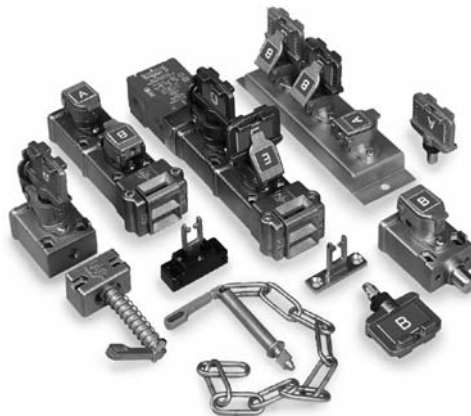




CNC precision cut keys



Interlocking and Control Solutions

Trapped Key Interlocks—Why Use Them?

Based upon the premise that no one key can be in two places at once, key interlock systems can be configured to provide that a predetermined sequence of events takes place or that hazards have been reduced before operators can become exposed to them.

It is a mechanical system and is therefore widely used in applications including those where the location of plant, environment or explosive atmospheres make the use of electrical interlock systems unsuitable or expensive to install. In addition, unique coding can be provided, leading to a greater degree of security and tamper-resistance.

Why Prosafe?

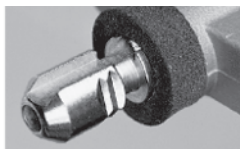
In order to derive the full benefits from a trapped key interlocking system its components must be totally practical, easily maintainable and readily available. Prosafe's unique key and code barrel gives the ability for even complicated interlocking systems and spare parts to be ordered from our worldwide network of distributors—fast! A first for trapped key interlocks.

Five Unique Prosafe Benefits

Compare the following to other trapped key manufacturers:

1. All stainless interlocking and coded parts—including the code barrel and internal components at no extra cost.
2. Weather cap as standard—no extra charge for dust caps and seals.
3. Standard red color-coded key and ID tags—at no extra charge.
4. Custom color/text keys and ID tags—nominal extra charge.
5. A complete range of isolators, key exchange, miniature valve interlocks and gate interlocks—all using the same key principle.

The Prosafe Advantage



Stainless steel construction.

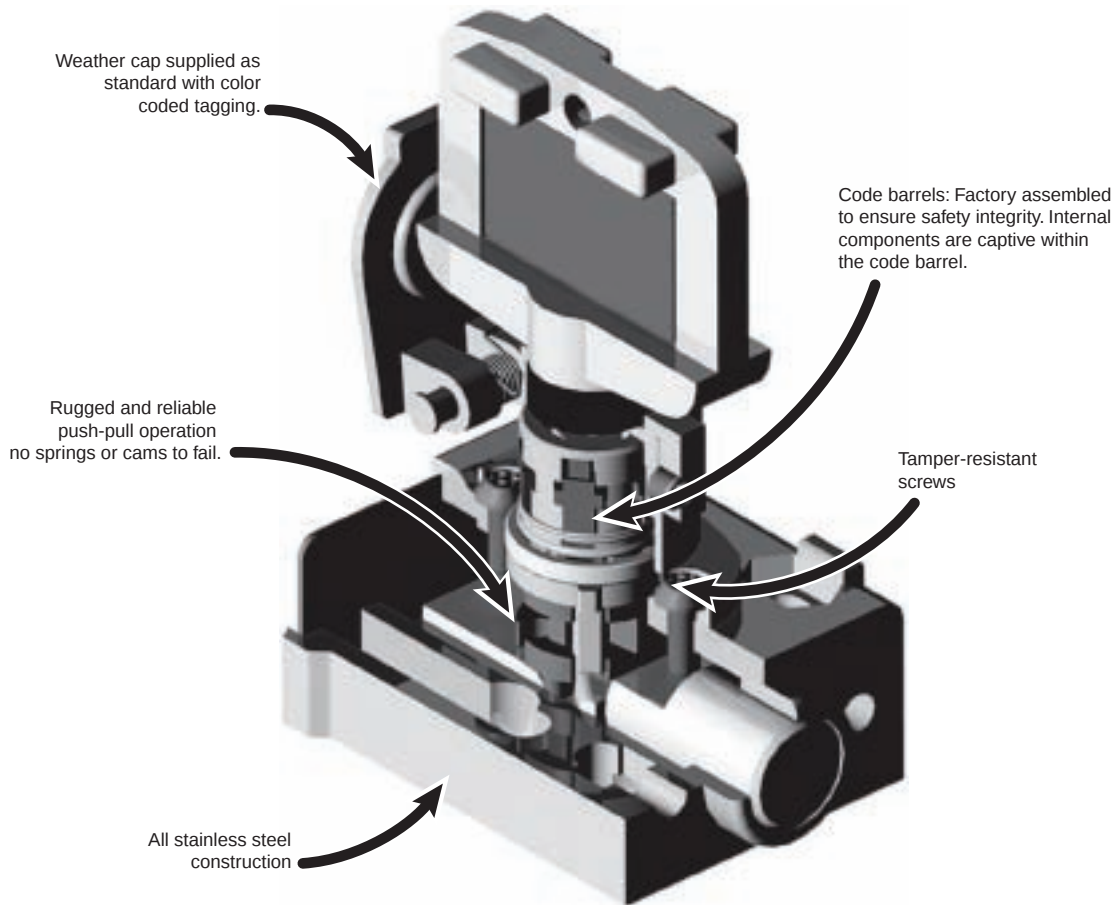
CE Marking—Tested and Approved

Only Prosafe products carry the prestigious BG mark. A sign of safety, independently tested by the German Berufsgenossenschaftliches Institut für Arbeitssicherheit, "BIA." Additional tests for valve interlocks include Lloyds Certificate for fire test and salt-mist resistance.

Over 100,000 Operations

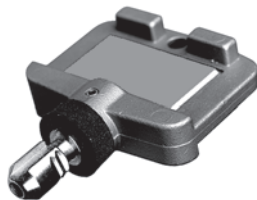
Prosafe products have been subjected to independent, exhaustive testing. With only a small amount of lubricant added infrequently, keys were inserted, rotated and removed at a rate of 12 times per minute. After 100,000 operations (at 10 operations a day this is equivalent to 27 years) the unit was functioning satisfactorily and most importantly would "pass" only the original or equivalent new key. No incorrect keys could operate the lock, underlining the unit's integrity as well as longevity.

The Advantage



Prosafe Keys

Compact, solid and sturdy keys supplied with dust seals and coded tagging. Optional colors/text are available.



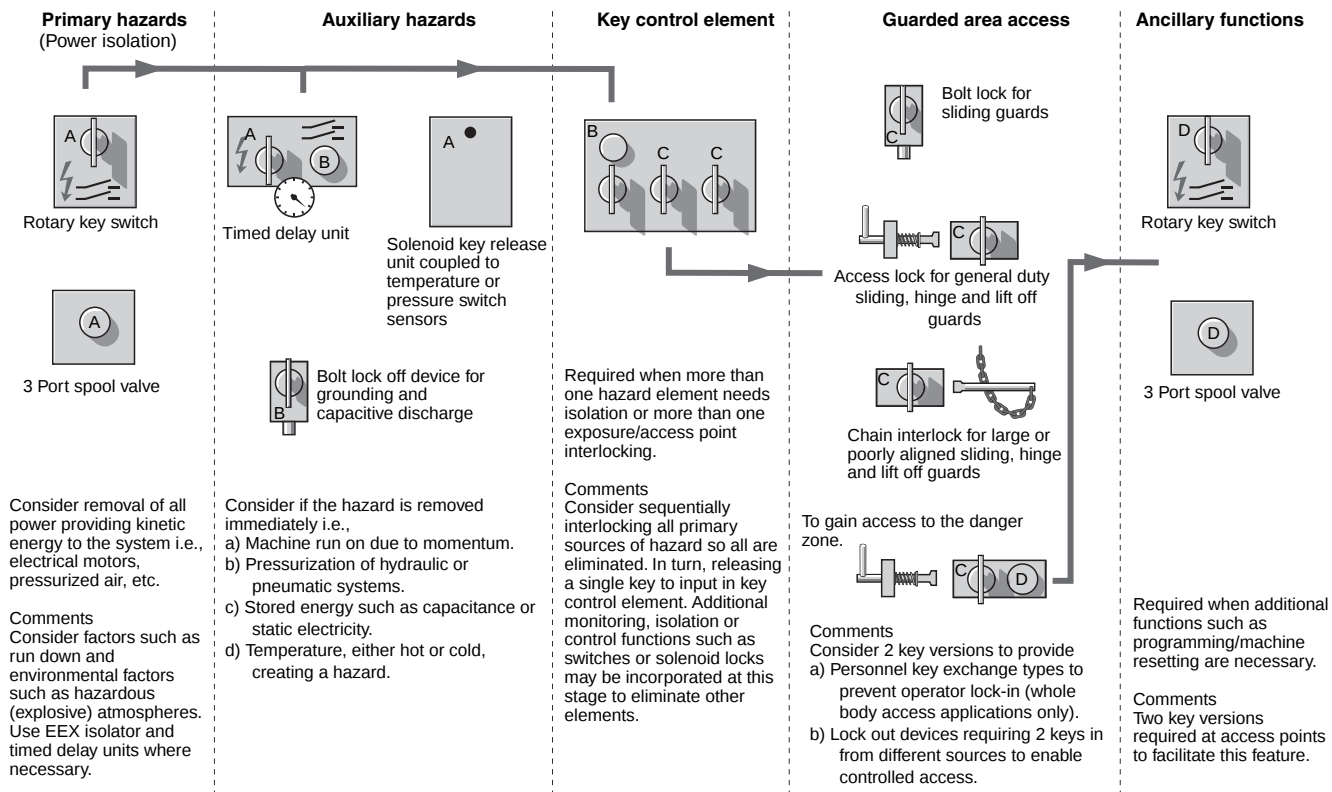
Safety Switches

Trapped Key Switches

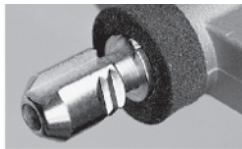
Overview

Design Suggestions for an Interlocking System

Plant and Machinery Interlocking

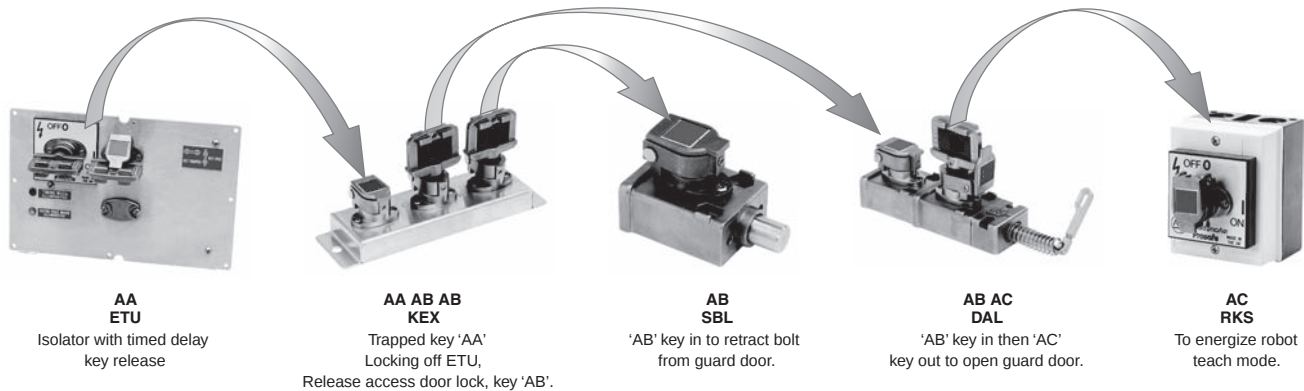


The Prosafe Advantage



Stainless steel construction.

Illustrated Principles of Trapped Key Interlocking



Sequence of Operation

1. The ETU isolator has two keys. One is a nonremovable key. The other key (a "AA" coded key) can be removed after a timed duration, which is set by a potentiometer inside the ETU isolator. Turn the nonremovable key to turn the hazardous machine motion off and start the timer. When the time expires, the Key Free LED turns ON. Remove the "AA" key.
2. Insert the "AA" key into the Key Exchange Unit (KEX) and turn it 90°.
3. Turn one of the "AB" keys 90° and remove it from the KEX. This traps the "AA" key in the KEX and prevents the restarting of the machine.
4. Insert the "AB" key into the Single-key Bolt Lock (SBL) and turn it 90° to gain partial body access to the machine.
5. Turn the second "AB" key 90° and remove it from the KEX. Removal of this key also traps the "A" key in the KEX and prevents the restarting of the machine.
6. Insert the "AB" key into the Dual-key Access Lock (DAL) and turn it 90°.
7. Turn the "AC" key 90° and remove the "C" key. Rotate the access handle to allow full body entry into the hazard zone.
8. Take the "AC" key into the hazard zone, insert it into the rotary key switch (RKSE) and turn it 90° to send a signal to the machine control system, to allow the machine to operate in a slow or teach mode.
9. Reverse the process to return the machine to full operational mode.

Bill of Materials

Item	Quantity	Description	Cat. No.
1	1	Single Key Time Delayed with an AA Primary Key	440T-MSTUE11AA
2	1	Key Exchange Unit, AB Primary Key, Two B Secondary Keys Trapped (included)	440T-MKEXE11AAABAB
3	1	Single Bolt Lock, AB Primary Key	440T-MSBLE10AB
4	1	Dual Access Lock, AB Primary Key, C Secondary Key Trapped (included)	440T-MDALE10ABAC
5	1	Rotary Key Switch, AC Primary Code Barrel	440T-MRKSE10AC
6	1	AA Key	440T-AKEYE10AA

Note: Primary keys must be ordered separately, when not provided for by a previous sequential trapped key. In the example above, only one primary key must be ordered separately. The remaining primary keys are provided by a previous sequential secondary (trapped) key.

Safety Switches

Trapped Key Switches

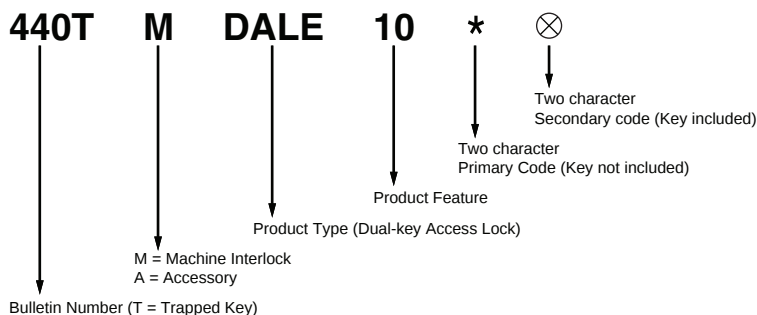
Overview

Code Selection

Ordering Prosafe trapped key products requires codes to be included in the cat. no.

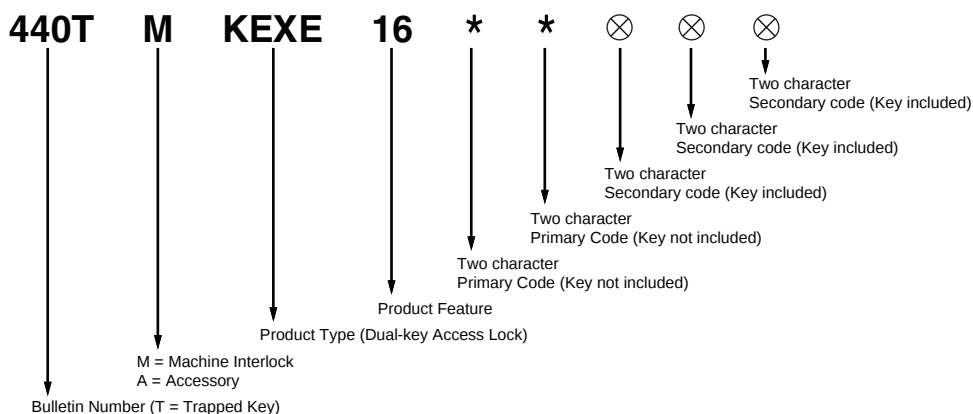
- The codes are added to the end of the cat. no.
- Each code must be two characters in length.
- The first code(s) is the primary code and the last code(s), if necessary, are the secondary code(s).
- Primary codes do not include the key. The key must be ordered separately or must come from a previous operation.
- Secondary codes come complete with a key, as the key is trapped in the code barrel.
- Use the tables on page 3-107 to select and track codes.

Ordering Example 1



Order Cat. No. 440TMDALE100AAAB to get a Dual key Access Lock with an "AA" primary code and a "AB" secondary code, with a "AB" key included.

Ordering Example 2



Order Cat. No. 440TMKEXE16AAABACACAC to get a key exchange unit with "AA" and "AB" primary codes and three "AC" secondary codes. The "AA" and "AB" keys are not included. The three "AC" keys, which are trapped in the secondary code barrels, are included.

The Prosafe Advantage



Stainless steel construction.

Key Coding

Below is an example reference guide that is useful in selecting and tracking codes. Start down the Aa column as the lower codes (typically Aa to Za) are stocked. The chart continues on to Zz. Note that there are only 24 letters used—O & Q are not used.

Codes are ordered with upper case letters. Labels with two letter codes will show the first letter in the upper case and the second letter in lower case.

	Code	Application & Date	Code	Application & Date	Code	Appli & Da
Start Down ↓	Aa	granulator machine #472 24/3/01 ine 67	Ab		Ac	
	Ba		Bb		Bc	
	Ca		Cb		Cc	
	Da		Db		Dc	

Code	Application & Date	Code	Application & Date	Code	Application & Date	Code	Application & Date	Code	Application & Date	Code	Application & Date
Aa		Ab		Ac		Ad		Ae		Af	
Ba		Bb		Bc		Bd		Be		Bf	
Ca		Cb		Cc		Cd		Ce		Cf	
Da		Db		Dc		Dd		De		Df	
Ea		Eb		Ec		Ed		Ee		Ef	
Fa		Fb		Fc		Fd		Fe		Ff	
Ga		Gb		Gc		Gd		Ge		Gf	
Ha		Hb		Hc		Hd		He		Hf	
Ia		Ib		Ic		Id		Ie		If	
Ja		Jb		Jc		Jd		Je		Jf	
Ka		Kb		Kc		Kd		Ke		Kf	
La		Lb		Lc		Ld		Le		Lf	
Ma		Mb		Mc		Md		Me		Mf	
Na		Nb		Nc		Nd		Ne		Nf	
Pa		Pb		Pc		Pd		Pe		Pf	
Ra		Rb		Rc		Rd		Re		Rf	
Sa		Sb		Sc		Sd		Se		Sf	
Ta		Tb		Tc		Td		Te		Tf	
Ua		Ub		Uc		Ud		Ue		Uf	
Va		Vb		Vc		Vd		Ve		Vf	
Wa		Wb		Wc		Wd		We		Wf	
Xa		Xb		Xc		Xd		Xe		Xf	
Ya		Yb		Yc		Yd		Ye		Yf	
Za		Zb		Zc		Zd		Ze		Zf	

Safety Switches

Rotary Switches

Accessories

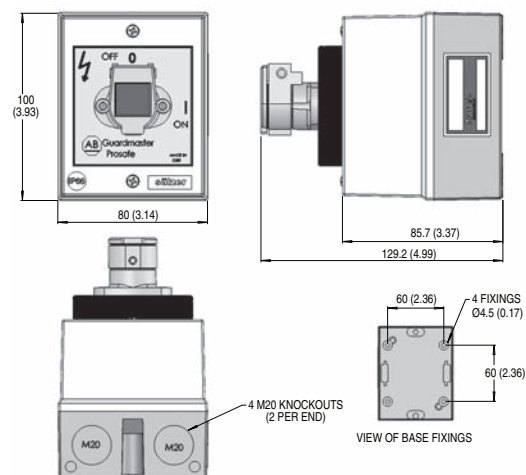
Description	Additional Information	Cat. No.
Stainless steel key		440T-AKEYE10*
Stainless steel replacement code barrel for products other than 100 A RPS/RKS units with dust cap	3-140	440T-ASCBE14*
Stainless steel replacement code barrel for 100 A unit rotary switch		440T-ASCBE11*
Stainless steel weatherproof replacement dust cap		440T-ASFC10*
Cable grip, M20 conduit, accommodates cable diameter 7...10.5 mm (0.27...0.41 in.)	3-53	440A-A09028
Adaptor, conduit, M20 to 1/2 inch NPT, plastic		440A-A09042
Supplemental Contact Block, 20 A, 1 N.O. Late Make, Early Break 1 N.C. Auxiliary	For use with RPSE12, RPSE20 (maximum 1 per switch)	440T-AACA10
Supplemental Contact Block, 20 A, 2 N.O. Late Make, Early Break	For use with RPSE12, RPSE20 (maximum 1 per switch)	440T-AACA11
Supplemental Contact Block, 20 A, 1 N.O., 1 N.C.	For use with RPSE13 & 14	440T-AACA20
Supplemental Contact Block, 20 A, 2 N.O.	For use with RPSE13 & 14	440T-AACA21
ABS plastic enclosure	For use with dual key, and dual key exchange, isolators	440T-AIPB10
Stainless steel enclosure (240x180x150 mm)	For use with >20 A RPSE units (not including RPSE21 or 22)	440T-AIPB25
Stainless steel enclosure (150x150x80 mm)	For use with RPSE10 & 11	440T-AIPB26
ABS plastic enclosure	For use with triple/quad key, and triple/quad key exchange, isolators	440T-AIPB50
Stainless steel enclosure	For use with triple/quad key, and triple/quad key exchange, isolators	440T-AIPB55

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

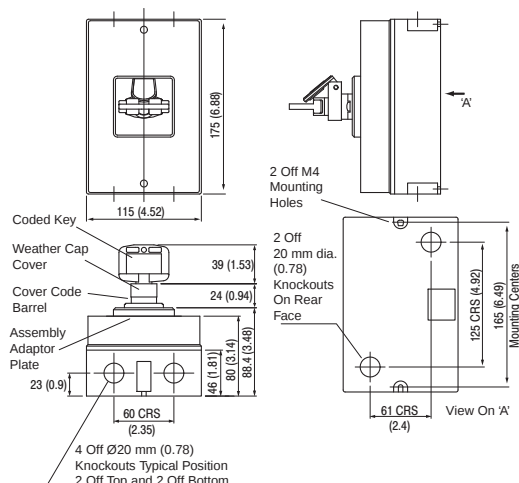
Approximate Dimensions [mm (in.)]

Dimensions are not intended to be used for installation purposes.

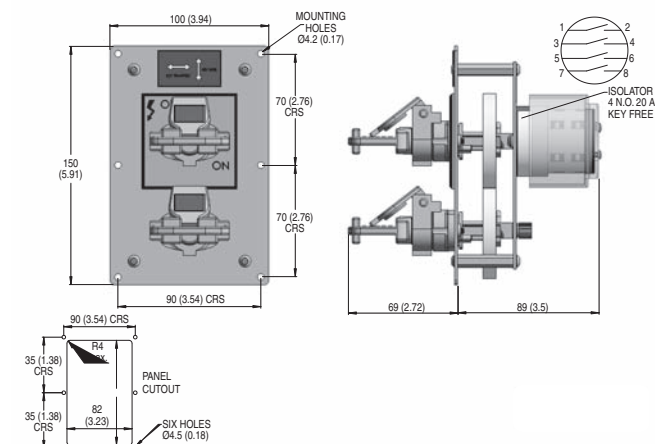
MRKSE10 and MRKSE11



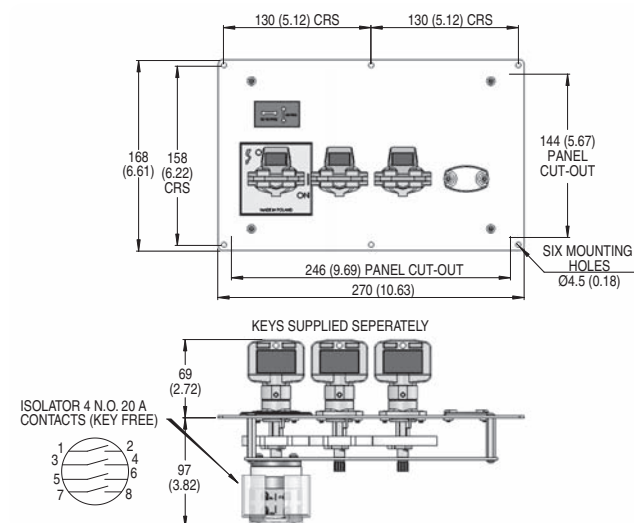
MRKSE12 and MRKSE13



MMRSE10



MMRSE20



Product Selection

Type	Solenoid Voltage	Contacts	Current, Nom	Cat. No.
Single key out	24V DC	2 N.O. & 2 N.C.	20 A	440T-MSRUE11*
		4 N.O.		440T-MSRUE10*
		3 N.O. & 3 N.C.	32 A	440T-MSRUE12*
		20 A	440T-MSRUE13*	
	110V AC	2 N.O. & 2 N.C.	20 A	440T-MSRUE22*
		4 N.O.	32 A	440T-MSRUE20*
		3 N.O. & 3 N.C.		440T-MSRUE23*
		20 A	440T-MSRUE14*	
	230V AC	4 N.O.	63 A	440T-MSRUE24*
		2 N.O. & 2 N.C.	20 A	440T-MSRUE33*
		4 N.O.		440T-MSRUE30*
		32 A	440T-MSRUE34*	
	110V DC	4 N.O.	63 A	440T-MSRUE35*
			20 A	440T-MSRUE44*
				440T-MSRUE40*
				440T-MSRUE46*
Dual key out	24V DC	2 N.O. & 2 N.C.	20 A	440T-MS2097D**
		4 N.O.		440T-MS2097A**
		4 N.O.	32 A	440T-MS2097G**
		63 A	440T-MS2097J**	
Triple key out	24V DC	4 N.O.	20 A	440T-MS3417D***
		2 N.O. & 2 N.C.		440T-MS3417A***
		4 N.O.	32 A	440T-MS3417G***
		63 A	440T-MS3417J***	
Quad key out	24V DC	4 N.O.	20 A	440T-MS3418D****
		2 N.O. & 2 N.C.		440T-MS3418A****
		4 N.O.	32 A	440T-MS3418G****
		63 A	440T-MS3418J****	

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

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*
Optional plastic enclosure	For use with single key out 20 A units	440T-AIPB10
	For use with single key out 32 A units	440T-AIPB22
Optional ABS plastic enclosure	For use with triple/quad key out units	440T-AIPB50
Optional stainless steel enclosure	For use with triple/quad key out units	440T-AIPB55

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

Safety Switches

Electronic Timed-Delay Units

Product Selection

Type	Solenoid Voltage	Contact Set 1	Contact Set 2	Cat. No.
Single key out Panel mounted	24V DC	3 N.O. 40 A	1 N.O. 20 A	440T-MSTUE10*
		2 N.O. 20 A	1 N.C. 20 A	440T-MSTUE11*
	110V AC	3 N.O. 40 A	1 N.O. 20 A	440T-MSTUE20*
		2 N.O. 20 A	1 N.C. 20 A	440T-MSTUE22*
	230V AC	3 N.O. 40 A	1 N.O. 20 A	440T-MSTUE30*
		2 N.O. 20 A	1 N.C. 20 A	440T-MSTUE33*
Dual key out Panel mounted	24V DC	3 N.O. 40 A	1 N.O. 20 A	440T-MDTUE10**
		2 N.O. 20 A	1 N.C. 20 A	440T-MDTUE11**
	110V AC	3 N.O. 40 A	1 N.O. 20 A	440T-MDTUE20**
		2 N.O. 20 A	1 N.C. 20 A	440T-MDTUE22**
	230V AC	3 N.O. 40 A	1 N.O. 20 A	440T-MDTUE30**
		2 N.O. 20 A	1 N.C. 20 A	440T-MDTUE33**

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

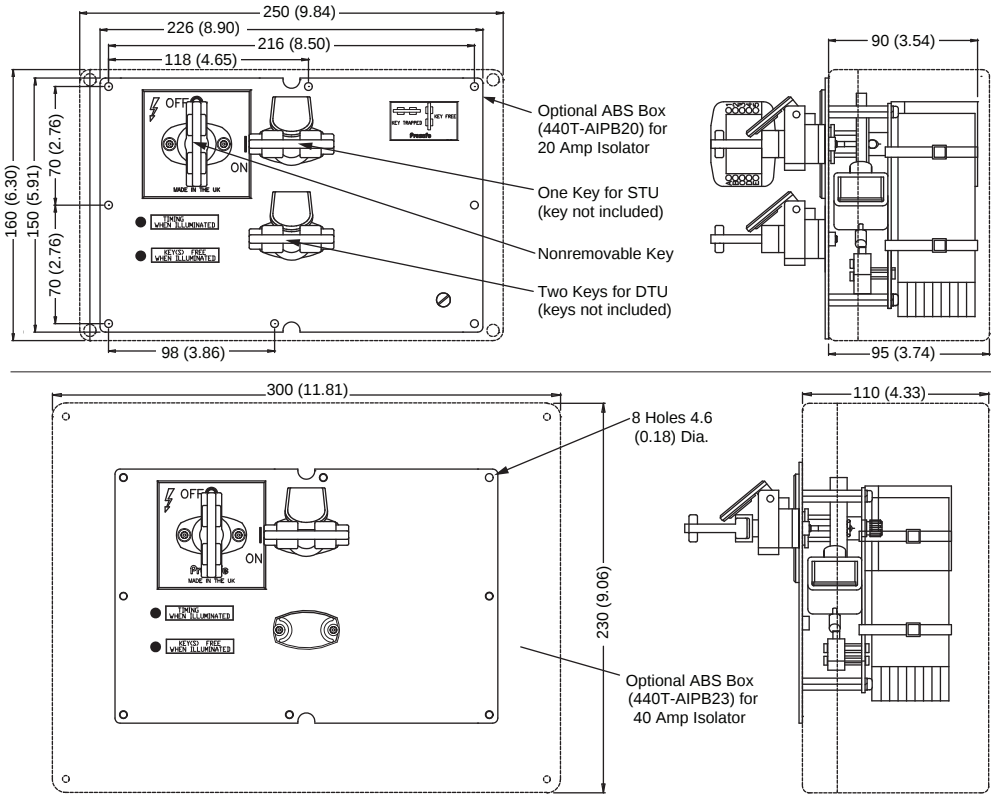
Accessories

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*
Optional plastic enclosure	For use with 20 A units	440T-AIPB20
	For use with 40 A units	440T-AIPB23
Optional stainless steel enclosure	For use with all units	440T-AIPB46

* 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.



Product Selection

Type	Solenoid Voltage	Contact Set 1	Contact Set 2	Cat. No.
Single key out Panel mounted	24V DC	3 N.O. 40 A	1 N.O. 20 A	440T-MSMSE10*
		2 N.O. 20 A	1 N.C. 20 A	440T-MSMSE11*
	110V AC	3 N.O. 40 A	1 N.O. 20 A	440T-MSMSE20*
		2 N.O. 20 A	1 N.C. 20 A	440T-MSMSE22*
	230V AC	3 N.O. 40 A	1 N.O. 20 A	440T-MSMSE30*
		2 N.O. 20 A	1 N.C. 20 A	440T-MSMSE33*
Dual key out Panel mounted	24V DC	3 N.O. 40 A	1 N.O. 20 A	440T-MDMSE10**
		2 N.O. 20 A	1 N.C. 20 A	440T-MDMSE11**
	110V AC	3 N.O. 40 A	1 N.O. 20 A	440T-MDMSE20**
		2 N.O. 20 A	1 N.C. 20 A	440T-MDMSE22**
	230V AC	3 N.O. 40 A	1 N.O. 20 A	440T-MDMSE30**
		2 N.O. 20 A	1 N.C. 20 A	440T-MDMSE33**

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

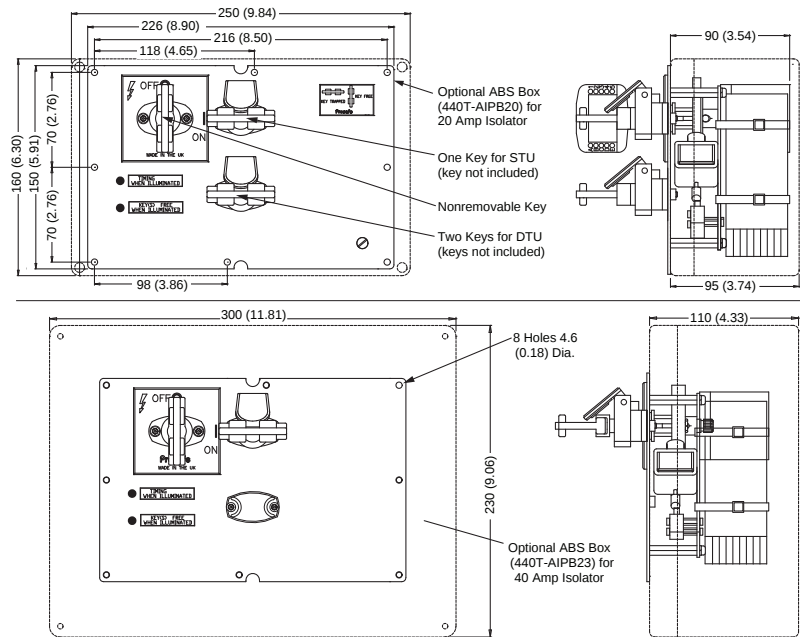
Accessories

Description	Size [mm]	Type	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*
500 mA fuse—Bussmann Cat. No. ETF-500 mA		500 mA @ 250V	NA	440R-A31562
Optional plastic enclosure		—	For use with 20 A units	440T-AIPB20
Optional stainless steel enclosure			For use with 40 A units	440T-AIPB23
			For use with all units	440T-AIPB46
Inductive Proximity Sensor, Three-wire, DC	12	NPN	page 5-57	872C-D3NN12-E2
		PNP		872C-D3NP12-E2
	18	NPN		872C-D5NN18-E2
		PNP		872C-D5NP18-E2
	30	NPN		872C-D10NN30-E2
		PNP		872C-D10NP30-E2

* 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.



Product Selection

Key Exchange Units		
Number of Keys	Keys In and Out	Cat. No.
2 way	1 key in 1 key out	440T-MKEXE10‡
3 way	1 key in 2 keys out	440T-MKEXE11‡
4 way	1 key in 3 keys out	440T-MKEXE12‡
5 way	1 key in 4 keys out	440T-MKEXE13‡
6 way	1 key in 5 keys out	440T-MKEXE14‡
4 way	2 key in 2 keys out	440T-MKEXE15‡
5 way	2 key in 3 keys out	440T-MKEXE16‡
6 way	2 key in 4 keys out	440T-MKEXE17‡
6 way	3 key in 3 keys out	440T-MKEXE18‡
7 way	1 key in 6 keys out	440T-MKEXE19‡
8 way	1 key in 7 keys out	440T-MKEXE20‡
9 way	1 key in 8 keys out	440T-MKEXE22‡
10 way	1 key in 9 keys out	440T-MKEXE23‡
11 way	1 key in 10 keys out	440T-MKEXE24‡
12 way	1 key in 11 keys out	440T-MKEXE25‡
13 way	1 key in 12 keys out	440T-MKEXE26‡
14 way	1 key in 13 keys out	440T-MKEXE27‡
15 way	1 key in 14 keys out	440T-MKEXE28‡
16 way	1 key in 15 keys out	440T-MKEXE29‡
17 way	1 key in 16 keys out	440T-MKEXE30‡
18 way	1 key in 17 keys out	440T-MKEXE33‡
19 way	1 key in 18 keys out	440T-MKEXE34‡
20 way	1 key in 19 keys out	440T-MKEXE35‡
21 way	1 key in 20 keys out	440T-MKEXE36‡
22 way	1 key in 21 keys out	440T-MKEXE37‡
23 way	1 key in 22 keys out	440T-MKEXE38‡
24 way	1 key in 23 keys out	440T-MKEXE39‡
25 way	1 key in 24 keys out	440T-MKEXE40‡

‡ Specify the codes individually for each primary key in (key not included) and for each secondary key (key included). See 3-107 for code selection.

Consult factory for other configurations of keys in and keys out.

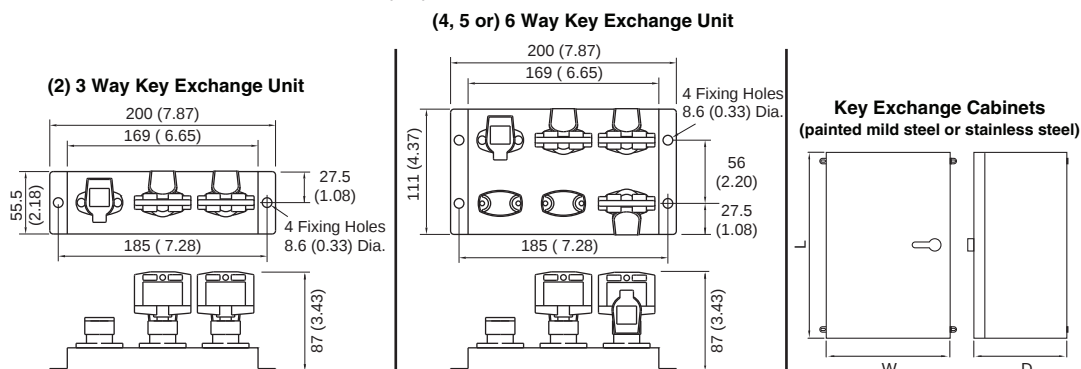
Accessories

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*
Optional Key Exchange Cabinet	Mild steel cabinet for 7-...11-way units	440T-AIPB30
	Mild steel cabinet for 12-...15-way units	440T-AIPB33
	Mild steel cabinet for 16-...25-way units	440T-AIPB34
	Stainless steel cabinet for 12-...15-way units	440T-AIPB40
	Stainless steel cabinet for 16-...25-way units	440T-AIPB44

* 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.



Product Selection - Solenoid

Solenoid Voltage	Contact Type	Type	Trapped Key Condition	Bolt Retracted [mm (in.)]	Bolt Extended [mm (in.)]	Cat. No.
24V DC	2 N.C. & 1 N.O. break before make	Single key	Free key to retract bolt	0	14 (0.55)	440T-MSBUE10*
				3 (0.11)	17 (0.66)	440T-MSBUE11*
				6 (0.23)	20 (0.78)	440T-MSBUE12*
				13 (0.51)	27 (1.06)	440T-MSBUE13*
			Key trapped to retract bolt	0	14 (0.55)	440T-MSBUE33*
				3 (0.11)	17 (0.66)	440T-MSBUE34*
		Dual key	Both keys trapped to retract bolt	6 (0.23)	20 (0.78)	440T-MSBUE35*
				13 (0.51)	27 (1.06)	440T-MSBUE36*
			Primary key trapped, secondary key free to retract bolt	0	14 (0.55)	440T-MDBUE10**
				3 (0.11)	17 (0.66)	440T-MDBUE11**
				6 (0.23)	20 (0.78)	440T-MDBUE12**
				13 (0.51)	27 (1.06)	440T-MDBUE13**
			Primary key trapped, secondary key free to retract bolt	0	14 (0.55)	440T-MDBUE14*⊗
				3 (0.11)	17 (0.66)	440T-MDBUE15*⊗
				6 (0.23)	20 (0.78)	440T-MDBUE16*⊗
				13 (0.51)	27 (1.06)	440T-MDBUE17*⊗

* 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

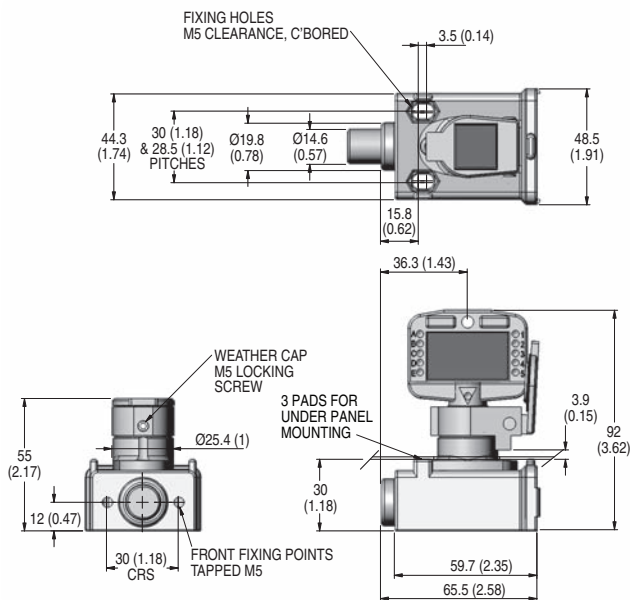
Description	Additional Information	Cat. No.
Stainless steel key	3-140	440T-AKEYE10*
Stainless steel replacement code barrel with dust cap		440T-ASCBE14*
Stainless steel weatherproof replacement dust cap		440T-ASFC10*
Stainless steel ejector key		440T-AKEYE13*

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

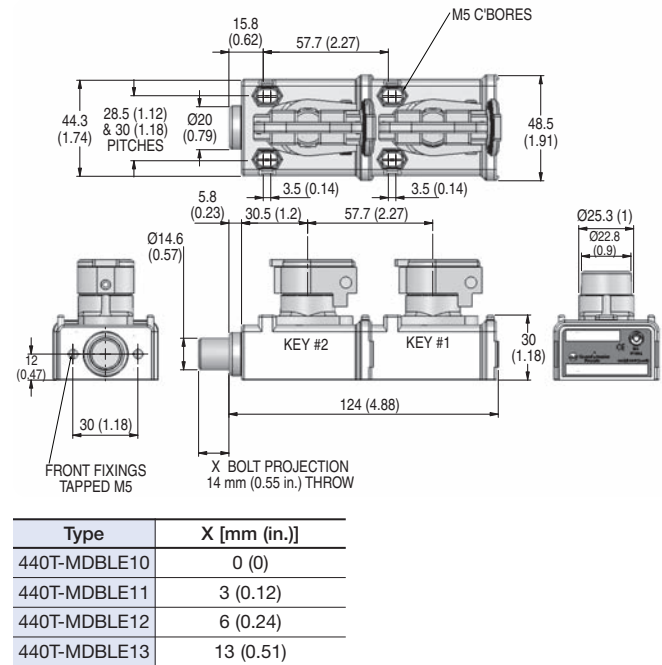
Approximate Dimensions [mm (in.)]

Dimensions are not intended to be used for installation purposes.

MSBLE10, 11, 12, and 13



MDBLE10, 11, 12, and 13



Type	X [mm (in.)]
440T-MDBLE10	0 (0)
440T-MDBLE11	3 (0.12)
440T-MDBLE12	6 (0.24)
440T-MDBLE13	13 (0.51)

Product Selection - Mechanical

Type	Actuator Type	Trapped Key Condition	Cat. No.
Single key	Lever	Key trapped to release lever	440T-MSALE10*
	Chain	Key trapped to release chain	440T-MSCLE10*
	Extended Lever	Key trapped to release lever	440T-MSALE20*
Single key with padlock hasp	Lever	Key trapped to release lever	440T-MSALE11*
	Chain	Key trapped to release chain	440T-MSCLE11*
Dual key	Lever	Primary key trapped, secondary key free to release lever	440T-MDALE10*⊗
		Both keys trapped to release lever	440T-MDALE11**
	Chain	Primary key trapped, secondary key free to release chain	440T-MDCLE10*⊗
		Both keys trapped to release chain	440T-MDCLE11**
Dual key with padlock hasp	Lever	Primary key trapped, secondary key free to release lever	440T-MDALE45*⊗
Dual key with eject key	Lever	Primary key trapped, secondary spring eject key	440T-MDALJ10*⊗
	Chain		440T-MDCLJ10*⊗
Triple key	Lever	One primary trapped, two secondary keys free to release lever	440T-MTALE11*⊗⊗
	Chain	One primary trapped, two secondary keys free to release chain	440T-MTCLE11*⊗⊗

* 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.

Product Selection - Electrical

Contact Type	Type	Actuator Type	Trapped Key Condition	Cat. No.
2 N.C. & 1 N.O. break before make	Dual Key	Lever	Both keys trapped to release lever	440T-MDASE21**
			Primary key trapped, secondary key free to release lever	440T-MDASE20*⊗
		Chain	Both keys trapped to release chain	440T-MDCSE21**
			Primary key trapped, secondary key free to release chain	440T-MDCSE20*⊗

* 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 replacement code barrel with dust cap		440T-ASCBE14*
Stainless steel weatherproof replacement dust cap		440T-ASFC10*
Replacement actuator type lever	—	440T-ACAD10
Replacement actuator type chain	—	440T-ACHA10
Stainless steel ejector key	—	440T-AKEYE13*

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

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

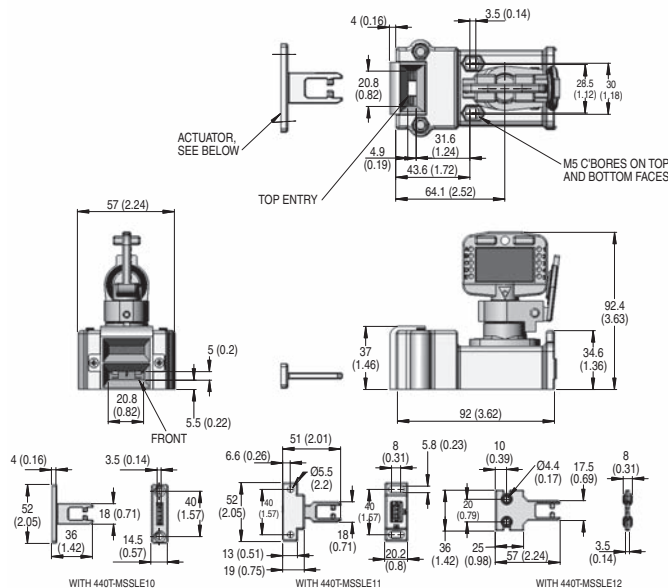
* Substitute the desired primary code for this symbol (key not included). See 3-107 for code selection.

⊗ Substitute the desired code for this symbol. See 3-107 for code selection.

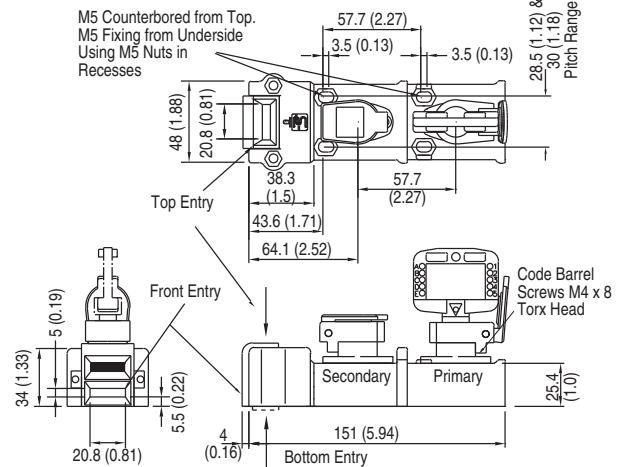
Approximate Dimensions [mm (in.)]

Dimensions are not intended to be used for installation purposes.

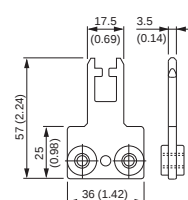
Single Key Slamlock



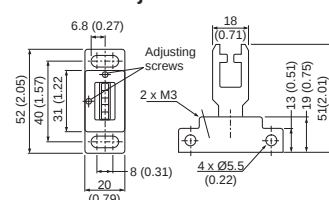
Dual Key Slamlock



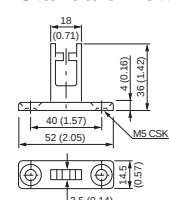
Flat Actuator



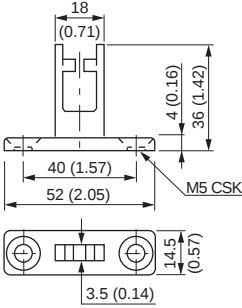
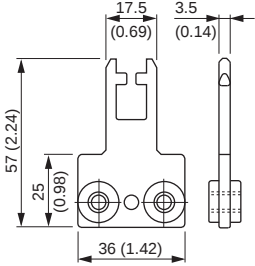
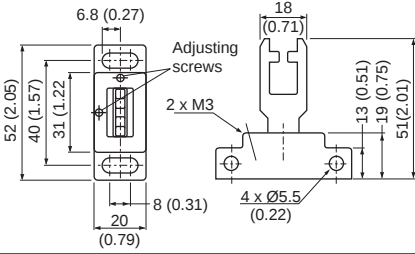
Flexible/Adjustable Actuator



Standard Actuator



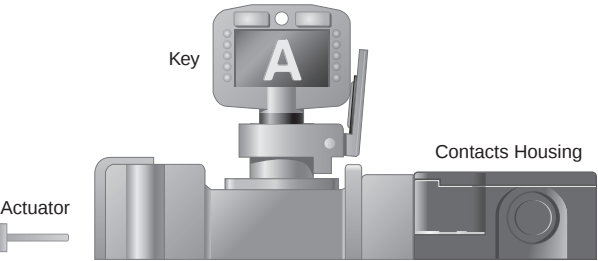
Accessories

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 contacts open, auxiliary contact closed.



Locking force = 2000 N (450 lb)

Safety Switches

Miniature Valve Interlocks

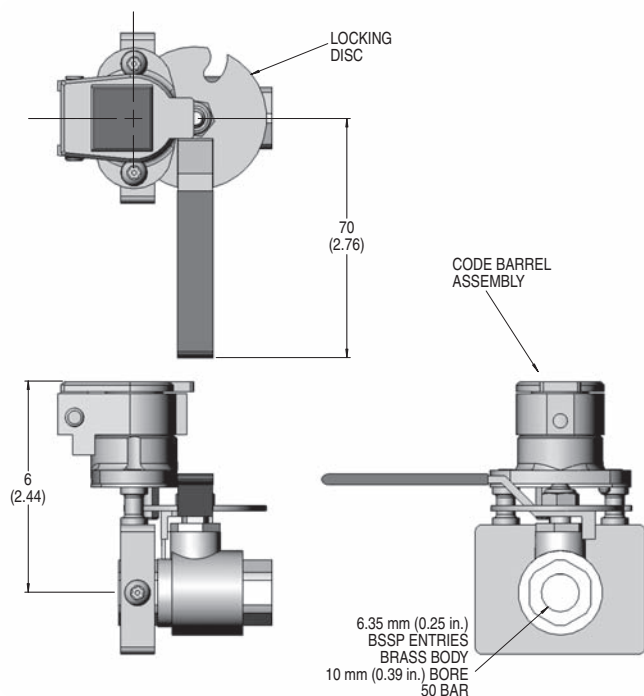


Features

- 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*

* Substitute the desired primary code for this symbol (key not 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 weatherproof replacement dust cap		440T-ASFC10*

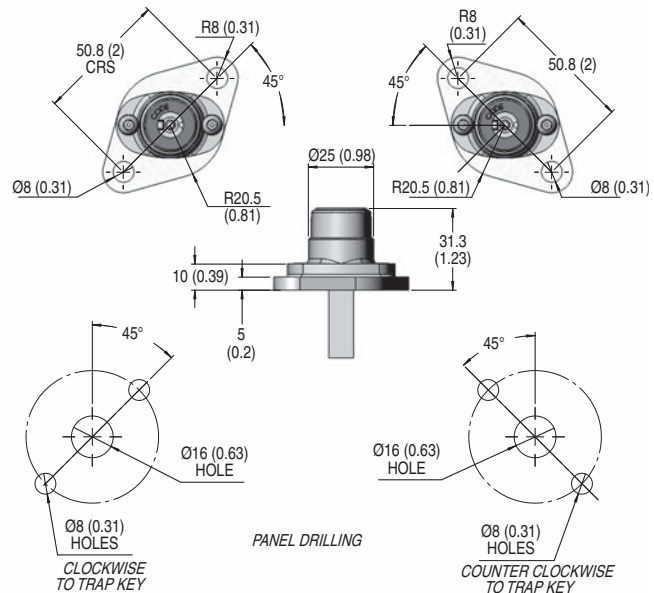
* Substitute the desired primary code for this symbol (key not included). See 3-107 for code selection.

Approximate Dimensions [mm (in.)]

Dimensions are not intended to be used for installation purposes.

45° Mounting Type

Panel Drilling Detail

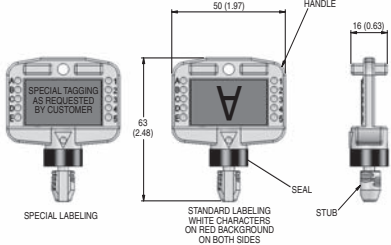
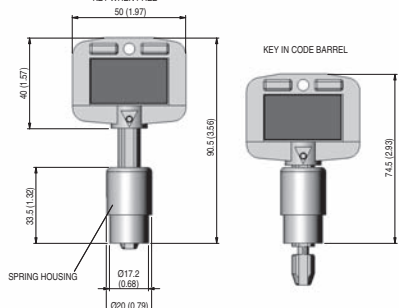
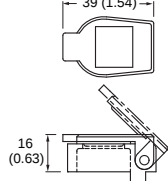
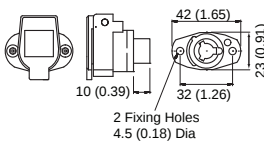
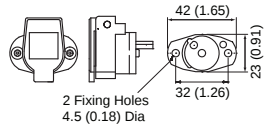


The Prosafe Advantage



Stainless steel construction.

Accessories

	Description	Approximate Dimensions [mm (in.)]	Cat. No.
	Stainless steel key		440T-AKEYE10*
	Stainless steel ejector key		440T-AKEYE13*
	Stainless steel weatherproof replacement dust cap		440T-ASFC10*
	Stainless steel replacement code barrel for 100 A unit rotary switch		440T-ASCBE11*
	Stainless steel replacement code barrel with dust cap*		440T-ASCBE14*
	Description	Material	Cat. No.
	Emergency break glass key box	Plastic case	440T-AIPB11
		Metal case with hammer	440T-AIPB12
	Description	Code	Cat. No.
	Emergency repair kit for code barrels* 2 offset pin code barrels with key	ER1	440T-AKITE45ER1
		ER2	440T-AKITE45ER2
		ER3	440T-AKITE45ER3
		ER4	440T-AKITE45ER4
		ER5	440T-AKITE45ER5
		ER6	440T-AKITE45ER6
		ER7	440T-AKITE45ER7
		ER8	440T-AKITE45ER8
		ER9	440T-AKITE45ER9

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

* Not suitable for 440T-MRKSE14/440T-MRPSE14 OR 440T-MSGAU units.



WARNING: The presence of spare keys, override keys, or spare actuators can compromise the integrity of safety interlocking systems. Personal injury or death, property damage or economic loss can result from the introduction of spare keys, override keys or spare actuators into interlocking systems without appropriate management controls, working procedures and alternative protective measures to control their use and availability.