



**Explosion Proof  
Electrical Control Panel**

HEBEI GN SOLIDS CONTROL CO.,LTD

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## Part 1 GN Company Profile

GN Solids Control is a famous brand of oil equipment manufacturer in domestic and overseas. GN's electrical engineering business department, affiliated to Hebei GN Solids Control Co., Ltd, has comprehensive ability to provide solution for explosion-proof electrical control. GN is able to provide the electric control system, explosion-proof control panel design and development, fabrication, site installation, program debugging, and other services.



## GN Explosion Proof Electrical Products Advantages

- ◆ GN is with enormous capability in software and hardware and has 2 factories with total area of 40,000 square meters running in Chaobai River development area close to Beijing. Another factory in Hebei province under establishing is of 100,000 square meters.
- ◆ GN company is approved by API certification system. The electrical control products have been certified by IEC Ex and China CNEEx, which enable GN's products to meet high level market requirements.
- ◆ GN has up-to-date numerical control processing workshop and advanced fabrication machine.
- ◆ GN is the first one China based electrical products manufacturer who set up the branch in the USA.
- ◆ GN products are applying in over 70 countries and regions. GN has set up branch and cooperative agency in the USA, Russia, Australia, Latin America and Middle East.
- ◆ GN has been approved HSE certification system, the company is comply with ISO9001、ISO14001、OHSAS18001 standard.
- ◆ GN is able to provide customized electrical control solutions including control panel, PLC Program design and integrated system smart control center as per customers' requirements.

## GN Factory Photographs

GN has set up branch in the USA, from where GN is able to provide quick response to customers from North and South America. The branch company in the meanwhile brings the latest technology back to China headquarter. Nowadays, GN has become one of the qualified suppliers of electrical products in global supply chain.



GN USA Company



GN China Machining Workshop



GN China Electrical Assembly Workshop



## GN Explosion Proof Certification

GN electrical control products have been certified by IEC Ex and China CNEx, which enable GN's products to meet high level market requirements.



International IECEx Ex-proof Certification



China CNEX Ex-proof Certification

## Part 2 Ex Proof Single Motor Starter

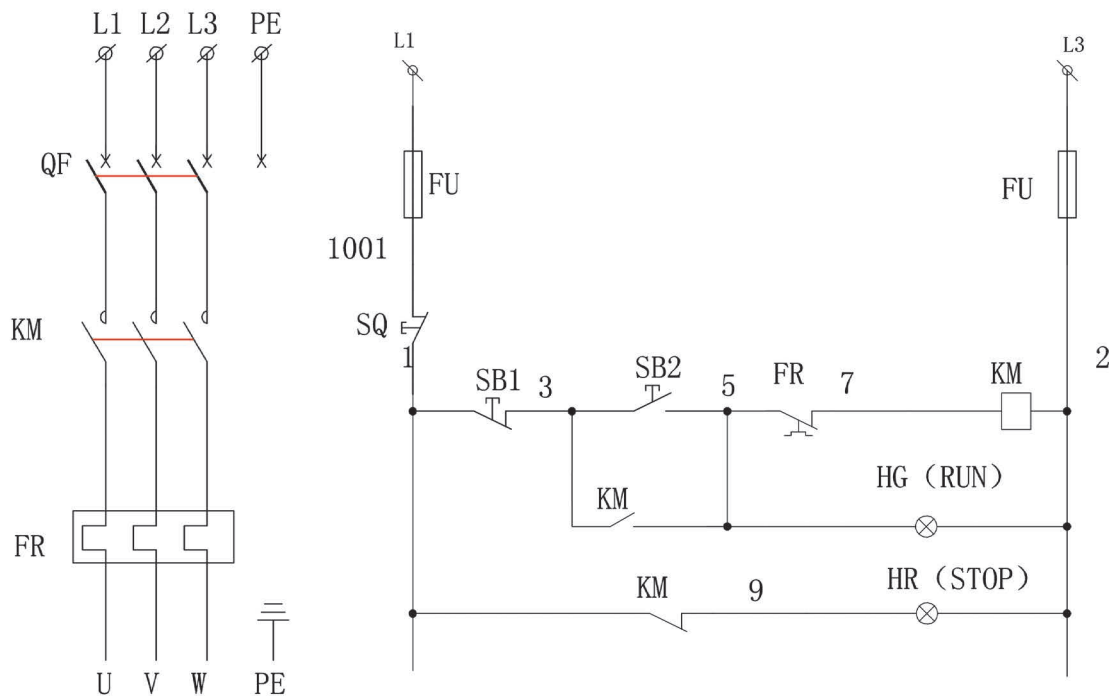
The Ex proof single motor starter made by GN Solids Control is with strong and compact design. For the purpose of safety operation and equipment suitability, in accordance with the motor power, GN Ex proof motor starter mainly includes following types: Ex proof electromagnetic starter, Ex proof star delta starter and Ex proof soft starter.

### 2.1 Ex Proof Electromagnetic Starter



Power ( kw )	Identification No.		Enclosure Type		Dimension ( mm )
	CNEX	IEC Ex	CNEX	IEC Ex	
2.2	CNEX-CL-020	IEEX-CL-020	CNDKXZ-3035	IECDKXZ-3035	300 × 350 × 200
3	CNEX-CL-030	IEEX-CL-030			
4	CNEX-CL-040	IEEX-CL-040			
5.5	CNEX-CL-055	IEEX-CL-055			
7.5	CNEX-CL-075	IEEX-CL-075			
11	CNEX-CL-011	IEEX-CL-011			
15	CNEX-CL-015	IEEX-CL-015			
18.5	CNEX-CL-018	IEEX-CL-018			
22	CNEX-CL-022	IEEX-CL-022			

## ★ Electrical Schematic Diagram



### Technical Parameters

1. Enclosure material is made of cast aluminum.
2. Enclosure color Window Gray (RAL7040), External surface Electrostatic powder coating.
3. Cable sealing connector type: DQM-IV.
4. Interior and exterior earthing.
5. Ex Marks: EX d II B T4 Gb.
6. IP Grade: IP65
7. Electric Specs: AC380V/50HZ or customized

### Scope of Application

1. Suitable for Explosive gas environment Zone1 or Zone 2,
2. Suitable for IIB、IIC Explosive gas environment
3. Suitable for group T1-T4 temperature group
4. Widely used in refinery, chemical plant, offshore oil drilling platform, oil exploitation, oil tanker and other flammable and explosive gas environment

## 2.2 Ex Proof Star Delta Starter

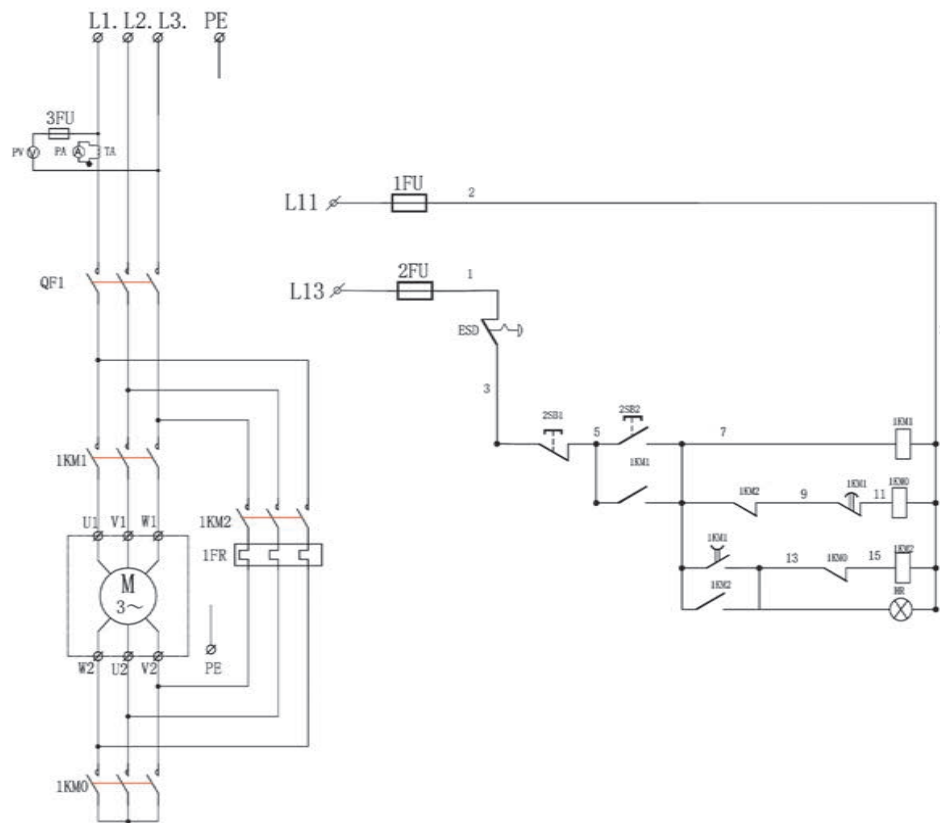


Power ( kw )	Identification No.		Enclosure Type		Dimension ( mm )
	CNEX	IEC Ex	CNEX	IEC Ex	
30	CNEX-YQ-030	IEEX-YQ-030	CNDKXZ-4056	IECDKXZ-4056	400 × 560 × 280
37	CNEX-YQ-037	IEEX-YQ-037	CNDKXZ-5672	IECDKXZ-5672	560 × 720 × 350
45	CNEX-YQ-045	IEEX-YQ-045			
55	CNEX-YQ-055	IEEX-YQ-055			
75	CNEX-YQ-075	IEEX-YQ-075			
90	CNEX-YQ-090	IEEX-YQ-090	CNDKXZ-5672/2	IECDKXZ-5672/2	1120 × 720 × 350
110	CNEX-YQ-110	IEEX-YQ-110			

Remarks: 5672/2 means double 5672 enclosures.



## ★ Electrical Schematic Diagram



### Technical Parameters

1. Enclosure material is made of cast aluminum.
2. Enclosure color Window Gray (RAL7040),  
External surface Electrostatic powder coating.
3. Cable sealing connector type: DQM-IV.
4. Interior and exterior earthing.
5. Ex Marks: EX d II B T4 Gb.
6. IP Grade: IP65
7. Electric Specs: AC380V/50HZ or customized

### Scope of Application

1. Suitable for Explosive gas environment Zone1 or Zone 2,
2. Suitable for IIB、IIC Explosive gas environment
3. Suitable for group T1-T4 temperature group
4. Widely used in refinery, chemical plant, offshore oil drilling platform, oil exploitation, oil tanker and other flammable and explosive gas environment

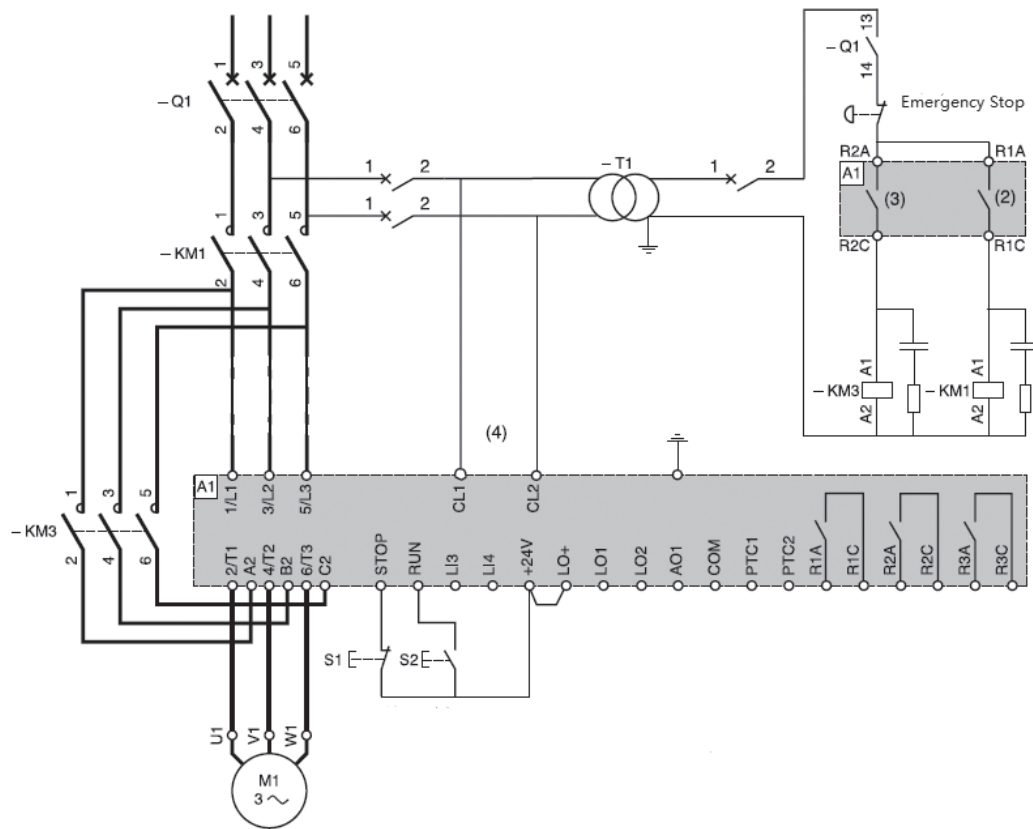
## 2.3 Ex Proof Soft Starter



Power ( kw )	Identification No.		Enclosure Type		Dimension ( mm )
	CNEX	IEC Ex	CNEX	IEC Ex	
30	CNEX-RQ-030	IEEX-RQ-030	CNDKXZ-5672	IECDKXZ-5672	560 × 720 × 350
37	CNEX-RQ-037	IEEX-RQ-037			
45	CNEX-RQ-045	IEEX-RQ-045			
55	CNEX-RQ-055	IEEX-RQ-055			
75	CNEX-RQ-075	IEEX-RQ-075			
90	CNEX-RQ-090	IEEX-RQ-090	CNDKXZ-5672/2	IECDKXZ-5672/2	1120 × 720 × 350
110	CNEX-RQ-110	IEEX-RQ-110			

Remarks: 5672/2 means double 5672 enclosures.

## ★ Electrical Schematic Diagram



### Technical Parameters

1. Enclosure material is made of cast aluminum.
2. Enclosure color Window Gray (RAL7040), External surface Electrostatic powder coating.
3. Cable sealing connector type: DQM-IV.
4. Interior and exterior earthing.
5. Ex Marks: EX d II B T4 Gb.
6. IP Grade: IP65
7. Electric Specs: AC380V/50HZ or customized

### Scope of Application

1. Suitable for Explosive gas environment Zone 1 or Zone 2,
2. Suitable for IIB、IIC Explosive gas environment
3. Suitable for group T1-T4 temperature group
4. Widely used in refinery, chemical plant, offshore oil drilling platform, oil exploitation, oil tanker and other flammable and explosive gas environment



## Part 3 Ex Proof Combination Control Panel

GN explosion proof combination electrical control panels are mainly used for multiple motors control and instrument monitoring. As per clients' requirements, GN is able to provide customized solution of electrical control chart design, control panel model selection and installation.



Power ( kw )	Identification No.		Enclosure Type		Dimension ( mm )
	CNEX	IEC Ex	CNEX	IEC Ex	
1.72+1.72	CNEX-ZH2-003	IEEX-ZH2-003	CNDKXZ-3035	IECDKXZ-3035	300 × 350 × 200
1.94+1.94	CNEX-ZH2-004	IEEX-ZH2-004			
11KW+3KW	CNEX-ZH2-014	IEEX-ZH2-014	CNDKXZ-3545	IECDKXZ-3545	350 × 450 × 280
22+7.5 KW	CNEX-ZH2-029	IEEX-ZH2-029	CNDKXZ-4056	IECDKXZ-4056	400 × 560 × 280
37+11+7.5 KW	CNEX-ZH3-056	IEEX-ZH3-056	CNDKXZ-5672	IECDKXZ-5672	560 × 720 × 353
45KW+7.5KW	CNEX-ZH2-053	IEEX-ZH2-053			
55+0.55+4kW	CNEX-ZH3-063	IEEX-ZH3-063			
Customized	GN is able to provide solution as per customers’ requirements				



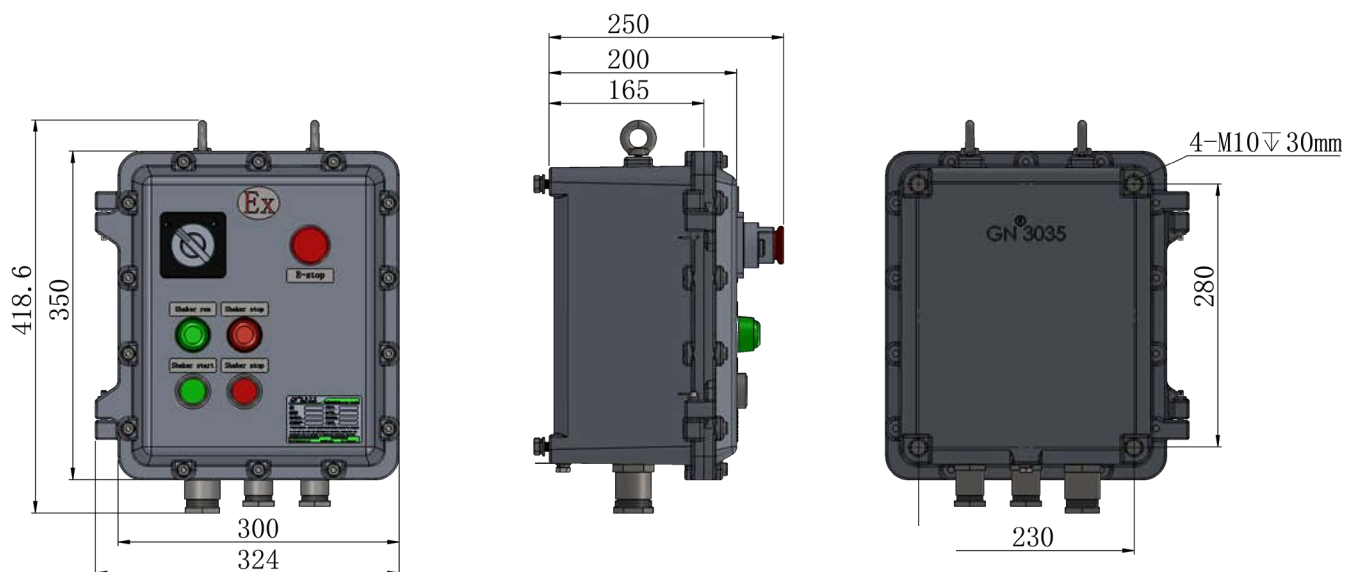




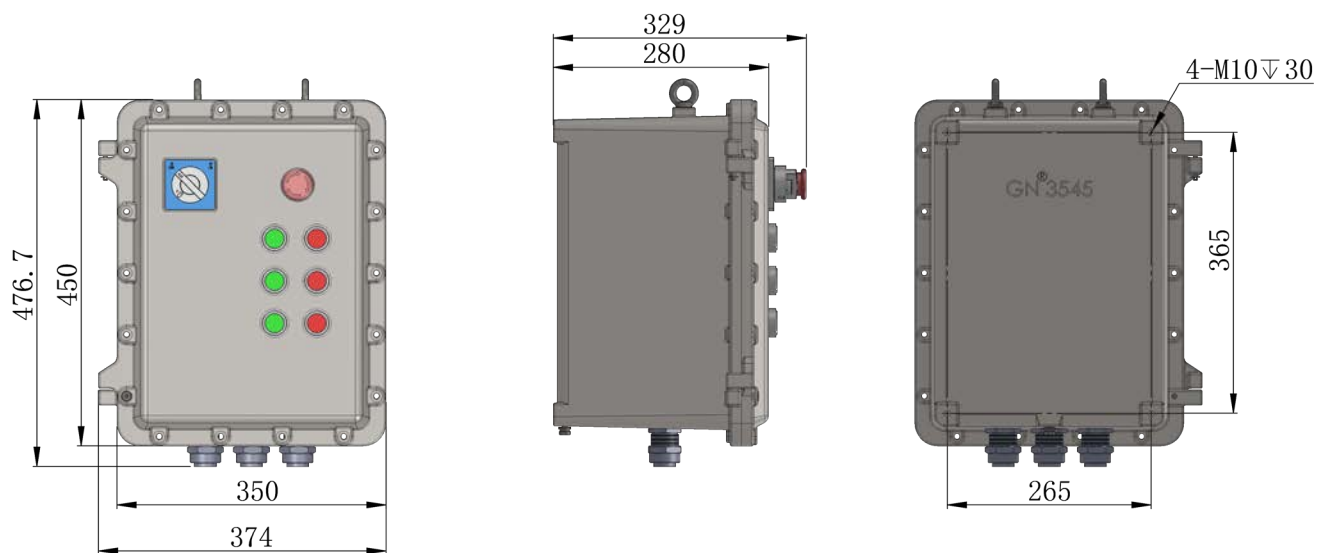
## Part 4 Ex Proof Enclosure Dimensional Drawing

Dimension Unit: mm

Enclosure Type: CNDKXZ-3035

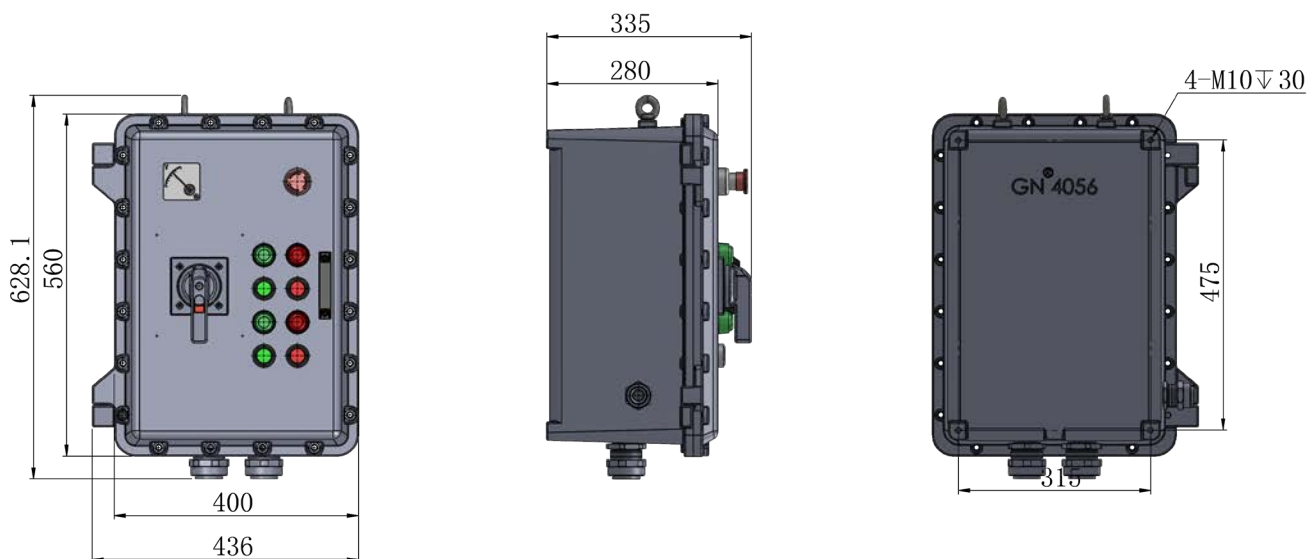


Enclosure Type: CNDKXZ-3545

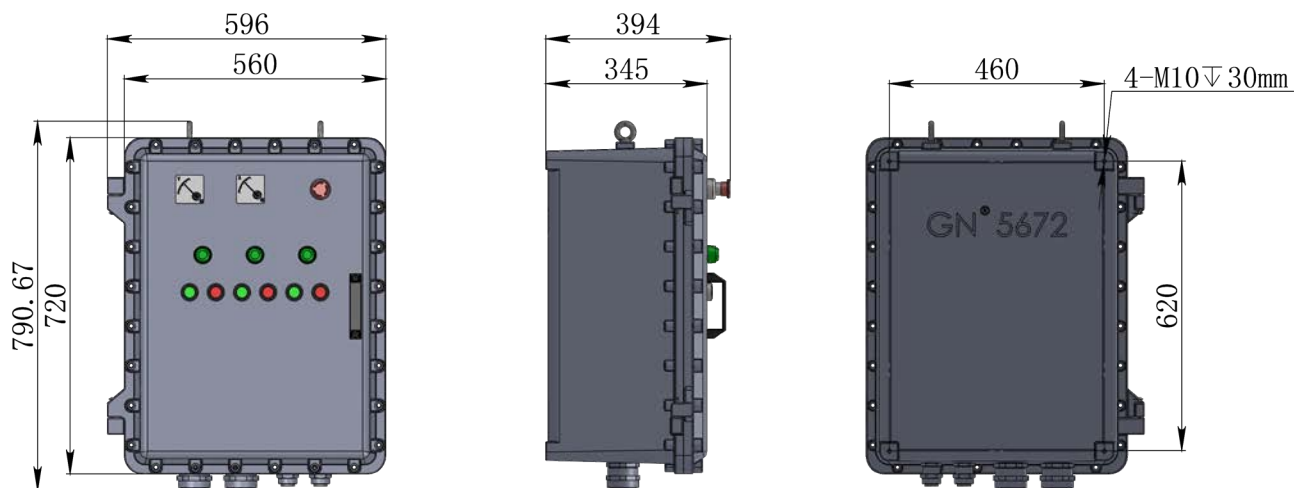


**Dimension Unit: mm**

Enclosure Type: CNDKXZ-4056



Enclosure Type: CNDKXZ-5672



## Part 5 Ex Proof Positive Pressure Control Panel

GN Explosion Proof Pressurized Control Panel is mostly used for VFD control and soft starter of motor, especially in high temperature ambient. The explosion proof pressurized control panel consists of main cabinet and auxiliary cabinet. Main cabinet enclosure is made of stainless steel, while the auxiliary cabinet is aluminum alloy material Exd type for main power connecting. GN is able to provide flame proof type control panel for VFD control.



Power ( kw )	Identification No. (Model refer control panel)		
	CNEX Flame Proof	CNEX Positive Pressure	IEC Ex Positive Pressure
37+11+7.5 KW	CNEX-BP3-056	CNEP-BP3-056	IEEP-BP3-056
45KW+7.5KW	CNEX-BP2-053	CNEP-BP3-053	IEEP-BP3-053
55+0.55+4kW	CNEX-BP3-063	CNEP-BP3-063	IEEP-BP3-063
55+22+15	CNEX-BP3-092	CNEP-BP3-092	IEEP-BP3-092
90+37+22	CNEX-BP3-149	CNEP-BP3-149	IEEP-BP3-149
Customized	GN is able to provide VFD control panel type selection and PLC program design according to customers' control requirements.		



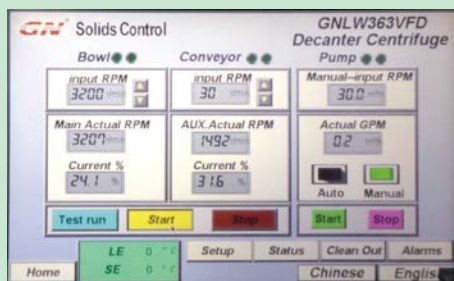
## VFD Control Panel Features



- Double VFD or 3 VFD available
- VFD brand is ABB, SIEMENS or other famous brands.



- The positive pressurized VFD control panel can be cooling by vertex tube or air conditioner to work for ambient Temp. up to +55 Degree Celsius.
- The VFD panel is optional for IEC Ex or ATEX or CNEX Zone 1 or Zone 2 application.



- The HMI and PLC system for user-friendly operation and smart control and protection.
- It's optional for client to choose bearing temperature protection and vibration switch.

### Application Scope

- ◎ Suitable for Explosive gas environment Division 1 or Division 2
- ◎ Suitable for IIB、IIC Explosive gas environment
- ◎ Suitable for combustible dust environment zone 21, zone 22.
- ◎ Suitable for group T1-T4 temperature group
- ◎ Protection level: IP65/IP66.

### Working Principle

Positive pressure ventilation Ex proof adopts principle of dielectric isolation ignition source, equivalent to all the electrical components installed in a positive pressurized clean medium shell, the mixed gas in the flammable and explosive substances outside of shell cannot come into contact with electrical components, not appear in normal electric studio spark or dangerous temperature, so as to achieve the purpose of electrical explosion proof.

**Please provide below information for order and request for quote.**

1. Number of motors need to be controlled  
E.g. 1 ea, 2 ea, 3 ea, .....
2. Motor Power (HP or KW)  
E.g. 40HP, 1.72Kw+1.72Kw, 37Kw+11Kw+7.5Kw, .....
3. Required control method  
E.g. Soft start, remote control, PLC VFD control, .....
4. Application site Voltage and Frequency.  
E.g. 380V/50Hz, 460V/60Hz, .....
5. Explosion-proof grade request  
E.g. Ex dIIBT4 for Zone 1, Exdeib PZ IIB T6 Gc for Zone 2, .....
6. Explosion-proof standard  
E.g. China CNEx, IEC Ex, ATEX,.....
7. Other relative information.

## Contact us



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