



SPECIFICATION DATA SHEET

TYPE BEMF / MSI - MOVEMENT SENSING UNIT

WWW.KIRKKEY.COM



The BEMF and the MSI units are designed to provide the highest level of safety when integrated into a trapped key interlock system for access control of dangerous machinery. The BEMF measures the back electromotive force generated by the windings of an electric motor. Only when the motor has stopped and the electromotive force (EMF) drops to zero will the trapped key be released. The BEMF can detect electromotive force up to 600 volts. The MSI relies on the detection of motion via two sensors. Only when both sensors detect zero movement will the trapped key be released. The MSI will protect machinery with 600 volts or higher. The Type BEMF and MSI units are only available in HD series.



BEMF
Connect directly to motor

OR



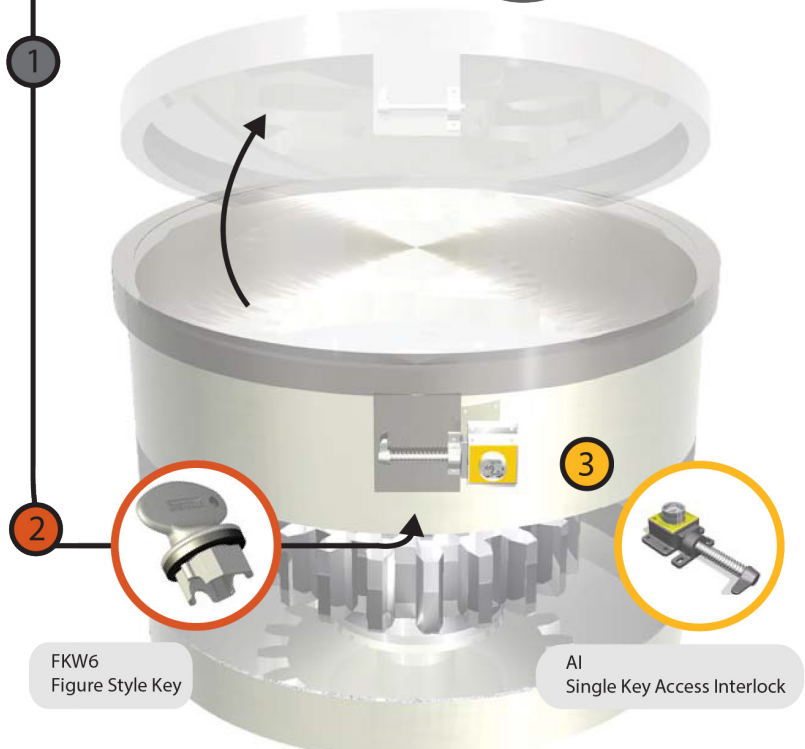
MSI
Use proximity sensors to sense motor shaft

TYPICAL APPLICATION

The BEMF and MSI units are designed to control access to machinery that have variable rundown times.

Current applications include:

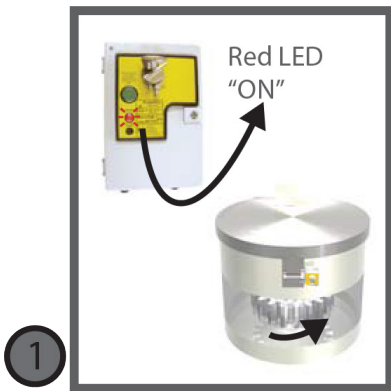
- Mixers
- Blenders
- Hammer Mills
- Centrifuges
- Pellet Mills
- Size Reduction Mills
- Other Motor-Driven Equipment



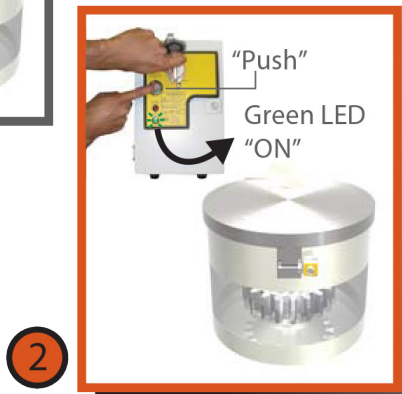
FKW6
Figure Style Key

AI
Single Key Access Interlock

TYPE BEMF / MSI OPERATION



- Operator initiates motor stop cycle via the isolator switch. (Turn key to "off" position)
- Key is retained until the motor reaches stand still position.



- Green release key light turns on, indicating motor has stopped.
- Operator pushes button to energize the solenoid and release the key.
- Turning and removal of the key then isolates control circuit.



- Operator inserts and turns key in the interlock fitted on the access door
- Door released and opened.
- The key remains trapped in the lock while the door is open. This prevents machine startup until maintenance is complete and the door is locked closed.

EASY TO INSTALL

The BEMF and MSI units come with an easily mounted IP65 enclosure.

FITS TO ANY MOTOR

The BEMF can detect "EMF" on motors up to 600 Volts. The MSI unit will protect machinery with 500V or higher!

TECHNICAL DATA

IP Rating - IP65, NEMA 4 enclosure

Standards - UL 508C

TYPE BEMF / MSI ORDERING GUIDE

BEMF Part Number

1	2	3	4	5	6	7	8	9	10	11	12
B	E	M	F	-	K	H	D	-	F	-	

12	Voltage and Current Options	24D = 24 Volts DC 110A = 110 Volts AC 240A = 240 Volts AC
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MSI Part Number

1	2	3	4	5	6	7	8	9	10	11
M	S	I	-	K	H	D	-	F	-	

11	Voltage and Current Options	24D = 24 Volts DC 110A = 110 Volts AC 240A = 240 Volts AC
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