



GENERAL TECHNIC
SAVE ENERGY SAVE LIFE

MVS 1000

High Voltage Soft Starter



Product description

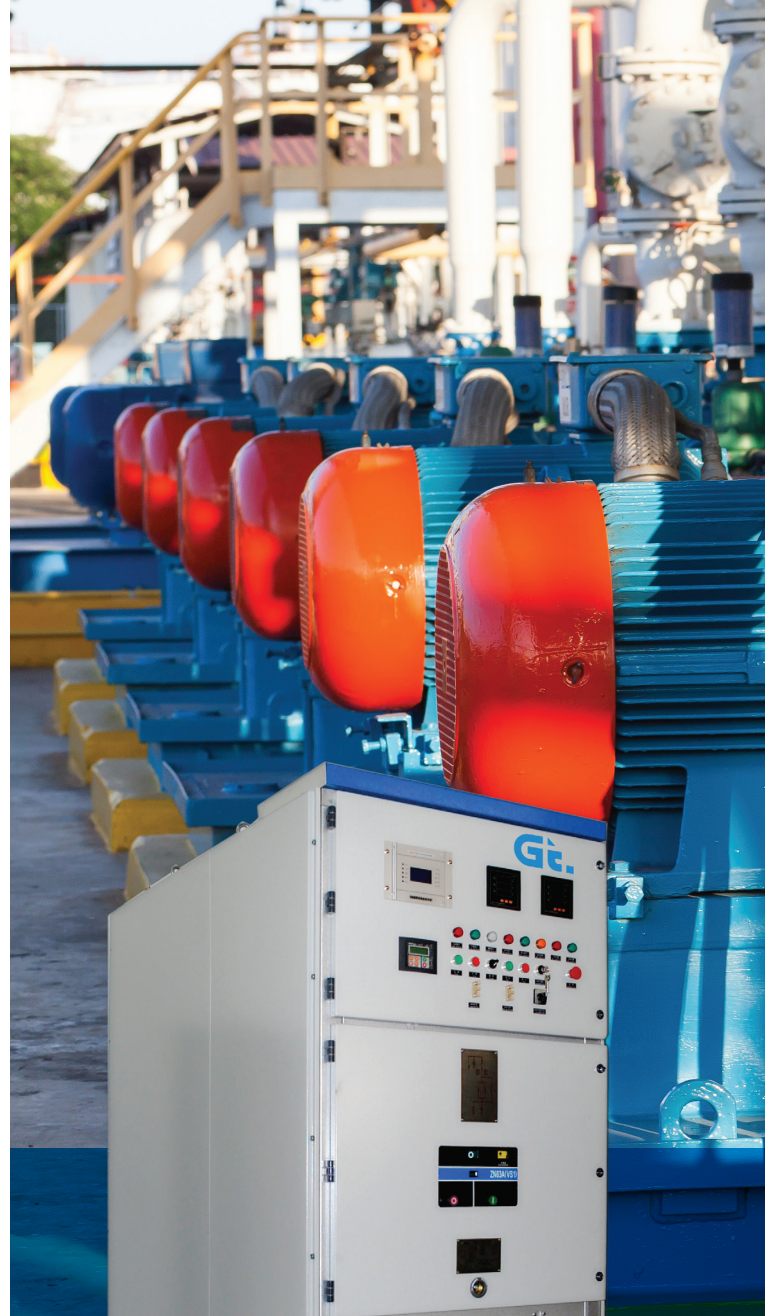
MVS1000 high voltage soft starter is a new type start-up equipment which integrates electronic techniques, computer techniques and modern control theory. It is the new generation product to replace the conventional star-delta starter, self-coupling voltage-drop starter and magnetic control voltage-drop . starter in high voltage applications

At a glance

- Widely used in electric industry with rated voltage 3000 to 10000V
- Mainly applicable to the control and protection for the starting and stopping of squirrel-cage type asynchronous and synchronous motors
- Application in water pumps, fans, compressors, crushers, agitators and conveyer belt etc.
- Start frequency reach to 1-3 times per hour
- Open-phase protection, Over-current protection in operation, Unbalanced phase current protection, Overload protection, Underload protection, Start timeout, Over-voltage protection, Under-voltage protection, Phase protection and Ground protection
- Communication support RS485 with Modbus RTU protocol. Support maximum 31 devices in network.
- LCD display with 6 touch membrane keyboard

Customer benefits

- Solves effectively the surging problem of inertia system when stopping.
- Only active at startup (and stop, if equipped). Ramping up the initial voltage to the motor produces gradual motor start.
- Generates a gentle start to relieve torque and tension (conveyors, beltdriven systems, gears, etc)
- Eliminate pressure surges caused in piping systems when fluid changes direction rapidly



MVS 1000

Basic parameters

Type of load	Three-phase squirrel cage asynchronous and synchronous motors
AC voltage	3000---10000VAC
Service frequency	50HZ/60HZ±2HZ
Phase sequence	MVS1000 is allowed to work with any phase sequence through setting parameter
Composition of major loop	(12SCRS, 18SCRS, 30SCRS depend on model)
Bypass contactor	Contactor with direct starting capacity
Control power	AC220V±15%
Transient voltage overload protection	dv/dt snubber network
Start frequency	1-3 times per hour
Ambient condition	Ambient temperature: -20°C --+50°C
	Relative humidity: 5%----95% no condensation
	Altitude less than 1500m (derating when altitude is more than 1500m)

Protective functions

Open-phase protection	Cut off any phase of primary power supply in the course of starting or operation.
Over-current protection in operation	Operational Over-current protection setting: 20-500%Ie
Unbalanced phase current protection	Unbalanced phase current protection: 0-100%
Overload protection	Overload protection grade: 10A, 10, 15, 20, 25, 30, OFF
Underload protection	Underload protection grade: 0-99% Action time of underload protection: 0-250S
Start timeout	Start time limit: 0-120S
Over-voltage protection	When voltage of primary power supply is 70% lower than rated value, undervoltage protection is enabled.
Under-voltage protection	When voltage of primary power supply is 120% higher than rated value, overvoltage protection is enabled.
Phase protection	Allow to work with any phase sequence (through setting parameter)
Ground protection	Protection available when grounding current is higher than set value

Description of communication

Protocol	Modbus RTU
Communication interface	Rs485
Network connection	Each MVS1000 can communicate with 31 MVS1000 equipments in network
Function	Operation state and programming can be observed through communication interface.

Operating interface

LCD display	LCD display/touch screen display
Language	Chinese , English, Italian
Keyboard	6 touch membrane keyboard

Meter display

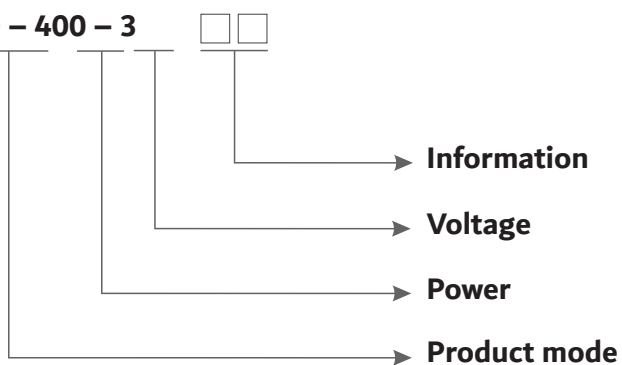
Voltage of primary power supply	Display voltage of three-phase primary power supply
Three-phase current	Display current of three-phase major loop

Data record

Fault history	Record recent 15 faults information
History of number of starts	Record number of starts of this soft starter

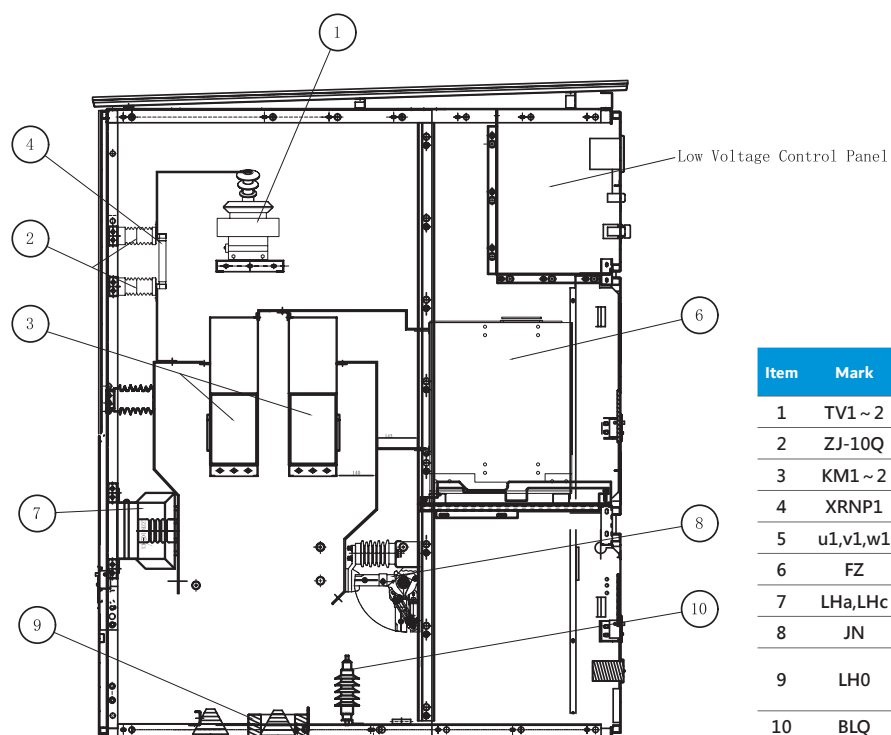
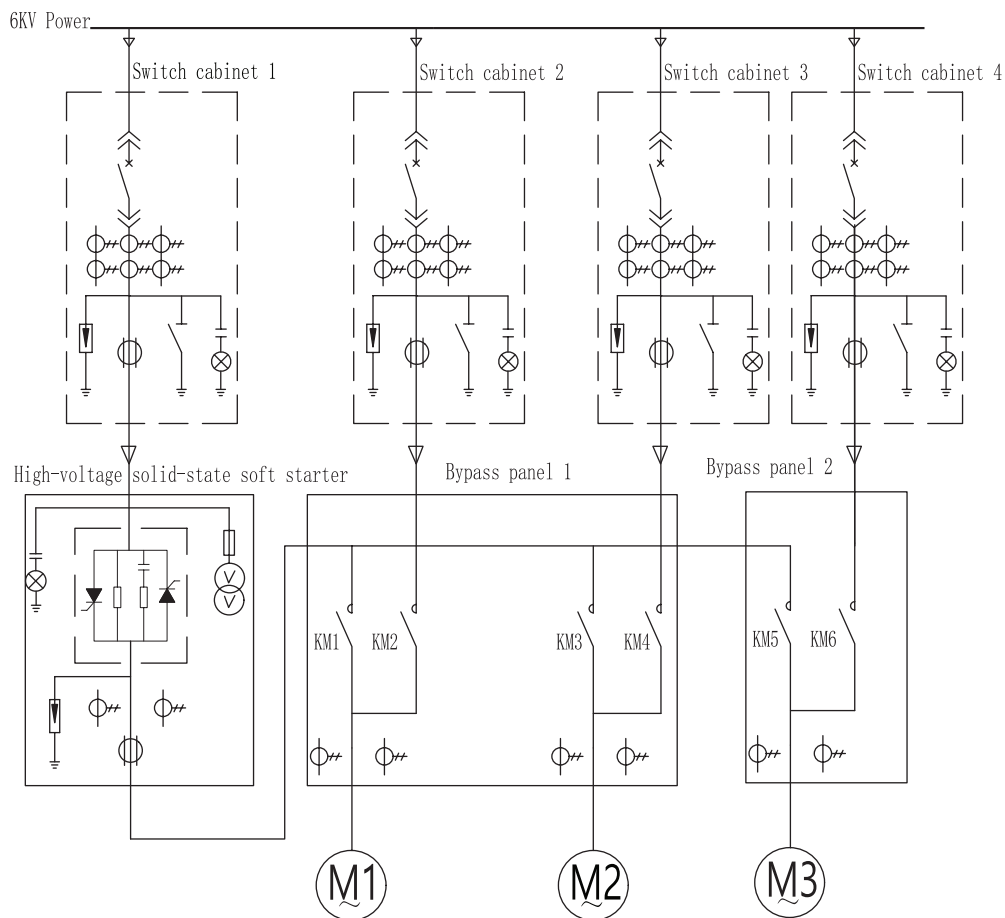


MVS1000 – 400 – 3



Voltage Grade	Specification	Rated Current (A)	W (mm)	H (mm)	L (mm)			
3000 V	MVS1000-400-3	100	1000	2300	1500			
	MVS1000-630-3	150						
	MVS1000-1600-3	400	1300	2300	1600			
	MVS1000-2500-3	≥600	Reserved					
6000 V	MVS1000-420-6	50	1000	2300	1500			
	MVS1000-630-6	75						
	MVS1000-800-6	96						
	MVS1000-1250-6	150						
	MVS1000-1600-6	200	1300	2300	1600			
	MVS1000-2500-6	300						
	MVS1000-3300-6	400						
	MVS1000-4150-6	500						
	MVS1000-5000-6	≥600				Reserved		
10000 V	MVS1000-420-10	30	1000	2300	1500			
	MVS1000-630-10	45						
	MVS1000-800-10	60						
	MVS1000-1250-10	90						
	MVS1000-1500-10	110						
	MVS1000-1800-10	130						
	MVS1000-2250-10	160						
	MVS1000-2500-10	180						
	MVS1000-2800-10	200						
	MVS1000-3500-10	250	1300	2300	1600			
	MVS1000-4000-10	280						
	MVS1000-4500-10	320						
	MVS1000-5500-10	400						
	MVS1000-6000-10	430						
	MVS1000-7000-10	500						
	MVS1000-8500-10	≥600				Reserved		

Connection Diagram



Item	Mark	Name	Type	Qty	Remark
1	TV1 ~ 2	Voltage transformer	JDZ-10	2	
2	ZJ-10Q	Insulated pillar	ZJ-10Q/φ85x140	6	
3	KM1 ~ 2	Vacuum contactor	CKG4-12	2	
4	XRNP1	Fuse	XRNP1-7.2KV	2	
5	u1,v1,w1	High voltage sensor	CG3	3	
6	FZ	SCR module	CMV-FZ-2000	1	
7	LHa,LHc	Current Transformer	LZZB-10	2	
8	JN	Ground switch	JN15-12	1	
9	LH0	Zero-sequence current transformer	LXK-Φ120	1	
10	BLQ	Lightning arrester	YH2.5WD	3	