

Low Voltage Switchgear

GPS1 For Siemens Breakers and Components



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- Environment Friendly
- Save Energy and Resource
- One-stop Solutions Concept
- Customer Value Increasing

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GreenPower, is jointly established by a number of state-owned excellent industrial electrical professional manufacturers, we committed to meet the procurement needs of clients. It is a professional procurement service provider with entity of industrial electrical.

GreenPower provides ONE-STOP solutions service for all customers in the International area. It is located in the time-honored electrical industrial city, a collection of worldclass brand of industrial electrical products, excellent brand of domestic electrical products as the basis.

Innovative business philosophy, strong professional supply team, expert technical guidance, advanced Information network management platform, fast logistics, which makes GreenPower as your procurement expert by your side.

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Human quests for transcendence, with transcendence we make progress, when the pursuit of unlimited become a belief, our dream began to realize.

Hard-working, dedicated GreenPower people, will be adhering to its past glory, beginners mind, let go sailing, to face the fierce competition in the future, and always help customers make the best choice, and strive to become the best and most reliable procurement service provider in the eld of industrial electrical.

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1. General introduction

GPS1 type components is for Siemens breakers of low-voltage power distribution equipment, which has circuit breaker technology, fixed-mount technology, withdrawable design technology and plug-in technology. It has safe, reliable, flexible, widely used in the construction industry and industrial technology fields.

The product has the following characteristics:

- Low voltage distribution equipment type-tested (TTA);
- Horizontal bus unified arranged in the top of the switchgear;
- 3-Pole and 4-pole busbar system rated current up to 7400A;
- Rated peak withstand current 1pk can reach 375kA;
- Big depth dimensions of the device compartment, suitable for a variety of installation;
- Device compartment can be divided into different units as the modulus structure;
- The switchgear can be installed on one side, also can be back to back installation;
- Incoming line can be from the top or from the bottom;
- Outgoing cables can be connected from the front or the rear of the cabinet.





GPS1 low-voltage switchgear components containing a total of four designs: Design breaker, fixed-mounted design, plug-in design and withdrawable design.

Breaker design for practice, the current level of bus can be divided into 3200A, 4000A, 7400A, the cable wiring compartment in the side or rear, the circuit breaker can be transferred from the connection position, test position to isolated position. Only breaker in isolated position, the door can be open, this is ensure maximum personal safety.

Fixed-mount cabinet modular structure, which makes the feeder circuits in the cabinet can be any combination. Cabinet installed fixed or insert type molded case circuit breakers(MCCB), fuse type disconnectors, or striptype disconnectors with fuse, its distribution busbar maximum rated current is 1400A; The protection class of the distribution busbar of the strip fuse cabinet is IP20B, using strips 3NJ6 fuse switch, the device can be replaced

without power down the entire cabinet. Power factor compensation cabinet has a choke and non-choke type.

Each drawer withdrawable design has connected position, test position and an isolated position. Drawers up than 125A has a mechanism that can overcome drawer advancing the process of friction. Drawer maximum rated current of 630A, modulus drawer is 100,150,200,300,400,5 00,600,700mm.

Plug-in type is designed to have a fixed device installed on the slats, plug into the main circuit and auxiliary circuit plug with the slat, main circuit cable outlet to take fixed wiring directly connected to the outlet devices. This design is more economical price.

In order to adapt engineering needs of according to BS standard design, all designed bus system were carried out 3S rated short time withstand current test.



Incomer cabinet 800*1000*2200



Feeder cabinet 1000*1000*2200



MCC fixed separation cabinet 800*1000*2200



2. Frame structure and enclosure

Load-bearing parts of the skeleton switch cabinet, which is made of steel profiles connected to each other, GPS1 skeleton structure dimensionally accurate and stable. There are two kinds of structure, namely screw connection or welded.

- Profile has 25mm hole distance modulus to meet the needs of various extensions
- Rotating handle spring can reliably prevent inadvertent or accidental leaving the door bounce
- Roof equipped with pressure relief devices

Enclosure

Roof plate

Roof plate is screwed onto the frame, the roof can be lifted without dismantling switchgear, IPX1 or IPX2 type protection class roof will delivery as accessories.

Bottom plate

In order to sealing the SPS1 from the bottom, can be screwed to the framing plurality of steel plates, you can punch holes on the floor for threading the cables. For a higher level of protection requirements, After holing the bottom plate at the site could use regular sealing stuffing for blocking.

Rear plate and Side wall

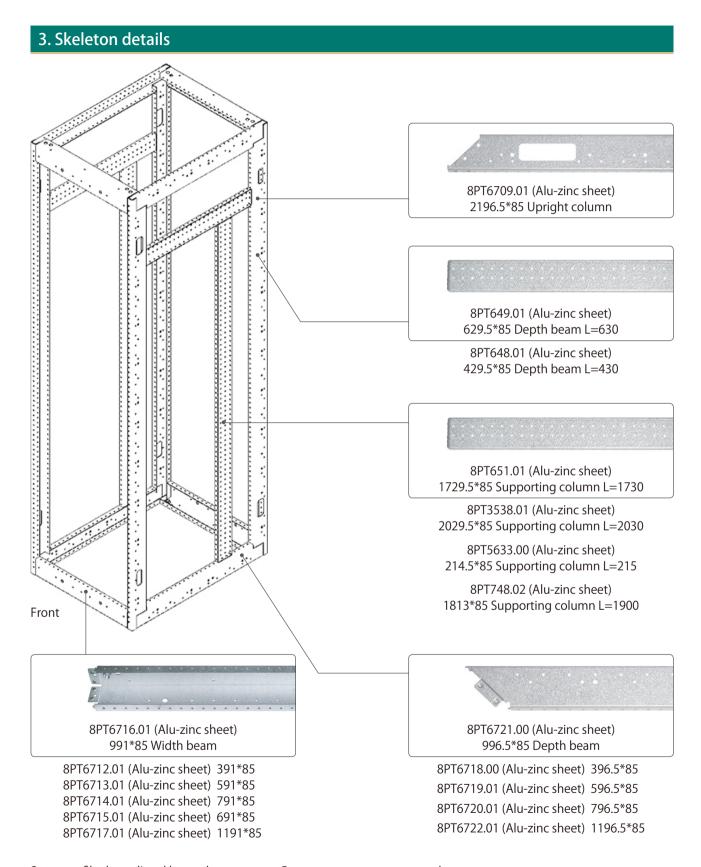
GPS1switchgear back and sides is made of not chamfered flat steel plate and screws attached to the support structure.

Partition plate

According to internal separation of different forms, for GPS1 switchgear cabinet installation in a row, partition plate is adopted for isolation between the form of the division. Spacer is mounted on the outside of the left frame.







Some profile do not listed here, please contact Greenpower to get more products.



4. Fixed type overview and features

OFF1 uses fixed mounting technology feeder cabinet, can be installed molded case circuit breakers (MCCB), fuse switch disconnectors.

OFF1 fixed outgoing circuits installed by the composition of the modular device compartment and located in the rear of the cable compartment.

Switchgear front is door or plate.

OFF2 the distribution cabinet of feeding outgoing circuits uses fixed mount technology can be installed molded case circuit breaker (MCCB), fuse switch disconnectors.

OFF2 electrical switch of cable feeder circuits is mounted on the mounting plate and connected to vertical distribution bus on the incoming side.

Switchgear front has separate compartment doors, cable connection compartments are in the front as well.

OFF3 feeding-out fixed installation cabinet is composed by a modular device compartment and a cable compartment located in the rear of cabinet.

OFF3 cable feeder circuits electrical switch is mounted on the mounting plate and connected to the vertical distribution bus of the incoming side.

Switchgear front has separate compartment doors.

OFF 4 outgoing circuits fixed installation consists of modular device compartment and a cable compartment

located in the front part of the cabinet.

OFF 4 cable feeder circuits electrical switch is mounted on the mounting plate and connected to the vertical distribution bus on the incoming side.

Switchgear front has separate compartment doors.

5. Draw-out type overview

Equipped with an electric motor and feeder circuits of withdrawable switchgear in safe and flexible premise of providing convenient operating, through withdrawable design, enabling quick and easy replacement and adjustment, which means that during the operation, can be Added module compartment and replace or convert.

Features

Main circuit with the movable barrier (breaking in the incoming side and the outlet side) and auxiliary circuits (up to 40-pin + 1 bus connector) of the contact system. Misuse protection mechanism prevents movement in case of contact with the load.

In the test position, relative performance of the withdrawable units can be detected in the state of mistakenly load (cold status)status.

In this position, we need to feeder the control voltage through the auxiliary contacts. The protection class on the position of test and isolated position is up to IP30.







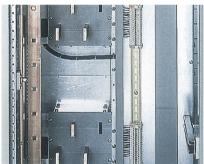
6. Control cabinets (CCS) for freelance design

Offering a lot of space for flexibility, a wide variety of expansion components are available for freely designed control and regulation cabinets.

- The busbar system of the control cabinet can be selected with 3 poles(3P) and 4 poles(4P)
- Rated current up to 1200A
- Rated short-time withstand current I_{cw} up to 65kA
- Available with doors at the same height as the cabinet or with separate small doors for each compartment
- Cabinet compartmentalization
- Wide variety of expansion components

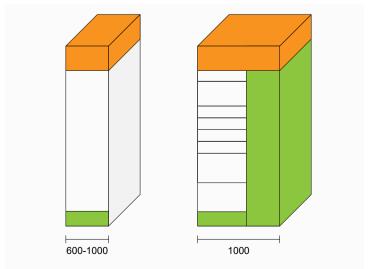






Cabinet dimension/Cabinet structure

Cabinets for free design with rated currents up to 1200A



Sivacon Label/8PT2530





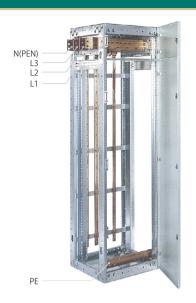
7. Flexible horizontal busbar system

Solutions to different usage requirements

The various requirements placed on a horizontal busbar system need to be met with different implementation possibilities.

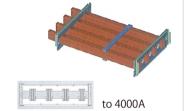
The modules can achieve economical structure and high safety of operation.

- The horizontal busbar is arranged above the cabinet
- Rated current for horizontal busbar systems up to 7400A
- The classification of rated current is practice-oriented
- Rated peak withstand current IPK up to 375kA
- The busbar compartment and the device compartment are separated from each other
- The connection between the busbars of the cabinet can be easily carried out from above
- With arc barrier to limit internal fault arcs



Horizontal busbar system







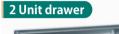


Relationship between rated current In and ambient temperature																	
Busbar system to 3200A										Phase line section		Short circuit strength					
Non-ventilated				Ventilated													
20° [A]	25° [A]	30° [A]	35° [A]	40° [A]	45° [A]	50° [A]	20° [A]	25° [A]	30° [A]	35° [A]	40° [A]	45° [A]	50° [A]	Quantity	Size (mm)	I_{pk}	I _{cw} (1s)
1075	1050	1025	1000	975	945	920	1315	1285	1250	1220	1185	1155	1120	1	40 × 10	163	65
1615	1575	1540	1500	1460	1420	1375	2025	1975	1930	1880	1830	1780	1725	2	40 × 10	163	65
1895	1850	1805	1760	1715	1665	1615	2420	2365	2310	2250	2190	2130	2065	2	60 × 10	200	80
2260	2210	2155	2100	2045	1985	1925	2960	2890	2820	2750	2675	2600	2525	2	80 × 10	200	80
2585	2525	2460	2400	2335	2270	2200	3445	3365	3285	3200	3115	3025	2935	2	100 × 10	200	80
Busbar system to 4000A																	
2205	2155	2105	2050	1995	1940	1880	2800	2735	2670	2600	2530	2460	2385	3	40 × 10	200	80
2530	2470	2410	2350	2285	2225	2155	3335	3260	3180	3100	3015	2930	2845	3	60 × 10	200	80
2850	2785	2720	2650	2580	2505	2430	3820	3730	3640	3550	3455	3360	3260	3	80 × 10	250	100
3175	3100	3025	2950	2870	2790	2705	4305	4205	4105	4000	3895	3785	3670	3	100 × 10	250	100
Busbar system to 7400A																	
4625	4520	4410	4300	4185	4065	3945	6240	6100	5950	5800	5645	5485	5320	3	80 × 10	200	80
														3	40 × 10		
5540	5415	5285	5150	5015	4870	4725	7480	7305	7130	6950	6765	6575	6380	3	80 × 10	375	150
														3	80 × 10		
5810	5675	5540	5400	5255	5110	4955	7965	7780	7590	7400	7205	7000	6790	3	100 × 10	250	100
														3	100 × 10		



8. Cabinet drawer











4 Unit drawer







Modulus height	Rated current							
3/4 P No-fuse circuits								
100mm	25A							
150mm	50A							
150mm	100A							
200mm	225A							
300mm	225A							
300mm	400A							
600mm	630A							
200mm	160A							
200mm	160A							
300mm	225A							
300mm	400A							
600mm	630A							
3P Fuse	circuits							
100mm	25A							
150mm	63A							
150mm	125A							
200mm	160A							
300mm	225A							
300mm	400A							
400mm	630A							
4P Fuse	circuits							
150mm	63A							
150mm	125A							
200mm	160A							
300mm	225A							
300mm	400A							
500mm	630A							
3P No-fus	se circuits							
150mm	63A							
150mm	100A							
150mm	160A							
200mm	225A							
200mm	225A							
300mm	400A							
300mm	630A							
4P No-fuse circuits								
150mm	63A							
150mm	100A							
200mm	160A							
300mm	225A							
300mm	400A							
500mm	630A							

Note: 100mm is 1 unit



9. Side walls of drawers





1 Unit drawer

1.5 Unit drawer





Bottom plate 8PT20564.02

Side-plate of the drawer

Unit drawer has no side-plate, only the bottom plate, higher than 1.5 unit drawer in addition to arrange drawer bottom also equipped with highly unequal side-plates. The following diagram are the left side-plate.

8PT7860.05





8PT8123.03 Left side-plate 150 8PT8122.05 Right side-plate 150

2 Unit drawer



8PT5638.06 Left side-plate 200 8PT5637.08 Right side-plate 200

3 Unit drawer



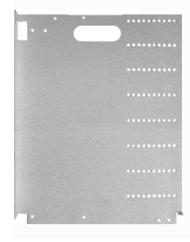
8PT5398.05 Left side-plate 300 8PT5399.07 Right side-plate 300

4 Unit drawer



8PT5700.05 Left side-plate 400 8PT5699.08 Right side-plate 400

5 Unit drawer



8PT5798.04 Left side-plate 500 8PT5797.06 Right side-plate 500



10. Drawer doors

1 Unit drawer



8PT8045.01

Drawer door plate 100mm 162.5/39 8uc61/62

1.5 Unit drawer



8PT5537.02

Drawer door plate 150mm 162.5/80 8uc61/62

2 Unit drawer



8PT7668.00

Drawer door plate 200mm 162.5/80 8uc61/62

3 Unit drawer



8PT5757.02

Drawer door plate 300mm 202.5/80 8uc61/62

4 Unit drawer



8PT35446.00

Drawer door plate 400mm 8uc61/62

5 Unit drawer



8PT7665.00 Drawer door plate 500mm 202.5/140 8uc61/62 spindle



310046
Drawer interlock mechanism assembly







8PT7857.01 Pressure Spring VD-153

8PT8092.04 Drawer interlock plate 2

8PT20567.03 Drawer interlock plate 1



8PT5662 Rubber block



3SB3000-20 Button



8PT5444.02 U-handle 100mm



8PT5387.02 U-handle 60mm



8GP.253.020(310051) U-handle 100mm



8GP.253.021(310052) U-handle 60mm



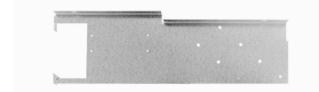
11. Switch installation plate



8PT6121.11 Installation plate 150



8PT6548 Installation plate 150



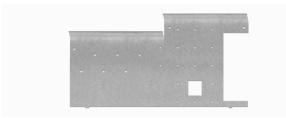
8PT9283.01 Installation plate 200



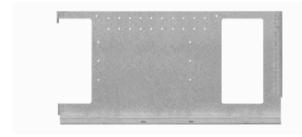
PT9284.01 Installation plate 200



8PT8305.07 Installation plate 300



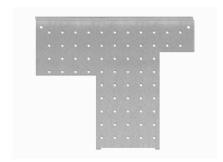
8PT8310.06 Installation plate 300



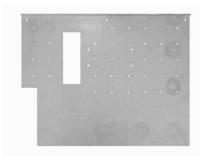
8PT35516.01 Installation plate VT 400 H 300



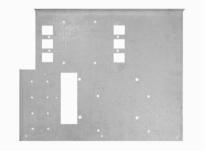
8PT7093.01 Installation plate 100



8PT35828.00 Installation plate VT 400 3P H 300



8PT5870.05 Installation plate 500



8PT5799.08 Installation plate 500



12. Drawer fittings



8PT12581 Indicator plate



8PT12660 Position label



8PT6789.07 Drawer mechanism left bracket



8PT6887.07 Drawer mechanism right bracket



310069 Secondary rotating-in mechanism



8PT12578 Front rotating sleeve



8PT12580 Guiding sleeve



8PT12579 Rear rotating sleeve



8PT7857.01 Spring VD-153



8PT12582.04 Secondary installation bracket (movable)



8PT11049 Micro switch



8PT20568.03 Mechanism interlock plate



8PT6017.01 Adaptor bracket



13. Secondary plugin



8PT7868 Secondary plug (40 pins)



8PT7869 Secondary socket (40 pins)



201281 (1.5mm²) 201374 (2.5mm²) Pins plug for secondary plugin (40 pins)



201282 (1.5mm²) 201375 (2.5mm²) Pins socket for secondary plugin (40 pins)



310271 Secondary plug (32pins)



310267 Secondary socket (32pins)



8PT17902.1 Pins plug for secondary plugin (32pins)



8PT17897.1 Pins socket for secondary plugin (32pins)



14. Drawer parts (1)



8PT5397.00 Supporting plate



8PT8151.02 Symmetrical part 6



8PT8152.01 Symmetrical part 8



8PT8153.01 Symmetrical part 10



8PT8154.01 Symmetrical part 12









8PT5998.09 Panel w/o plug 8PT11883.03 Panel 150 w/o plug 8PT11882.03 Panel 100 w/o plug



8PT5475.02 Indicating supporting angle



310295

Hinge Assembly

8PT5544.04 Indicating supporting angle



8PT5958.01 Adaptor 3RV



8PT7169.03 Latch bolt 4kt8



8PT35438.00 Latch bolt 4kt8 VT400



8PT7257.04 Latch Bolt 4kt12 3KL61



8PT5955.04 Latch Bolt 4kt12 3VF6



8PT9915.02 Latch Bolt 4kt12 VL400

14



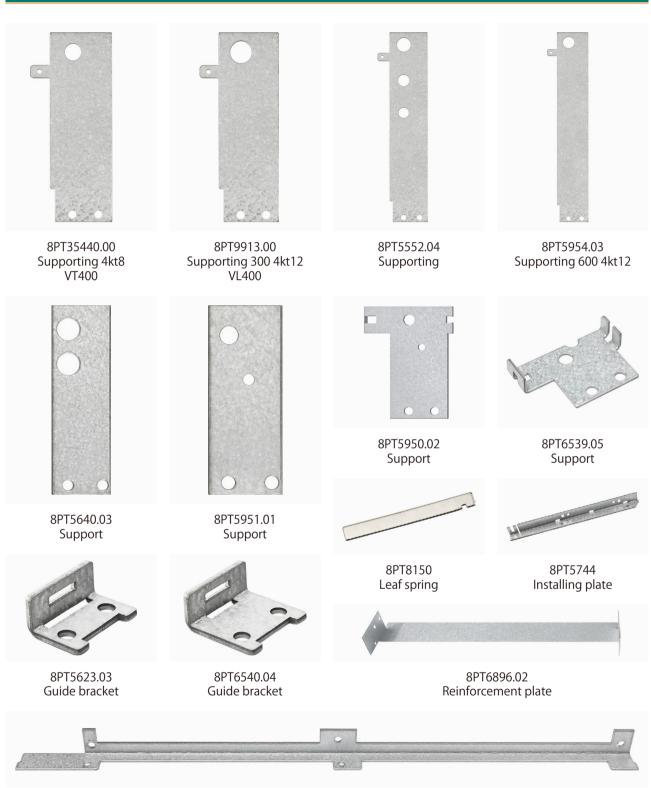
8PT5953.06 Latch 4kt8



8PT5944.01 Latch



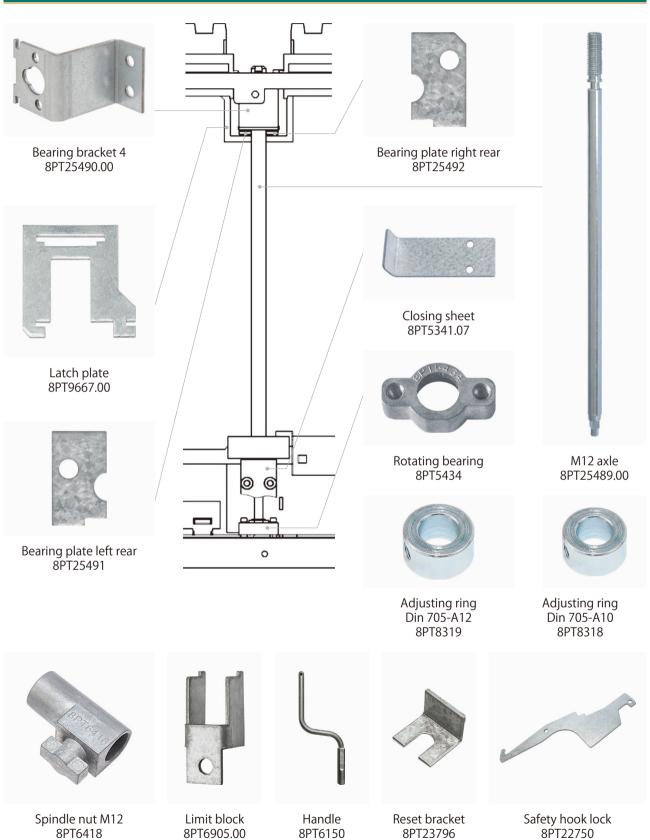
14. Drawer parts (2)



8PT2718.05 Drawer rear wall bracket



14. Drawer parts (3)





14. Drawer parts (4)



Layer partition plate 8PT5323.17



Basic cover plate 8PT5380.01



Outgoing plate 8PT22743.01



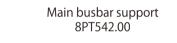
Bracket tray 8PT546.00



Side plate 8PT22540.01

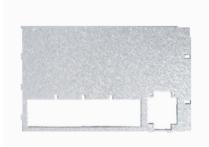


Outgoing frame 8PT22736.01

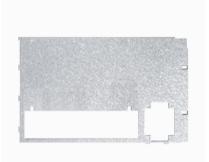




1 Unit rear cover (100) 8PT4075.04



Cover plate rear part (200) 8PT4592.04



Cover plate rear part (200) 8PT4594.02



Cover plate rear part (150) 8PT4076





Reinforced hook (600 width) 8PT955.01



Reinforced hook (800 width) 8PT956.02





Strengthened rings (1200 width) 8PT958.03



15. Cabinet lock and hinge



Hinge 8PT535



Hinge sheet 1 8GP.256.500



Hinge sheet 2 8GP.256.501



Axis 8GP.206.530



Pressure plate 8GP.156.504



Door lock 8PT538



Lock cylinder 8GP.870.511



Spring 8GP.282.531



Lock plate 8GP.870.510



Lock shell 8GP.885.501



Nuts 8GP.940.506



Hexagon flange bolts M5*11.5 GB/T16674.1



Metal key K10-11(49.5*87mm)



Plastic key 8GP.887.001



Supporting 8PT13254.01



Lock supporting plate 8PT539.00



16. Primary plugin



Output contact system 8PT9325



Incoming contact system 8PT4130

Contact system	Product code	Phases	Rated current (A)
	8PT5315	3P	225A
	8PT5318	4P	225A
8PT9325	8PT5316	3P	400A
(Output)	8PT5319	4P	400A
	8PT5317	3P	630A
	8PT2809	4P	630A
	8PT3741	3P	225A
	8PT2648	4P	225A
8PT4130	8PT3742	3P	400A
(Incoming)	8PT2647	4P	400A
	8PT3743	3P	630A
	8PT2646	4P	630A

Contact number of each phase	Rated current (A)	Allowed current (kA)
1	225	≈ 50
2	400	≈ 50
3	630	≈ 65



Output contact case 8PT2631



Incoming contact case 8PT2630



Primary contact 8PT2597



Contact bus 8PT2641



Contact bracket 8PT2642



17. Busbars, Busbar holders (1)

Main technical parameters

- Rated insulating voltage: 1000V;
- Rated working voltage: up to 690V;
- Main bus rated current: up to 7400A;
- Rated peak withstand current: up to 375kA;
- Rated short time withstand current: up to 150kA,1s; to 120kA, 3s;
- Rated current of the vertical busbar for circuit breaker technology: up to 6300A;
- Rated peak withstand current: up to 250kA;
- Rated short-time withstand current: up to 100kA, 2s, up to 80kA, 3s;
- Rated peak withstand current: up to 163kA;

- Rated current of the vertical busbar for fixed installation technology: up to 2800A;
- Rated short time withstand current: up to 65kA, 1s; up to 50kA, 3s;
- Rated current of the vertical busbar for strip insert technology: up to 2100A;
- Rated peak withstand current: up to 110kA;
- Rated short-time withstand current: up to 50kA, 1s;
- Rated current of the vertical busbar for plugin type and draw-out type technology: up to 1200kA;
- Rated peak withstand current: up to 163kA;
- Rated short-time withstand current: up to 65kA, 1s; up to 50kA, 3s;
- Rated current of the switch: CB: up to 6300A, Cable feeder circuits: up to 630A.



Busbar cover (upper) 8PT3599



Busbar cover (down) 8PT3600



8PT3812.01



8PT3817



Copper bar L1 1 8PT3426.03



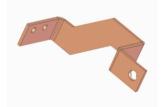
Copper bar L2 1 8PT3427.03



Copper bar 8PT3425.01



Copper bar 8PT3429.01



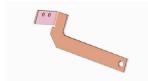
Copper bar L3 1 8PT3428.02



Copper bar L1 2 8PT3430.01



8PT4073 Outgoing contact case (Small current)



Copper bar L2 2 8PT3431.01



Copper bar L3 2 8PT3432.1



Connecting bus N.L2 120*10 PT23827.00G



Connecting bus L1.L3 120*10 8PT23827.00



17. Busbars, Busbar holders (2)



Busbar channel cover 8PT2625



Outgoing shield plate 8PT4768



Insulating sleeve 8PT8354 (481-7005.0)



Rear outgoing bus N-L2 (630A) 8PT22570



Rear outgoing bus L1-L3 (630A) 8PT22571



Outgoing copper 8PT4074



Vertical busbar 40*10 (N bar use 4 pcs) 8PT3155.01



Vertical busbar 60*10 (N bar use 4 pcs) 8PT3152.01



8PT15346(26.5mm) 8PT15346.1(24.5mm)



8PT15347:15*3 8PT15348:30*3 8PT15349:10*3



8PT15449



17. Busbars, Busbar holders (3)





18. Operation mechanism and handle







For MCB

GPZ2 Front GPZ3 Front

Circuit Breaker	Model	Mechanism type	Axis size
21/4/10/11/10/11/10/11/12/11	GPZ2-1347.6/S	Central mechanism	□ 8 × 8
3VA10/11B/N/S/M/H/3P 100/160	GPZ3-161.40	Eccentric mechanism	□ 8 × 8
100,100	GPZ3-1347.7 Eccentric mechanism		\Box 6 × 6
3VA12M/H/C/L/3P 250	GPZ2-1361.1	Central mechanism	□ 8 × 8
3VA2M/H/C/L/3P 100/160/250	GPZ2-133.7	Central mechanism	□ 8 × 8
3VA2M/H/C/L/3P	GPZ2-246.18	Central mechanism	□ 10 × 10
400/630	GPZ3-296.6	Eccentric mechanism	
5SL4 3P	GPZ2-198.16/3P	Central mechanism	□ 6 × 6
5SL4 4P	GPZ2-198.16/4P	Central mechanism	\Box 6 × 6

Note: Please specify the model/brand of the breaker, GreenPower will define the model of the mechanism as its dimension.



310207 (Square axis 6*6*180) 310317 (Square axis 8*8*180) 310315 (Square axis 8*8*150) Short handle (8UC71 Handle) 8PTSB-1.71



310208 (Square axis 8*8*150) 310213 (Square axis 6*6*180) 310216 (Square axis 8*8*300) Medium handle (8UC72 Handle) 8PTSB-1.72



310209 Long handle (8UC73 Handle) 8PTSB-1.73



310316 Extra large handle (8UC63 Handle) 8PTSB-1.73X

Note: This catalog only lists regular products. Other components if not listed in this catalog, please contact with GP to get more information, we can customize as your special requirement.

Zhejiang Greenpower Electric Co., Ltd Zhejiang GreenPower I&E Co.,Ltd **Professional Power Equipment provider**

The data and illustrations are not binding. We reserve the right to make modifications following technical developments to the products.

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