

ANNEXURE –A FOR MECHANICAL INTERLOCKS & KEY

1.0 **Objective:**

This specification governs the requirements for stocking of MECHANICAL INTERLOCKS, BOLT LOCK & KEY INCLUDING KEY EXCHANGE BOX for use in Switchgear panels.

The basic lock consisting of a main spindle with die-cast head in brass housing. A key with inscription corresponding to the inscription on the die-cast head of spindle can be inserted in the housing to rotate the spindle in the clockwise or anticlockwise direction through' 45, 60, 85, 90 or 360 degree.

2.0 **Application:**

The locks can be used in different mechanical interlocking schemes to ensure a definite sequence of operation of one or more industrial or substations equipment. (Power plants / Distribution).

3.0 **Compliance with national standards :**

There is no Indian Standard covering this type of material.

4.0 **Technical specifications :**

Material : Brass casting. AA - 19912

Finish : Nickel plated with Chrome finish.

: Thickness of plating > 5 microns.

Direction of rotation. : Clock-wise from the front of lock.

(From free to Trap key)

Angle of rotation of key : 90 degree unless otherwise stated.

Dimensions : As per Figures 1 & 2.

Notes to supplier:

- (i) **SUPPLIER TO ESSENTIALLY SUBMIT ANNEXURE-II(CHECK LIST) DULY FILLED IN THE FORMAT ENCLOSED, ALONGWITH THE OFFER. OFFER WITHOUT DULY FILLED ANNEXURE-II MAY NOT BE EVALUATED.**
- (ii) Supplier to manufacture all the items in line with the figures 1 & 2 given along with this standard.
- (iii) Separate drawing approval on vendor's drawing against each project is not required.
- (iv) Annexure-I duly filled, signed with seal, in the format specified at sht.no.3, with inscription details for one particular project shall be considered as final document for engraving.

INSCRIPTIONS:

: As per Annexure-I.

: Letters Height/Depth 3 mm.

: FOR ONE PARTICULAR PROJECT, IT SHALL NOT BE POSSIBLE TO INSERT KEYS HAVING ONE INSCRIPTION, ON THE LOCKS HAVING OTHER INSCRIPTION.

: FOR ONE PARTICULAR PROJECT, KEYS OF THE SAME INSCRIPTION SHALL BE COMMON FOR LOOSE LOCKS & LOCKS FITTED ON KEY EXCHANGE BOX.

ITEM-001 : Mechanical interlock (TOTAL 635 NOS LOCKS)

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ITEM-002 : Key for Mechanical interlock #001 (TOTAL 212 NOS KEYS)

ITEM-003 : 2 WAY KEY EXCHANGE BOX (TOTAL 40 NOS)

Fitted with one control lock with key and two front locks without key. The key of control lock shall be free when key of all front locks are trapped and vice versa. The key exchange box shall be suitable for wall mounting.

ITEM-004 : 3 WAY KEY EXCHANGE BOX (TOTAL 6 NOS)

Fitted with one control lock with key and three front locks without key. The key of control lock shall be free when key of all front locks are trapped and vice versa. The key exchange box shall be suitable for wall mounting.

ITEM 005 :- (TOTAL 28 NOS)

Solenoid operated Mechanical interlock (one lock and key) with key solenoid operated with 110 VAC input (key is released when voltage is absent). **The operating current of solenoid should be 0.35 (max.) and should be of continuous rating.**

"INSCRIPTION SHALL BE INFORMED AFTER P.O PLACEMENT"

5.0 Packing:

MECHANICAL INTERLOCKS, BOLT LOCK, KEY & KEY EXCHANGE BOX

Shall be properly packed to avoid any damage during transport and handling.

To ensure easy traceability & avoid mixing of different items, all the locks & key pertaining to one particular board shall be packed together in one single packet. All the packets pertaining to one project shall be kept together to form one package and each package shall be marked with the following information:

MECHANICAL INTERLOCKS & KEY : SG12640
Project Name :
BHEL Order No. :
W.O. No. :
Item wise quantity (Item 1, 2, 3,4 & 5) :
Batch/Lot No. :
Manufacturer's Name and TYPE :
Month and Year of Manufacture :

6.0 Acceptance norms:

All the items are to be accepted based on the following:

- Verification of inscription marked on the MECHANICAL INTERLOCKS, KEYS & KEY EXCHANGE BOXES with Annexure-I.
- Smooth & Free movement in operation.
- Visual inspection for defect free surface & smooth finish.
- Key exchange box & their labels as per Annexure-I.
- Dimensional checks as per figures 1 & 2 of SG12640.
- Availability of check list duly filled in the enclosed format (Annexure-II).

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FORMAT FOR CHECK LIST

(TO BE FILLED & SUBMITTED BY SUPPLIERS ALONGWITH THE OFFERS)

ANNEXURE-II

Sl. No.	Parameter	BHEL's Requirement	Offered (to be filled by suppliers)
1.	Material	Brass casting	
2.	Finish	Nickel plated with Chrome finish	
3.	Thickness of plating	> 5 microns	
4.	Direction of rotation	Clock-wise from the front of lock	
5.	Angle of rotation of key	90 degree	
6.	Dimensions	As per Figures 1 & 2	
7.	Height/Depth of inscription letters	Minimum 3mm	
8.	The operating current of solenoid should be 0.35 (max.) and should be of continuous rating.	YES	
9.	For one particular project :		
	i) Whether it is possible to insert keys having one inscription, on the locks having other inscription	No	
	ii) Whether keys of the same inscription are common for loose locks & locks fitted on key exchange box.	Yes	
10.	All the locks & key pertaining to one particular board will be packed together in one single packet	Yes	
11.	All the packets pertaining to one project will be kept together to form one package	Yes	

Prepared by :

Date :

Approved by :

Date :