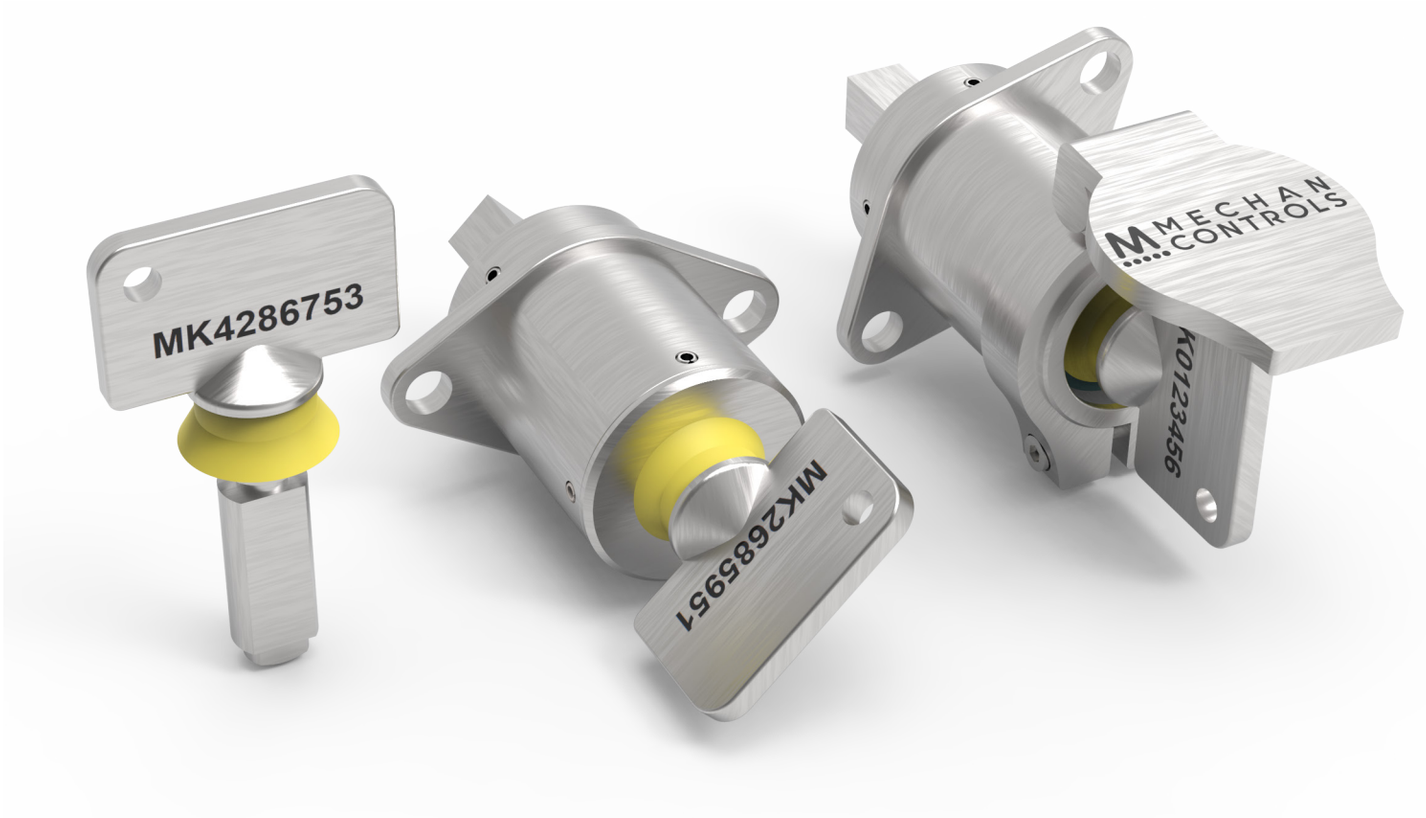
DESIGNED & MANUFACTURED
IN GREAT BRITAIN

MECHAN CONTROLS

Installation Instruction for

MK-Safe BR Basic Lock & Key



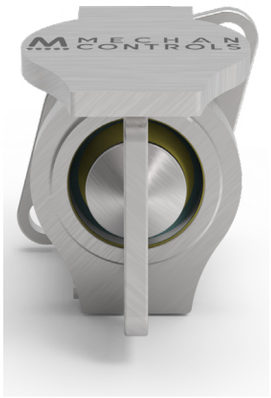
Machine Safety for People and Productivity

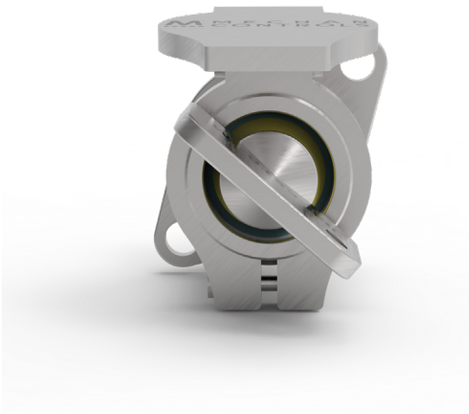
Operating Instructions: MK-Safe Basic Lock & Key

Description	Basic Lock & Key
MK-Safe is the easy-to-configure trapped key interlocking system. It is suitable for various industrial safety applications. The casing of the MK-Safe range is stainless steel 316 which is designed and built to withstand the harsh industrial environments. The coding system has 15,000+ different key codes available. The master coding system can be provided as an option. BR basic lock barrel is a mechanical interlocking device with a rotary lock spindle. The BR lock can be used for switchgear applications, such as circuit breakers, isolators and earth switchs. The BR lock is right handing. The lock spindle is 9.5mm sq and 22mm long.	

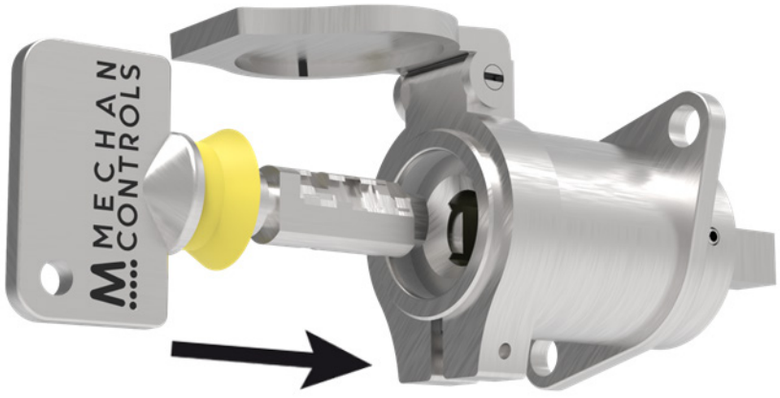
Insert the key and turn to the a trapped position, the lock spindle turns clockwise 90 deg.

When the key is in trapped position, turn the key anti-clockwise to release the key, and the lock spindle turns anti-clockwise 90 deg.





The key is duel side entry to the lock barrel.



Technical Specification: Basic Lock & Key

Housing Material	316 Stainless Steel
Internal Component Material	Full Stainless Steel
Operating Temperature	0ºC - 80ºC
Mechanical Lifetime	400,000 Operations
Max Key Strength	15 Nm

Safety Standards	
Standards	EN ISO 14119:2013 EN ISO 13849-1:2015 EN ISO 13849-2:2012 EN IEC 62061:2021
Certifications	CE marked for all applicable directives

Safety Related Data	
B10d	2,000,000
SIL up to	SIL 3 acc. to EN IEC 62061
Performance Level (PL) up to	PL-e acc. to EN ISO 13849-1
Safety Category up to	CAT4 acc. to EN ISO 13849-1
Coding	Type 2 acc. to EN ISO 14119

Note:
The trapped key interlocking product is part of the machine safety control system. To achieve the desired safety performance, the correct system structure should be implemented. The proper safety controller should be used to provide the correct monitoring function and diagnostic coverage.

Mounting

Mounting of the BR lock

1. The unit should be mounted in its correct assembly condition.

2. The installation of the unit must comply with the relevant international and local safety standards.

3. After mounting the unit, it must be commissioned and tested by a qualified person to ensure the correct operation and safety function of the unit.

The unit should be mounted in a position with no vibration. Otherwise, anti-vibration mounting measurements should be used to ensure the correct operation of the unit.

Recommended Fixing Required (Mechan Controls does not provide the fixing screws and washers):

2 x M6 Hex socket head cap screws / minimum screw Length=18mm + panel thickness.

2 x M6 Spring washer, 2 x M6 Flat washer, 2 x M6 Nut.

The recommended torque to tighten the fixings is 8 to 10Nm.

Ensure that all the fixing screws can not be removed due to the vibration.
The temper-proof security screws are recommended so that the personnel on site can not remove the unit using standard tools.
All fixing positions must be used.
Mount the unit to a flat steel plate. The minimum thickness should be 3.0mm.

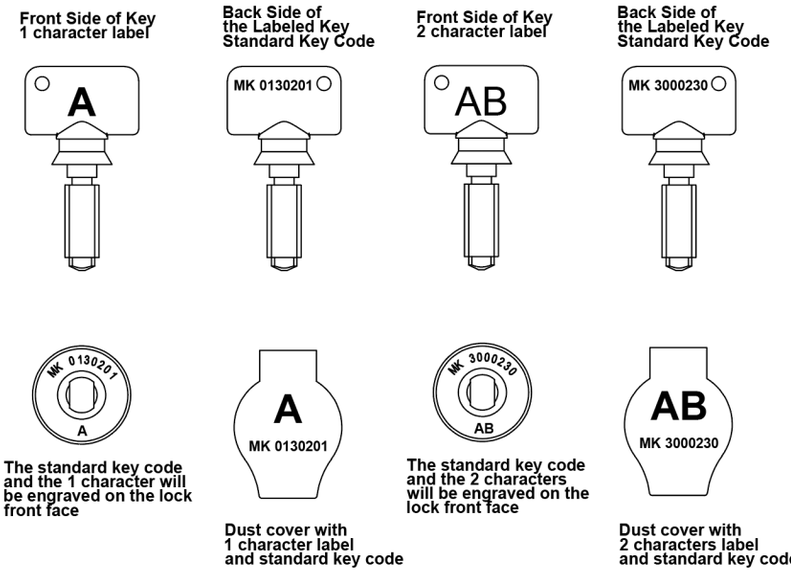
Key Code and Engraving Specification

To operate the specific lock, the key cut number on the key needs to match the key code on the lock barrel. The key cut number is laser engraved on the key and lock. Please see the following examples:

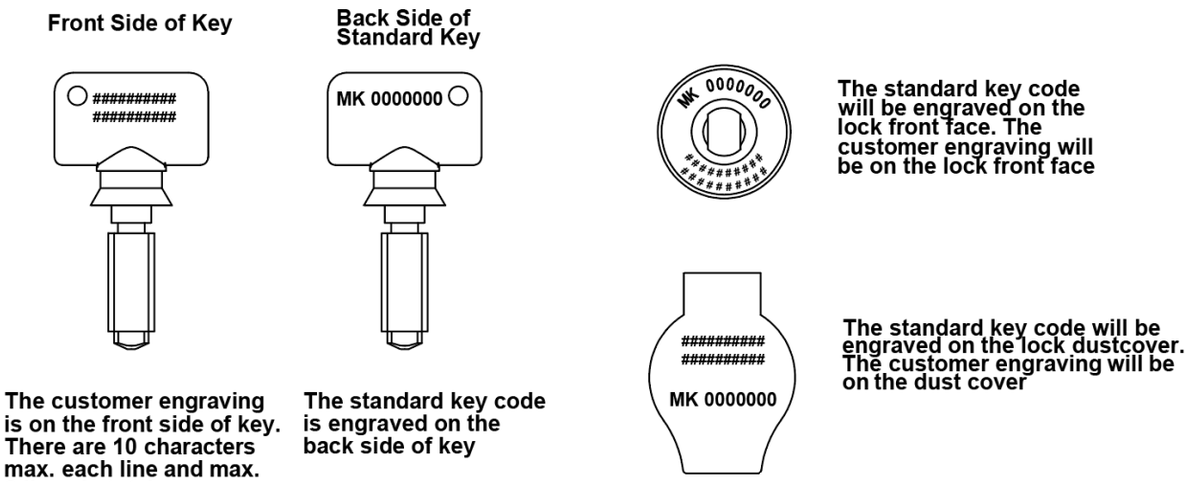
If there are further requirements for key code, please contact Mechan Controls for further assistance

MK-SAFE mechanical trapped key system offers 15,000+ unique standard key codes and 126 master key codes. Mechan provides both stocked lock and key options and customised laser engraving options.
The standard key cut number/key code is a 7 digit number with a prefix of MK. Each digit has a 0,1,2,3 code. The master key cut number / key code is 7 digit letter with the prefix of MK. Each digit has an A,B code

Option 1 --- Stocked lock and key, For example, A lock and A key will always have the same cut number/ key code.

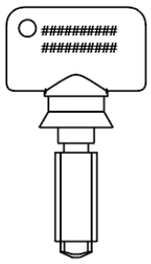


Option 2 --- customised laser engraving option of standard lock system. Note: The engraving and key code information should be managed by the customers.



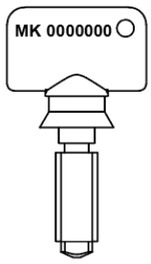
Key Code and Engraving Specification

Option 3 --- customised laser engraving option of the master lock system. Note: The engraving and key code information should be managed by the customers.



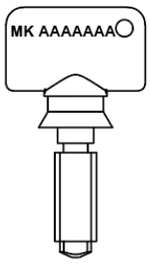
Front Side of Key

The customer engraving is on the front side of key. There are 10 characters max. each line and max. 2 lines in total



Back side of Standard Key

For standard cut key. the standard key code is engraved on the back side of key



Back side of Master Key

For master cut key, the master key code is engraved on the back side of key

The standard and master key code will be engraved on the lock front face. The customer engraving will be on the lock front face

The standard and master key code will be engraved on the lock dustcover. The customer engraving will be on the dust cover

BR Part Selection

MK-BR-STC-N-CW90

Product Type	
MK	Mechan Key Exchange

Range	
BR	Basic Lock Barrel

Code	
STC	Standard Code System
MAC	Master Code System

Dust Cover	
N	No Dust Cover
D	With Dust Cover

Lock orientation	
CW90	90 Deg Clockwise

Key Part Selection

MK-KEY-STC

Product Type	
MK	Mechan Key Exchange

Range	
KEY	KEY

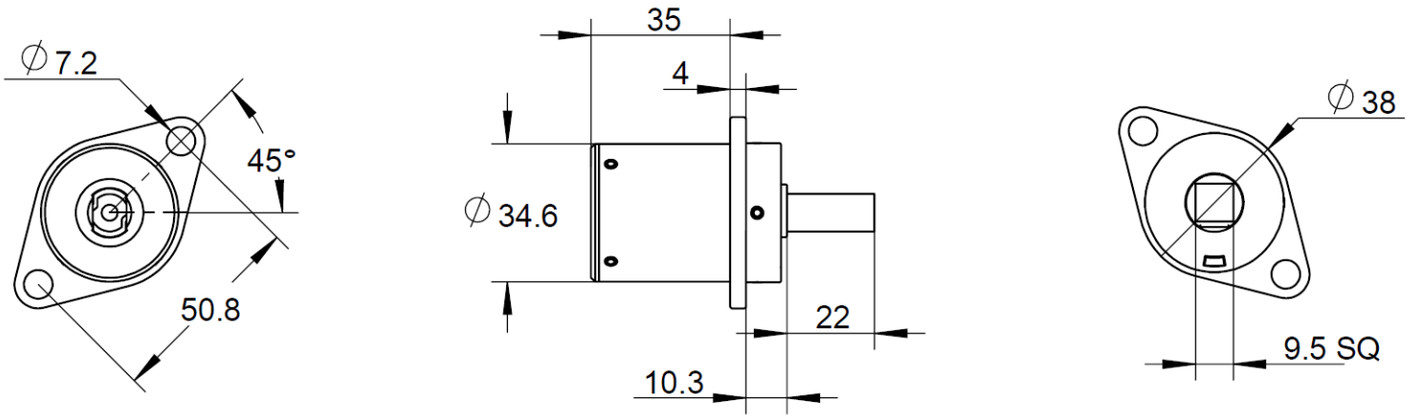
Code	
STC	Standard Code System
MAC	Master Code System

The information is designed to help suitably qualified personnel install and operate Mechan Controls safety equipment. Before using this product, read this guide thoroughly along with any relevant European and/or National Standards E.g. Machinery Directive 2006/42/EC and its Amendments, Provision and Use of Work Equipment Regulations. Further information can be obtained from Mechan Controls Ltd.

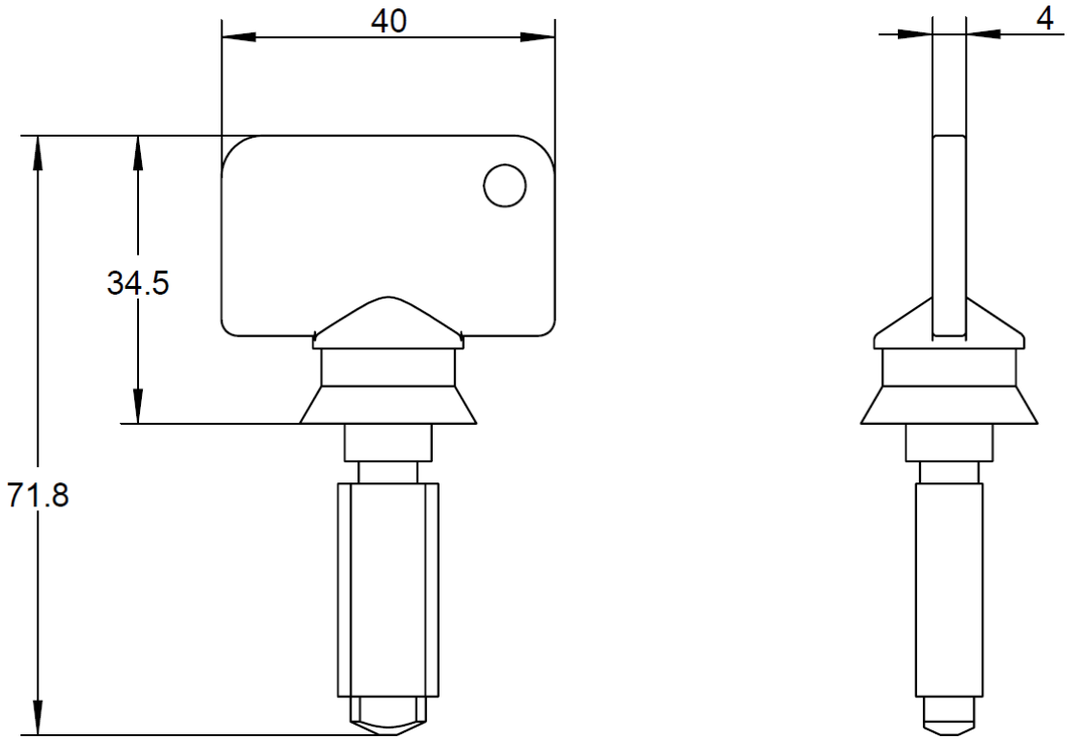
Mechan Controls Ltd accepts no responsibility of managing key codes for the customers. It is the customer's responsibilty to implement a proper key code management system and means to prevent unintentional duplication of key codes. If an organization decides to keep spare or master keys then they shall be under management control and this shall be taken into account in the risk assessment. For further information, please refer to ISO/TS 19837.

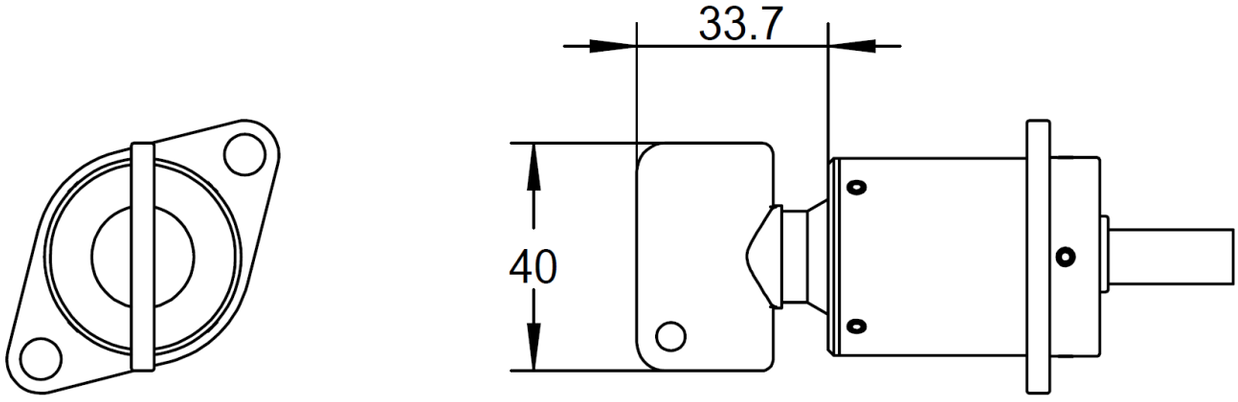
Dimensions

Barrel Dimension



Key Dimension





All dimensions are in MM

Safety Specification

Safety Assessment

A risk assessment should take place to establish that the specifications of the MK-Safe product are suitable for the application required. See Technical Specifications below or contact Mechan Controls for further information.

The products may only be installed, commissioned, operated and maintained by competent persons.
A competent person is a qualified and knowledgeable person who, because of their training, experience and current professional activity, has the specialist knowledge required. An understanding of European and International laws, directives and standards is recommended.

Maintenance

It is recommended to check the unit every week basis regarding the following aspects:
1. the correct safety function of the unit
2. the correct operation of the unit
3. Look for signs of damage or excessive wear

Damaged units should be replaced or returned to the manufacturer for repair where practical. For lubrication or cleaning, use WD40. The unit should be lubricated at a reasonable frequency depending on the operating environment.

Disclaimer

In the interest of product development specifications are subject to change without notice. It is the responsibility of the user to ensure compliance with any acts or by-laws in place. All information regarding Mechan equipment is believed to be accurate at the time of printing. Responsibility cannot be accepted for errors or omissions.

Warranty

The warranty will be void if the following points are true:

- The product was not used for its intended purpose
- Damage was caused by usage not stated in the manual
- Modifications have been made to the products (e.g exchanging components)
- Operating personnel are not suitably qualified

Warning!

The MK-Safe trapped key system should not be manipulated or overridden. Removing the actuator from the guard may lead to loss of safety resulting in serious injury or death.

MECHAN CONTROLS

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