

#### GENERAL

HD-I indoor disconnectors are designed to be employed in the distribution networks up to 36 kV, they are used for lines disconnection.

They are hinge disconnection type with central insulating rod.

HD-I can be equipped with upper or lower earthing blades mechanically interlocked with line blades.

#### MOUNTING

HD-I indoor Disconnector suitable for metal switchboard or use on concrete boxes can be

mounted on wall in vertical position through metal inserts or set pins.

#### CURRENT CARRYING SET

**Moving contact** made of Cu-ETP 99,90 copper consists in series of blades mounted in parallel.

**Fixed contact** made of Cu-ETP 99,90 copper has a feature which ensure an optimal working.

A tin-coated treatment protects both contacts against corrosion.

Contacts pressure is controlled by steel springs during normal conditions and by the

self-tightening action when high current flow through them in particular conditions.

All small components like bolts or pins made of steel are protected against corrosion by a zinc coated treatment according to UNI ISO 2081 / 4520 standards.

#### INSULATORS

**Insulating components** used are made of epoxy resin having a profile with extended leakage distance in order to prevent partial discharges.

Isolators are subjected to aging test in saline fog.

#### OPERATING MECHANISM AND OPERATING DEVICES

**Operating mechanism** The opening / closing speed is dependent of the operator.

Opening can be carried out by:

-Manual device

-Motorized device

**Operating devices** available are the following:

- **Manual intermediate transmission device** is a control lever moved by an insulating rod. It is braced to the operating mechanism by one or more pipes.
- **Manual bottom transmission device** consists on an handle control suitable for wall or board mounting manoeuvrable directly. It is braced to the operating mechanism by one or more pipes.

- **Manual top direct device** consists on an operating arm manoeuvrable through an insulating rod.

- **Motorized command device** allows the remote control of the disconnecter. The manual or motorized local manoeuvre remains however possible. Several supply voltages are possible to agree with the customer.

HD-I indoor disconnecter can be endowed with a device that allows remote control. This control gives a signal of the line and earthing blades position.

Transmission rods and transmitting rod joint are available. Optional padlock or interlock can be fitted.

All operating devices are made of welded structural and bent metal sheets, protected by a zinc coated treatment according to UNI ISO 2081/4520 standards. Different operating devices are available on request.

### MANUFACTURING, STANDARDS, QUALITY ASSURANCE

HD-I indoor disconnecter is born from Eleron's experience and it boasts thousands installations and many years of duty.

Eleron **manufactures** directly main parts of disconnecter as contacts, frame, operating mechanism and devices. Remaining parts come from chosen suppliers, Eleron carry out to assembling and test the product.

An internal standard **Quality Assurance** in compliance with governs all manufacturing process UNI EN ISO 9001 standard

Before shipment, all HD-I indoor disconnecters are subject to the following **routine tests**:

- Dielectric test
- Measurement of the resistance of the main circuit
- Mechanical operating test

HD-I indoor disconnecter comply with the following **standards**:

- International IEC 62271-102
- National CEI EN 62271-102

Before the shipment, all our HD-I indoor disconnecter are subject to the following tests of routine:

- Operational test
- Dielectric test
- Power circuit resistance

HD-I indoor disconnecter has been subordinate to the following prototype tests:

- Test of isolation
- Test of temperature
- Test of mechanical duration
- Measure of the power circuit resistance
- Tests of held to the currents short-circuit

### TECHNICAL CHARACTERISTICS

Ambient temperature	[°C]	-15÷50
Nr. of mechanical manoeuvre	M0	1000

#### Isolator's electrical characteristics

Rated normal voltage	[kV]	3,6	7,2	12	17,5	24	36
Rated withstand voltage toward earth and between phases (50-60 Hz/1 min.)	[kV]	10	20	28	38	50	70
Rated withstand voltage between open contacts (50-60 Hz/1 min.)	[kV]	12	23	32	45	60	80
Impulse withstands voltage toward earth and between phases	[kV]	40	60	75	95	125	170
Impulse withstands voltage between open contacts	[kV]	23	46	85	110	145	195
Rated normal frequency	[Hz]	50÷60					
Rated normal thermal current	[A]	1250 up to 12000					
Rated admissible short-time current (3 sec.)	[kA]	25-40-50-63					
Rated admissible short time current (peak)	[kA]	62,5-100-125-158					

#### Earthing switch's electrical characteristics

Rated normal voltage	[kV]	3,6	7,2	12	17,5	24	36
Rated withstand voltage toward earth and between phases (50-60 Hz/1 min.)	[kV]	10	20	28	38	50	70
Impulse withstands voltage toward earth and between phases	[kV]	40	60	75	95	125	170
Rated admissible short-time current (3 sec.)	[kA]	25-40-50-63					

#### Auxiliary contact (optional)

Nominal current 'Ith'	[A]	10
Nominal tension of isolation 'Ui'	[V]	500Vac / 600Vdc

**DIMENSIONS**

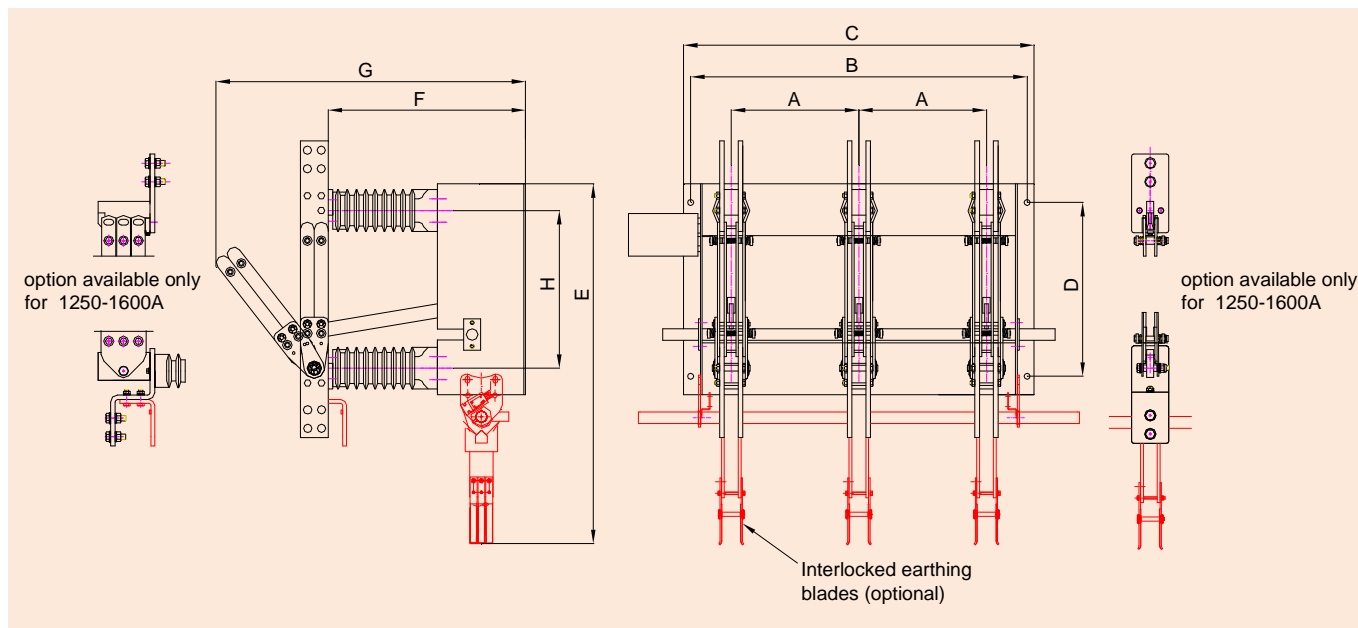


Fig.1

3 POLES									
Overall dimensions (mm)		A	B	C	D	E	F	G(*)	H
A	kV								
From 1250 to 12000	3,6	210	600	630	350	750	320	550	250
	7,2	210/250	640/660	670/690	400	800	345	575	300
	12	210/250	640/660	670/690	400	810	355	585	345
	17,5	250/300	750/800	780/830	400	855	400	630	345
	24	300	800	830	480	905	450	680	345
	36	500	1000	1030	625	990	535	765	550

\*Add 30mm for 1600 and 4000A

All dimensions above indicated are only approximate. Please consult us for other values or dimensions

2 POLES									
Overall dimensions (mm)		A	B	C	D	E	F	G(*)	H
A	kV								
From 1250 to 12000	3,6	210	400	430	350	750	320	550	250
	7,2	210/250	430/470	460/500	400	800	345	575	300
	12	210/250	430/470	460/720	400	810	355	585	345
	17,5	250/300	500/540	810/860	400	855	400	630	345
	24	300	500	860	480	905	450	680	345
	36	500	500	1060	625	990	535	765	550

\*Add 30mm for 1600 and 4000A

All dimensions above indicated are only approximate. Please consult us for other values or dimensions

1 POLE									
Overall dimensions (mm)		A	B	C	D	E	F	G(*)	H
From 1250 to 12000	kV								
	3,6	/	190	220	350	750	320	550	250
	7,2	/	220/260	250/290	400	800	345	575	300
	12	/	220/260	250/290	400	810	355	585	345
	17,5	/	300/330	330/360	400	855	400	630	345
	24	/	290	320	480	905	450	680	345
36	/	290	320	625	990	535	765	550	

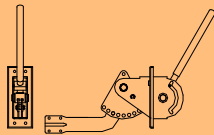
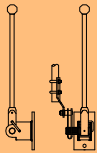
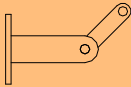
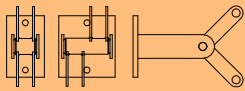

\*Add 30mm for 1600 and 4000A

All dimensions above indicated are only approximate. Please consult us for other values or dimensions

**Please consult us for other values**

**Dimensions are subject to changes without notice**

### OPERATING DEVICES AND ACCESSORIES

		 <p>2.b</p>	Transmitted operating device for switchboard
 <p>2.c</p>	Handle control device for wall	 <p>2.d</p>	Inter-tie gear
 <p>2.e</p>	Bracket gear	 <p>2.f</p>	Transmitted control levers

