

**SD2 SERIES****VARIABLE  
SPEED DRIVE**

SANHUA SD2 variable speed drive series are dedicated to BLDC compressor and fans.

**FEATURES**

- OPTIMIZED FOR HVAC&R APPLICATIONS SUCH AS HEAT PUMP, AIR CONDITIONING, REFRIGERATION RACKS AND CONDENSING UNITS.
- EXTENDED SPEED RANGE ALLOWING TO REDUCE THE NUMBER OF SHORT CYCLE AND PROVIDE MORE COOLING CAPACITY
- CUSTOMIZABLE HEATSINK ACCORDING TO THE CONFIGURATION OF YOUR UNITS
- REFRIGERANT COOLING AVAILABLE WITH EASY SERVICEABILITY
- THROUGH PANEL MOUNTING FOR LOWER FOOTPRINT
- COMPATIBLE WITH NUMEROUS OF HERMETIC BLDC COMPRESSOR. ALL TESTED IN OUR CERTIFIED TUV LABORATORY AT DIFFERENT CONDITIONS.
- DRIVE ALREADY SET ACCORDING TO YOUR COMPRESSOR AND YOUR APPLICATION

**GENERAL SPECIFICATIONS**

- Adapted for application using A3 refrigerants
- Operating temperature: -25°C to +65°C
- Storage temperature: -40°C to +85°C
- Relative humidity: ≤ 95%RH
- Safe Torque Off (STO)
- Harmonic compliant according to EMC Directive (2014/30/EU)
- Certification: UL, CE Declaration according to low voltage directive
- Compliant with pollution degree 3 environment
- Installation method: wall mounting with screws
- Works well with Sanhua DPF and LPF EEVs

**ELECTRICAL SPECIFICATIONS**

- Power supply:
  - 1Ph, 230VAC ±20%, 50/60Hz
  - 3Ph, 400VAC ±20%, 50/60Hz
- Modbus RTU (RS485)
- Pluggable terminals
- Analogue Input – Speed reference
- High Pressure switch
- NTC probe



## MODEL DESIGNATION

N°							Model Designation Legend
1	2	3	4	5	6	7	
SD2	011	A1	H	0	X	A	SANHUA SD2 variable speed drive series
SD2	<b>011</b>	A1	H	0	X	A	<b>Output Current (Amps)</b> 011: 11A-RMS (Single Phase) 015: 15A-RMS (Single/Three Phase) 020: 20A-RMS (Single/Three Phase) 025: 25A-RMS (Three Phase) 032: 32A-RMS (Three Phase) 037: 37A-RMS (Three Phase) 045: 45A-RMS (Three Phase)
SD2	011	<b>A1</b>	H	0	X	A	<b>Input Power Supply (VAC)</b> A1: 1P 94-135VAC 50Hz (Under Development) A2: 1P 220-240VAC 50Hz/60HzMP B2: 3P 200-260VAC 60Hz (Under Development) B4: 3P 380-415VAC 50Hz/60HzMP C4: 3P 420-528VAC 60Hz (Under Development) C5: 3P 520-630VAC 50Hz (Under Development)
SD2	011	A1	<b>H</b>	0	X	A	<b>Cooling Version</b> A: Active Air Cooling FAN (Under Development) H: Horizontal Heat Sink Cooled Finned MP V: Vertical Heat Sink Cooled Finned MP F: Flat Plate Fluid Cooled MP
SD2	011	A1	H	<b>0</b>	X	A	<b>IP CLASS / Housing</b> 0: IP00 W/O Enclosure MP 2: IP20 Plastic Enclosure MP 5: IP54 (Under Development)
SD2	011	A1	H	0	<b>X</b>	A	<b>Drive Version</b> X: Prototype Sample or Production Pilot S: Mass Production Single Package M: Mass Production Multi Package
SD2	011	A1	H	0	X	<b>A</b>	<b>Version Index:</b> A: First Edition of each Sample or MP B: Second Edition of each Sample or MP



### ORDERING METHOD

All SD2 drives are tested in our TÜV certified laboratory. This ensures a perfect matching for your application. Contact your sales representative for the drive selection and best advice adapted to your application. SD2 are available in different cooling type (see below).

#### A Cooling type :



Type	Max. output Current	Model	Cooling Type	SANHUA U11 Code	Frame size
1PH 2.6KW Inverter IP20	11 A	SD2011A2H2XA000	Horizontal Finned	10501030801	1
		SD2011A2V2XA000	Vertical Finned	10501031301	1
		SD2011A2F2XA000	Flat Plate	10501034301	1
1PH 3.8KW Inverter IP20	15 A	SD2015A2H2XA000	Horizontal Finned	10501030101	1
		SD2015A2V2XA000	Vertical Finned	10501031401	1
		SD2015A2F2XA000	Flat Plate	10501034401	1
1PH 5.0KW Inverter IP20	20 A	SD2020A2H2XA000	Horizontal Finned	10501030201	2
		SD2020A2V2XA000	Vertical Finned	10501031501	2
		SD2020A2F2XA000	Flat Plate	10501034101	2
3PH 3.8KW Inverter IP20	15 A	SD2015B4H2XA000	Horizontal Finned	10501030401	3
		SD2015B4V2XA000	Vertical Finned	10501031601	3
		SD2015B4F2XA000	Flat Plate	10501034501	3
3PH 5.0KW Inverter IP20	20 A	SD2020B4H2XA000	Horizontal Finned	10501030501	3
		SD2020B4V2XA000	Vertical Finned	10501031701	3
		SD2020B4F2XA000	Flat Plate	10501034601	3
3PH 8.0KW Inverter IP20	25 A	SD2025B4H2XA000	Horizontal Finned	10501030601	3
		SD2025B4V2XA000	Vertical Finned	10501031801	3
		SD2025B4F2XA000	Flat Plate	10501034701	3
3PH 11.5KW Inverter IP20	32 A	SD2032B4H2XA000	Horizontal Finned	10501033701	3
		SD2032B4V2XA000	Vertical Finned	10501033501	3
		SD2032B4F2XA000	Flat Plate	10501034201	3
3PH 15KW Inverter IP20	37 A	SD2037B4V2XA000	Horizontal Finned	10501039101	4
		SD2037B4H2XA000	Vertical Finned	10501039001	4
		SD2037B4F2XA000	Flat Plate	10501039201	4
		SD2037B4A2XA000	Active cooling*	10501039301	4
3PH 18,5KW Inverter IP20	45 A	SD2045B4V2XA000	Horizontal Finned	10501039501	4
		SD2045B4H2XA000	Vertical Finned	10501039401	4
		SD2045B4F2XA000	Flat Plate	10501039601	4
		SD2045B4A2XA000	Active cooling*	10501039701	4

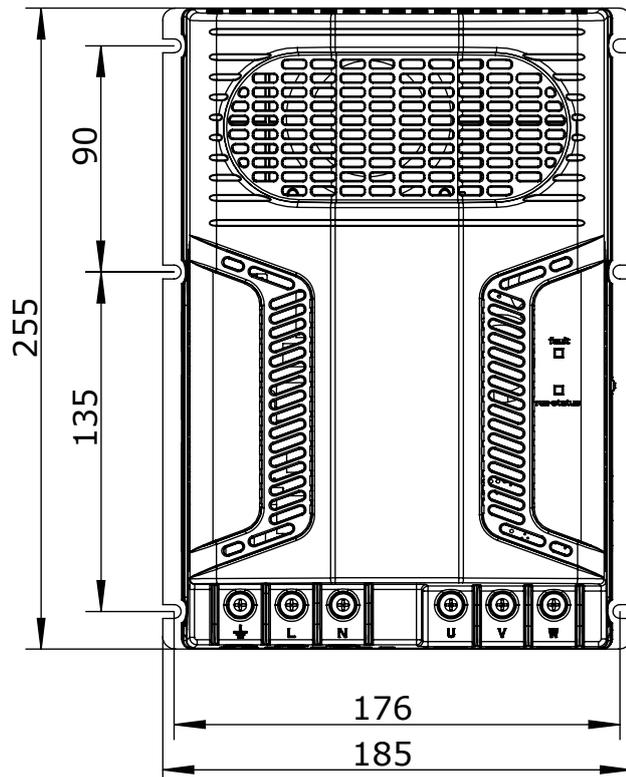
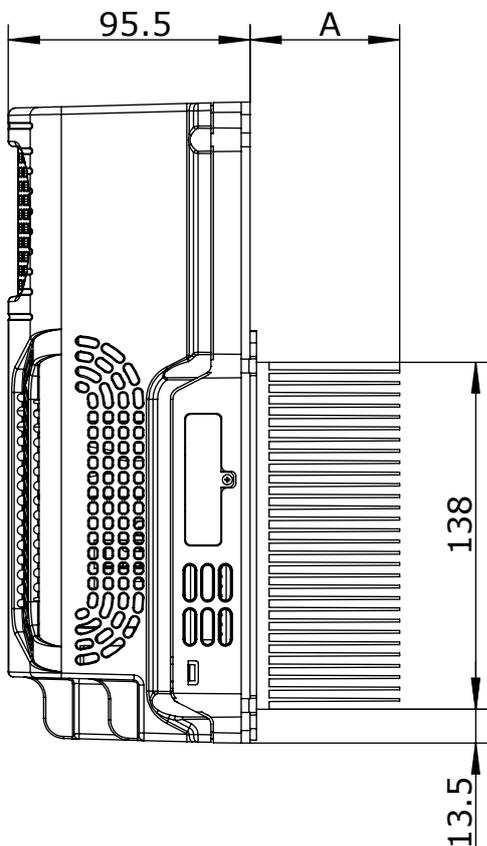
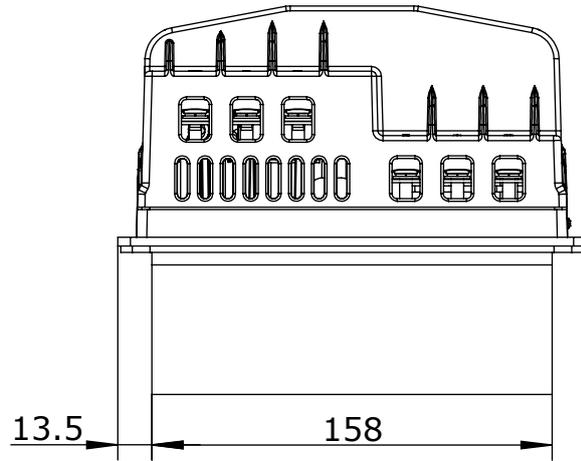
\* This version uses internal fan for cooling



**DIMENSIONS**

**Frame size 1**

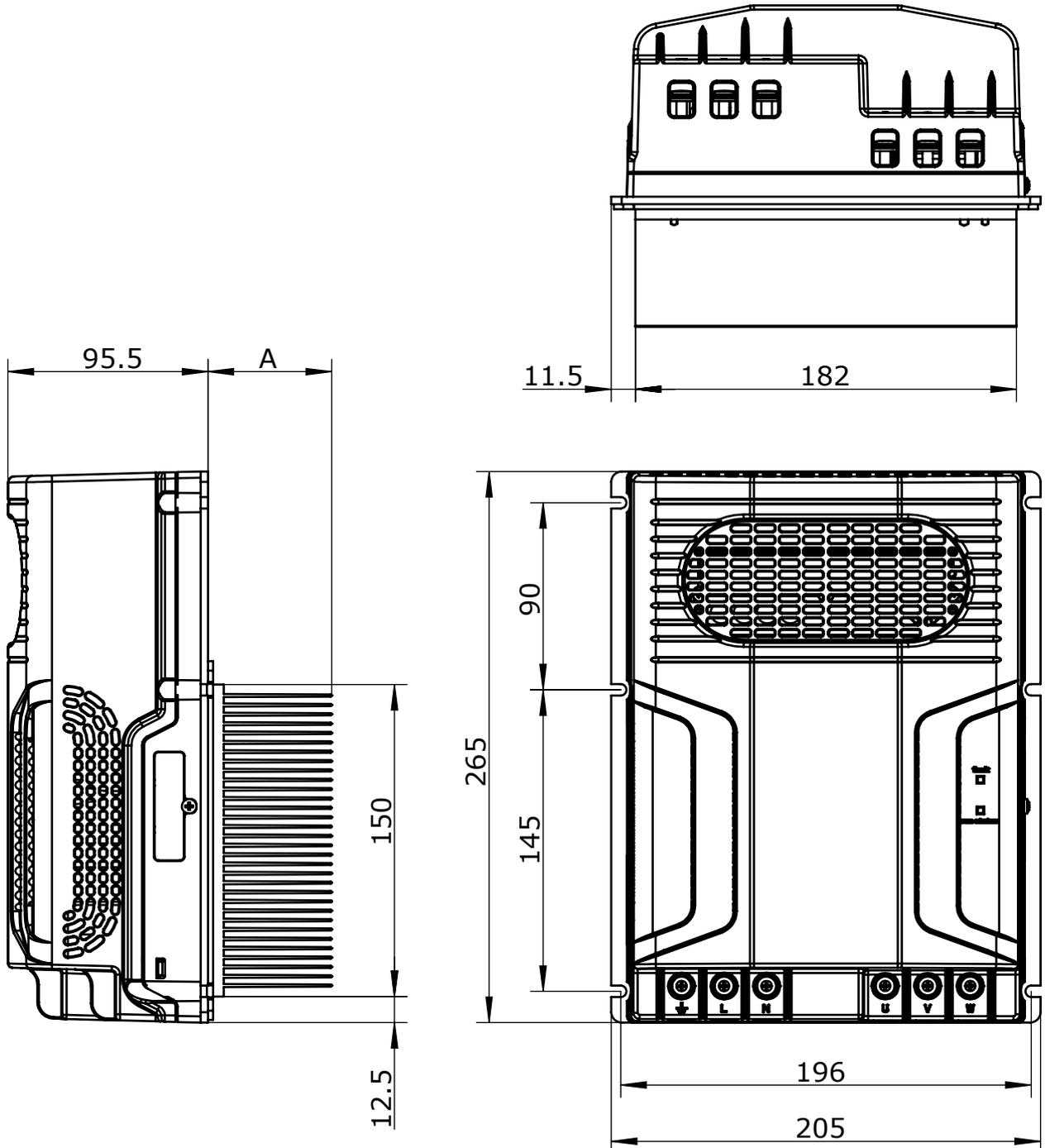
Model	A (Length of different Cooling type) (mm)			Weight (kg)		
	Horizontal	Vertical	Flat plate	Horizontal	Vertical	Flat plate
SD2011A2	39.5	39.5	8	2.38	2.38	2.24
SD2015A2	59	59	8	3.59	3.59	2.79





**Frame size 2**

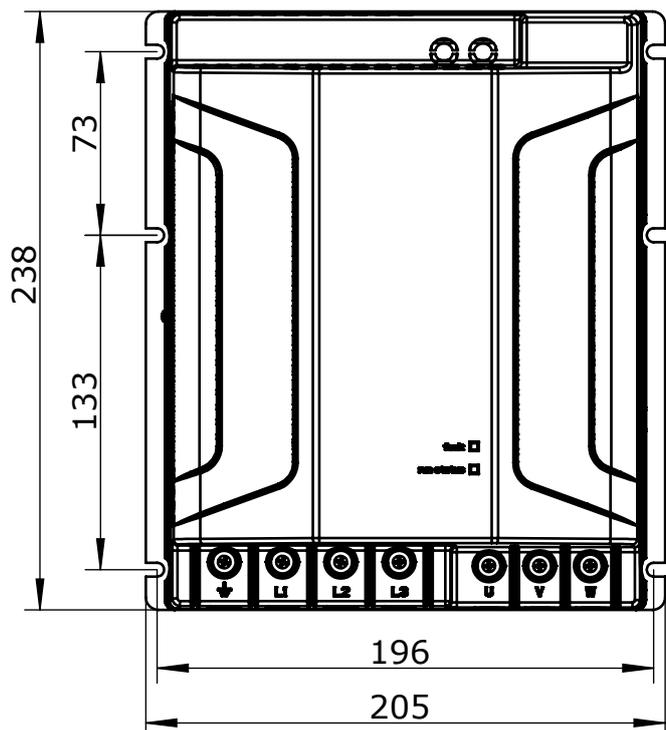
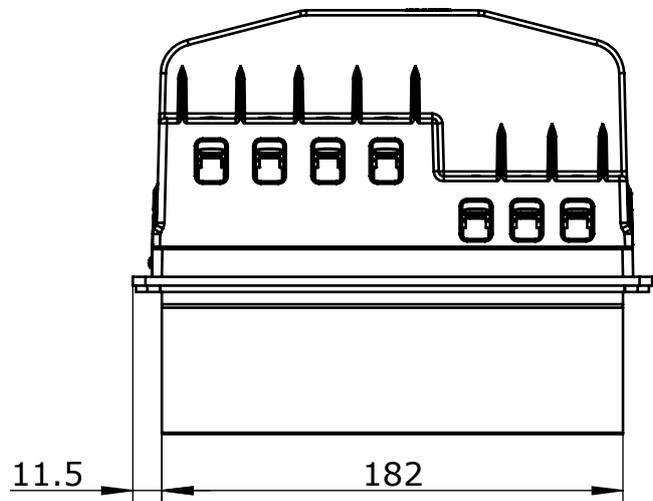
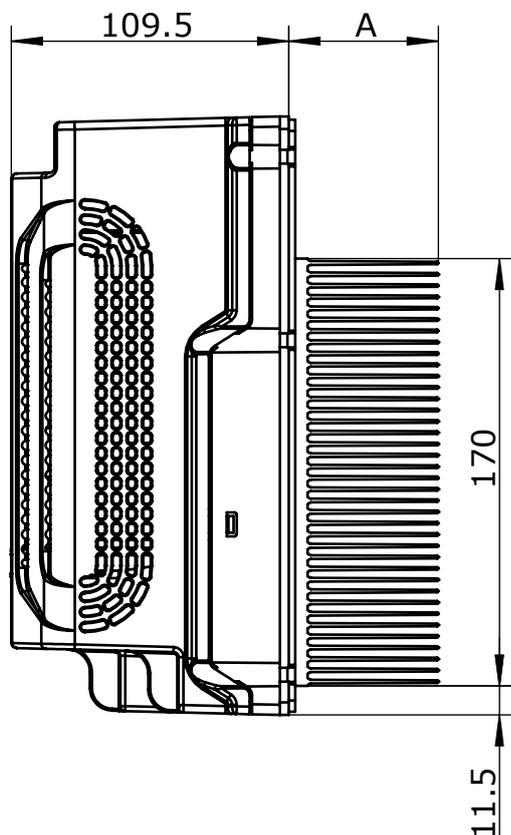
Model	A (Length of different Cooling type) (mm)			Weight (kg)		
	Horizontal	Vertical	Flat plate	Horizontal	Vertical	Flat plate
SD2020A2	59	59	8	3.95	3.95	2.95





**Frame size 3**

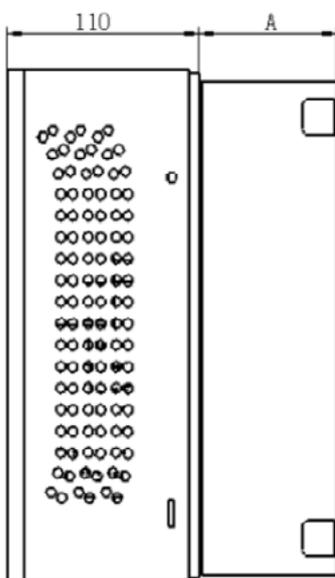
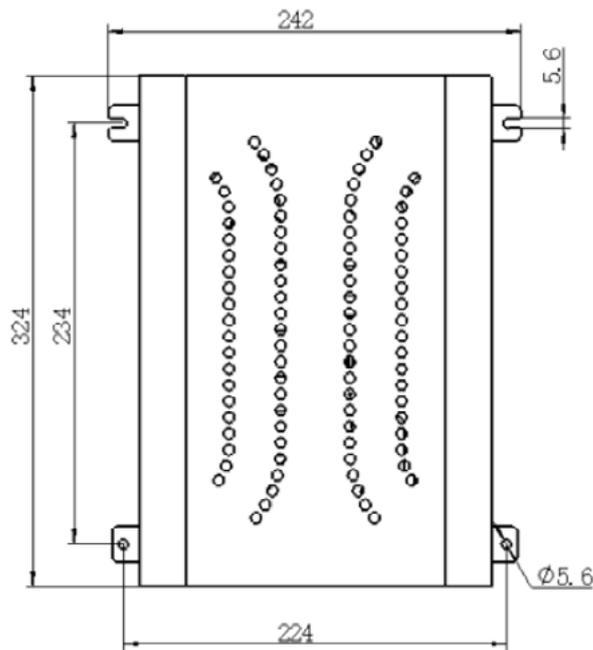
Model	A (Length of different Cooling type) (mm)			Weight (kg)		
	Horizontal	Vertical	Flat plate	Horizontal	Vertical	Flat plate
SD2015B4	39.5	39.5	8	3.1	3.1	2.4
SD2020B4	59	59	8	3.84	3.84	2.61
SD2025B4	59	59	8	4.46	4.46	2.98
SD2032B4	69	69	8	4.14	4.14	3.13



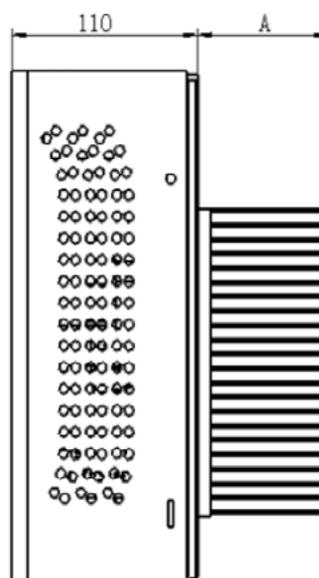


**Frame size 4**

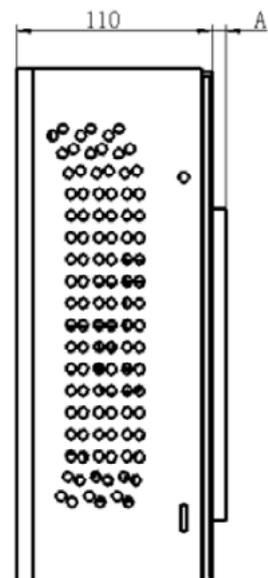
Model	A (Length of different Cooling type) (mm)				Weight (kg)			
	Active cooling	Horizontal	Vertical	Flat plate	Active cooling	Horizontal	Vertical	Flat plate
SD2037B4	84	70	70	11	7	5.6	5.6	4
SD2045B4	84	80	80	11	7	5.6	5.6	4



Active Air Cooling



Horizontal / Vertical

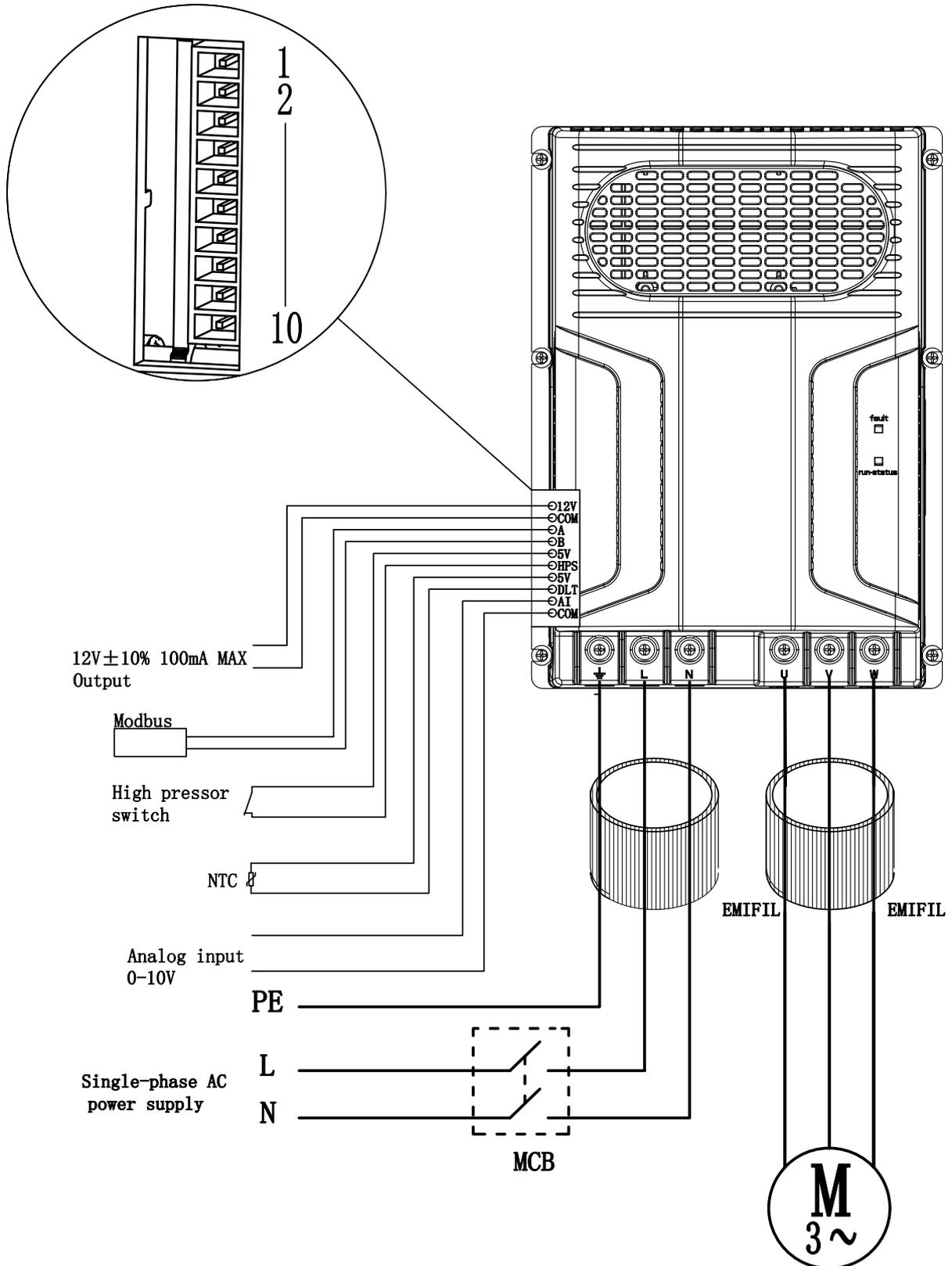


Flat plate



**INSTALLATION DIAGRAM**

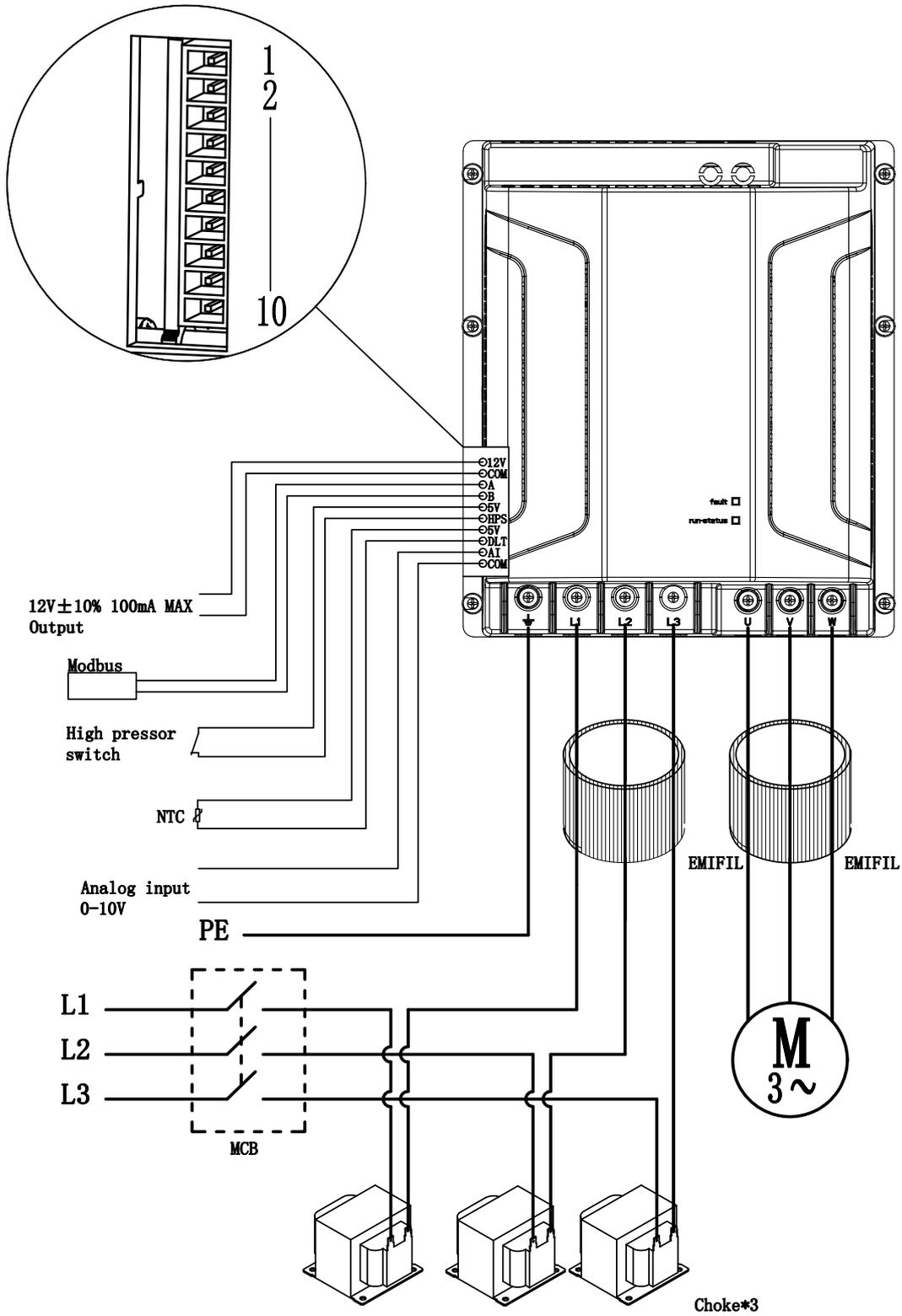
1ph - SD2011 / SD2015 / SD2020





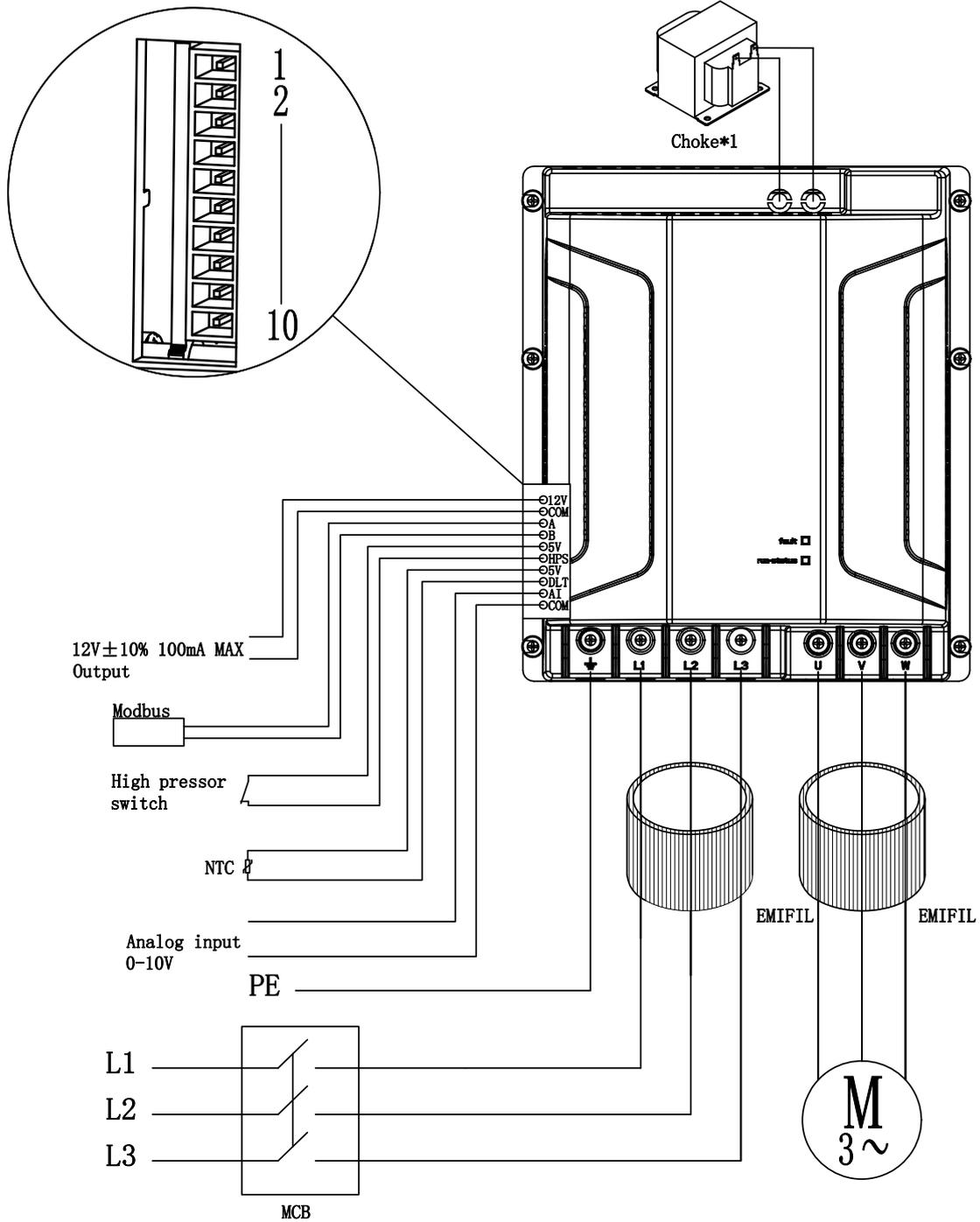
**INSTALLATION DIAGRAM**

3ph - SD2015 / SD2020 / SD2025





3ph - SD2032 / SD2037 / SD2045





**PRESSURE SWITCHES**

Pressure type	Reference	Electrical rating	Contact	Reset	Port fitting	Electrical connector
HP	MPS2AXXX	240V / 1-4A	NO/NC	Automatic	"1/4 SAE, 1/4 solder, 6mm solder, 1/8 NPTF Male"	Lead wires, AMP connector, Automotive connector...
LP	MPS1AXXX					

Contact your sales representative for the pressures switch selection and best advice adapted to your application.

**CHOKES**

Three-phase models are supplied together with chokes to be externally connected to the drives.

Chokes for single phase version are embedded in the drive.

SD2 drive	Type	Nb.	Choke Model	SANHUA U11 Code	Dimensions [ mm ]						Weight (kg)
					A	B	C	D	E	F	
SD2015B4	3PH 3.8KW	3	LE76-0825-XT	10530500401	64	64	78	76,2	65	5,2	1,5
SD2020B4	3PH 5.0KW		LE105-1325-XTA	10530500501	88	90	105	110	89	6	3,9
SD2025B4	3PH 8.0KW		LE85.8-2503B-XTA	10530500601	64	64	76,2	78	73	4	2
SD2032B4	3PH 11.5KW	1	R3515	10521007201	79	88	93,2	112,5	73,5	5,8*16	1,86
SD2037B4	3PH 15KW		R5004	23000002001	103	104	133	135	97	6*15	6,0
SD2045B4	3PH 18.5KW		R6035	23000002101	103	104	133	135	113	6*15	6,3

