

# *Soft Starter AJR3-N*

## *User Manual*



## Warning message



The product should be operated by qualified electricians as per safety specifications, including installation, pilot run and maintenance, etc;

The voltage used by the product is dangerous, which may cause serious injury or death of others. Prohibit touching terminal after electrifying the device or during operation. Although the device is switched off, voltage may still exist in output terminal;

The product should be used under rated specification of product. Before use, please check the accuracy of various parameters such as power, motor and frequency of product or device.

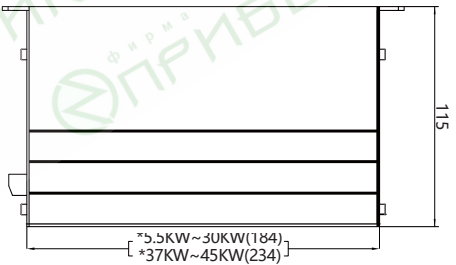
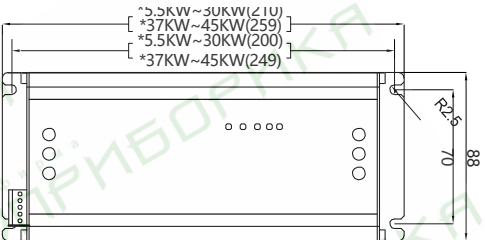
The product has passed insulation test before leaving factory. Incorrect megger test may damage product or shorten product life.

## Electrical parameters

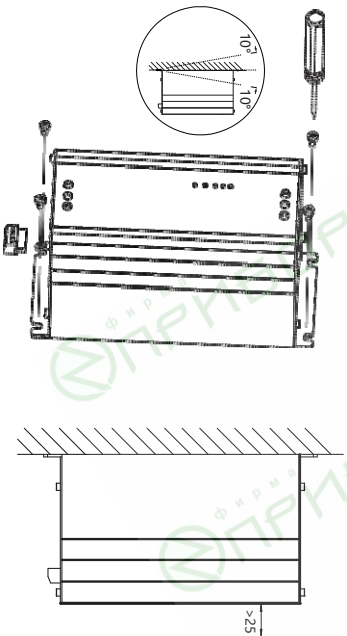
Standard	GB 14048.6-2008/IEC 60947-4-2 : 2002	
Rated operational voltage	200~415V(-15%+10%)	
Max. length between soft starter and cable	300m	
Permissible ambient environment	Operation	-25°C~+60°C (consider reducing capacity if > 40°C)
	Storage	-40°C~+70°C
Protection grade	IP20	
Rated power	50/60Hz	
Permissible installation height	5000m (start to reduce capacity for above 1000m)	
Starting frequency	≤ 20 times/hour (Class10 standard load)	

# Product dimensions

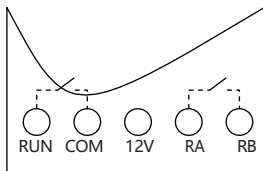
(Unit: mm)



# Installation sketch



## Terminal description

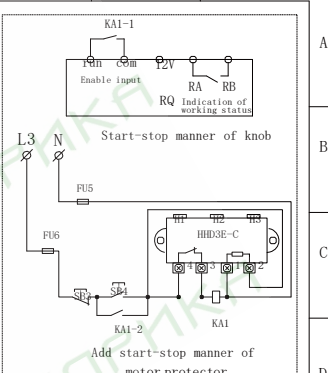
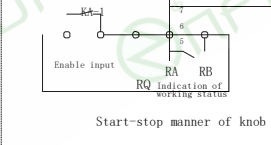
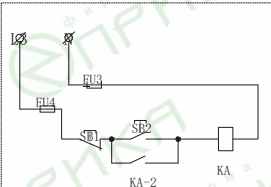
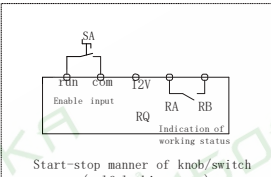
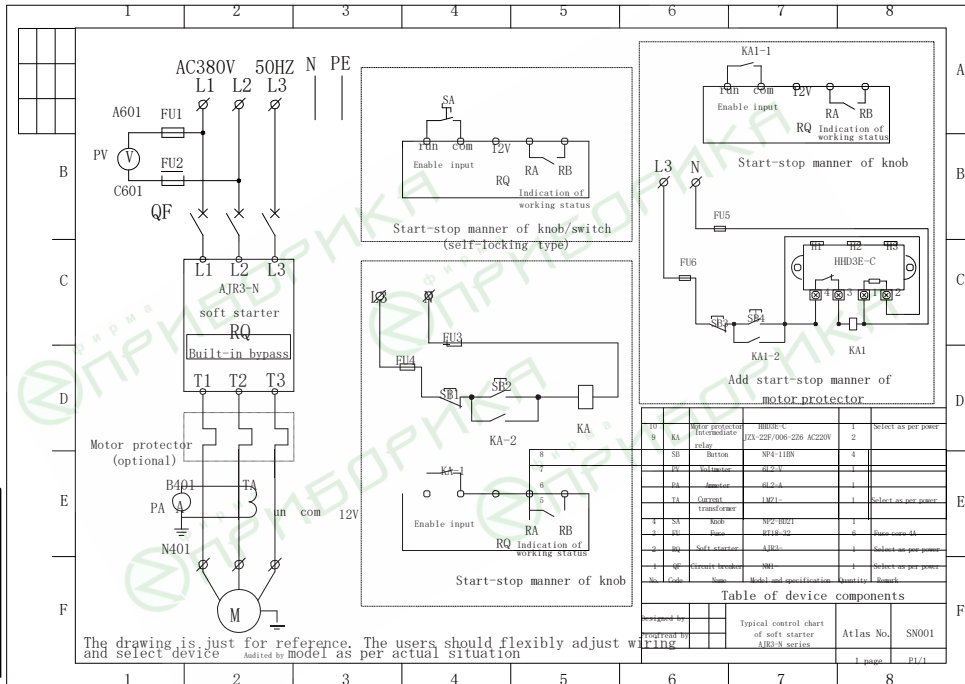


Terminal marking of major loop	Terminal name	Function description
L1, L2, L3	Mains input of major loop	Connect three-phase source
T1, T2, T3	Output connection of soft start	Connect three-phase motor

Terminal marking of control loop	Terminal name	Function description
RUN	Enable input	When closing run and com, start to operate When breaking run and com, motor slows down and halts
COM	Common port	run and common port at 12V
12V	Power terminal	Interior power output terminal at 12V, 300mA at maximum, prohibit overload
RA, RB	Indication of working status	Working status: relay output, normally open contact, close during operation, break if stall or fault, relay capacity 250V/AC 0.3A

## Power diagram

Model	230V/KW	400V/KW	Rated current A
AJR3-N5R5	3	5.5	13
AJR3-N7R5	4	7.5	17
AJR3-N11	5.5	11	25
AJR3-N15	7.5	15	32
AJR3-N18	7.5	18.5	37
AJR3-N22	11	22	45
AJR3-N30	15	30	60
AJR3-N37	18.5	37	75
AJR3-N45	22	45	90



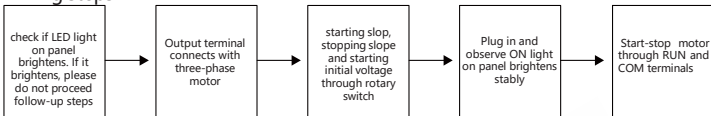
10	KA	Motor protector Intermediate relay	HHD3E-C JZX-22F/006-226 AC220V	1	Select as per power
9	SB	Button	NP4-11BN	4	
8	PV	Voltmeter	61.2-V	1	
7	PA	Ammeter	61.2-A	1	
6	TA	Current transformer	LMZ1-	1	Select as per power
4	SA	Knob	NP2-BR21	1	
3	FU	Fuses	RT18-32	6	Plus copy 4A
2	RQ	Soft starter	AJR3-	1	Select as per power
1	QF	Circuit breaker	MM	1	Select as per power
No.	Code	Name	Model and specification	Quantity	Remark

Table of device components					
Designed by		Typical control chart of soft starter AJR3-N series			
Drawn by					
				Atlas No.	SNO01
				Page	P1/1

The drawing is just for reference. The users should flexibly adjust wiring and select device Anded by model as per actual situation

# Parameter setting

## Wiring steps

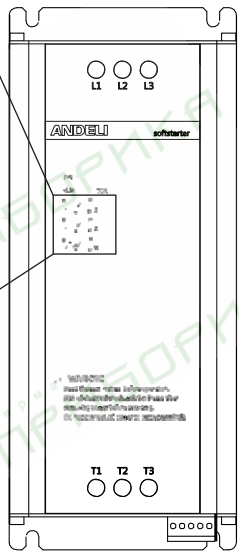
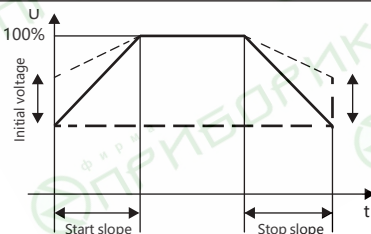


## Panel parameters

**Knob of soft starting time:** adjust soft starting time of soft starter and range is 1-20S. The longer the time setting, the more gentle the soft starting process, which is helpful to reduce the impact on power grid.

**Knob of soft stopping time:** adjust soft stopping time of soft starter and range is 0-20S. In some application occasions of water pump, soft stopping function can effectively avoid "water hammer effect" generated by the halt of water pump. When the knob is adjusted to be 0S, it indicates that the stalling way of motor is free stalling, which will stop output immediately after soft starting.

**Knob of initial voltage:** adjust initial voltage of soft starter and range is 40%~70%. When the motor starts, it needs to overcome the friction under stationary state. Properly increasing the initial voltage can obtain larger starting torque. The users should refer to actual load condition to coordinate starting and stopping time, thus obtaining the best effect of smooth starting.



## Operation sequence diagram

