

Safety Switches

Slamlock Mechanical



Single

Dual

Description

The Prosafe Slamlock combines the features of trapped keys with tongue actuated interlocks. When the actuator is inserted into the interlock (guard closed), the trapped key can be rotated and removed. With the key free, the actuator can not be removed thus locking closed the guard door. The trapped key must be re-inserted and rotated 90° to unlock the guard.

Slamlocks are manufactured in 316L stainless steel to provide a rugged, industrial grade method of interlocking guard doors.

One advantage of the slamlock is that there is no need to run power wires to the gate. Power is disconnected by a trapped key on a control panel or by a Prosafe RKS type unit and the key is then hand-carried to the gate by the operator.

The Single-key Slamlock (SSL) is used to interlock hatches, guards and doors where full body access is not required.

Dual-key Slamlock (DSL) is similar to the single key version but has a secondary key to allow "two key in" or "key exchange" conditions. The key exchange version may be used where whole body access is required, as the secondary key can be used as a personnel key.

Features

- 316L stainless steel construction
- Selection of actuator types available
- Direct drive operation
- Replaceable code barrel assembly
- Fitted with tamper resistant screws
- Weatherproof stainless steel dust cap as standard
- Multiple key options

Specifications

Safety Ratings

Standards	EN1088, IEC/EN60947-5-1, GS-ET-19, ISO12100-1&2, ISO14119, AS4024.1
Category	Cat. 1 per EN 954-1 (ISO 13849-1) Suitable for Cat. 2, 3, or 4 systems
Certifications	CE Marked for all applicable directives and BG; C-Tick not required

Operating Characteristics

Operating Temperature [C (F)]	-40...+200 ° (-40...+392 °)
Mechanical Life	In excess of 100,000 operations under normal working conditions
Code Barrel Life	Tested to 100,000 operations

Environmental & Physical Characteristics

Shear Force to Key	15.1 k•N (3398 lbs), max.
Torque to Key	14 N•m (124 lb•in), max.
Relative Humidity	95%
Weight [kg (lbs)]	Single Key: 0.76 (1.68) Dual Key: 1.33 (2.93)
Ambient Temperature [C (F)]	-10...+50 ° (14...122 °)
Material	316L stainless steel
Mounting	SSL: 2 x M5 counterbored from top or 2 x M5 from underside with nuts DSS: 4 x M5 counterbored from top or 4 x M5 from underside with nuts
Holding Force, Max.	2000 N (450 lbs)

The Prosafe Advantage



Stainless steel construction.

Product Selection

Type	Actuator Type	Trapped Key Condition	Cat. No.
Single key	Standard	Key trapped to release actuator	440T-MSSLE10*
	Flexible		440T-MSSLE11*
	Flat		440T-MSSLE12*
Dual key	Standard	Primary key trapped, secondary key free to release actuator	440T-MDSLE10*⊗
	Flexible		440T-MDSLE11*⊗
	Flat		440T-MDSLE12*⊗
	Standard	Both keys trapped to release actuator	440T-MDSLE20**
	Flexible		440T-MDSLE22**
	Flat		440T-MDSLE23**
Dual with secondary ejector key	Standard	Primary key trapped, secondary key free to release actuator	440T-MDSLJ10*⊗
	Flexible		440T-MDSLJ11*⊗
	Flat		440T-MDSLJ12*⊗

* Substitute the desired primary code for this symbol (key not included). See 3-107 for code selection.
 ⊗ Substitute the desired secondary code for this symbol (key included). See 3-107 for code selection.

Accessories

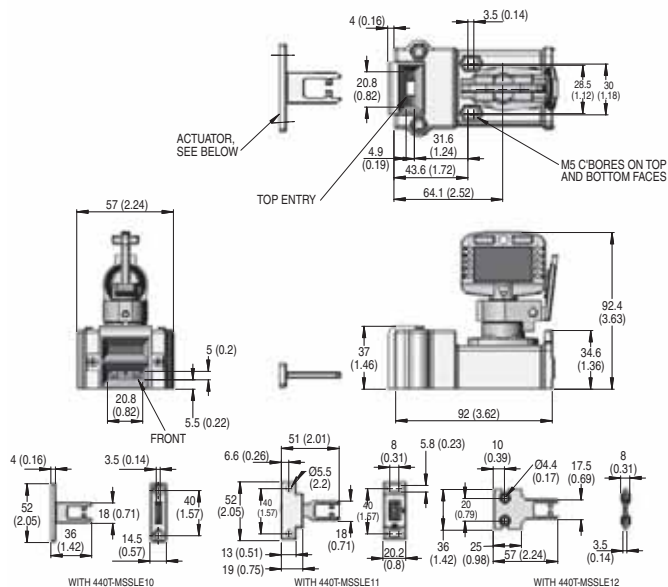
Description	Additional Information	Cat. No.
Stainless steel key	3-140	440T-AKEYE10⊗
Stainless steel ejector key		440T-AKEYE13⊗
Stainless steel replacement code barrel with dust cap		440T-ASCBE14*
Stainless steel weatherproof replacement dust cap		440T-ASFC10⊗
GD2 standard actuator	—	440G-A27011
GD2 flat actuator	—	440K-A11112
Fully flex actuator	—	440G-A27143

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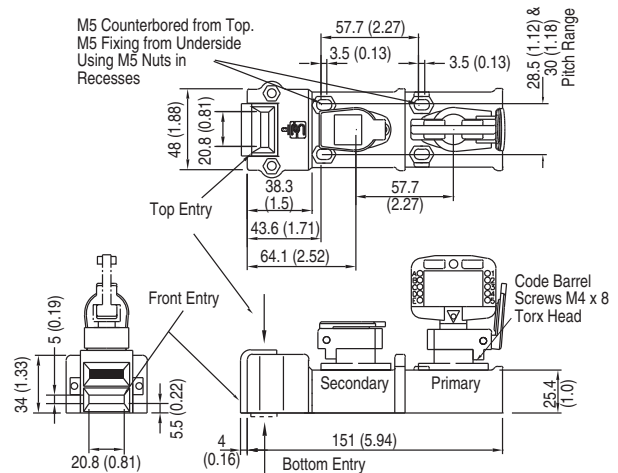
Approximate Dimensions [mm (in.)]

Dimensions are not intended to be used for installation purposes.

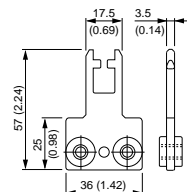
Single Key Slamlock



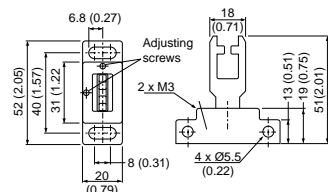
Dual Key Slamlock



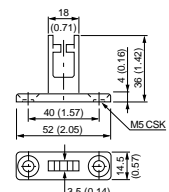
Flat Actuator



Flexible/Adjustable Actuator

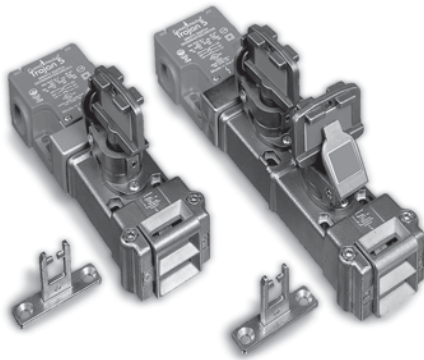


Standard Actuator



Safety Switches

Slamlock Electrical



Single

Dual

Description

The Prosafe Slamlock with electrical isolation combines the features of trapped key tongue actuated interlocks while also providing sets of electrical safety and auxiliary contacts. When the actuator is inserted into the lock and the key is removed the actuator is trapped in the unit thus locking closed the guard door. In this state the safety contacts are closed and the auxiliary contacts are open. To open the guard door the key must be inserted and rotated 90°, opening the safety contacts, closing the auxiliary contacts and enabling the actuator to be released thus unlocking the guard door. While the guard door is open the key is trapped in the unit.

Slamlocks with electrical isolation offer the features of electrical safety interlock switches with the benefits of a trapped key/enforced sequence systems. They allow a combination of both approaches for safeguarding machinery and processes to be used.

The Single-key Slamlock (SSS) is used to interlock hatches, guards and doors where full body access is not required. The single key locks the actuator and operates the switch in the same action.

Dual-key Slamlock (DSS) is similar to the single key version but has a secondary key to allow "two key in" or "key exchange" conditions. The key exchange version may be used where whole body access is required, as the secondary key can be used as a personnel key.

Features

- Electrical safety contacts combined with trapped key/enforced sequence feature
- Most of unit constructed from 316L stainless steel
- Selection of actuator types available
- Single or dual key versions available
- Direct drive operation
- Replaceable code barrel assembly
- Weatherproof stainless steel dust cap as standard
- Solenoid versions

The Prosafe Advantage



Stainless steel construction.

Specifications

Safety Ratings

Standards	EN1088, IEC/EN60947-5-1, GS-ET-19, ISO12100-1&2, ISO14119, AS4024.1
Category	Cat. 1 per EN 954-1 (ISO 13849-1) Suitable for Cat. 2, 3, or 4 systems
Certifications	CE Marked for all applicable directives and BG; C-Tick not required

Outputs

Safety Contacts	2 N.C. positive break
Switching Current @ Voltage, Max.	500V/500V A
Thermal Current (Ith)	10 A
Current, Min.	5 mA @ 5V DC
Safety Contact Gap	>2 x 2 mm (0.07 in.)
Rated Insulation Voltage	(Ui) 500V
Rated Impulse withstand Voltage	(Uimp) 2500V
Auxiliary Contacts	1 N.O.

Operating Characteristics

Break Contact Force, Min.	12 N (2.7 lbs)
Actuation Speed, Max.	1 ms
Actuation Frequency, Max.	2 cycle/s

Utilization Category

AC 15	(Ue)	500V	250V	100V
	(Ie)	1 A	2 A	5 A
DC		250V	0.5 A, 24V	2 A

Environmental Characteristics

Enclosure Type Rating	IP67
Operating Temperature [C (F)]	Electrical: -20...+80 ° (-4...+176°) Solenoid: -20...+60 ° (-4...+140 °)
Relative Humidity	95%

Physical Characteristics

Actuator Travel for Positive Opening	5 mm (0.19 in.)
Operating Radius, Min.	175 mm (6.88 in.) [60 mm (2.36 in.) with flexible actuator]
Actuator Holding Force, Max.	2000 N (450 lbs)
Releasable Load, Max.	100 N (22.5 lbs)
Case Material	UL Approved glass-filled polyester & 316L stainless steel
Actuator Material	Stainless steel
Conduit Entry	3 x M20
Mounting	SSS: 4 x M5 counterbored from top or 4 x M5 from underside with nuts DSS: 6 x M5 counterbored from top or 6 x M5 from underside with nuts
Mechanical Life	100,000 operations
Electrical Life	1,000,000 operations
Weight [g (lbs)]	SSE: 1160 (2.6) DSSSE: 1700 (3.7)
Color	Red/Stainless
Shear Force to Key	15.1 k•N (3398 lbs), max.
Pollution Degree	3
Torque to Key	14 N•m (124 lb•in), max.

Note: The safety contacts of the Guardmaster switches are described as normally closed (N.C.), i.e. with the guard closed, actuator in place (where relevant) and the machine able to be started.

Product Selection - Electrical

Contact Type	Type	Trapped Key Condition	Actuator Type	Cat. No.
2 N.C. + 1 N.O. Break before make	Single key	Key trapped to release actuator	Standard	440T-MSSSE10*
			Flexible	440T-MSSSE11*
			Flat	440T-MSSSE12*
		Key free to release actuator	Standard	440T-MSSSE20*
			Flexible	440T-MSSSE22*
			Flat	440T-MSSSE23*
	Dual key	Primary key trapped, secondary key free to release actuator	Standard	440T-MDSSE10*⊗
			Standard	440T-MDSSJ10*⊗
		Primary key trapped, secondary key eject to release actuator	Flexible	440T-MDSSE11*⊗
			Flexible	440T-MDSSJ11*⊗
		Primary key trapped, secondary key free to release actuator	Flat	440T-MDSSE12*⊗
				440T-MDSSJ12*⊗
Both keys free to release actuator	Standard	440T-MDSSE20**		
	Flexible	440T-MDSSE22**		
	Flat	440T-MDSSE23**		
2 N.C. + 2 N.O. Break before make	Single key	Key free to release actuator	Standard	440T-MSSSE26*
			Flexible	440T-MSSSE27*
			Flat	440T-MSSSE25*

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 ⊗ Substitute the desired secondary code for this symbol (key included). See 3-107 for code selection.

Product Selection - Solenoid

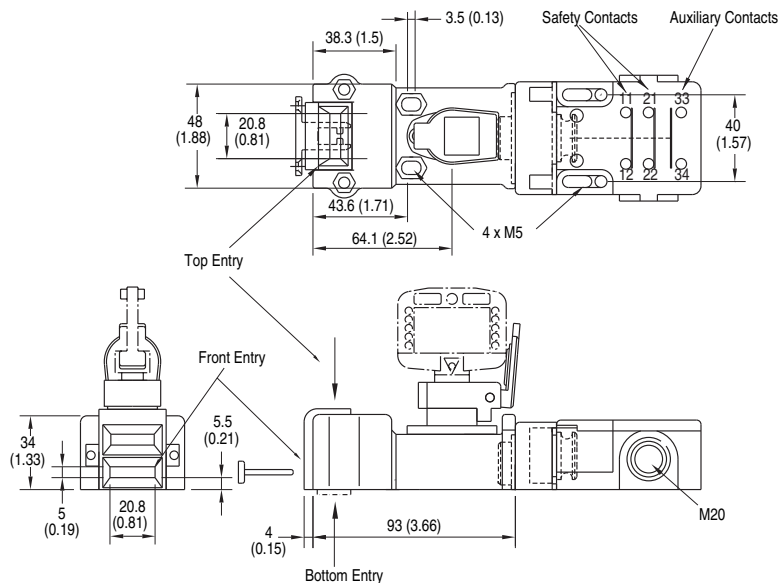
Contact Type	Type	Trapped Key Condition	Solenoid Voltage	Actuator Type	Cat. No.
2 N.C. & 1 N.O. Break before make	Single key	Key free to release actuator	24V DC	Standard	440T-MSSUE20*
				Flexible	440T-MSSUE22*
				Flat	440T-MSSUE23*
	Dual key	Primary key trapped, secondary key free to release actuator	24V DC	Standard	440T-MDSUE10*
				Flexible	440T-MDSUE11*
				Flat	440T-MSSUE12*
Single key	Key free to release actuator	110V AC	Standard	440T-MSSUE50*	

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Approximate Dimensions [mm (in.)]

Dimensions are not intended to be used for installation purposes.

Single Key Slamlock



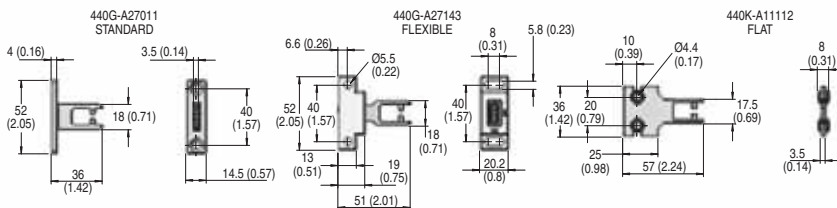
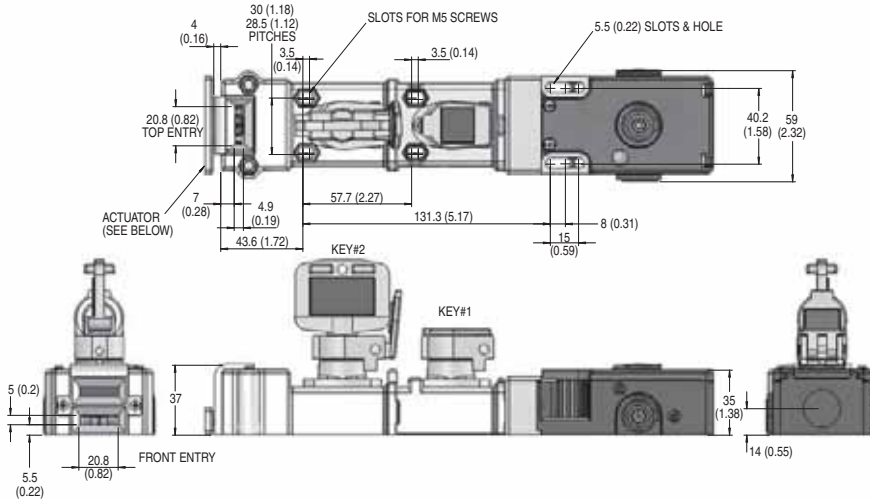
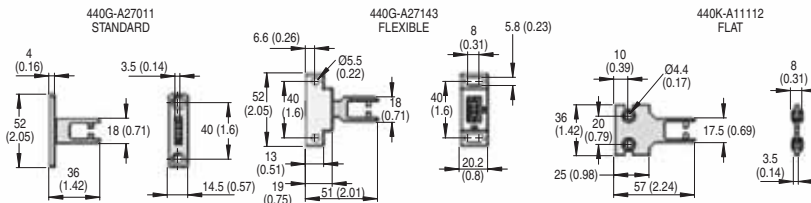
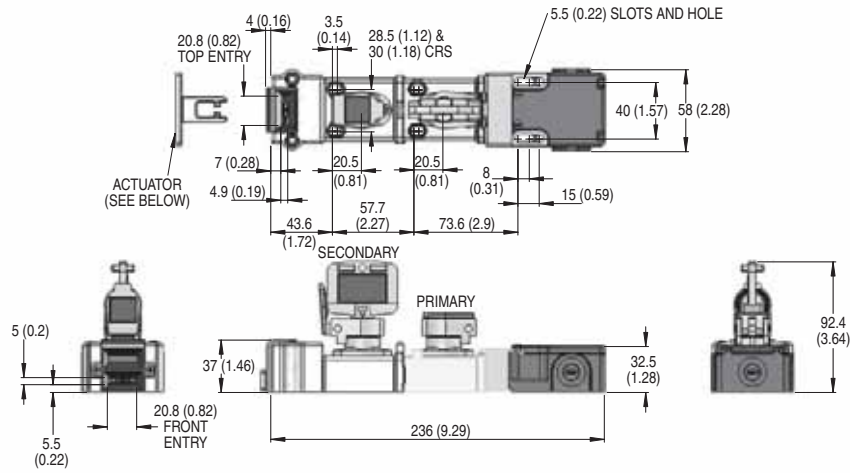
Safety Switches

Slamlock Electrical

Approximate Dimensions [mm (in.)] (continued)


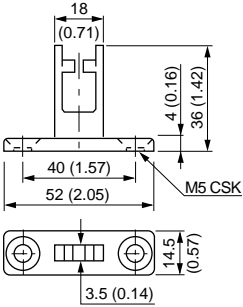

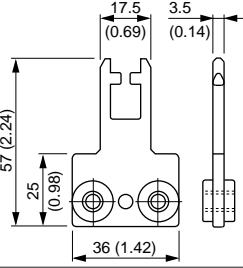

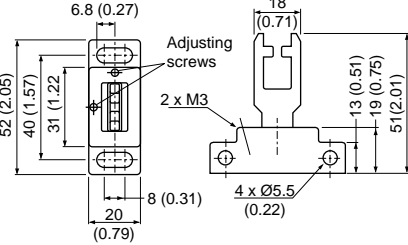



Dimensions are not intended to be used for installation purposes.

Dual Key Slamlock



3-Trapped Key Switches

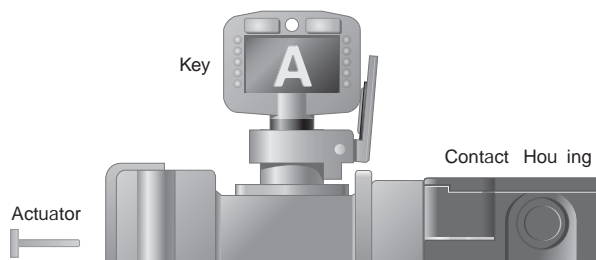
Accessories

	Description	Approximate Dimensions [mm (in.)]	Cat. No.
	GD2 standard actuator		440G-A27011
	GD2 flat actuator		440K-A11112
	Fully flex actuator		440G-A27143
	Stainless steel key	page 3-140	440T-AKEYE10⊗
	Stainless steel replacement code barrel with dust cap		440T-ASCBE14*
	Stainless steel weatherproof replacement dust cap		440T-ASFC10⊗

* Substitute the desired primary code for this symbol (key not included). See 3-107 for code selection.
 ⊗ Substitute the desired code for this symbol. See 3-107 for code selection.

Typical Applications

Actuator out, key trapped, safety contact open, auxiliary contact closed.



Locking force = 2000 N (450 lbf)

3-Trapped Key Switches

Safety Switches

Miniature Valve Interlocks

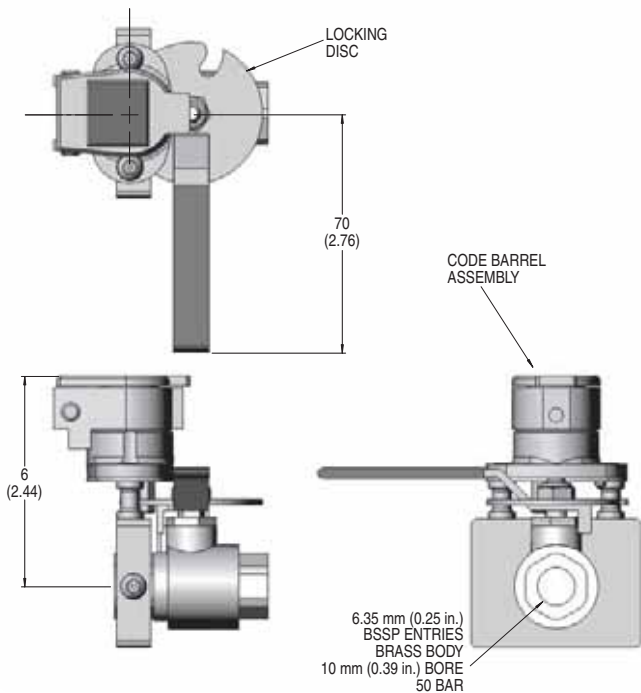


Features

- Direct drive operation
- Supplied with valves 0.25...1 in.
- Direct body mounting with security screws
- Locked open or locked closed options
- Virtually maintenance free
- Weatherproof stainless steel dust cap as standard
- Replaceable code barrel assembly
- Valve is chrome-plated brass

Approximate Dimensions [mm (in.)]

Dimensions are not intended to be used for installation purposes.



Approximate Dimensions [mm (in.)]

Model	A	B	C
440T-VMVLE10	104 (4.1)	68 (2.7)	38 (1.5)
440T-VMVLE11	104 (4.1)	68 (2.7)	38 (1.5)
440T-VMVLE12	112 (4.4)	80 (3.2)	48 (1.9)
440T-VMVLE13	104 (4.1)	68 (2.7)	38 (1.5)
440T-VMVLE14	104 (4.1)	68 (2.7)	38 (1.5)
440T-VMVLE15	112 (4.4)	80 (3.2)	48 (1.9)
440T-VMVLE16	108 (4.3)	110 (4.3)	53 (2.1)
440T-VMVLE17	108 (4.3)	110 (4.3)	53 (2.1)
440T-VMVLE18	115 (4.5)	110 (4.3)	61 (2.4)
440T-VMVLE19	115 (4.5)	110 (4.3)	61 (2.4)

Specifications

Standards	EN1088, ISO12100-1&2, ISO14119, AS4024.1
Certifications	CE Marked for all applicable directives and BG
Operating Temperature [C (F)]	-10...+40 ° (14...104 °)
Mechanical Life	100,000 operations
Shear Force to Key	15.1 k•N (3398 lbs)
Torque to Key	14 N•m (124 lb•in)
Relative Humidity	25...95%
Material	316L stainless steel

Product Selection

Valve Size	Valve Status	Cat. No.
0.25 in. BSP*	Key Free/Valve Locked Closed	440T-VMVLE10*
0.375 in. BSP*		440T-VMVLE11*
0.5 in. BSP*		440T-VMVLE12*
0.25 in. BSP*	Key Free/Valve Locked Open	440T-VMVLE13*
0.375 in. BSP*		440T-VMVLE14*
0.5 in. BSP*		440T-VMVLE15*
1.0 in. BSP*	Key Free/Valve Locked Closed	440T-VMVLE18*
	Key Free/Valve Locked Open	440T-VMVLE19*
2.0 in. BSP*	Key Free/Valve Locked Closed	440T-VMVLE20*
	Key Free/Valve Locked Open	440T-VMVLE21*

* Substitute the desired primary code for this symbol (key not included). See 3-107 for code selection.

* BSP = British standard pipe threads.

Accessories

Description	Additional Information	Cat. No.
Stainless steel key	3-140	440T-AKEYE10*
Stainless steel replacement code barrel with dust cap		440T-ASCBE14*
Stainless steel weatherproof replacement dust cap		440T-ASFC10*

* Substitute the desired primary code for this symbol (key not included). See 3-107 for code selection.



Description

The switch gear adaptor is used to interlock preparatory switch gear applications or other host equipment such as spool valves. Power is isolated and locked off when the key is rotated and removed. The key can then be used in the next sequence of operation.

Features

- Virtually maintenance free

Specifications

Standards	EN1088, ISO12100-1&2, ISO14119, AS4024.1
Category	Cat. 1 per EN 954-1
Certifications	CE Marked for all applicable directives and BG
Operating Temperature [C (F)]	-10...+50 ° (14...122 °)
Mechanical Life	>100,000 operations
Shear Force to Key	15.1 k•N (3398 lbs), max.
Torque to Key	14 N•m (124 lb•in), max.
Relative Humidity	95%
Weight [kg (lbs)]	0.30 (0.66)
Material	316L stainless steel
Mounting	2 x M4
Shaft Dimensions	3/8 in ² x 7/8 in long (standard) 9/16 in dia. x 7/8 in long (optional: contact factory)

Product Selection (3/8 square shaft)

Mounting	Trap Direction	Cat. No.
2 x M4	65° CW to trap	440T-MSGAU10*
	65° CCW to trap	440T-MSGAU11*
	90° CW to trap	440T-MSGAU12*
	90° CCW to trap	440T-MSGAU13*
	±90° to trap	440T-MSGAU14*
	45° CW to trap	440T-MSGAU17*
	45° CCW to trap	440T-MSGAU18*

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Accessories

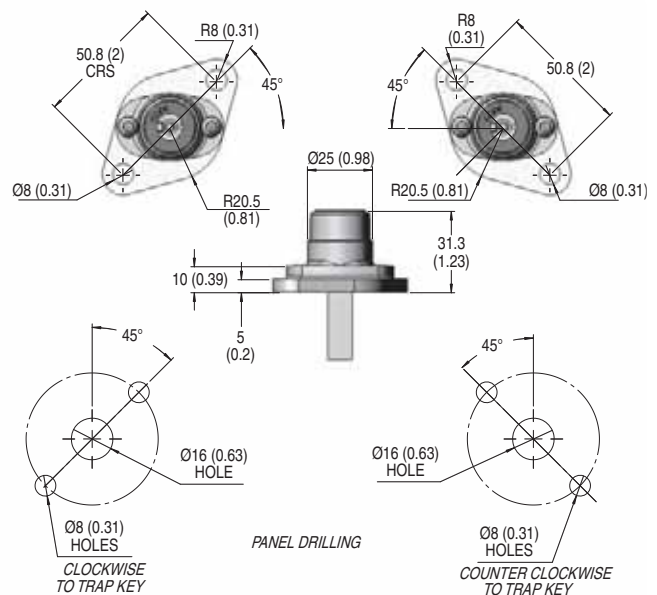
Description	Additional Information	Cat. No.
Stainless steel key	3-140	440T-AKEYE10*
Stainless steel ejector key		440T-AKEYE13*
Stainless steel weatherproof replacement dust cap		440T-ASFC10*

* Substitute the desired primary code for this symbol (key not included). See 3-107 for code selection.

Approximate Dimensions [mm (in.)]

Dimensions are not intended to be used for installation purposes.

45° Mounting Type Panel Drilling Detail



3-Trapped Key
Switches

The Prosafe Advantage



Stainless steel construction.