TENGEN

GL Series Switch Disconnector (YUN 3.0)



1 Overview

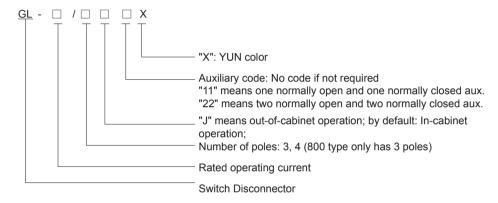
GL series switch disconnector is used in the AC 50Hz power distribution equipment with the rated voltage up to AC690V and the conventional thermal current up to 3150A in industries and enterprises for infrequent connection and disconnection of circuits and for electrical isolation, and the product is widely used in power distribution systems and automation systems in many industries such as construction, electric power, and petrochemical engineering.

This product complies with GB/T 14048.3 standard.

The disconnector has advantages of artistic appearance, creative and simple structure, small size, and full functions, making it the best choice among similar products.



2 Type Designation





3 Operating Conditions

- 3.1 The ambient air temperature is -5° C \sim 40°C, and the mean temperature within 24h does not exceed +35°C (-25°C should be indicated).
- 3.2 The altitude of the installation site shall not exceed 2000m, and if the altitude exceeds 2000m, the altitude derating correction factor shall be used.
- 3.3 The mean maximum relative humidity of the wettest month does not exceed 90%.
- 3.4 The pollution degree of the ambient environment is Level 3.
- 3.5 Vertically installed in a place where there is no significant shaking and no shock vibration.



4 Structure Features

The disconnector adopts a modular design, suitable for the connection and disconnection of circuits and for the electrical isolation, but it is only suitable for electrical isolation if 1000A and above.

The disconnector adopts an acceleration opening and closing mechanism with spring energy storage and instantaneous release and a dual-break contact structure that is closed and open simultaneously, greatly improving the electrical performance and mechanical performance of the product.

The disconnector is made of unsaturated polyester glass fiber reinforced molding plastic and its manual operating handle has high dielectric performance, protection capacity and reliable operational safety.

The disconnector has 3 poles, and 4 poles (3 poles + on/off neutral pole).

The handle is directly installed on the switch for operation (referred to as in-cabinet operation), and can also be installed on the door of the distribution cabinet through the extended shaft (referred to as out-of-cabinet operation) for convenient operation.

The handle can be locked at the segment position "0" with two to three locks to prevent misoperation.



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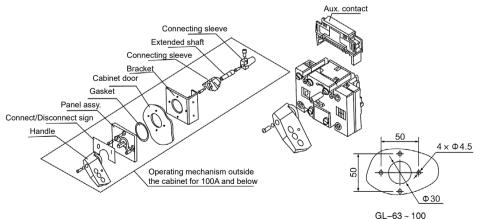
5 Technical Parameters

Table 1

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Main technical parameters																
Conventional thermal current Ith (A)		10	00	160	160 250 400 630 800 1600					3150						
Rated insula voltage Ui (A		1000														
Rated opera voltage (V)	AC415/690															
Rated impulse withstand voltage 8 12 Uimp (kV)																
Rated operating current le (A)		63	100	160/125	250/200	400	630	80	00	1000	1250	1600	2000	2500	3150	
Use category	` ′			AC-23A/AC22A						C-22B AC-22B						
Rated short time withstand current lcw (kA/1s)		2	2	7	9	20	20	20	20	30	30	30	50	50	50	
Making and	ON	10le/3le							3le							
breaking capacity	OFF			81	e/3le							3le				
Mechanical I (times)	ife	20	000	8000	8000	5000	3000	50	00	500	500	500	500	500	300	
Electrical life (times)		300 1000		1000	1000	500	10	00	100	100	100	100	100	100		
Rated work s	system	8 hours														

6 Installation Method

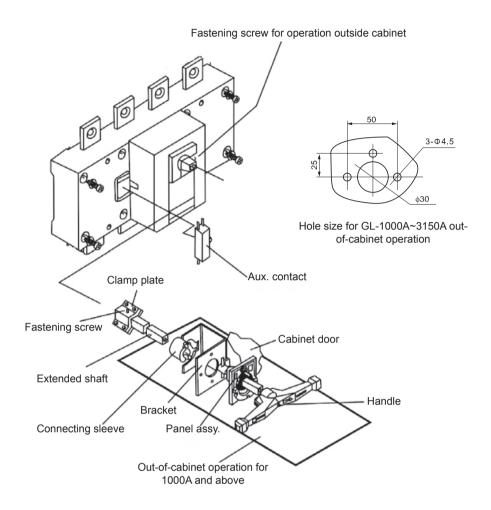
The installation method is illustrated in the figure. A long shaft is required for operation outside the cabinet, and it is required that the handle (shaft) installed on the panel (door) shall be coaxial (aligned) with the long shaft, otherwise the cabinet door is not easily open and closed and difficult to operate, resulting in damage to the operating mechanism. The length of the shaft can be determined according to the sum of the installation distance from the product to the door panel and the length (approx. 30mm) of the shaft inserted into the handle. The default length of the long shaft is 330mm, and the installation method diagram is illustrated in figure below.



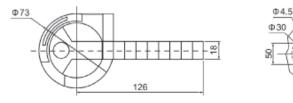
Out-of-cabinet operating handle panel installation dimensions drawing

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Notes: Standard length of the extended shaft for 125~800A: 10×10×330mm Standard length of the extended shaft for 1000~3150A: 15×15×330mm



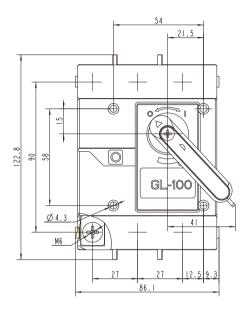
GL-125 ~ 800 out-of-cabinet operating handle

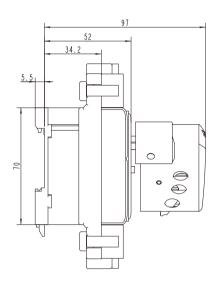
GL-125~80 out-of-cabinet operating handle panel installation dimensions drawing

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7 Outline and Installation Dimensions

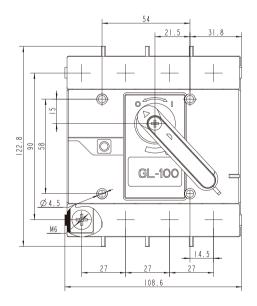
7.1 GL-63/3, GL-100/3 outline and installation dimensions

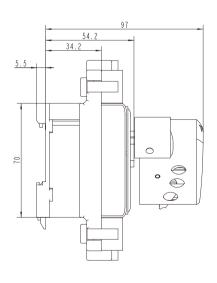




Adapted to a 35mm guide mounted

7.2 GL-63/4, GL-100/4 outline and installation dimensions





Adapted to a 35mm guide mounted

Power Distribution Electrics

GL Series Switch Disconnector (YUN 3.0)

7.3 GL-800 switch disconnector outline and installation dimensions

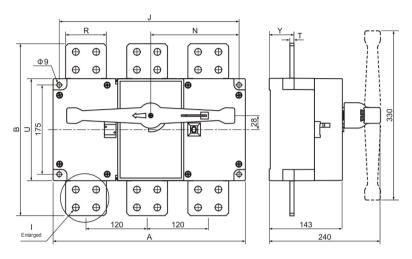
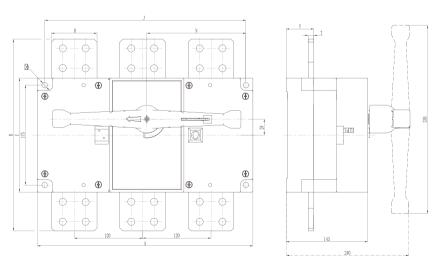


Table 2

Spec.	Outline dimensions and installation dimensions (mm)																		
Current	Α	В	С	D		G	Н		K		М	N	Р	R			U	W	Υ
160/3	140	135	125	17	70	21	115	120	65	5.5	8	75	36	20	85	3	117	222	23
160/4	170	135	125	17	70	21	115	150	65	5.5	8	75	36	20	85	3	117	222	23
250/3	180	170	140	25	86	27.5	145	160	90	6.5	10	105	50	25	110	3	140	246	27
250/4	230	170	140	25	86	27.5	145	210	90	6.5	10	105	50	25	110	3	140	246	27
400/3	230	240	185	40	115	39	160	210	140	6.5	10	135	65	32	160	4.5	208	292	36.5
400/4	290	240	185	40	115	39	160	270	140	6.5	10	135	65	32	160	4.5	208	292	36.5
630/3	230	260	185	40	115	39	160	210	140	6.5	12	135	65	40	160	5	220	292	37
630/4	290	260	185	40	115	39	160	270	140	6.5	12	135	65	40	160	5	220	292	37
800/3	280	286	240	50	143	60	160	255	177	9	12	162	80	50	200	6	248	-	47

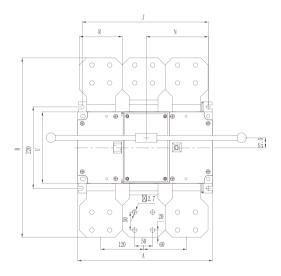
7.4 GL-1000~3150 switch disconnector outline and installation dimensions

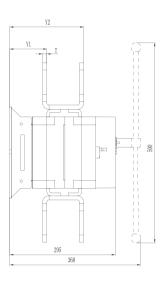


GL-1600 direct operation

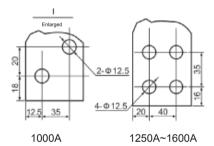
Power Distribution Electrics

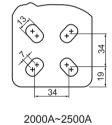
GL Series Switch Disconnector (YUN 3.0)

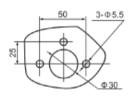




GL-2000~3150 direct operation







Out-of-cabinet handle seat installation dimensions

Table 3

Spec.	Outline dimensions and installation dimensions (mm)										
Current	А	В		N	R		U	Y(Y1, Y2)			
1000/3	378	310	353	176.5	60	8	200	48			
1000/4	498	310	473	236.5	60	8	200	48			
1250/3	378	336	353	176.5	80	8	200	48			
1250/4	498	336	473	236.5	80	8	200	48			
1600/3	378	336	353	176.5	80	10	200	49			
1600/4	498	336	473	236.5	80	10	200	49			
2000/3	378	405	353	176.5	80	10	200	109, 203			
2000/4	498	405	473	236.5	80	10	200	109, 203			
2500/3	378	405	353	176.5	80	10	200	109, 203			
2500/4	498	405	473	236.5	80	10	200	109, 203			
3150/3	378	460	353	176.5	120	12	200	104, 207			
3150/4	498	460	473	236.5	120	12	200	104, 207			
3150/3 customized	378	460	353	174	120	15	200	107, 210			
3150/4 customized	498	460	471	235	120	15	200	107, 210			

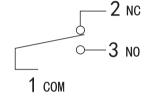
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8 Operation and Maintenance

- 8.1 The switch should be installed vertically. Please check whether the contents of the nameplate meet the working requirements and confirm that the switch is in the OFF state before installation. Turn the switch operating handle until the arrow on the handle indicates the "I" and the view window also shows that the "I" switch is in the ON state.
- 8.2 The terminal block and bare bus bars on the switch should be wrapped with insulating materials to prevent short circuit between phases of the switch.
- 8.3 For the disconnector that is operated outside the cabinet, if the extended shaft is not coaxial with the hole on the handle, do not turn the extended shaft to avoid damage to the internal parts. Be sure to adjust the switch position to ensure they are coaxial.
- 8.4 Disconnectors should be maintained every about six months. If the rotating part is turning inflexibly, place apply MP-3 grease on it. Check whether the fasteners are loose, and they can be repaired according to the actual situations, and cannot be used if seriously damaged.

9 Aux. Switch and Wiring Diagram

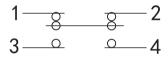




GL-100

GL-100 switch in the OFF position

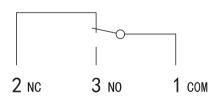




KW2-0Z

GL-160~630 switch in the OFF position





NL-5

GL-1000 and above switch in the OFF position

10 Ordering Notice

Please specify the following contents when ordering:

- 10.1 Product name, model, specification and quantity.
- 10.2 If there are special installation conditions or special applications, please provide the corresponding technical data or contact our company.
- 10. Model Example

Switch disconnector, rated current 630A, 3-pole out-of-cabinet operation: GL-630/3J (YUN 3.0)