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- Sonapat - Haryana
- Kundli - Haryana
- Karnal - Haryana
- Jabli - Himachal Pradesh

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18004190198

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AV ATS

Advance Version Automatic load Transfer Switch

Changeover applications 125A-630A



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AV ATS

Advance Version Automatic load Transfer Switch

from 125A-630A

new



AV ATS
Advance Version Automatic load Transfer Switch
from 125A - 630A

Founded in 1956, the HPL Group is a major player in Indian Electrical Industry with commitment to the state of art technology, manufacturing world class products. HPL Group has been serving Indian Industry since last 55 years with time tested, reliable and well-proven products in the field of Switchgears, Protection Devices, Electronic Energy Meters, Energy Management Systems, CFL Lamps, Luminaries, Wire & Cable, LED Lighting & Modular Switches

HPL Group has created niche for it self in Electrical Industry. Upgradation of existing technology and introduction of new products with innovative ideas and new technology are the main driving force here.

HPL brings to you, **AV ATS** range of True 4 pole motor operated changeover switches with positive break indication. They enable the on load transfer of two three-phase supplies via remote volt-free contacts, from either external automatic controllers, using pulse logic, or Push Button Station.

They are intended for use in low voltage power systems where interruption of the load supply is acceptable during transfer.

The solution for

- > Generator manufacturers.
- > Heating.
- > Air conditioning.
- > Ventilation.
- > Telecommunications.



Strong points

- > Extensive power supply range.
- > Safety and reliability.
- > Easy integration.
- > Simplified maintenance.
- > ATyS Sd Dual power supply.

Conformity to standards

- > IEC 60947-6-1
- IEC 60947-3
- CE Marked
- RoHS Compliant



Approvals & Test

- Time tested
- Customer Accepted
- CPRI Tested
- ISO 9001 Certified



Globally Accepted exporting to over 25 countries



Salient Features:

- A simple strong and reliable mechanism to provide a safe changeover of sources, remotely.
- The only Switch with RoHS Compliance studded with protections like Phase Barriers, Source Separators, Terminal Cover.
- The FR molding material of the switch is having high thermal withstand capacity.
- AV ATS is True 4 Pole switch available in 3 frame sizes with AC 23A & AC-31B Load switching duty.
- AV ATS is available with 3 positions I-O-II Manual & Electrical Operations with non defeatable mechanical interlock.
- The AV ATS can be put in 'O' position both by manual operation through emergency handle & Electrical Operation through emergency switch.
- In the AV ATS the contacts opening / closing is within self extinguishing reinforced fiberglass body with arc chutes for quick & better arc extinguishing.
- For all versions, the quick make and quick break feature independent of the operating speed enables the switches to close and open circuits under the most severe conditions (e.g. highly inductive loads-AC 23A duty).
- The manual and electrical operation are interlocked and the manual operation is done with the handle provided with.
- The motor module is detachable & wide range of spares allow on site repair solutions.
- The Basic Controller & Higher Version Controller are available for advance auto switching with Communication facility.

Applications

- > Healthcare
- > Internet Data Centers
- > Commercial Buildings
- > Industrial Buildings
- > Telecom Central Office
- > Process Manufacturing
- > Distribution Power / Load Management
- > HVAC
- > Telecommunications
- > BMS

Installation

- HPL Changeover switches are ideal choice for installation in A.M.F. panel or for remote operation.
- Connection on terminal is very easy, as they are large and accessible.

Conformity

IS/IEC: 60947-3 & IEC: 60947-6-1
CE Marked
RoHS Compliant

Range

AC 23A 415VAC 4 Pole 125A to 630A in 3 frame sizes.

General Characteristics

The ideal conception in HPL AV ATS changeover switch incorporate 3 stable positions (I-O-II) changeover from one to the other while functioning.

Positions:

- O - Circuit I and II Open (Neutral Position)
- I - Circuit -I close and circuit II open (transformer supply "ON" and generator supply "OFF")
- II - Circuit I open and Circuit II close (generator supply "ON" and transformer supply "OFF")

All positions are interlocked

Functions

HPL AV ATS CHANGEOVER SWITCHES 'operate as a Changeover giving three stable positions I-O-II and help in supply changeover from one source to another' remotely.

Design

AV ATS Changeover Switches are manufactured from AV Changeover moulded case on load switches. In case of control supply failure, Emergency Handle arrangement is provided for manual operation of switch in "OFF" position or selecting the supply. The switch frames are back to back. The whole range is motor operated.

Contact System

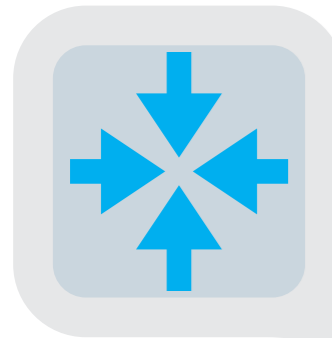
- Clearly apparent operation
- High thermal and dynamic strength to withstand rated fused short circuit current level 80KA rms.
- Are rated for AC-23A utilisation category.

Factory Fitted Auxiliary Contacts

- The auxiliary contacts are of "CO" type, they provide position signal or prebreak control.
- The auxiliary contacts are pre-wired for more convenience during installations.
- The auxiliary contacts 1NO 1NC and 2NO 2NC are available



Advantages



Compactness

It is very compact in size and hence helps in saving space in the enclosures, panels etc. Due to its slim size uses the distribution space very efficiently regardless of fact whether it is in residential or funtional buildings.



Simplicity

Its handling is easy and simple. Its simplicity and ease in use allows the user for quick installation. Any pole can be used as Neutral pole. Line load reversibility supports user in comer and out going design. Plugin auxiliary contact kit easy to mount on the switch. Grove to insert safety shield



Total Safety

Its is very safe to use. all moving parts and live parts are covered eliminating possibilities of casualties & electric shocks. The insulation property of the material used is highly reliable, self extinguishing with high insulating properties and remains intact in even critical conditions. arch chute chamber evades fire in surges

Isolation Function:

These Onload changeover switches are Suitable for Isolation as per IS/IEC 60947-3. Isolation function highlights the following points:-

- Position of main contact is indicated clearly by a separate mechanical indicator.
- No residual current



**Positive isolation
no room for surges**



Characteristics according to IEC 60947-3 and IEC 60947-6-1

125 to 630A

Specification	Current Rating								
	Frame Sizes			Frame-1		Frame-2		Frame-3	
Thermal Current (Ith) 40°C	125A	160A	200A	250A	320A	400A	630A		
Rated Insulation voltage Ui (Vac)	1000	1000	1000	1000	1000	1000	1000		
Dielectric strength (Vac) 50 Hz 1 minute	5000	5000	5000	5000	5000	8000	8000		
Impulse voltage (KV)	6	6	8	8	8	12	12		
Number of Poles	4	4	4	4	4	4	4		

Rated Operational Current Ie (A) According to IS/IEC: 60947-3

415 Vac: AC 23A	125	160	200	250	320	400	630
500 Vac: AC 23A	100	130	160	200	250	315	315
260V dc: DC 21A	125	160	200	250	320	400	630
260V dc: DC 22A	125	160	200	250	320	400	500
260V dc: DC 23A	125	160	160	200	250	400	500
440V dc: DC 21A	125	160	200	250	320	400	500
440V dc: DC 22A	125	130	160	200	250	400	500
440V dc: DC 23A	125	130	160	200	250	400	500

According to IS/IEC: 60947-6-1

415 Vac: AC-31B	125	160	200	250	320	400	630
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Overload Capacity

Short circuit current with fuses (kA RMS)	80	80	80	80	80	80	80
Associated Fuse Rating	125	160	200	250	315	400	630
Peak short circuit making capacity (kA RMS)	20	20	20	30	45	45	45
Admissible short time current 1 sec (kA RMS)	7	7	7	13	13	13	13

Making & Breaking Characteristics

Breaking capacity (A RMS) 415 Vac pf=0.35	1000	1280	1600	2000	2520	3200	5040
Making capacity (A RMS) 415 Vac pf=0.35	1250	1600	2000	2500	3150	4000	6300

Endurance

Mechanical Life (No. of Operations)	8000	8000	8000	8000	5000	5000	5000
Electrical Life (No. of Operations)	1000	1000	1000	1000	1000	1000	1000
Operating Torque (N-m)	9.5	9.5	9.5	11	11	17	17

Switching Time

I - II or II - I (s)	0.75	0.75	0.75	1.3	1.3	1.3	1.3
I - 0 or II - 0 (s)	0.45	0.45	0.45	0.85	0.85	0.85	0.85
Duration of "electrical blackout" I - II (s)	0.3	0.3	0.3	0.6	0.6	0.6	0.6

Connection

(Details of Copper Conductors)

Cable size (Sq.mm)	50	70	95	120	185	240	2x185
Max. Bar width (mm)	22	25	25	32	32	40	55

(Details of Aluminum Conductors)

Cable size (Sq.mm)	70	95	150	185	240	300	-
Max. Bar width (mm)	22	25	25	32	32	40	55
Weight (Kgs)	7.5	8	8	10.5	10.5	19	22



ATS CM 331 Controller



Functions of ATS CM 331

- Automatic switch over between supplies.
- Manual restore to S1.
- Configurable inputs/outputs (4/8). 4 configurable volt-free outputs & 4 configurable DC outputs.
- Rotary ATS configuration.
- Source 1/source 2 control.
- 3-phase display.
- Panel editor/Configuration PC suite licence free

General Characteristics of ATS CM 331

- Switches power when mains (utility) supply fails and switches back when mains (utility) supply returns.
- Allows flexible control of source inputs.
- Provides multiple installation options.
- Provides alternator breaker type control.
- Allows flexible control of source inputs.
- Ensures the smoothest possible transfer is achieved.
- Gives true on screen information for all 3-power phases.
- Provides complete user-friendly configuration and easy-to-use high-level system control & monitoring



ATS CM 335 Controller



Functions of ATS CM 335

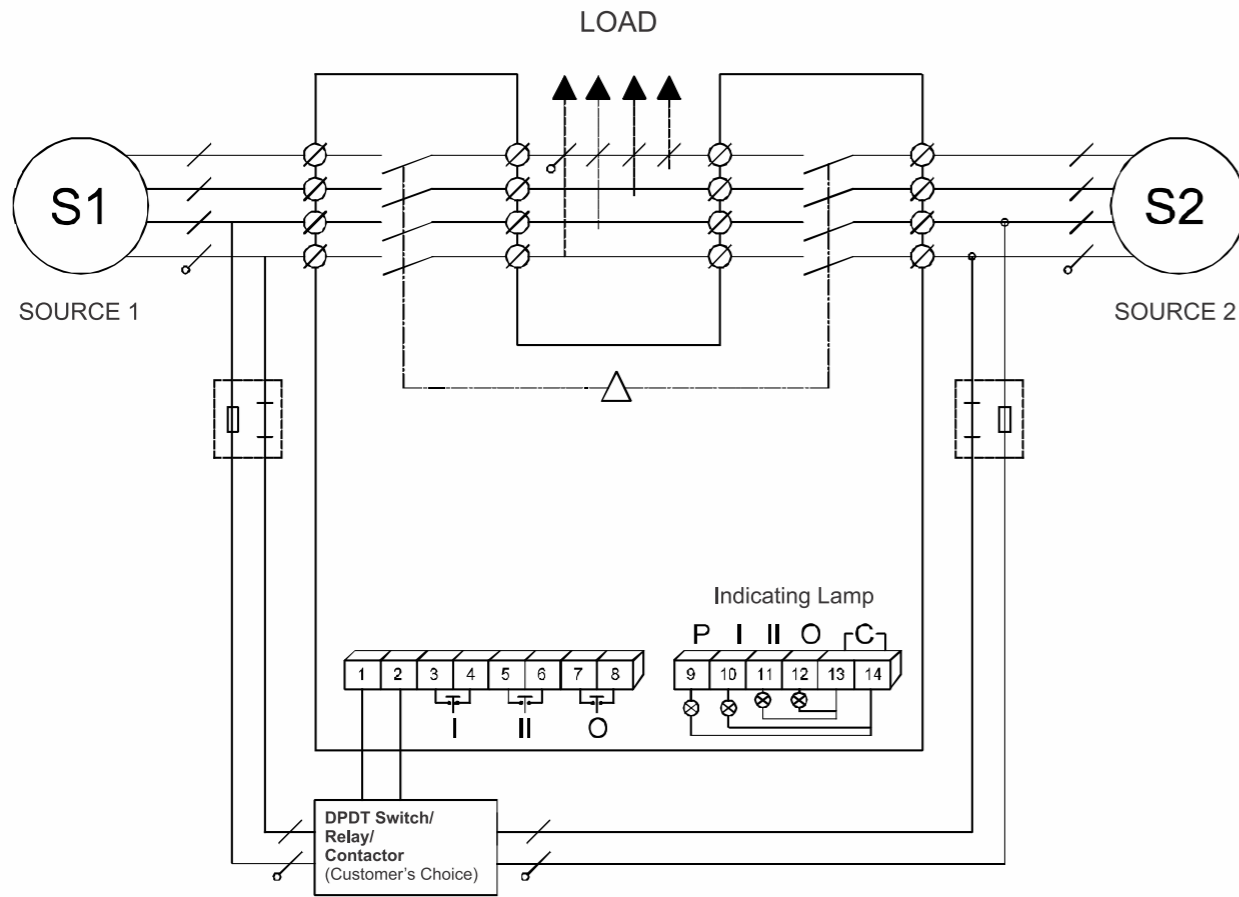
- Automatic switch over between supplies.
- Manual restore to S1.
- Configurable inputs/outputs (12/12). 6 configurable volt-free outputs & 6 configurable DC outputs.
- Power & Energy Parameters monitoring (kWh, kVAr, kVAh, kVArh).
- Source 1/source 2 control.
- Integral PLC editor.
- RS232 & RS485 communications (user selectable).
- Rotary ATS configuration.
- Configurable event log (250).
- Panel editor/Configuration PC suite licence free.

General Characteristics of ATS CM 335

- Allows flexible control of source inputs.
- Provides multiple installation options.
- Provides clear accurate power measurement information.
- Allows flexible control of source inputs.
- Ensures the smoothest possible transfer is achieved.
- Ensures additional applications are easily integrated into the system.
- Provides secure and simple off site monitoring. All ports are continuously active.
- Provides alternator breaker type control.
- Provides complete user-friendly configuration and easy-to-use high-level system control & monitoring.
- Provides access to historical alarms and operational status.



ATS Switch Connection

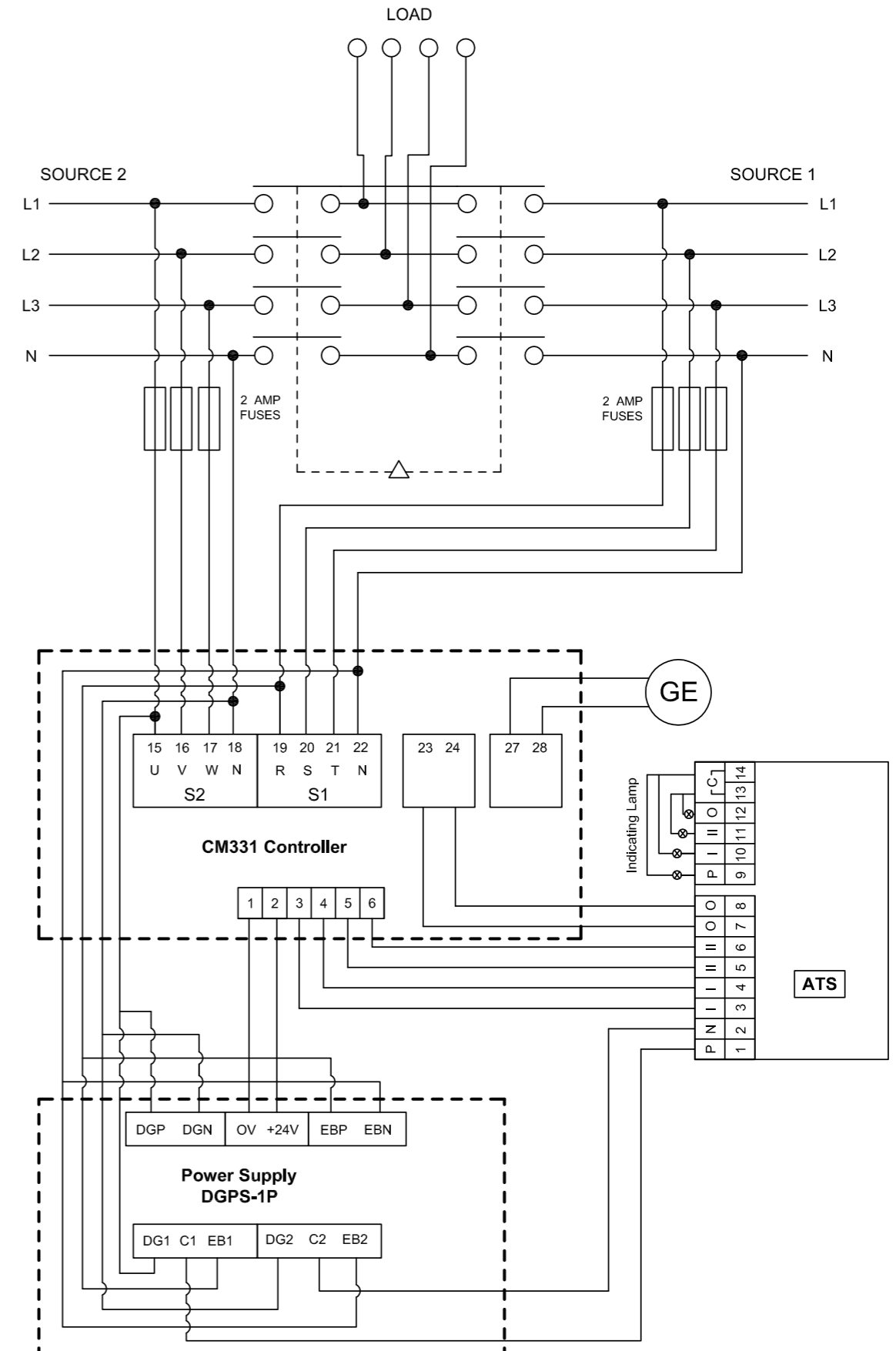


P = Power Indication **II** = Source - 2 **C** = Common
I = Source - 1 **O** = Neutral

DETAILS	TERMINAL No.	DESCRIPTION	PARAMETERS	CABLE SIZE REQD.
Power Supply	①	Power Supply	230 Vac ±20%	1.5 Sq.mm
Control	②	Position-I Command	 DO NOT CONNECT TO POWER SUPPLY	
	④	Position-II Command		
	⑤	Position-O Command		
	⑥	Position-O Command		
Signaling	⑦	Power Indicator	5A, 230 Vac OUTPUT	
	⑧	Position-I Indicator		
	⑨ ~ ⑬	Position-II Indicator		
	⑩ ~ ⑭	Position-O Indicator		

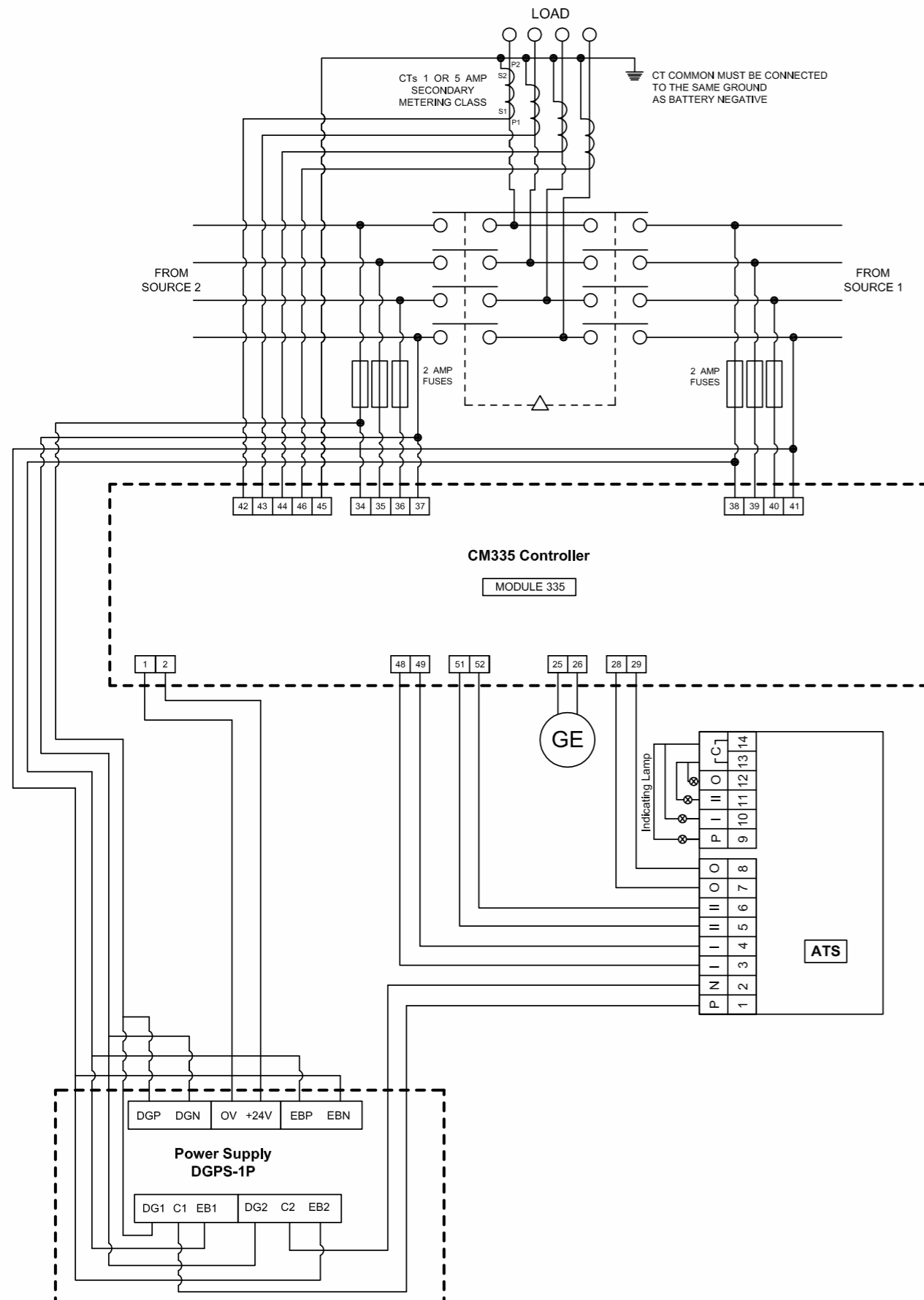


ATS with CM 331 Controller Connection



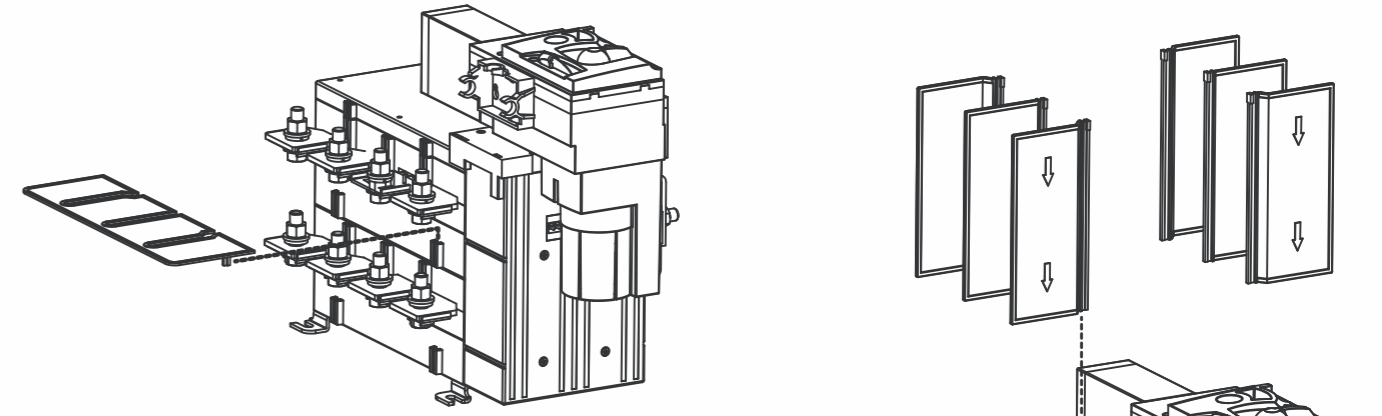


ATS with CM 335 Controller Connection

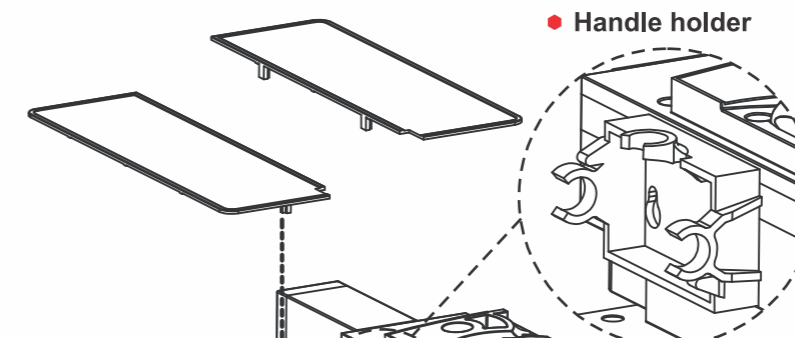


Accessories

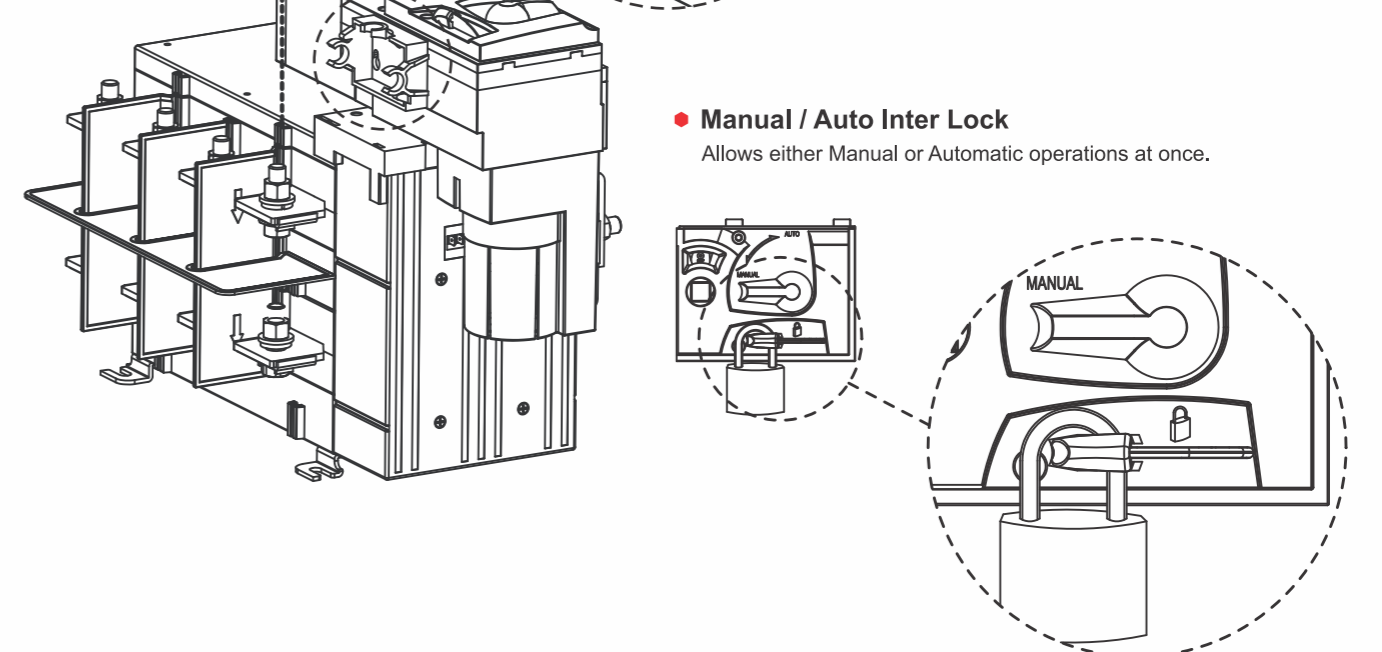
- **Source Separator**
Evades any possibility of source shorting.
- **Phase Barrier**
Possibility of accidental shorting between the phases is completely eradicated.



- **Terminal Cover**
Protects touching the live parts unknowingly.

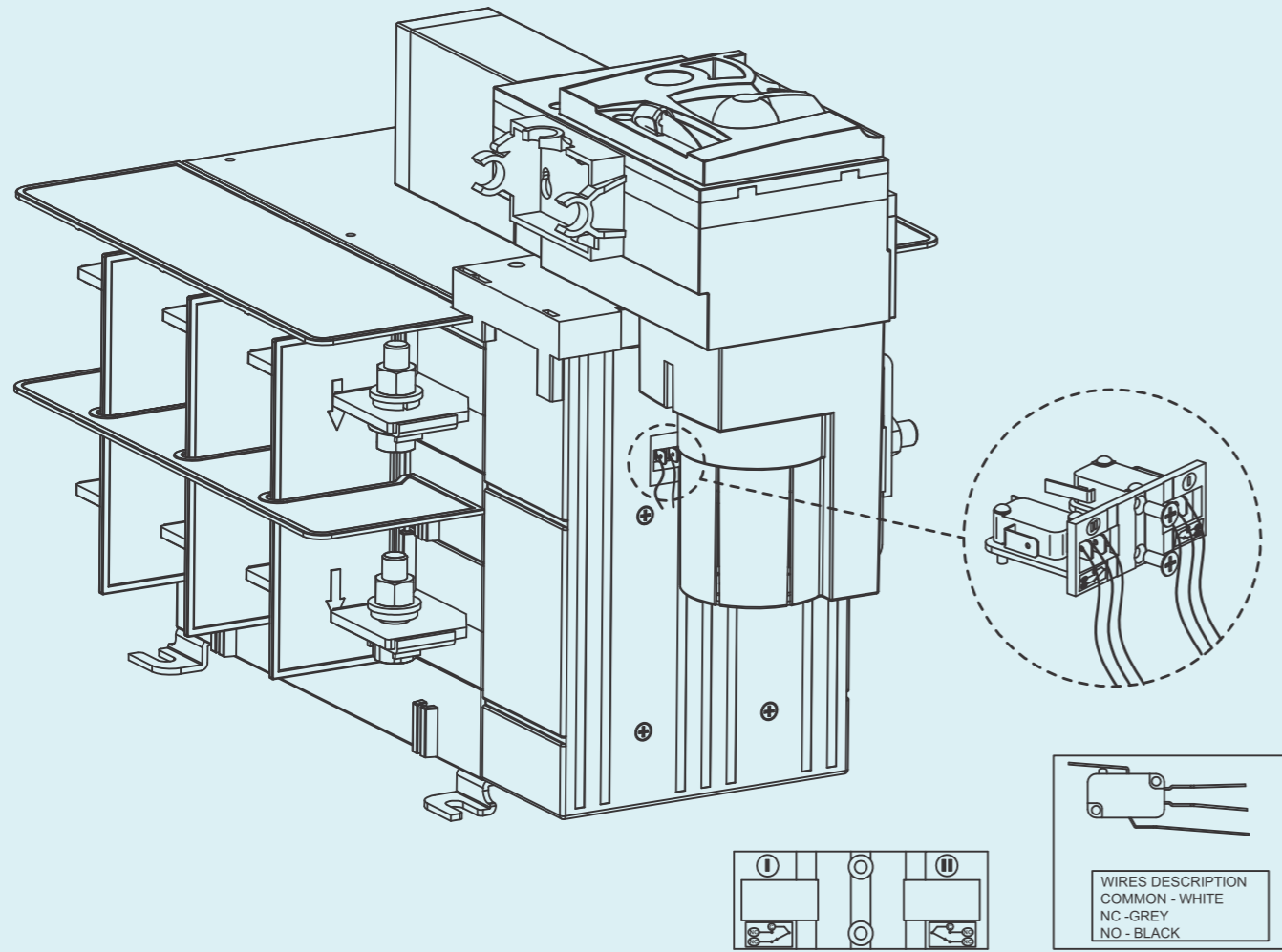


- **Manual / Auto Inter Lock**
Allows either Manual or Automatic operations at once.

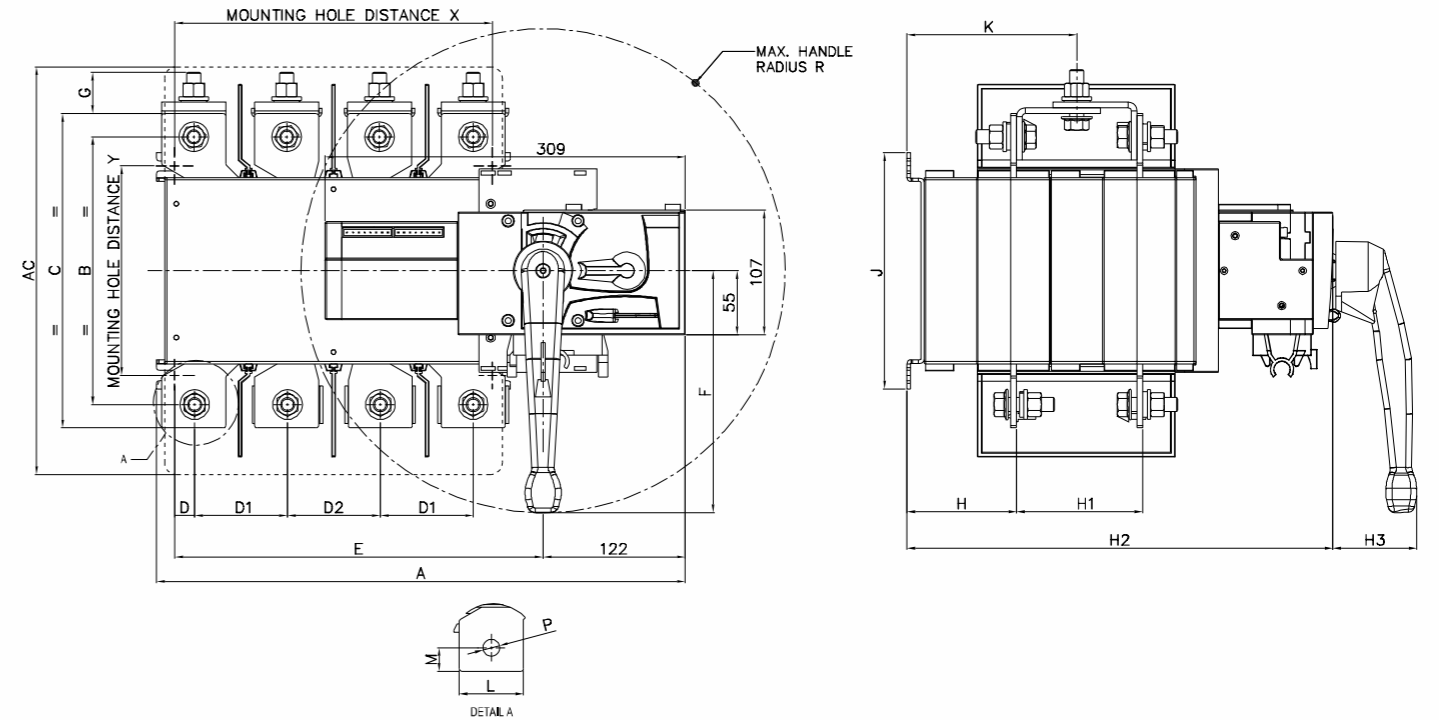




Terminals and connections for Auxiliary Contacts

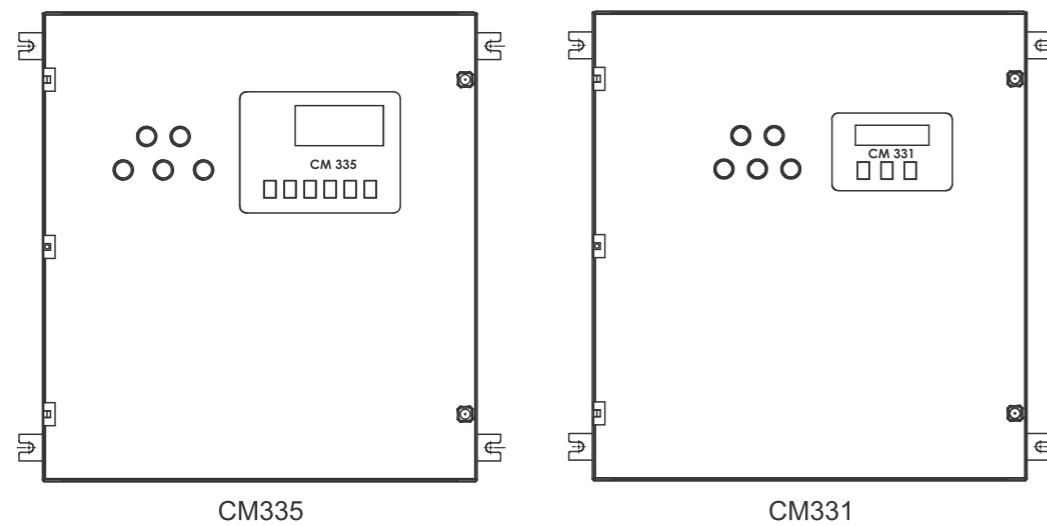


Dimensions



Rating	Mounting Hole Distance X	Mounting Hole Distance Y	A	B	C	D	D1	D2	E	F	G	H	H1	H2	H3	J	K	L	M	P	R	A C
125A	158	95	316.5	117	141	12	45	45	183	151	35	64	66	278	54	115	95	22	16	10.5	151	195
160A & 200A	158	95	316.5	123	155	8	48	45	183	151	35	64	66	278	54	115	95	25	16	10.5	151	195
250A & 320A	215	111	375.5	152	192	7	64.5	64.5	240	208	35	72.5	75.5	298	72	130	107.5	32	20	11	208	240
400A	273	180	454	206	240	27	73	73	317	208	40	94.5	108.5	366	72	203	146	40	20	14.5	208	350
630A	273	180	454	230	270	17	80	80	317	208	40	94.5	108.5	366	72	203	146	55	20	14.5	208	350

Concept Diagram of Enclosures



Dimension Enclosure

Rating	L	W	Y	X	H
125 - 200A	450	500	497	450	359
250 - 320A	550	600	598	550	399
400 - 630A	650	700	690	600	469

