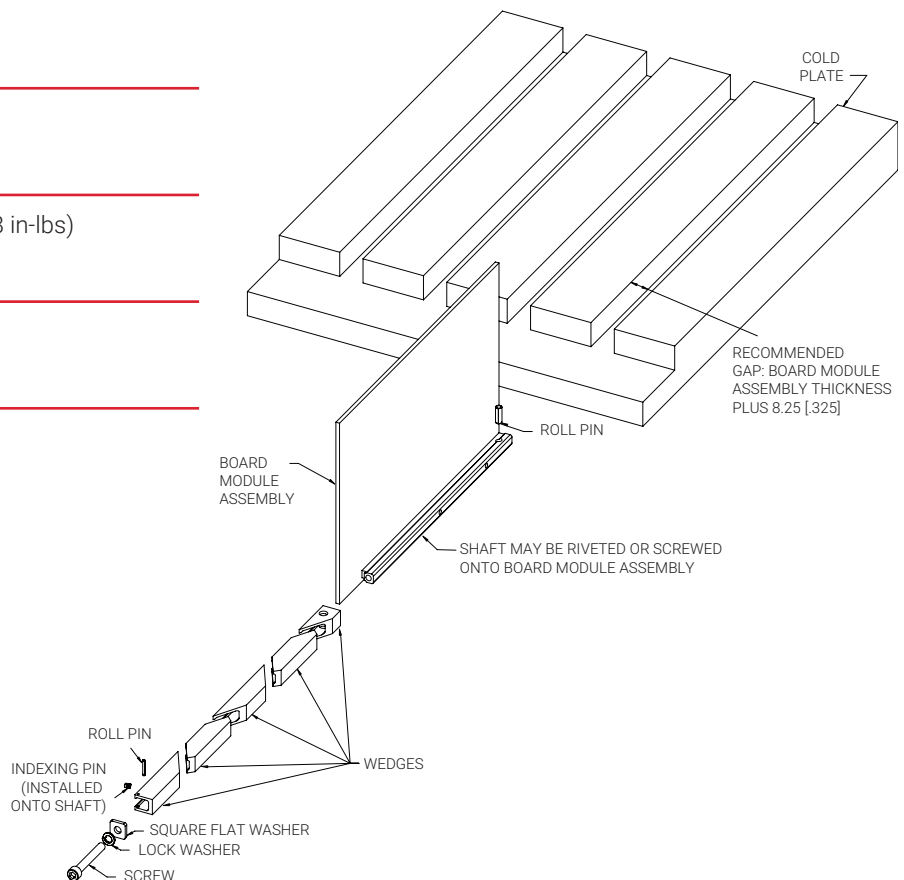
Lock Washer

- **Material:** MS35338-135
- **Finish:** Passivated per AMS2700

Indexing Pins

- **Material:** Aluminum alloy 6061-T6
- **Finish:** See finish table on opposite page

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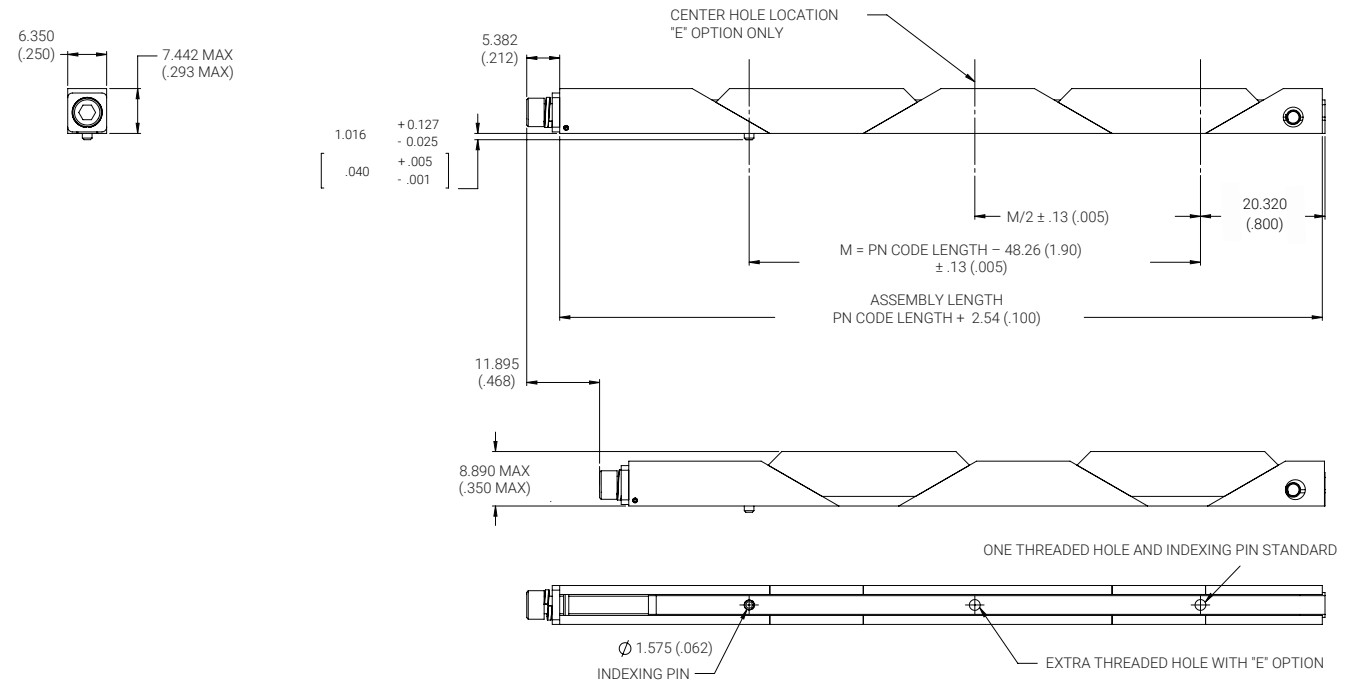


Detail "V"

Provides visual lock indication.

Detail "L"

Provides prevailing torque for resistance to loosening from shock and vibration. Adds 22 N-cm (2 in-lbs) torque to assembly.



Part Number Code
Series 263HC Card-Lok Five Piece

Prefix options
Metric Screw Head 2.5 mm Hex Drive M
Standard Screw Head 3/32 _____
Hex Drive _____ [blank]
Visual Indicator _____ V
No Visual Indicator _____ [blank]
Black Anodize _____ A
or choose from Finish Table _____ see table

Suffix options
Length in 12.7 (.50) increments _____ 96.52 (3.80)
_____ to 172.72 (6.80)
Additional Center Mounting Hole _____ E
None _____ [blank]
Mounting Options - holes for rivet mounting _____ H
or choose from Mounting Option Table _____ see table
Lock Element _____ L
None _____ [blank]

Part Number Code Example:
MVA263HC-3.80ET2L

Series 263HC Card-Lok five piece 96.52 (3.80) long black anodized with 2.5 mm hex drive, visual indicator, mounting holes tapped for 2-56 thread, with locking element.

Finish Table

Code letter	Finish
"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
"H"	Ø 1.73/1.85 (.068/.073) DIA. THROUGH HOLES COUNTERSINK 100° X 1.50 (.060) DEEP
"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

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Series 265 Card-Lok

Meets **VITA** 46, 48.2, 48.4
In alignment with the
SOSA® Technical Standard



RECOMMENDED GAP WIDTH

PCB + 6.35 mm (.250 in)

RECOMMENDED TORQUE

68 N-cm (6 in-lbs) With "L" option 90 N-cm (8 in-lbs)

WEIGHT

.89 g/cm (.080 oz/in)

MATERIALS AND FINISH

Shaft

- **Material:** Aluminum alloy 7075-T6 per ASTM B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Bodies and Wedges

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/11
- **Finish:** See finish table on opposite page

Screw

.09 in. or 2.5 mm hex. socket head cap screw, depending on mounting configuration

- **Material:** NAS1352C, Modified NAS1352C04 or 300 series stainless steel, stainless steel per ASTM-A582
- **Finish:** Passivated per AMS2700

Lock and Flat Washer

- **Material:** 300 series stainless steel
- **Finish:** Passivated per AMS2700

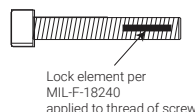
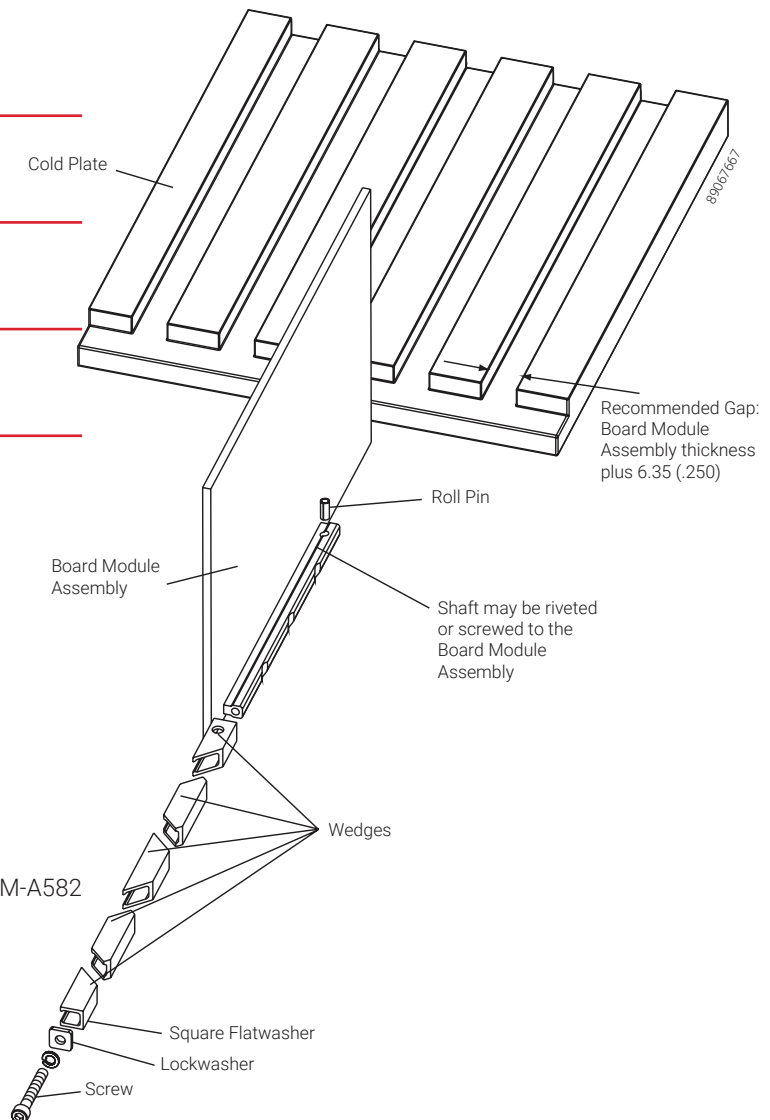
Roll Pin

- **Material:** 400 series stainless steel
- **Finish:** Passivated per AMS2700



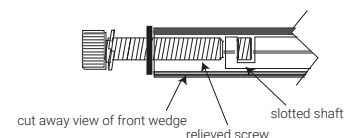
Detail "V"

Provides visual lock indication.



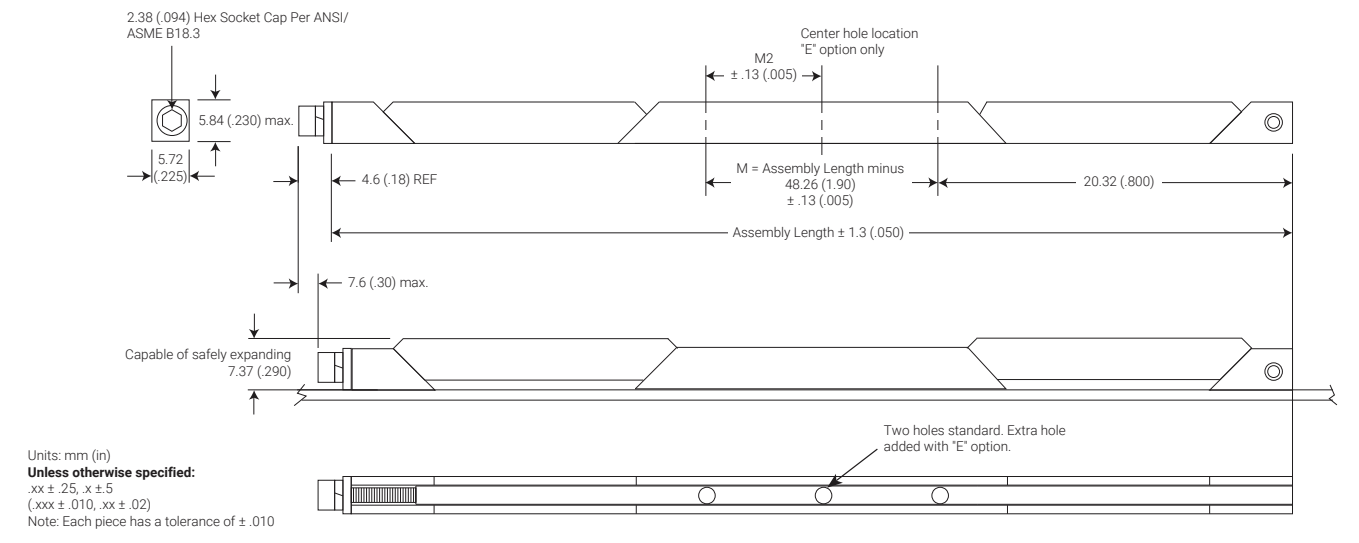
Detail "L"

Provides prevailing torque for resistance to loosening from shock and vibration. Adds 22 N-cm (2 in-lbs) torque to assembly.



Detail "K"

Prevents the unintentional disassembly of screw from shaft.



Part Number Code	M	V	A	265	-	2.80	E	H	L	K
Screw										
Metric Screw Head 2.5 mm Hex Drive							M			
Standard Screw Head 3/32 Hex Drive							[Blank]			
Type										
Torque Limiting Version*							TLC			
Standard version with Visual Indicator							V			
Standard version							[Blank]			
Finish										
Black Anodized							A			
or select code letter from Finish Table										
Length										
Length in 12.7 (.50) increments							71.12 [2.80]			
							to 325.12 [12.80]			
Mounting										
Additional Center Mounting Hole.							E			
None							[Blank]			
Mounting Options – through mounting holes							H			
Or choose from Mounting Method Table										
Lock Patch										
Lock Patch							L			
None							[Blank]			
Captive Screw							K			
None							[Blank]			

Part Number Code Example:

TLCHA265-4.80H

Series 265 Card-Lok, with torque limiting option, hard black anodized finish, 121.9 (4.80) long and standard rivet hole mounting.

Finish Table

Code letter	Surface finish
[blank]	Chemical Film per Mil-DTL-5541 Class 3, Gold, Type I
"R"	Chemical Film per Mil-DTL-5541 Class 3, Clear, Type II
"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
"H"	ø 1.73/1.85 (.068/.073) dia. through holes countersink 100° x 1.52 (.060) deep
"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

NOTE: For torque limiting "tlc" version: the minimum length is 96.52 (3.80) the front mounting hole, nearest to the screw, will be replaced with an indexing pin visual indicator lock patch options not available must click 3+ times for proper installation

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Series 265HC Card-Lok

Meets **VITA** 46, 48.2, 48.4
In alignment with the
SOSA® Technical Standard



RECOMMENDED GAP WIDTH

PCB + 6.35 mm (.250 in)

RECOMMENDED TORQUE

68 N-cm (6 in-lbs) With "L" option 90 N-cm (8 in-lbs)

WEIGHT

.89 g/cm (.080 oz/in)

MATERIALS AND FINISH

Bodies and Wedges

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Shaft

- **Material:** Alluminum alloy 7075-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Screw

.09-in. or 2.5-mm hex. socket head

- **Material:** 300 series stainless steel with dry film lube per MIL-L-46010
- **Finish:** Passivated per AMS2700

Rollpins and Flat Washer

- **Material:** 400 series stainless steel
- **Finish:** Passivated per AMS2700

LOCK WASHER

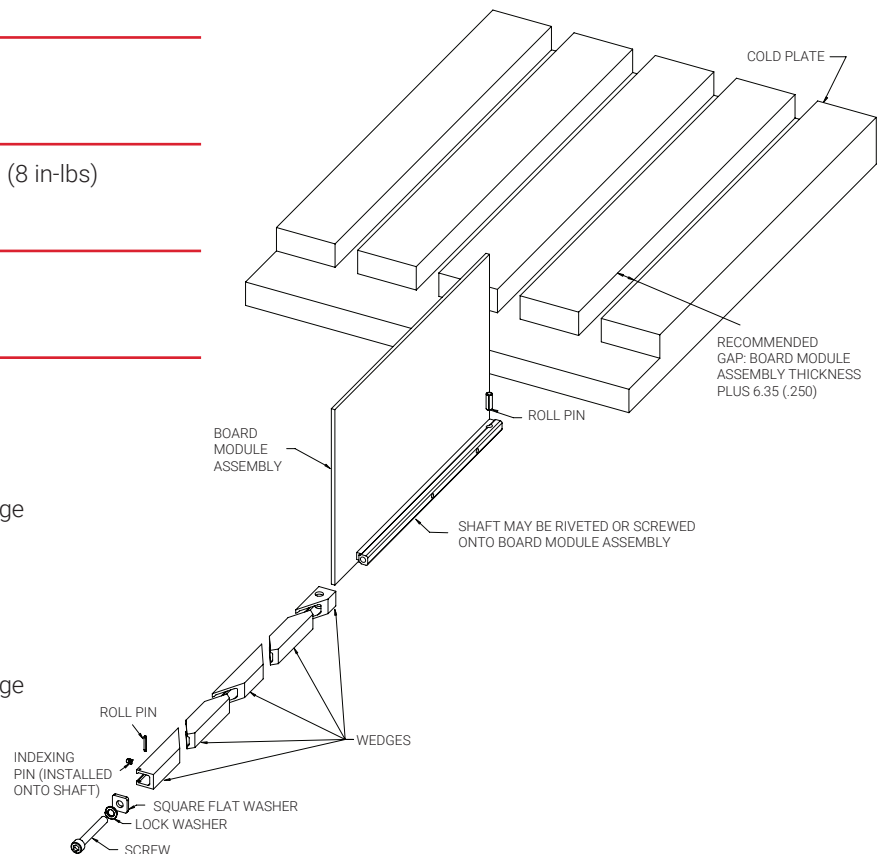
- **Material:** MS35338-135
- **Finish:** Passivated per AMS2700

INDEXING PINS

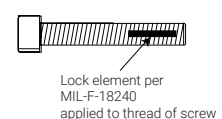
- **Material:** Aluminum alloy 6061-T6
- **Finish:** See finish table on opposite page

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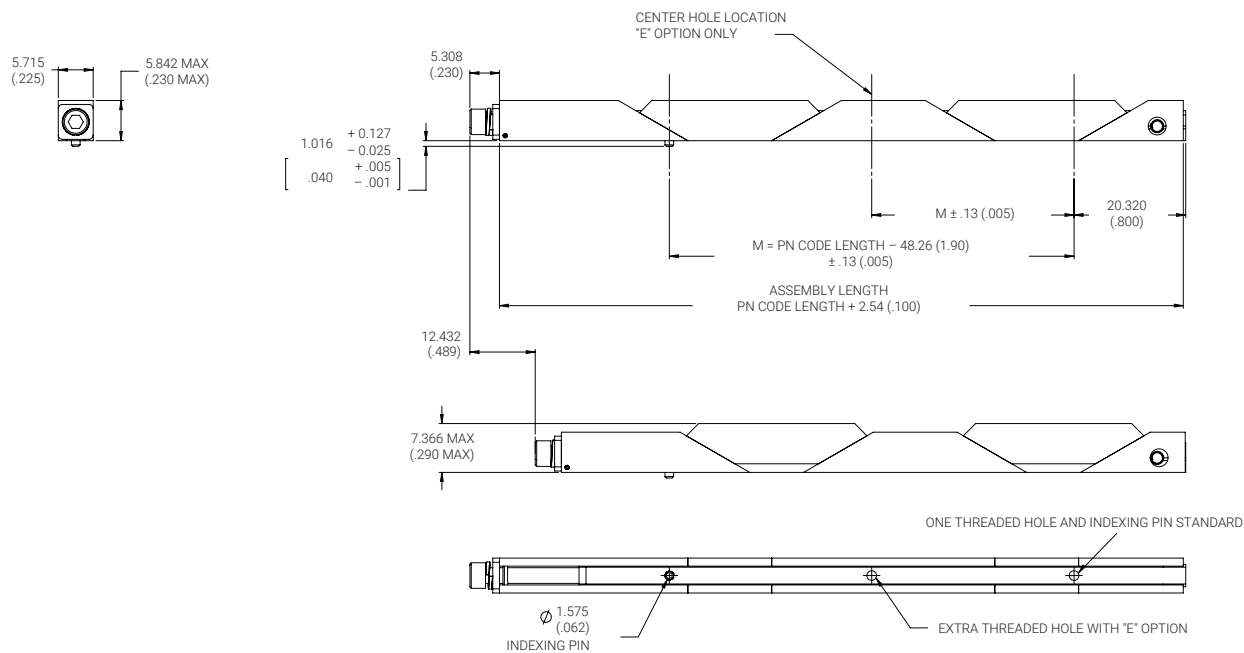
SCHROFF-DS-H83415-265HCCardLok-EN-2506



Detail "V"
Provides visual lock indication.



Detail "L"
Provides prevailing torque for resistance to loosening from shock and vibration. Adds 22 N-cm (2 in-lbs) torque to assembly.



Part Number Code

Series 265HC Card-Lok Five Piece

M V A 265HC - 3.80 E H L

Prefix options

Metric Screw Head 2.5 mm Hex Drive **M**

Standard Screw Head 3/32

Hex Drive [blank]

Visual Indicator **V**

No Visual Indicator [blank]

Black Anodize **A**

or choose from Finish Table see table

Suffix options

Length in 12.7 (.50) increments **96.52 (3.80)**

to **172.72(6.80)**

Additional Center Mounting Hole **E**

None [blank]

Mounting Options - holes for rivet mounting **H**

or choose from Mounting Option Table see table

Lock Element **L**

None [blank]

Part Number Code Example: **MVA263HC-3.80ET2L**

Series 263HC Card-Lok five piece 96.52 (3.80) long black anodized with M2.5 hex drive, visual indicator, mounting holes tapped for 2-56 thread, with locking element.

FINISH TABLE

CODE LETTER	FINISH
"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
"H"	Ø1.73/1.85 (.068/.073) dia. through holes countersink 100° x 1.50 (.060) deep
"T0"	0-80 tapped hole
"T2"	2-56 tapped hole
"TM2"	M2 x 0.40 tapped hole
"tTM2.5"	M2.5 x 0.45 tapped hole

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Series 265HTS Card-Lok



Meets **VITA** 46, 48.2, 48.4
In alignment with the
SOSA® Technical Standard

RECOMMENDED GAP WIDTH

PCB + 6.35 mm (.250 in)

RECOMMENDED TORQUE

68 N-cm (6 in-lbs)

WEIGHT

1,21 g/cm (0,109 oz/po)

MATERIALS AND FINISH

Brackets and Front Wedge

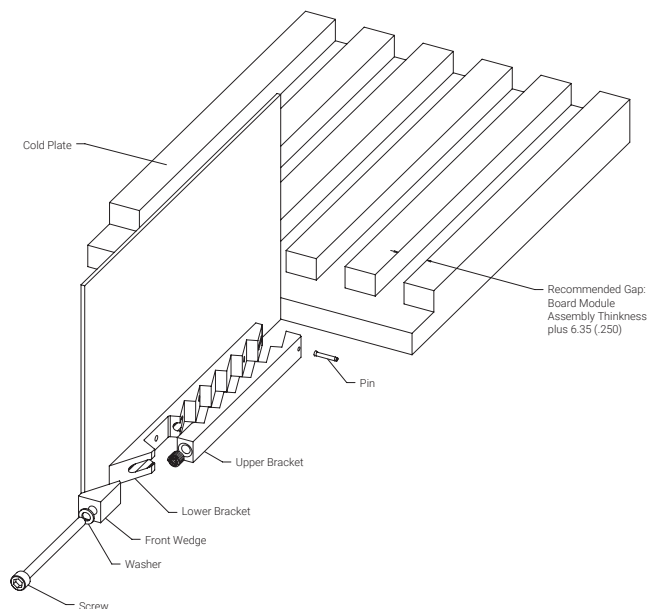
- **Material:** 6061-T6 or T6XXX per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Screw and Washer

- **Material:** Stainless steel
- **Finish:** Passivated per AMS2700 and dry film lube per MIL-L-46010

Pin

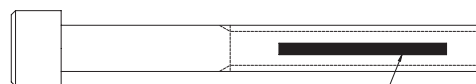
- **Material:** Stainless steel
- **Finish:** Passivated per AMS2700



DETAIL K (RELAXED VIEW)

Detail K

Prevents the unintentional disassembly of screw from shaft.

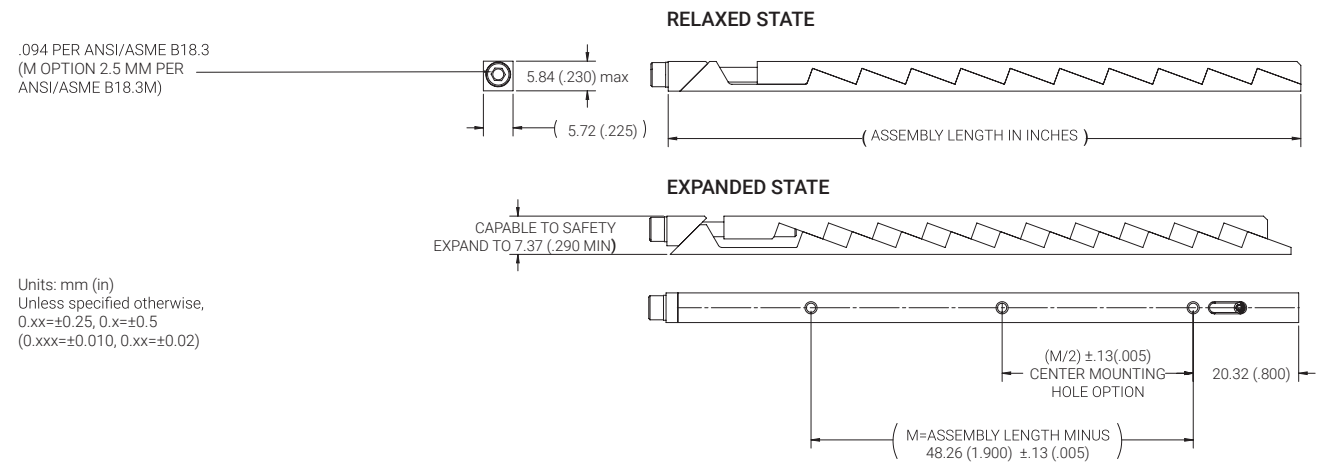


Lock element per MIL-F-18240 applied to thread of screw

Detail L

Lock element provides prevailing torque for resistance to loosening from shock and vibration.

DIMENSIONS



PRODUCT CONFIGURATION

Screw Drive	M	A	265HTS-2.80	E	T2	L	K
Metric Screw Head 2.5 mm Hex Drive	M						
Standard Screw Head 3/32 Hex Drive	[Blank]						
Surface Finish		A					
Black Anodized		A					
Electroless Nickel		EN					
Length			71.12 (2.80)				
Length in 12.7 (.50 increments)			to 325.12 (12.80)				
Mounting				E			
Additional Center Mounting Hole				E			
None				[Blank]			
Mounting Options - Mounting Holes				T2			
or choose from Mounting Method Table							
Threaded Insert							
Lock Patch					L		
Free Running Insert					[Blank]		
Screw Type							K
Captive Screw							K
Standard							[Blank]

Finish Table

Code Letter	Surface Finish
A	Black Anodize Per MILA 8625 Type II, Class 2
EN	Electroless Nickel Per MIL-C-26074 Class 4, Grade B, Bright

Mounting Method Table

Code Letter	Surface Finish
E	Additional Center Mounting Hole
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

Part Number Code example: M A 265HTS – 4.80 E T2 L K
Series 265HTS Card-Lok with M2.5 hex drive, black anodized finish, 121.9 (4.80) long, with additional mounting hole, 2–56 tapped hole, locking insert and captive screw.

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Series 265PR Card-Lok



Meets **VITA** 46, 48.2, 48.4
In alignment with the
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RECOMMENDED GAP WIDTH

PCB + 6.35 mm (.250 in)

RECOMMENDED TORQUE

68 N-cm (6 in-lbs) With "L" option 90 N-cm (8 in-lbs)

WEIGHT

.89 g/cm (.080 oz/in)

MATERIALS AND FINISH

Bodies and wedges

- **Material:** Aluminum Alloy 6061-T6 per ASTM B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Shaft

- **Material:** Aluminum alloy 7075-T6 per ASTM B221 or AMS-QQ-A-200/11
- **Finish:** See finish table on opposite page

Screw

.09 in or 2.5 mm hex. socket head cap screw, depending on mounting configuration

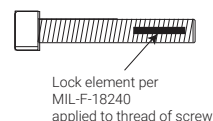
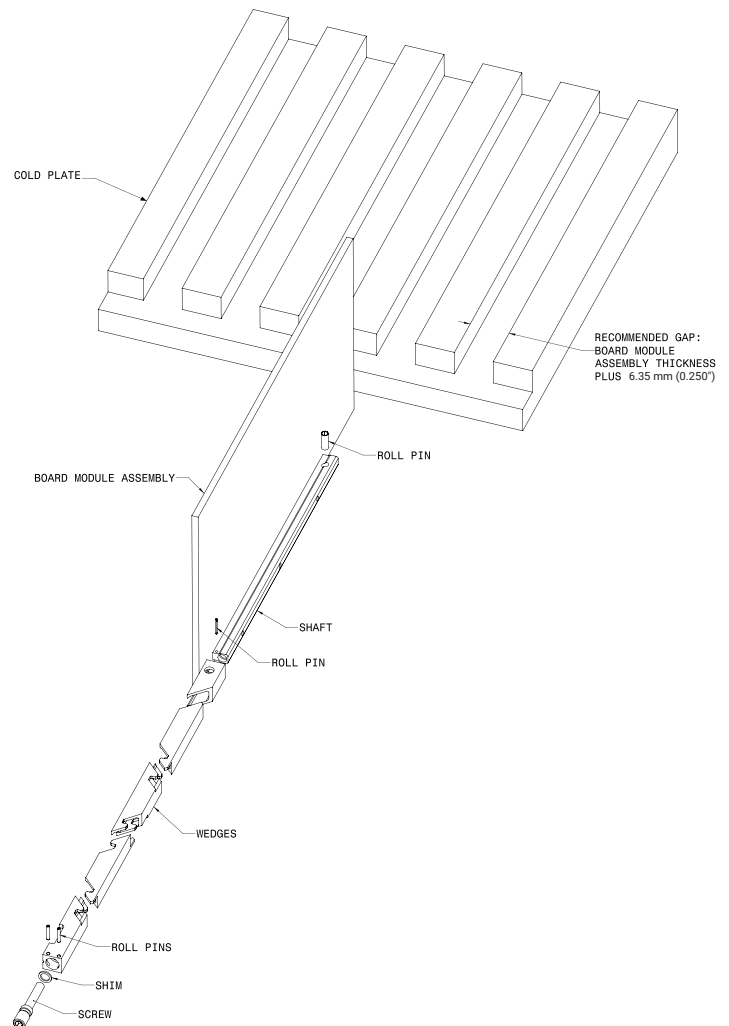
- **Material:** 300 Series Stainless Steel per ASTM-A582
- **Finish:** Passivated per AMS2700 with dry film lube per MIL-L-46010

Back and front roll pins

- **Material:** 400 series stainless steel
- **Finish:** Passivated per AMS2700

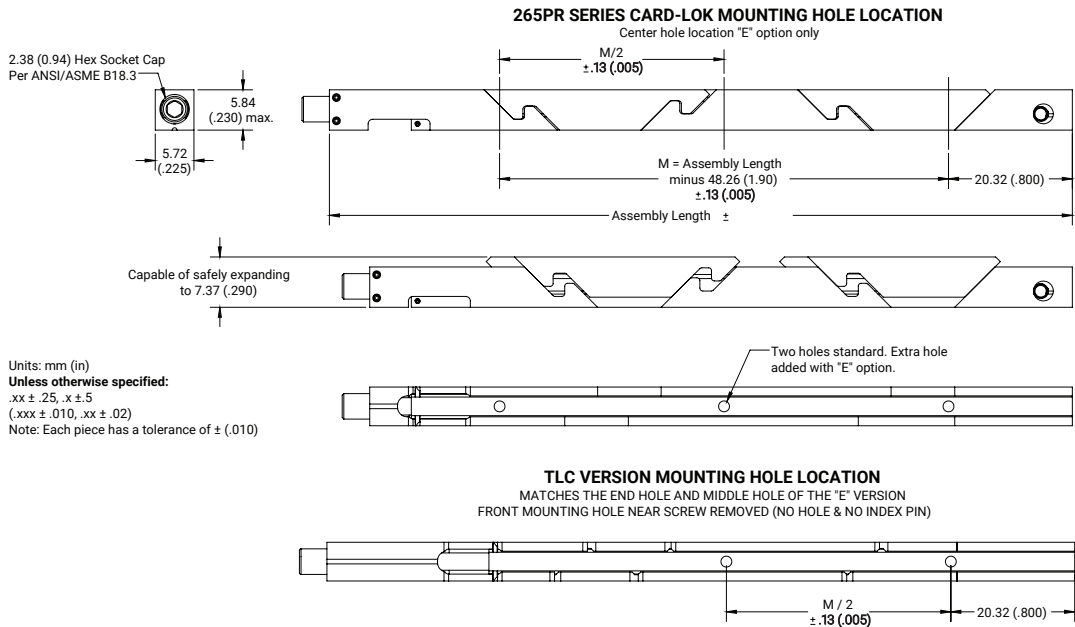
Shim

- **Material:** 300 Series Stainless Steel per QQ-S-766
- **Finish:** Passivated per ASTM A380



Detail "L"

Provides prevailing torque for resistance to loosening from shock and vibration. Adds 22 N-cm (2 in-lbs) torque to assembly.



Part Number Code	M	TLC	A	265PR	-3.30	E	H	L
Screw Metric Screw Head 2.5 mm Hex Drive _____ M Standard Screw Head 3/32 Hex Drive _____ [Blank]								
Type Torque Limiting Version* _____ TLC Standard version _____ [Blank]								
Finish Black Anodized _____ A or select code letter from Finish Table								
Length Length in 12.7 (.50) increments _____ 83.82 [3.30] _____ to 325.12 [12.80]								
Mounting Additional Center Mounting Hole _____ E None _____ [Blank] Mounting Options – through mounting holes _____ H Or choose from Mounting Method Table								
Lock Patch Lock Patch _____ L None _____ [Blank]								

Part Number Code Example:
TLCHA265PR-4.80H
Series 265PR Card-Lok, with torque limiting option, hard black anodized finish, 121.9 (4.80) long and standard rivet hole mounting

Code Letter	Surface finish
[blank]	Chemical Film per Mil-DTL-5541 Type I, Class 3, Gold
"R"	Chemical Film per Mil-DTL-5541 Type II, Class 3, 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

Code Letter	Method
"H"	ø 1.73/1.85 (.068/.073) dia. through holes countersink 100° x 1.52 (.060) deep
"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

NOTE: For torque limiting "TLC" version:
the minimum length is 96.52 (3.80) the front mounting hole, nearest to the screw, will be removed and a center hole added similar to the E option.
Must click 3+ times for proper installation

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Series 266 Card-Lok



Meets **VITA** 46, 48.2, 48.4,
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SOSA® Technical Standard

RECOMMENDED GAP WIDTH

PCB + 6.35 mm (.250 in)

RECOMMENDED TORQUE

68 N-cm (6 in-lbs)
With "L" option 90 N-cm (8 in-lbs)

WEIGHT

.89 g/cm (.080 oz/in)

MATERIALS AND FINISH

Bodies and Wedges

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Shaft

- **Material:** Aluminum alloy 7075-T6 per ASTM-B221 or AMS-QQ-A-200/11
- **Finish:** See finish table on opposite page

Screw

3/32 in. or 2.5 mm hex. socket head cap screw, depending on mounting configuration

- **Material:** NAS1352C, Modified NAS1352C04 or 18-8 stainless steel, stainless steel per ASTM-A582
- **Finish:** Passivated per AMS2700

Rollpins and Flat Washer

- **Material:** 300 series stainless steel
- **Finish:** Passivated per AMS2700

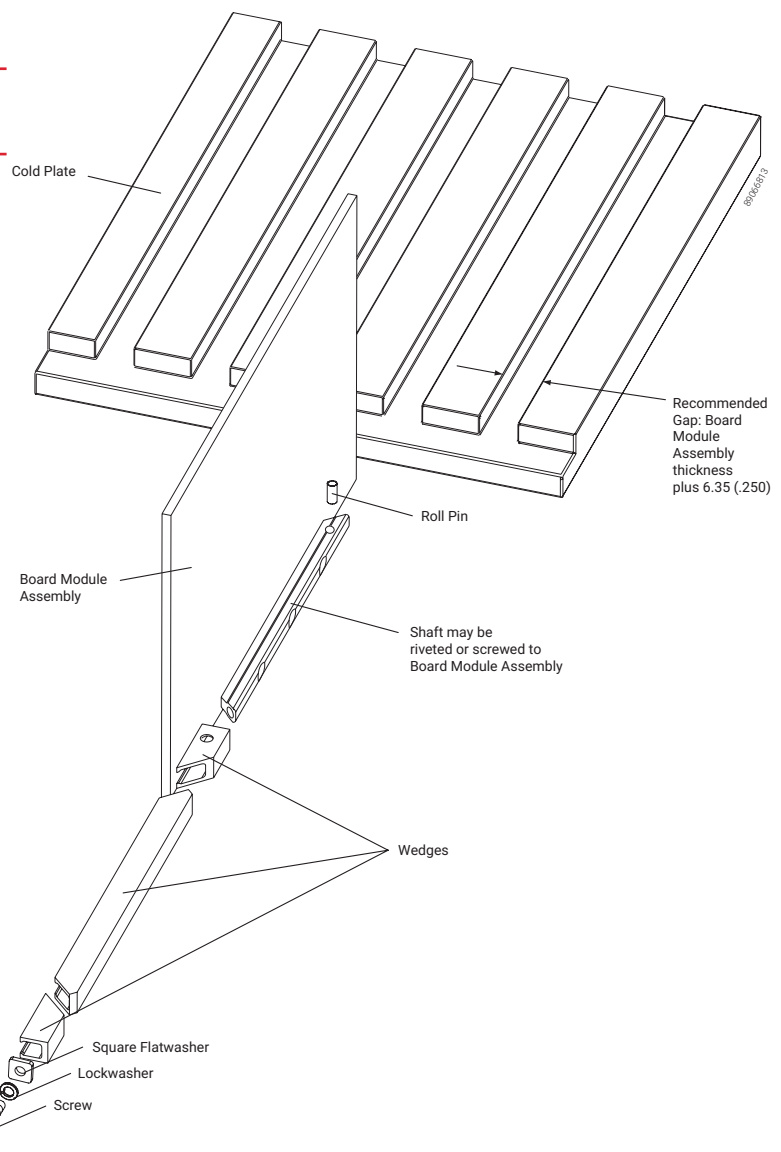
Basket (Option 'V')

- **Material:** Stainless Steel per ASTM-A240 or ASTM-A582
- **Finish:** Passivate per AMS2700

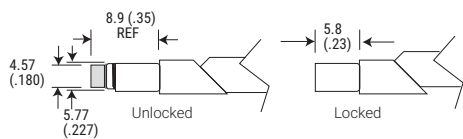
Spring (Option 'V')

- **Material:** 17-7 SS Wire per AMS5678
- **Finish:** Passivate per AMS2700

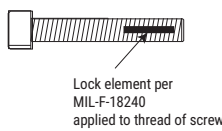
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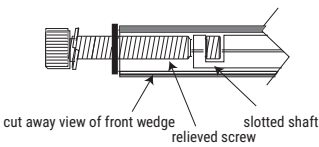
SERIES 266 CARD-LOK



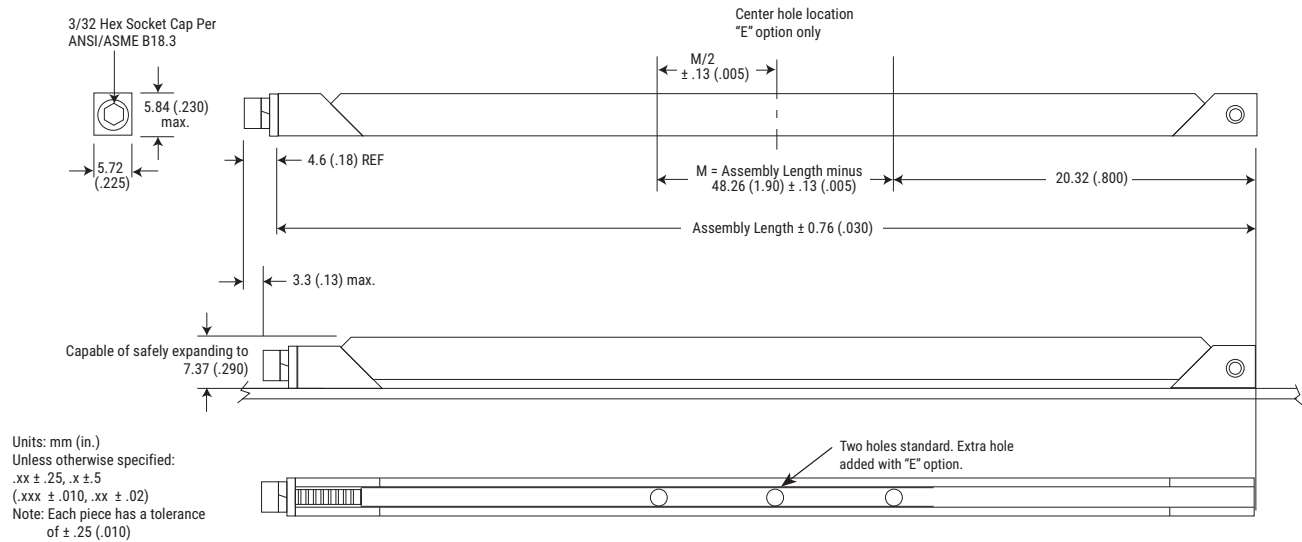
Detail "V"
Provides visual lock indication



Detail "L"
Provides prevailing torque for resistance to loosening from shock and vibration. Adds 22 N-cm (2 in-lbs) torque to assembly. See application data on previous sheet.



Detail "K"
Prevents the unintentional disassembly of screw from shaft.



Part Number Code

Prefix options

Metric Screw Head 2.5 mm Hex Drive **M**
Standard Screw Head 3/32 Hex Drive **[blank]**
Visual Indicator **V**
No Visual Indicator **[blank]**
Black Anodize **[blank]**
or choose from Finish Table **see table**

Suffix options

Assembly length in inches. Standard lengths range from 71.12 (2.80), 96.52 (3.80) and 121.9 (4.80). **length.xx**
Other lengths available upon request.
Additional Center Mounting Hole **E**
None **[blank]**
Mounting Options - holes for rivet mounting **H**
or choose from Mounting Option Table **see table**
Lock Element **L**
None **[blank]**
Captive Screw **K**
None **[blank]**

Part Number Code Example:

266-2.80T2K Series 266 three piece Card-Lok gold chemical film finish, 71.12 (2.80) long with 2-56 tapped mounting holes and captive screw feature

Finish Table

Code	
[blank]	Chemical Film per Mil-DTL-5541 Class 3, Type I, Gold Non Rohs Compliant
"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	
"H"	ø 1.73/1.85 (.068/.073) dia. through holes countersink 100° × 1.52 (.060) deep
"T0"	0-80 tapped hole
"T2"	2-56 tapped hole
"TM2"	M2 × 0.40 tapped hole
"TM2.5"	M2.5 × 0.45 tapped hole

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Series 267 Card-Lok



Meets **VITA** 46, 48.2, 48.4
In alignment with the
SOSA® Technical Standard

RECOMMENDED GAP WIDTH

PCB + 5.59 mm (.220 in)

RECOMMENDED TORQUE

68 N-cm (6 in-lbs) With "L" option 90 N-cm (8 in-lbs)

WEIGHT

.75 g/cm (.067 oz/in)

MATERIALS AND FINISH

Bodies and Wedges

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Shaft

- **Material:** Aluminum alloy 7075-T6 per ASTM-B221 or AMS-QQ-A-200/11
- **Finish:** See finish table on opposite page

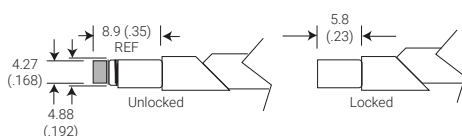
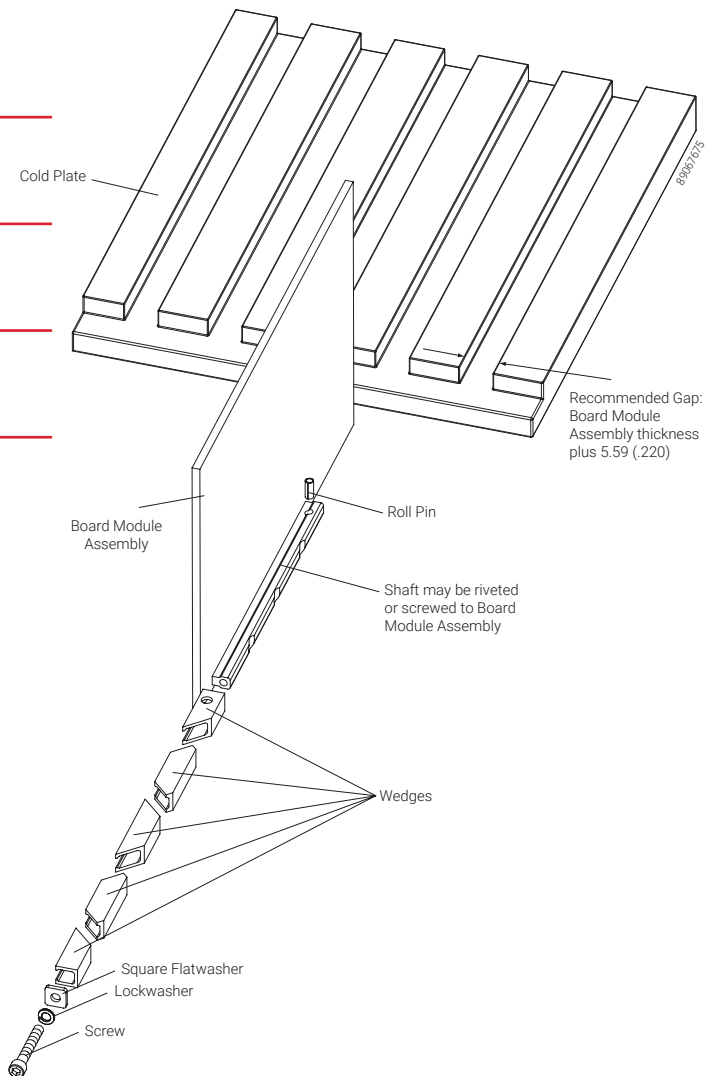
Screw

.09 in. or 2.5 mm hex. socket head cap screw, depending on mounting configuration

- **Material:** NAS1352C, Modified NAS1352C04 or 18-8 stainless steel, stainless steel per ASTM-A582
- **Finish:** Passivated per AMS2700

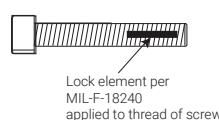
Rollpin

- **Material:** 300 series stainless steel
- **Finish:** Passivated per AMS2700



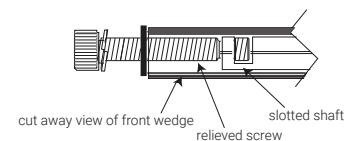
Detail "V"

Provides visual lock indication.



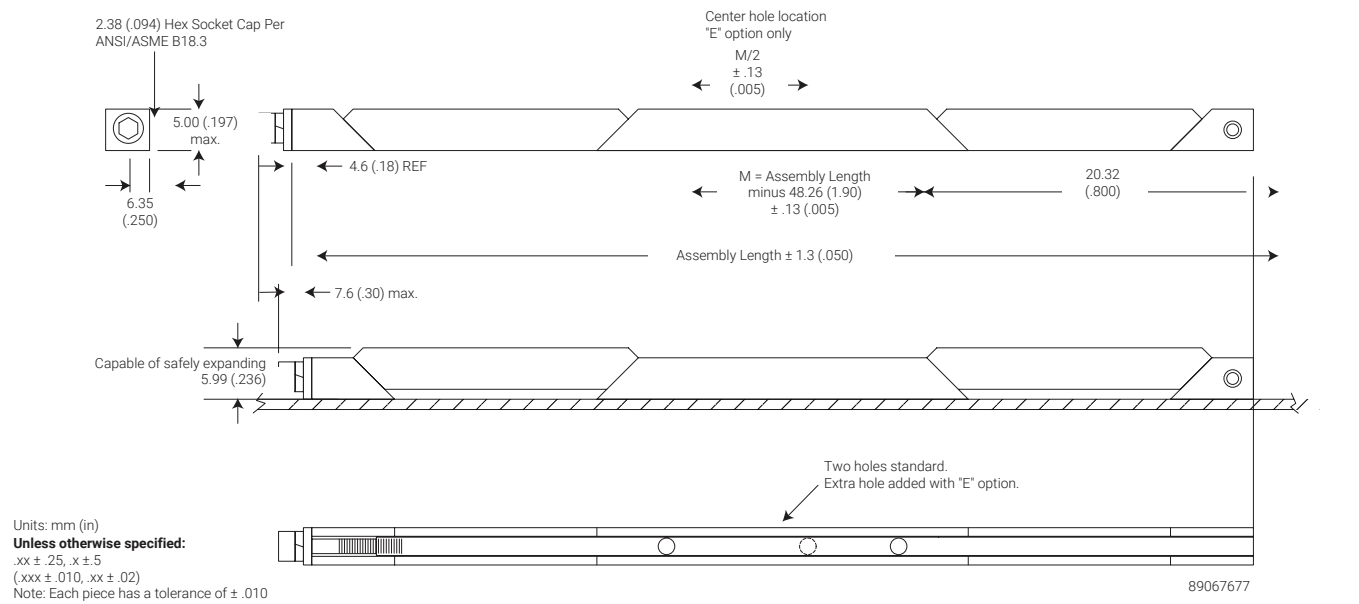
Detail "L"

Provides prevailing torque for resistance to loosening from shock and vibration. Adds 22 N-cm (2 in-lbs) torque to assembly. See application data on previous sheet.



Detail "K"

Prevents the unintentional disassembly of screw from shaft.



Part Number Code
Series 267 Card-Lok Five Piece

Prefix options

Metric Screw Head 2.5 mm Hex Drive **M**
Standard Screw Head 3/32
Hex Drive [blank]
Visual Indicator **V**
No Visual Indicator [blank]
Black Anodize **A**
or choose from Finish Table see table

Suffix options

Assembly length in inches. Standard lengths range from 71.12 (2.80), 96.52 (3.80) and 121.9 (4.80). length.xx

Other lengths available upon request

Additional Center Mounting Hole **E**
None [blank]

Mounting Options – holes for rivet mounting **H**
or choose from Mounting Option Table see table

Lock Element **L**
None [blank]

Captive Screw **K**
None [blank]

Part Number Code Example:

267-2.80T2K

Series 267 ve piece Card-Lok gold chemical Im nish, 71.12 (2.80) long with 2–56 tapped mounting holes and captive screw feature

Finish Table

Code letter	Finish
[blank]	CHEMICAL FILM PER MIL-DTL-5541 CLASS 3, GOLD
"R"	CHEMICAL FILM PER MIL-DTL-5541 CLASS 3, TYPE II, CLEAR
"A"	BLACK ANODIZE PER MIL-A-8625 TYPE II, CLASS 2
"H"	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
"H"	ø 1.73/1.85 (.068/.073) DIA. THROUGH HOLES COUNTERSINK 100° × 1.50 (.060) DEEP
"T0"	0–80 TAPPED HOLE
"T2"	2–56 TAPPED HOLE
"TM2"	M2 × 0.40 TAPPED HOLE
"TM2.5"	M2.5 × 0.45 TAPPED HOLE

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Series 267HC Card-Lok

Meets **VITA** 46, 48.2, 48.4
In alignment with the
SOSA® Technical Standard



RECOMMENDED GAP WIDTH

PCB + 5.59 mm (.220 in)

RECOMMENDED TORQUE

68 N-cm (6 in-lbs). With "L" option 90 N-cm (8 in-lbs)

WEIGHT

.75 g/cm (.067 oz/in)

MATERIALS AND FINISH

Bodies and Wedges

- Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- Finish:** See finish table on opposite page

Shaft

- Material:** Alluminum alloy 7075-T6 per ASTM-B221 or AMS-QQ-A-200/11
- Finish:** See finish table on opposite page

Screw

.09-in. or 2.5-mm hex. socket head

- Material:** 300 series stainless steel with dry film lube per MIL-L-46010
- Finish:** Passivated per AMS2700

Rollpin and Flat Washer

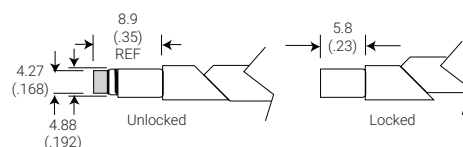
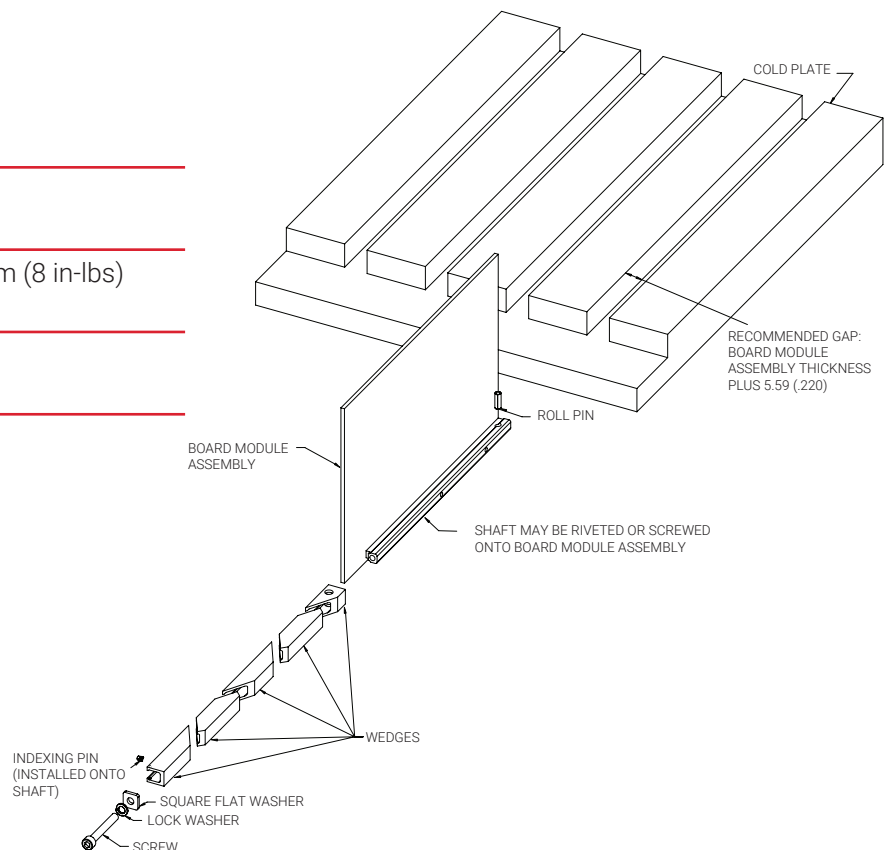
- Material:** 400 series stainless steel
- Finish:** Passivated per AMS2700

Lock Washer

- Material:** MS35338-135
- Finish:** Passivated per AMS2700

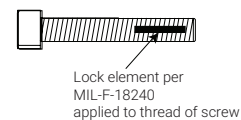
Indexing Pin

- Material:** Aluminum alloy 6061-T6
- Finish:** See finish table on opposite page



Detail "V"

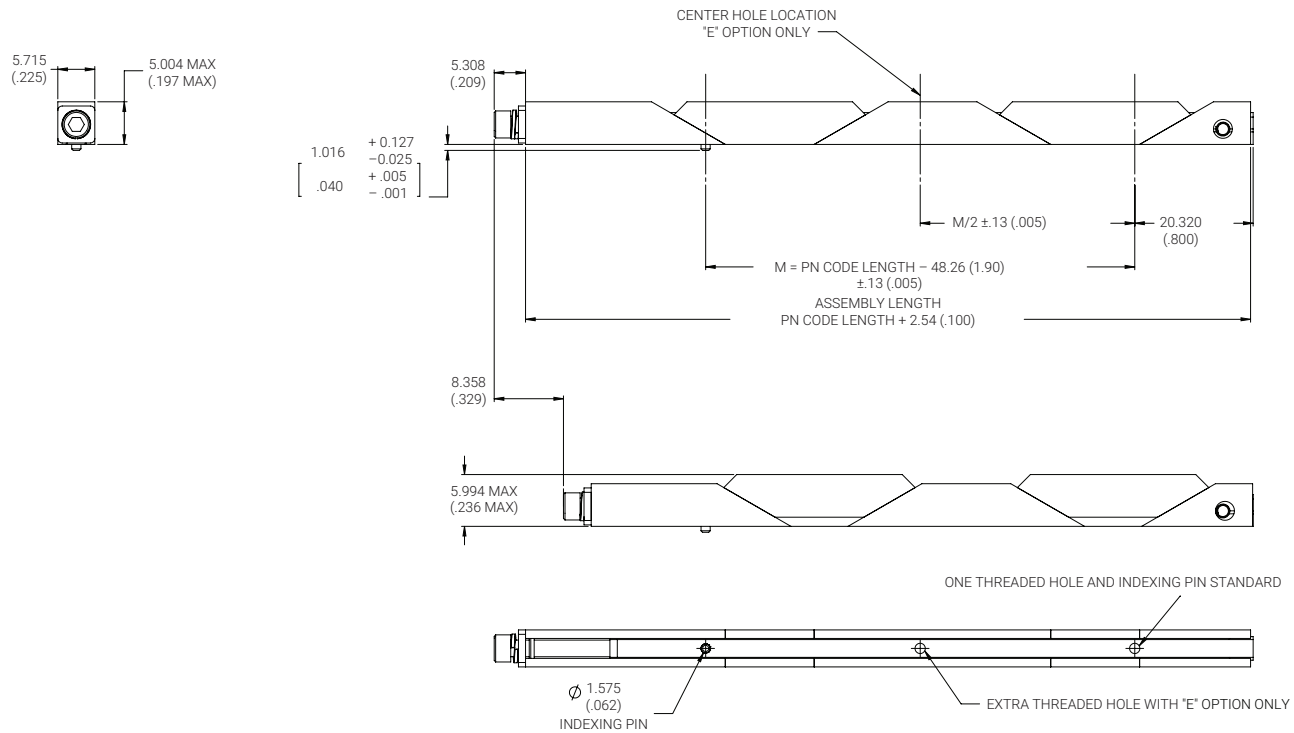
Provides visual lock indication.



Detail "L"

Provides prevailing torque for resistance to loosening from shock and vibration. Adds 22 N-cm (2 in-lbs) torque to assembly.

SERIES 267HC CARD-LOK



Part Number Code

Series 267HC Card-Lok Five Piece

M

V

A

267HC

-

3.80

E

H

L

Prefix options

Metric Screw Head 2.5 mm Hex Drive__M

Standard Screw Head 3/32

Hex Drive _____ [blank]

Visual Indicator _____ V

No Visual Indicator _____ [blank]

Black Anodize _____ A

or choose from Finish Table _____ see table

Suffix options

Length in 12.7 (.50) increments _____ 96.52 (3.80)

_____ to 172.72(6.80)

Additional Center Mounting Hole _____ E

None _____ [blank]

Mounting Options - holes for rivet mounting _____ H

or choose from Mounting Option Table _____ see table

Lock Element _____ L

None _____ [blank]

Part Number Code Example:
MVA26 HC-3.80ET2L
Series 26 HC Card-Lok five piece 96.52 (3.80) long black anodized with M2.5 hex drive, visual indicator, mounting holes tapped for 2-56 thread, with locking element.

Code Letter	Finish
"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

Code Letter	Method
"H"	ø 1.73/1.85 (.068/.073) dia. through holes countersink 100° x 1.50 (.060) deep
"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

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Series 280 Card Lok

Meets **VITA 48.2**
In alignment with the
SOSA® Technical Standard



RECOMMENDED GAP WIDTH

PCB + 10.8 mm (.425 in)

RECOMMENDED TORQUE

227 N-cm (20 in-lbs)

With "L" option 277 N-cm (24 in-lbs)

WEIGHT

2.18 g/cm (.195 oz/in)

MATERIALS AND FINISH

Bodies And Wedges

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Shaft

- **Material:** Aluminum alloy 7075-T6 per ASTM-B221 or AMS-QQ-A-200/11
- **Finish:** See finish table on opposite page

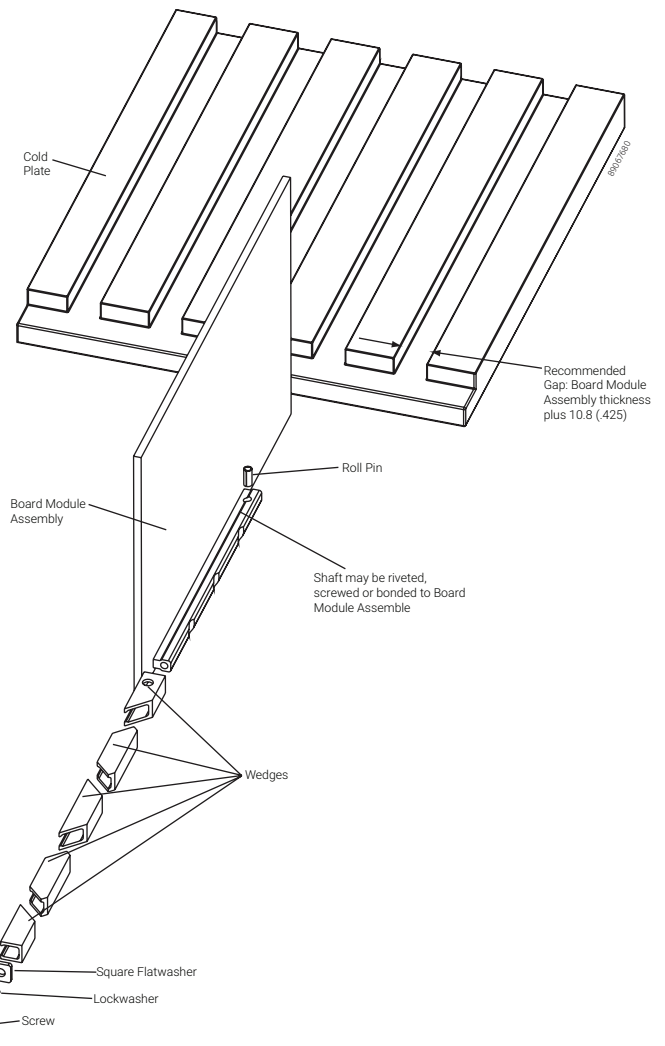
Screw, Lock and Flat Washer

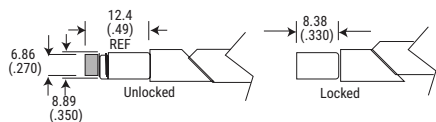
.109 in or 3.0 mm hex. socket head cap screw, depending on mounting configuration

- **Material:** 300 series stainless steel
- **Finish:** Passivated per AMS2700

Roll Pin

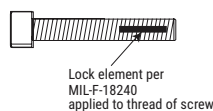
- **Material:** 400 series stainless steel
- **Finish:** Passivated per AMS2700





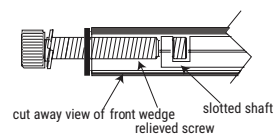
Detail "V"

Provides visual lock indication.



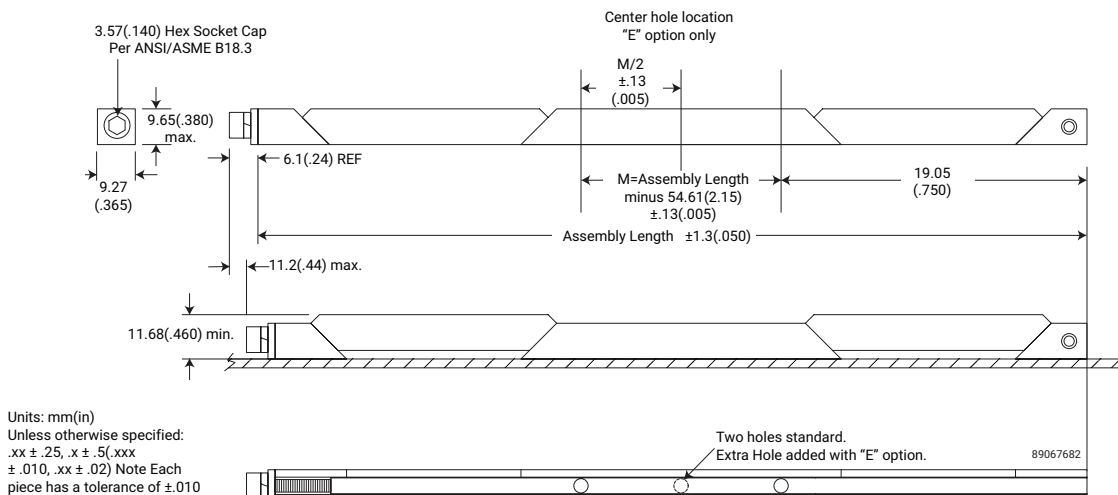
Detail "L"

Provides prevailing torque for resistance to loosening from shock and vibration.
Adds 50 N-cm (4 in-lbs) torque to assembly.



Detail "K"

Prevents the unintentional disassembly of screw from shaft.



Units: mm(in)
Unless otherwise specified:
.xx ± .25, .x ± .5(.xxx
± .010, .xx ± .02) Note Each
piece has a tolerance of ±.010

[illegible]

Part Number Code Example: A280-4.80HK
Series 280 Card-Lok five piece 121.9 (4.80) long with black anodize finish, standard rivet mounting hole, and captive screw option

Finish Table

CODE	
[blank]	CHEM FILM PER MIL-DTL-5541 CLASS 3, GOLD
"R"	CHEM FILM PER MIL-DTL-5541 CLASS 3, TYPE II, CLEAR
"A"	BLACK ANODIZE PER MIL-A-8625 TYPE III, CLASS 2
"HA"	HARD BLACK ANODIZE PER MIL-A-8625 TYPE III, CLASS 2
"EN"	ELECTROLESS NICKEL PER MIL-C-26075 CLASS 4, GRADE B, BRIGHT

Mounting Method Table

CODE	
"H"	ø 3.40/3.53(.0134/.139) DIA. THROUGH HOLES COUNTER-SINK 60° x 3.81 (.150) DEEP
"T4"	4-40 TAPPED HOLE
"TM3"	M3 x 0.50 TAPPED HOLE

***NOTE:** FOR THE TORQUE LIMITING "TLC" VERSION:
THE MINIMUM LENGTH IS 109.22 (4.30) THE FRONT MOUNTING HOLE, NEAREST TO
THE SCREW, WILL BE REPLACED WITH AN INDEXING PIN. VISUAL INDICATOR, LOCK
PATCH OPTIONS NOT AVAILABLE. MUST CLICK 3+ TIMES FOR PROPER INSTALLATION



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Series 280HTS Card-Lok



Meets **VITA 48.2**
In alignment with the
SOSA® Technical Standard

RECOMMENDED GAP WIDTH

PCB + 10.29 mm (.405 in)

RECOMMENDED TORQUE

113 N-cm (10 in-lbs). With L Option: 158 N-cm (14 in-lbs)

WEIGHT

2.50 g/cm (.224 oz/in)

MATERIALS AND FINISH

Brackets and Front Wedge

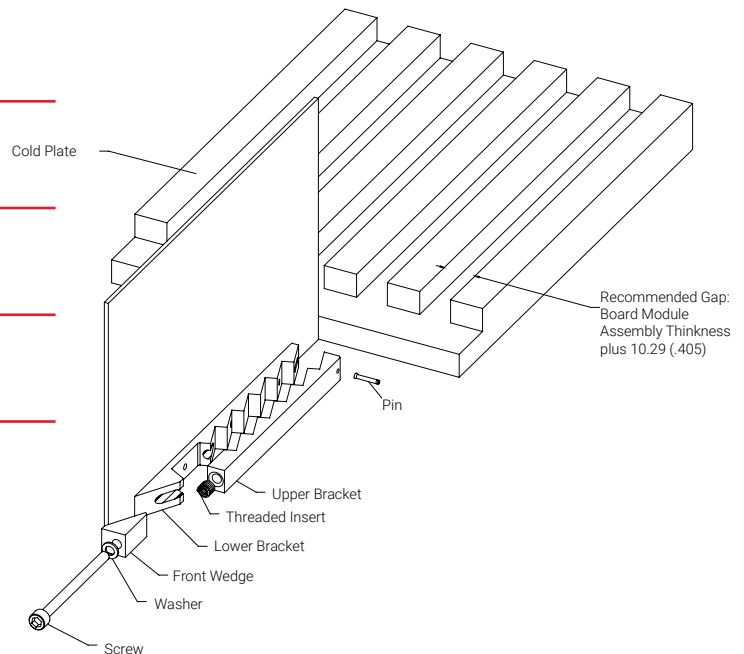
- **Material:** 6061-T6 or T6XXX per ASTM-B221 or AMSQQ-A-200/8
- **Finish:** See finish table on opposite page

Screw and Washer

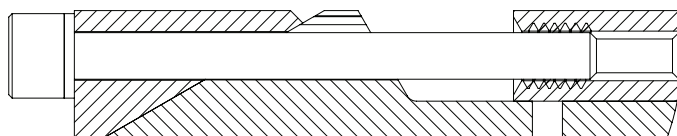
- **Material:** Stainless steel
- **Finish:** Passivated per AMS2700 and dry film lube per MIL-L-46010
- **Threaded Insert**
- **Material:** Stainless steel
- **Finish:** Passivated per AMS2700

Pin

- **Material:** Stainless steel
- **Finish:** Passivated per AMS2700



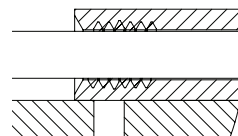
OPTIONS



DETAIL "K" (RELAXED VIEW)

Detail "K"

Prevents the unintentional disassembly of screw from shaft.

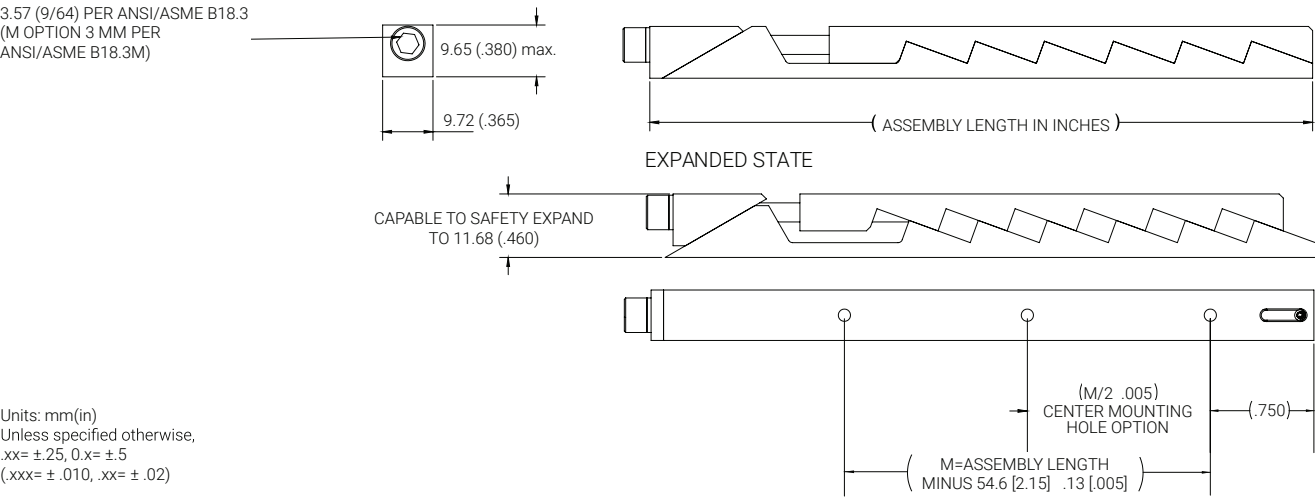


DETAIL "L" (RELAXED VIEW)

Detail "L"

SCREW LOCKING INSERT

Provides prevailing torque for resistance to loosening from shock and vibration. Meets NASM 8846.



Units: mm(in)
Unless specified otherwise,
.xx= ±.25, 0.x= ±.5
(.xxx= ±.010, .xx= ±.02)

Screw Drive	M A 280HTS-3.30 E T4 L K
Metric Screw Head 3 mm Hex Drive _____ M	
Standard Screw Head 9/64 Hex Drive _____ [Blank]	
Surface Finish	
Black Anodized _____ A	
Electroless Nickel _____ EN	
Length	
Length in 12.7 (.50 increments) _____ 71,12 (2,80)	
_____ to 325,12 (12,80)	
Mounting	
Additional Center Mounting Hole _____ E	
None _____ [Blank]	
Mounting Options - Mounting Holes	
or choose from Mounting Method Table	T4
Threaded Insert	
Screw-Locking Insert _____ L	
Free-Running Insert _____ [Blank]	
Screw Type	
Captive Screw _____ K	
Standard _____ [Blank]	

Part Number Code Example:

M A 280HTS-4.80 E TM3 L K

Series 280HTS Card-Lok with M3 hex drive, black anodized finish, 121.9 (4.80) long, with additional mounting hole, M3 x 0.50 tapped hole, locking insert and captive screw

Finish Table

Code Letter	Finish
"A"	BLACK ANODIZE PER MIL-A-8625 TYPE II, CLASS 2
"EN"	ELECTROLESS NICKEL PER MIL-C-26074 CLASS 4, GRADE B, BRIGHT

Mounting Method Table

Code Letter	Method
"T4"	4-40 TAPPED HOLE
"TM3"	M3 x 0.50 TAPPED HOLE



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Series 280PR Card-Lok

Meets **VITA 48.2**
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RECOMMENDED GAP WIDTH

PCB + 10.8 mm (.425 in)

RECOMMENDED TORQUE

227 N-cm (20 in-lbs)

With "L" option 277 N-cm (24 in-lbs)

WEIGHT

2.18 g/cm (.195 oz/in)

MATERIALS AND FINISH

Shaft

- **Material:** Aluminum alloy 7075-T6 per ASTM B221 or AMS-QQ-A-200/11
- **Finish:** See finish table on opposite page

Bodies and Wedges

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Screw

.109 in or 3 mm hex. socket head cap screw, depending on mounting configuration

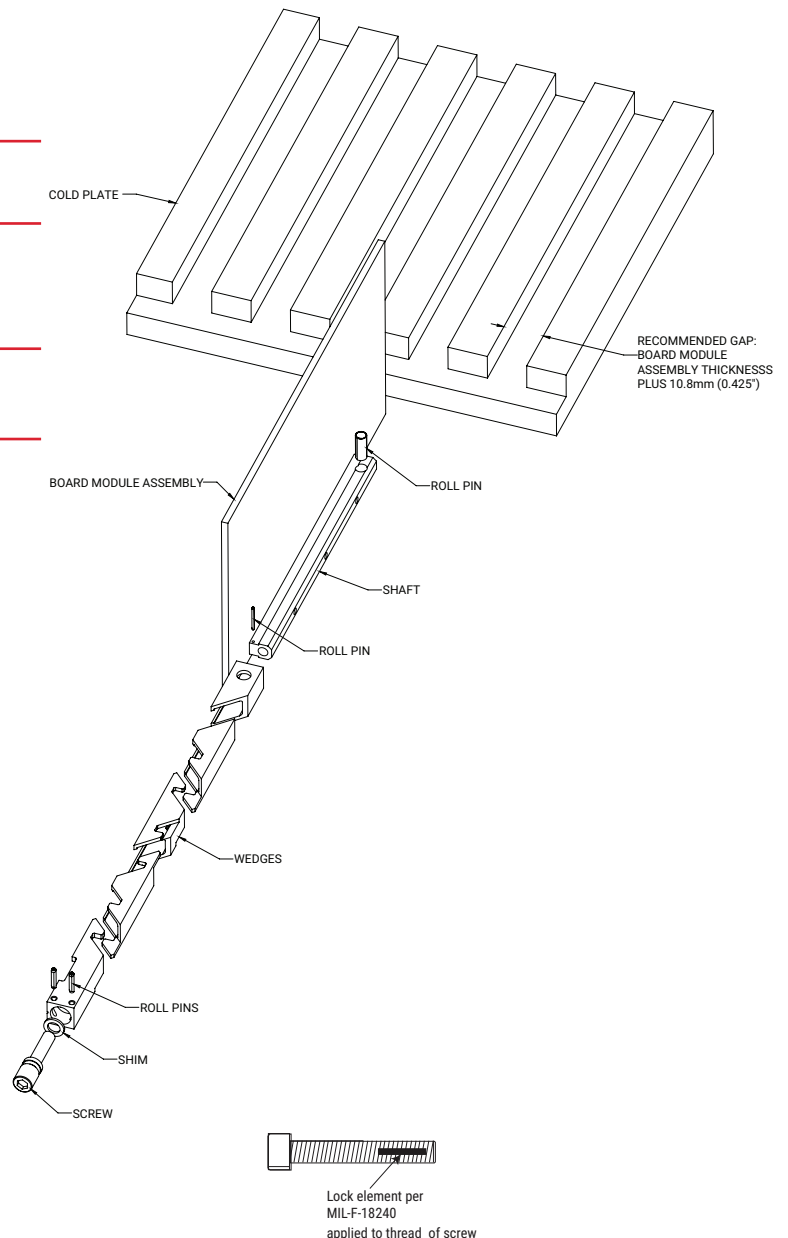
- **Material:** 300 series stainless steel per ASTM-A582
- **Finish:** Passivated per AMS2700 with dry film lube per MIL-L-46010

Back and Front Roll Pins

- **Material:** 400 series stainless steel
- **Finish:** Passivated per AMS2700

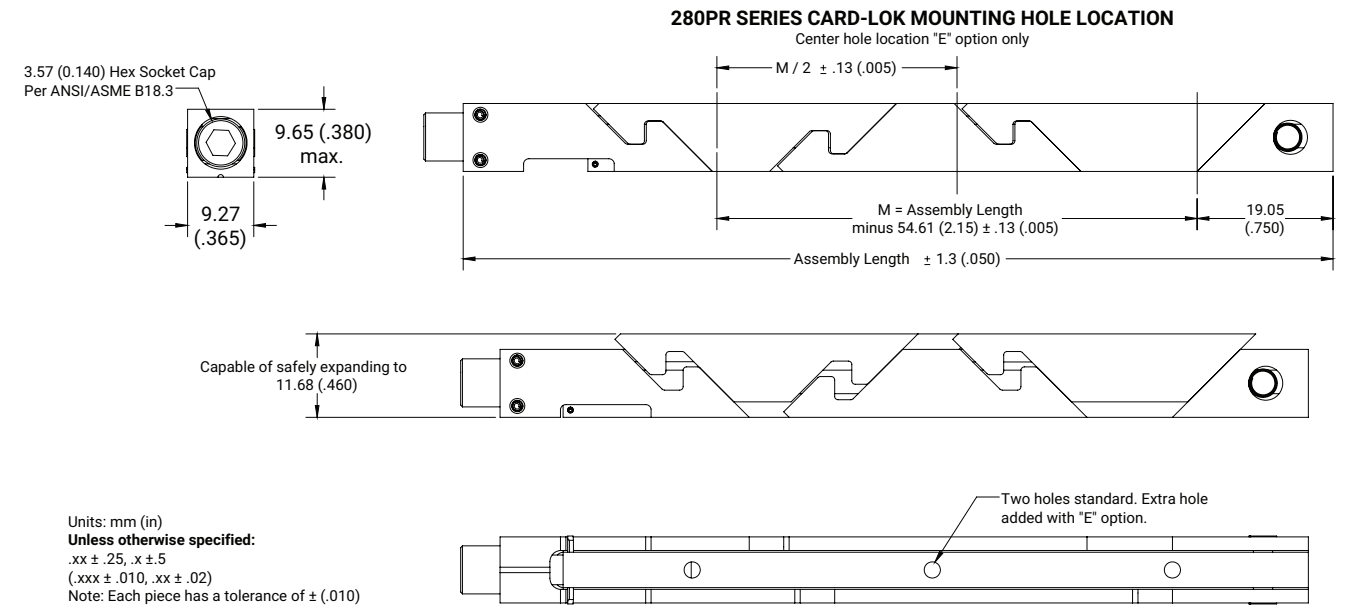
Shim

- **Material:** 300 Series Stainless Steel Per QQ-S-766
- **Finish:** Passivated per ASTM A380



Detail "L"

Provides prevailing torque for resistance to loosening from shock and vibration. Adds 50 N-cm (4 in-lbs) torque to assembly.



Part Number Code	M	A	280PR	-4.30	E	H	L
Screw Metric Screw Head 3 mm Hex Drive _____ M Standard Screw Head 9/64 Hex Drive _____ [Blank]							
Finish Black Anodized _____ A Or choose from Finish Table							
Length Length in 12.7 (.50) increments _____ 109.22[4.30] _____ to 325.12 [12.80]							
Mounting Additional Center Mounting Hole _____ E None _____ [Blank] Mounting Options – through mounting holes _____ H Or choose from Mounting Method Table							
Lock Patch Lock Patch with DFL screw, adds 45 N-cm (4 in-lbs torque) _____ L None _____ [Blank]							

Part Number Code Example: A280PR-4.80H
Series 280PR Card-Lok five piece 121.9(4.80) long with
black anodize finish, standard rivet mounting hole.

FINISH TABLE

Code Letter	Surface Finish
[blank]	CHEMICAL FILM PER MIL-DTL-5541 TYPE I, CLASS 3, GOLD
"R"	CHEM FILM PER MIL-DTL-5541 TYPE II, CLASS 3, CLEAR
"A"	BLACK ANODIZE PER MIL-A-8625 TYPE III, CLASS 2
"HA"	HARD BLACK ANODIZE PER MIL-A-8625 TYPE III, CLASS 2
"EN"	ELECTROLESS NICKEL PER MIL-C-26075 CLASS 4, GRADE B, BRIGHT

MOUNTING METHOD TABLE

Code Letter	Method
"H"	ø 3.40/3.53(.0134/.139) DIA. THROUGH HOLES COUNTERSINK 60° × 3.81(.150) DEEP
"T4"	4-40 TAPPED HOLE
"TM3"	M3 × 0.50 TAPPED HOLE

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Series 281 Card-Lok

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RECOMMENDED GAP WIDTH

PCB + 10.8 mm (.425 in)

RECOMMENDED TORQUE

227 N-cm (20 in-lbs)

With "L" option 277 N-cm (24 in-lbs)

WEIGHT

2.18 g/cm (.195 oz/in)

MATERIALS AND FINISH

Bodies and Wedges

- **Material:** Aluminum Alloy 6061-T6 per ASTM-B221 or AMS-QQ-A-200/8
- **Finish:** See finish table on opposite page

Shaft

- **Material:** Aluminum alloy 7075-T6 per ASTM-B221 or AMS-QQ-A-200/11
- **Finish:** See finish table on opposite page

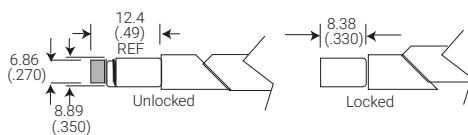
Screw, Lock and Flat Washer

.109 in or 3.0 mm hex. socket head cap screw, depending on mounting configuration

- **Material:** 300 series stainless steel
- **Finish:** Passivated per AMS2700

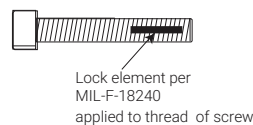
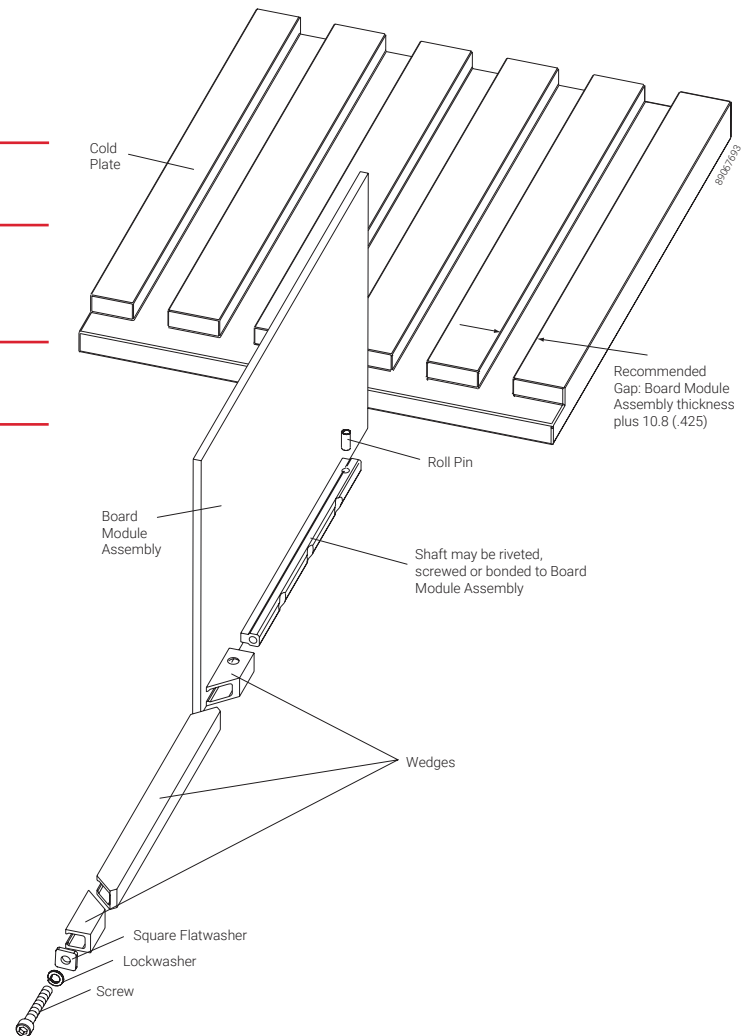
Roll Pin

- **Material:** 400 series stainless steel
- **Finish:** Passivated per AMS2700



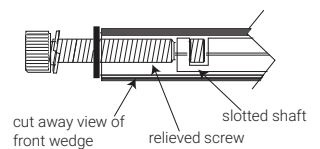
Detail "V"

Provides visual lock indication



Detail "L"

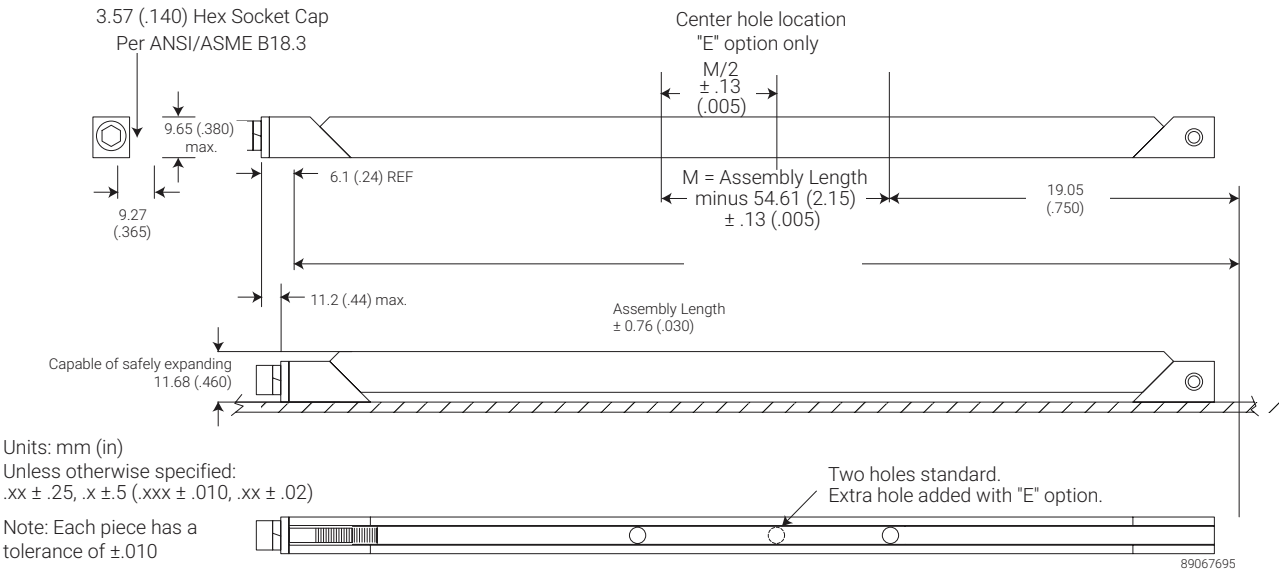
Provides prevailing torque for resistance to loosening from shock and vibration. Adds 50 N-cm (4 in-lbs) torque to assembly. See application data on previous sheet



Detail "K"

Prevents the unintentional disassembly of screw from shaft

SERIES 281 CARD-LOK



Part Number Code

Series 281 Card-Lok Three Piece

Prefix options

Metric Screw Head 3 mm Hex Drive_____M

Standard Screw Head 9/64 Hex Drive_____ [blank]

Visual Indicator_____V

No Visual Indicator_____ [blank]

Black Anodize_____A

or choose from Finish Table_____ see table

Suffix options

Assembly length in inches. Standard lengths range from 71.12 mm (2.80") to 325 mm (12.80"), 12.7 mm (0.5")_____

Other lengths available upon request.

Additional Center Mounting Hole_____E

None_____ [blank]

Mounting Options - holes for rivet mounting_____H

or choose from Mounting Option Table_____ see table

Lock Element_____L

None_____ [blank]

Captive Screw_____K

None_____ [blank]

M V A 281 - 3.80 E H L K

Part Number Code Example:

281-2.80H
Series 281 Card-Lok three piece 71.12 (2.80) long with chemical film finish and standard rivet mounting hole

Finish Table

Code Letter	Finish
[blank]	CHEM FILM PER MIL-DTL-5541 CLASS 3, GOLD
"R"	CHEM 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 ELECTROLESS
"EN"	NICKEL PER MIL-C-26074 CLASS 4, GRADE B, BRIGHT

Mounting Method Table

Code Letter	Method
"H"	ø 3.40/3.53 (.134/.139) DIA. THROUGH HOLES COUNTERSINK 60° x 3.81 (.150) DEEP
"T4"	4-40 TAPPED HOLE
"TM3"	M3 x 0.50 TAPPED HOLE

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