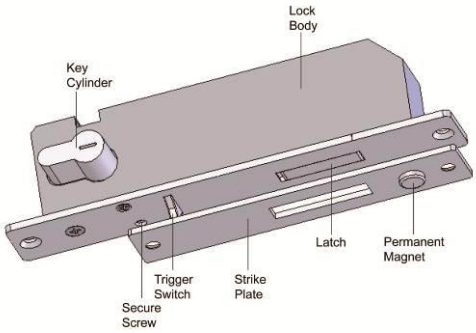
HBL 1283E

Mechanical Electric Lock (Fail Secure Drop Bolt Lock)

HBL 1283E

HBL 1283E is engineered and derived from traditional Mortise Lock. The mortise mounted lock body installed on center rear side of the door leaf provides even distribution of external forces applied on the locked door. HBL 1283E has a square shaped latch with a latch depth of 21mm; the shape allows two-dimensional contact between latch and Strike Plate instead of common one-dimensional contact. HBL 1283E has a round Trigger Switch positioned directly below the latch. When Trigger Switch is activated from door closing, the latch extends immediately to the Strike Plate and locks the door without damaging the latch during this process. This solves common damages to latch if door closer is closed too fast.

Specification

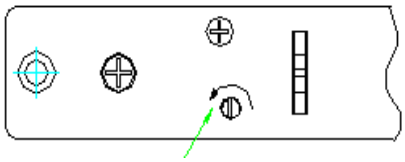
SPECIFICATION	Description
Mechanical Electric Lock (Fail Secure Drop Bolt Lock)	
Certifications	CE
	BS465: The product has been tested under British Standard for a 4 hours fire testing.
Fail Secure	Can be locked and unlocked manually with/without power (Key Override)
Lock Body with Face Plate	220L x 30W x 3.50T (mm) – Height: 62.5mm.
Standard Strike Plate	162L x 30W x 3.00T (mm) – Height: 6mm
Latch	43.5L x 9.00T (mm) – Height: 21mm Stainless Steel, Square shaped
Trigger Switch (Mechanical type)	7.7Width x 21Deep x 4Thick (mm) Activates when pushed 2.7mm or more inwards
Operating Voltage	12VDC ±10%
Operating Current	**When unlock the door from locked status:** < 1.0A (to retract the latch initially) < 0.4A (five seconds after the latch is retracted) **When lock the door from unlocked status:** < 0.04A (latch extends) Low energy consumption
Holding Force	Up to 800Kg

Dynamic Impact Resistance	Up to 160J (Most of the products cannot withstand high Dynamic Impact resistance. **AS Standard:** GRADE 1, 60J/GRADE 2, 100J/GRADE 3, 160J)
Operating Temp	-10°C ~60°C
Surface Temp	**Zero** temperature rise when locked Under 40°C when unlocked, in room temperature (25°C)
Operating Humidity	0~95% (non-condensing)
Signal Output	**Lock status output** (LSS) NO/NC/COM Max 24VDC; Max 1A; Max 6W **Door status output** (DSS) NO/NC/COM Max 24VDC; Max 1A; Max 6W **Alarm output** Open Collector (OC) Output. Activate Low. Max 12VDC; Max 200mA **Key Alarm output**
Induction Distance	8mm (Due to the limitation of the trigger switch, the maximum door gap has to be < 5mm)
Cycle Tests	Cycle tested to 1,000,000 operations
Suitable For	Wooden Door, Metal Door
Face Plate Material	304 Stainless Steel, Hair Line Finished
Weight	1.1Kg
Standard Packing	10pcs
Stand Alarm and Key Alarm Characteristic	HBL 1283E is mounted on the door instead of the door frame. HBL 1283E is installed widely in prisons, entrance doors in apartment buildings, office doors, and high security environments. **Standard Alarm** will be **activated** when: ● Door is opened and the preset opening time has elapsed. ● Latch is retracted regardless the allowable opening time (set up from dip switch 1). ● Latch is pushing back under external tampering. ● Latch is extending to the wrong position. **Key alarm** will be **activated** when: Mechanical key is used manually to unlock the lock.

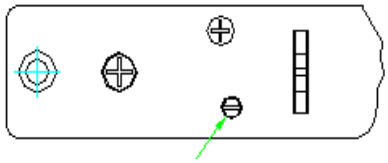
Photo of installed HBL 1283E

HBL 1283E Features	● Mechanical Electric Lock (Solenoid type) ● Fail Secure Lock ● Double secure design with trigger switch and permanent magnet sensor

- Anti-tamper pin design
  - Anti-tamper pin is located inside the lock body and will extend right after the square bolt is fully extended. It is used to lock up the square bolt and prevent the bolt from retracting under external tampering
- Low power consumption
- Mechanical Key
  - Door can be unlocked from Key Cylinder (European Profile).
  - The Key Cylinder is available in:
    1. European single or double sided
    2. Single side with knob
- Key Alarm
  - The dry contact alarm output will activate when a Mechanical Key is used to unlock the door lock regardless power on or power off
- Dual monitoring signals (LSS & DSS)
- Dual Alarm output signals (Standard Alarm and Key Alarm)
- Secure Screw (to ensure the latch will not be extended during installation)



When the Secure Screw is in this orientation, latch will remain retracted under any circumstances.



When the Secure Screw is in this orientation, latch will function normally.

- High Dynamic Impact Resistance up to 160J
- Silence operation (can be installed in quiet environment)
- Surge & Spike protection PCB
- Patented Globally

Other HBL1283 Models

HBL1283 series consists of three models, HBL1283E, HBL1283S, and HBL1283U.

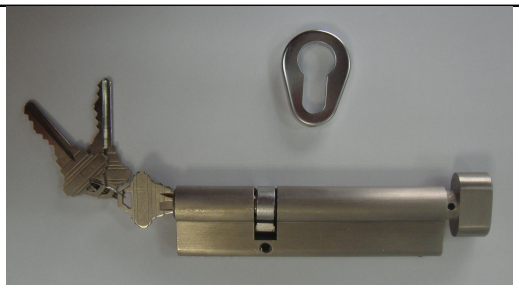
HBL1283S

HBL1283S is the slim model with identical features compared to HBL1283E, and is designed to mount in the door frame of a narrow profile door.

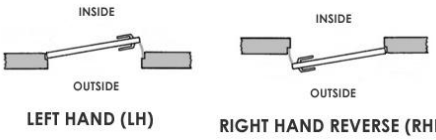
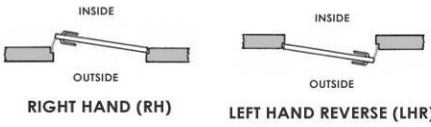
HBL1283U

Identical features and dimensions with HBL1283E, the only difference between HBL1283U and HBL1283E is HBL1283U has a circular shaped Key Cylinder.

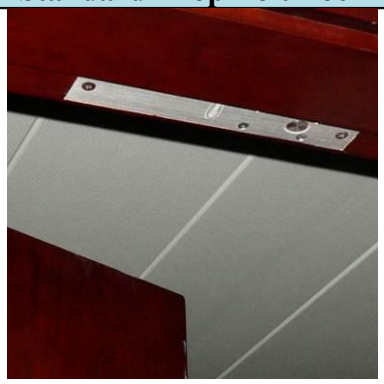
Optional Accessories

Associated Products (Optional Accessories)		
	 **Electric Power Transfer Hinge** Cycle test up to 100,000 cycles	 **Flex Loop** JWL8001-30 (in 30cm) JWL8001-50 (in 50cm)
	 **Key Cylinder (70mm)** KC-1283E	 **Single Side Key Cylinder (40mm)** YTL70
	 **Key Cylinder with Knob (Length: 120mm)** YW120-K40 YW120-K80	Mortise Wire Loop (Product is under development)
	 **Cover Plate for Key Cylinder**	 **Door Handle** DH1283E

	CP44	

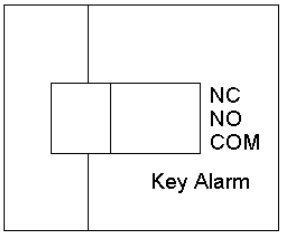
Associated Products (Optional Accessories)	 **Strike Plate with Ramp** SPL-1283E-11 (W11.2mm Latch Hole) SPL-1283E-15 (W15.0mm Latch Hole) **Suitable for following door type:**  	 **Strike Plate with Ramp** SPR-1283E-11 (W11.2mm Latch Hole) SPR-1283E-15 (W15.0mm Latch Hole) **Suitable for following door type:** 

Advantage and Disadvantage Table

MODELS	HBL 1283E	Standard Drop Bolt Lock
Installation	 Installed **vertically** in the middle on the door leaf.	 Installed **horizontally** on top corner of the door frame
Advantages and Disadvantages	The position of the lock allows the external force applied on the door spread more evenly when the door is locked.	The position of the lock will resulted in difficulties of spreading external force applied to the door evenly
Power Off Operation		
Advantages and Disadvantages	HBL 1283E can be operated manually by both provided Mechanical Key and knob.	Standard Drop Bolt lock can not be operated under this situation.
Timing to Extend the Latch/Bolt	 Latch extends only when Trigger Switch is triggered (pushed in) by door leaf	 Bolt extends while door is not in the right position (disadvantage of Magnetic type trigger)
Advantages and Disadvantages	Latch extends immediately when the Trigger Switch is triggered, this ensures the latch only fully extended inside the Strike Plate.	Possibility of unsuccessful Bolt extension to lock the door or causing damage to the bolt while door leaf closed too fast.

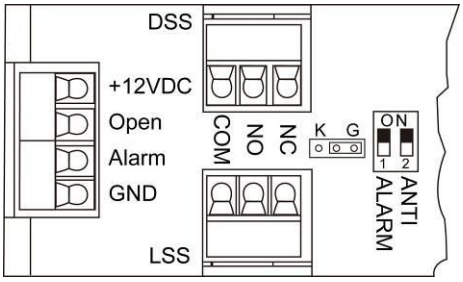
Settings and Wiring

Key Alarm Wirings



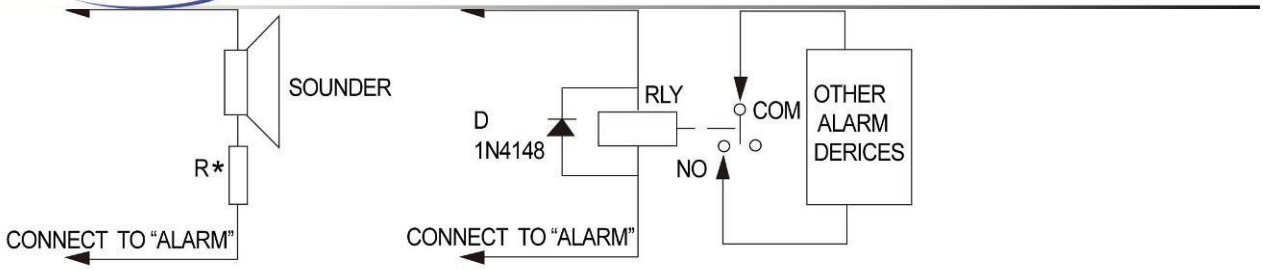
1. When HBL 1283E and Access Control or Alarm device use different power source:
   - Key Alarm dry contact output: COM, NO, NC (Max 12VDC/0.2A)
2. When HBL 1283E and Access Control or Alarm device use same power source:
   - Please connect Key Alarm COM to "-" on power source (Max 12VDC/0.2A)

PCB Wirings & Functions



Power Connection:	Connect 12VDC Power input to +12VDC and GND.
Alarm Output:	Connect "+12VDC" and "Alarm" terminal to external alarm device.
Latch remains retracted when:	Open" terminal is connected to "GND" terminal.
DSS is activated when:	Door is closed.
LSS is activated when:	Latch is out and in the right position.
Alarm is activated when:	Door is open
	Latch retracts
	Latch is pushing back by external force
	Latch is out but not in the right position

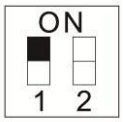
Recommend Circuitries for Alarm Signal OC output



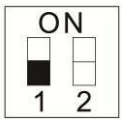
Circuit 1 **Circuit 2**

Jumper & Dip Switch Settings:

DIP 1

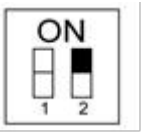


DSS, LSS and Alarm functions perform as usual.



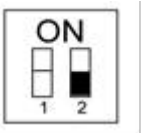
DSS, LSS and Alarm functions as usual, except "Alarm" will be disabled when the "Open"
terminal is connected to "GND" terminal.
d

DIP2

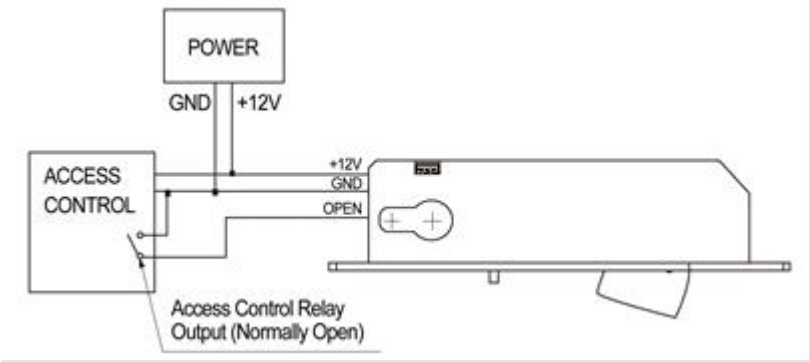


With Latch Anti-Tamper

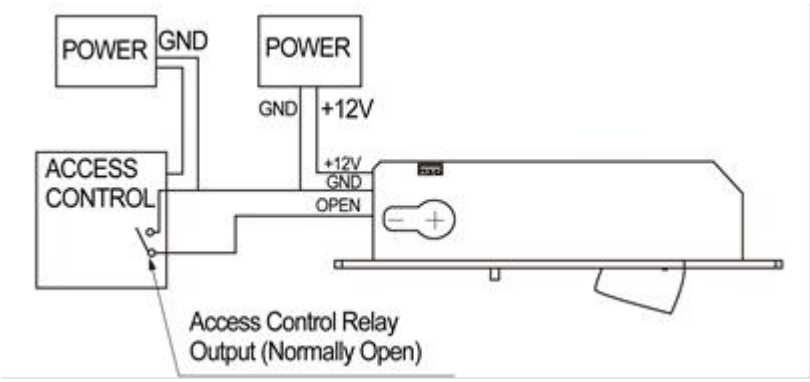
Without Latch Anti-Tamper



Recommend System Connections:

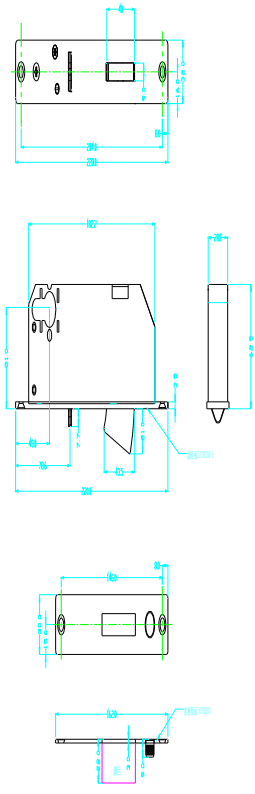


Connection with one power source



Connection with two power sources

HBL 1283E Dimensions



HBL1283E Series Models and Accessories

HBL1283E SERIES	MODEL NUMBER	DESCRIPTION
Model	HBL1283E	Mechanical Electric Lock (European Profile)
Key Cylinders	KC1283E	Double sided Key Cylinder for European profile
	YTL70	Single sided Key Cylinder
	YW120-K40	Key Cylinder with Knob (40mm in length)
	YW120-K80	Key Cylinder with Knob (80mm in length)
Cover Plate and Door Handle	CP44	Cover Plate for Key Cylinder
	DH1283E	Door Handle
Strike Plate with Ramp	SPL-1283E-11	Suitable for LH and RHR door type (W11.2mm Latch Hole)
	SPL-1283E-15	Suitable for LH and RHR door type (W15.0mm Latch Hole)
	SPR-1283E-11	Suitable for RH and LHR door type (W11.2mm Latch Hole)
	SPR-1283E-15	Suitable for RH and LHR door type (W15.0mm Latch Hole)

Project Photo References






Project site: Service Apartment, Shanghai

Doors are equipped with Mechanical Electric Lock - HBL 1283E, with Finger Print Door Phone Reader, Push Button with LED, Mechanical Key Cylinder and Knob, and Electric Hinge. Total of 250 pieces installed.