

# Gas Insulated Load Break Switches – Brochure

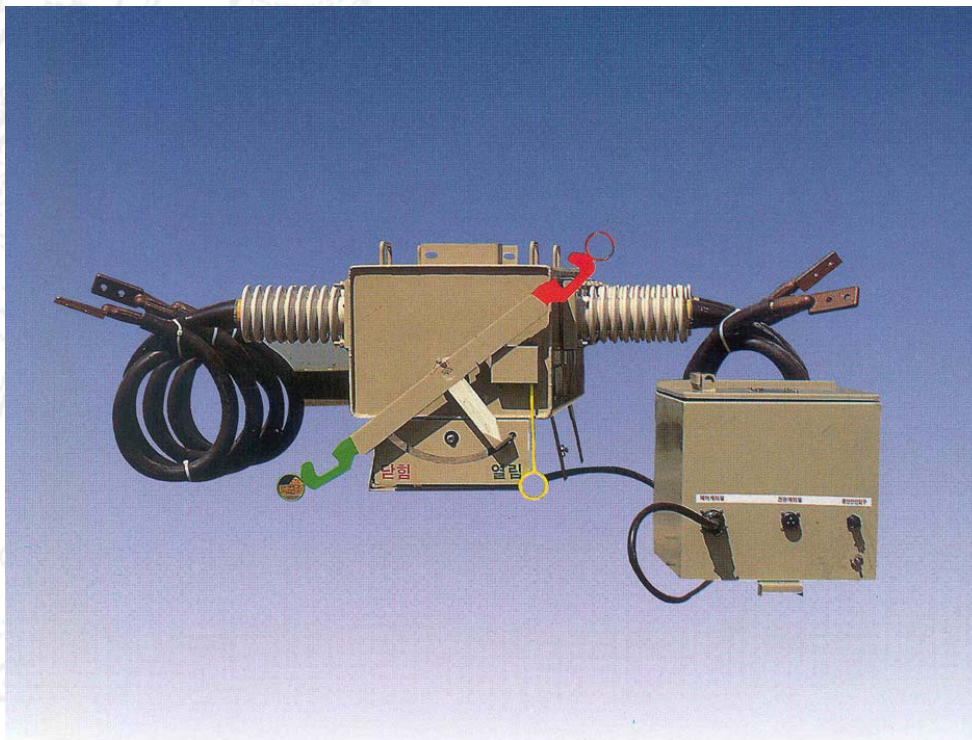
## Application

ILJIN'S SF6 Gas Load Break Switch, Pole Mounted type, designed to meet the requirements for the maintenance. Free, adaptation of distribution automation and maximum safety during operation, as well as initial cost saving and energy conservation, the SF6 Gas switches, which can be manually, locally or remotely controlled are best suited for applications where positive and reliable power distribution, and safety measures such as utility facilities are of prime importance.

Applied standards : IEC 60265-1, ANSI C37.71

## Service Condition

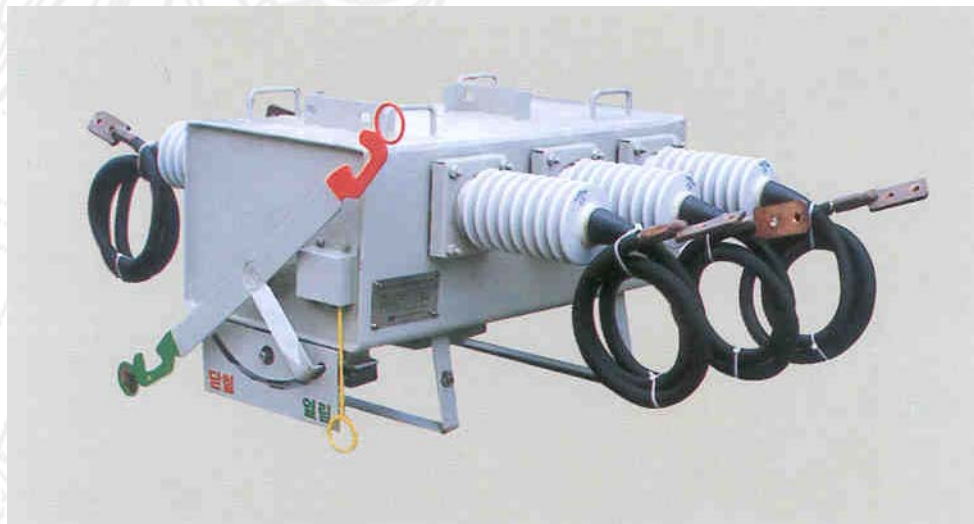
- a. Ambient temperature : -25 °C and 40 °C for pole-mounted switch
- b. Altitudes up to 1,000 meters
- c. Relative humidity close to 100% , non-condensing
- d. Industrial pollution, smog 3. 3.

**ILJIN**  
Electric**CAT ILJIN 0106 - 01**

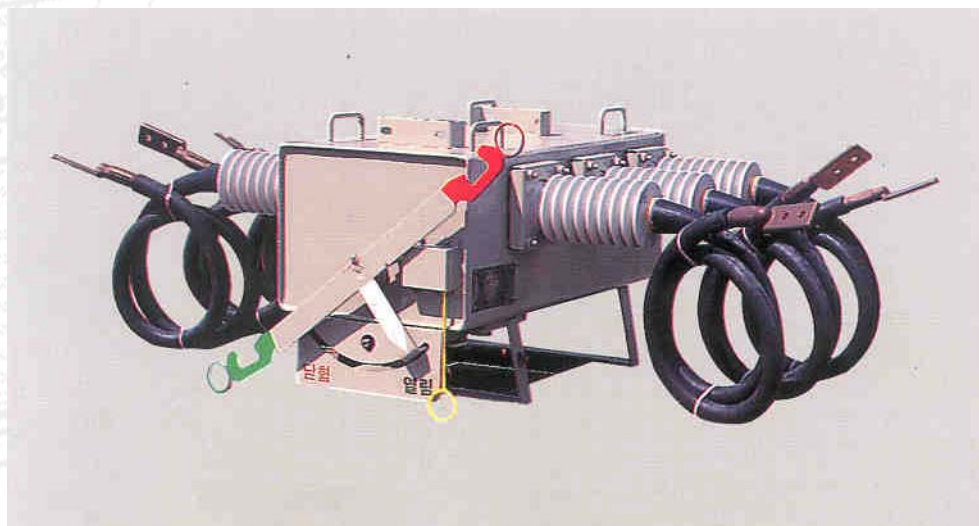
## Characteristics

- SF6 Interruption & SF6 Insulation
  - Fully shielded by all stainless steel enclosure
  - Low energy motor operation is available
  - Heavily polluted region applicable
  - Easy handling & light weight
  - Open/close indicator
  - Maintenance free
  - Safety interlock if the gas pressure abnormally reduces
  - High dielectric strength
  - Superior endurance to any adverse environment
  - Mechanical latch holding in close position
  - Pole mounting provisions
  - Explosion safety screen to prevent the destruction of the tank against accidental internal pressure-up
- ### 4. Ratings and Specifications
- 4.1 15kV Pole-Mounted SF6 Gas Insulated Load Break Switch

**IJ – W2S ( 400 – A )**



**IJ – W2S ( 630 – A )**



## Ratings and Specifications

### 15kV Pole-Mounted SF6 Gas Insulated Load Break Switch

Catalog No.	IJ-W1S (400-M)	IJ-W1S (400-A)	IJ-W1S (400-DA)	IJ-W1S (630-M)	IJ-W1S (630-A)	IJ-W1S (630-DA)
Operation Type	Manual Operation	Remote Operation	Distribution Automation	Manual Operation	Remote Operation	Distribution Automation
Rated Voltage		15kV			15kV	
Continuous Current		400A			630A	
Number of Poles		3			3	
BIL(1.2*50μs)		110kV			110kV	
Frequency		50/60HZ			50/60HZ	
Rated Short Time Current		16kA			16kA	
Rated Making Current (Asym) (Peak)		16kA 41.6kA			16kA 41.6kA	
Rated Power Frequency Withstand Voltage Dry (One Min.) Wet (One Sec.)		50kV 45kV			50kV 45kV	
Number of Operations Mechanical Load Switching		5000 Operations 400 Operations			5000 Operations 400 Operations	



## 25kV Pole-Mounted SF6 Gas Insulated Load Break Switch

Catalog No.	IJ-W2S (400-M)	IJ-W2S (400-A)	IJ-W2S (400-DA)	IJ-W2S (630-M)	IJ-W2S (630-A)	IJ-W2S (630-DA)
Operation Type	Manual Operation	Remote Operation	Distribution Automation	Manual Operation	Remote Operation	Distribution Automation
Rated Voltage		25.8kV			25.8kV	
Continuous Current		400A			630A	
Number of Poles		3			3	
BIL(1.2*50μs)		150kV			150kV	
Frequency		50/60HZ			50/60HZ	
Rated Short Time Current		16kA			16kA	
Rated Making Current (Asym) (Peak)		16kA 41.6kA			16kA 41.6kA	
Rated Power Frequency Withstand Voltage Dry (One Min.) Wet (One Sec.)		70kV 60kV			70kV 60kV	
Number of Operations Mechanical Load Switching		5000 Operations 400 Operations			5000 Operations 400 Operations	

## 36kV Pole-Mounted SF6 Gas Insulated Load Break Switch

Catalog No.	IJ-W3S (400-M)	IJ-W3S (400-A)	IJ-W3S (400-DA)	IJ-W3S (630-M)	IJ-W3S (630-A)	IJ-W3S (630-DA)
Operation Type	Manual Operation	Remote Operation	Distribution Automation	Manual Operation	Remote Operation	Distribution Automation
Rated Voltage	36kV	36kV			36kV	
Continuous Current	400A	400A			630A	
Number of Poles	3	3			3	
BIL(1.2*50 $\mu$ s)	170kV	170kV			170kV	
Frequency	50/60HZ	50/60HZ			50/60HZ	
Rated Short Time Current	16kA	16kA			16kA	
Rated Making Current (Asym) (Peak)	16kA 41.6KA	16kA 41.6KA			16kA 41.6kA	
Rated Power Frequency Withstand Voltage Dry (One Min.) Wet (One Sec.)	70kV 60kV	70kV 60kV			70kV 60kV	
Number of Operations Mechanical Load Switching	5000 Operations 400 Operations	5000 Operations 400 Operations			5000 Operations 400 Operations	

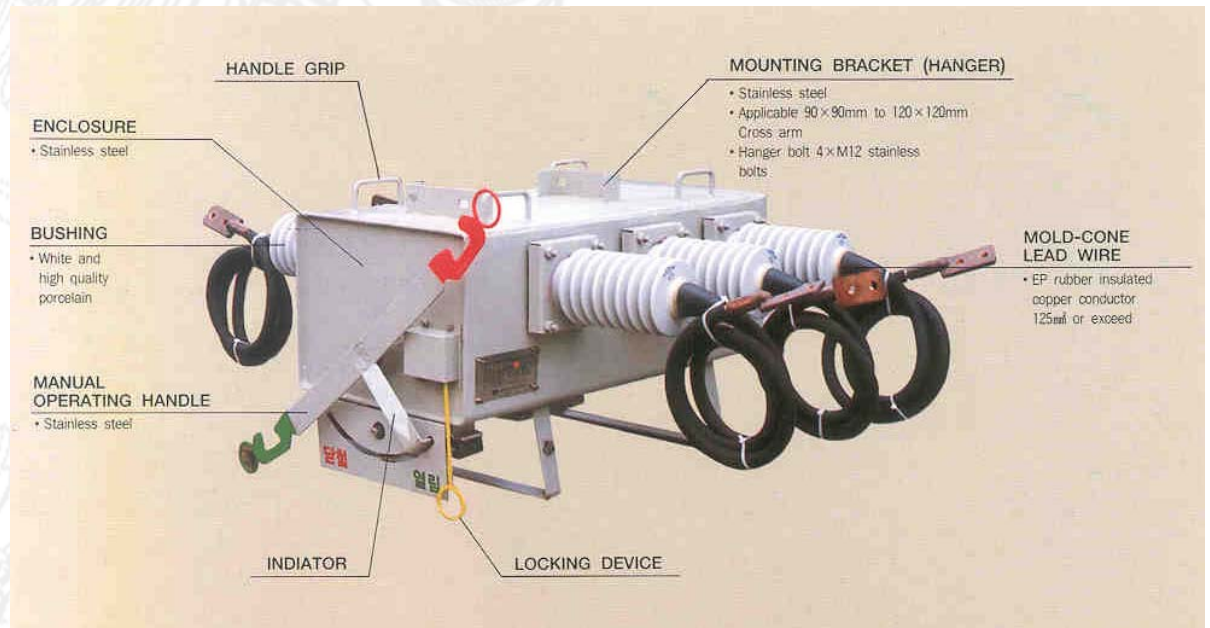
## Construction & Description.

### Manual Operation Type

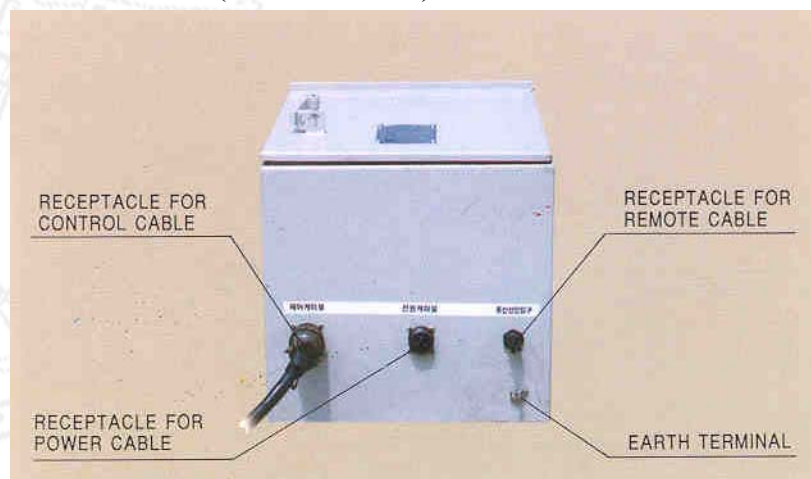
- Easy operation
- Open/Close indication
- Safety interlock
- Light weight
- Maintenance free

## Remote Operation Type

- Local/Remote switch is provided for locally controlled in the field or remotely from DAS master station and substation RTU
- Dry contacts to provide the local/remote switch status to the DAS master station and substation RTU
- Auxiliary output contacts are mechanically linked with the switch main contact
- Metal connector of waterproof plug-in type for connecting control cable
- Line switch control (open/close) & status indication



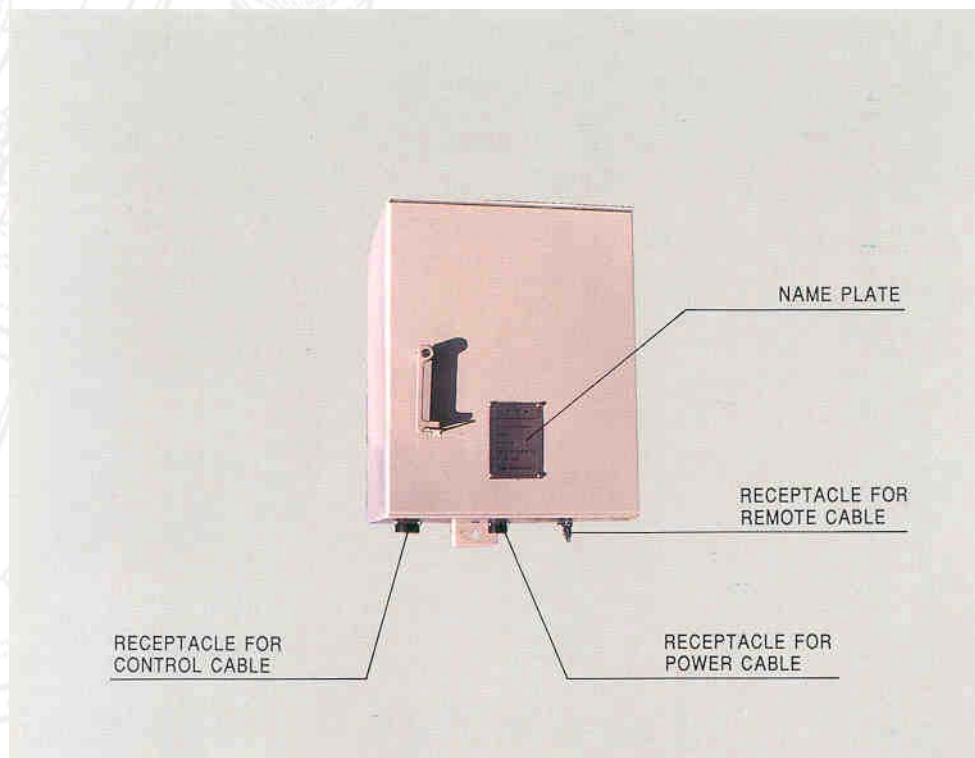
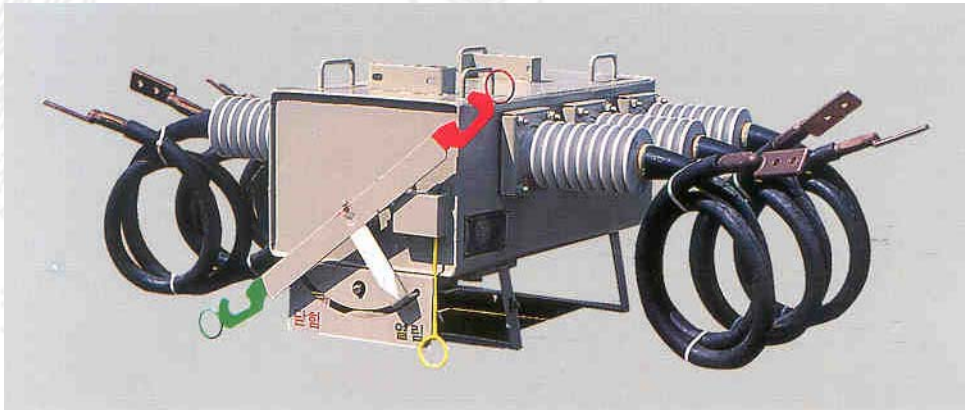
### CONTROL BOX ( OPTION PART )





## Distribution Automation Type

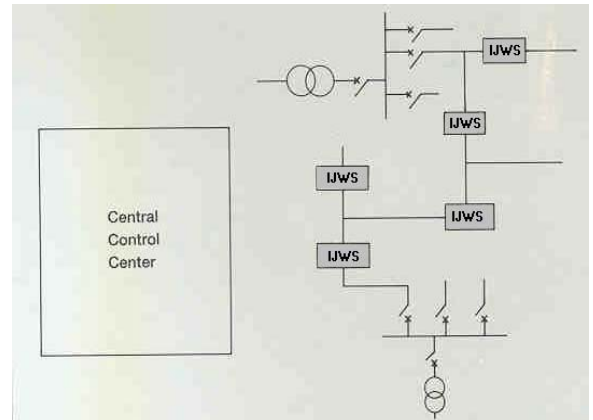
- Three pieces of bushing CT inside of switch tank for three phase current display
- Pressure relay to provide the switch normal/under pressure status of the SF6 gas
- CPU built in control board
- Fault indicator with inrush restraint feature
- Phase current & voltage can be displayed on LCD and transmitted to the central system
- Three pieces of bushing CT and voltage censors inside of switch tank for phase current & voltage display
- Line switch control (open/close) & status indication
- Battery status indication
- T-C curve is available
- Series resistor to protect against secondaries of CT
- Phase sequence can be verified



*Remotely controlled from a central control room:*

- provides following major advantages
- Three phase load breaking switch in SF6
- Fault detection
- Improved operator convenience
- Reduce the duration of outages
- Reduce operating cost
- Improve quality and continuity of service
- Optimal operation by monitoring load condition
- such as current and voltage

- A control box containing a battery charging unit, a mechanism control and interfaces needed for remote operation
- Manually operable from the foot of the pole
- Locally operable from the control box
- Remotely operable from the control center



## 6. Typical Mounting Arrangement

Remote Operating Type

