

Description

These series soft starter, an overall digital intelligent motor controller and motor protector has been developed. It can control the motor to start and stop at a smoothly changing speed, it also offers the best protection to motor and itself. It is a better control method to replace the traditional A-Y motor start and auto transformer start controls. It adopts RS485 communication interface, supporting Modbus protocol. It is suited for industrial bus monitoring and control, and widely used on textile, metallurgy, petroleum, chemical industry, water treatment, shipping, transportation, medicine, food processing, mining and mechanical equipment.

New functions are added to improve the reliability and convenience for customer applications

Features

- Three-Phase control
- Optional main voltage 220/400/500 VAC
- Wide Range Control Voltage 100 - 240V AC, 50/60 Hz
- Optional Control voltage 24V DC
- Rated current 1.5-150A
- Control Board Enhanced Coating
- Integrate construction, Protection grade IP21.
- Direct Potentiometer Setting, Easy To Use.
- All Range Bypass Built in, Easy To Install,
- Reduce Energy Consumption. Optional Modbus RTU for monitoring.
- Most of communication protocols supported.
- Motor protections build-in

Functions

- Start/stop slope and voltage set by 3 different potentiometer built-in
- By pass relay built-in, No need for extra contactor
- Voltage slope start-up mode
- The output torque can be maintained during the stop process (Continuous torque control), prevent water hammer effect
- External Δ, Y Wiring mode
- Real-time data of communication (A,B,C phase current, average current) 1
- Reading history fault records by communication (10 history log)*1
- The statistics data can be read by modbus communication.*1
- Protections:
 - 1) Overcurrent protection
 - 2) Over load protection with classes 10A, 10, 20 and 30
 - 3) Three phase current imbalance protection
 - 4) No voltage/Missing phase protection
 - 5) Phase sequence protection
 - 6) SCR overheating protection
- 1 start/stop Digital Input
- Communication Interface. *1
- Option Build In start/stop switch *2
- 2 Output relay (running relay, trip relay)

Note *1: Option, only if select the RS-485 communication interface with the function.

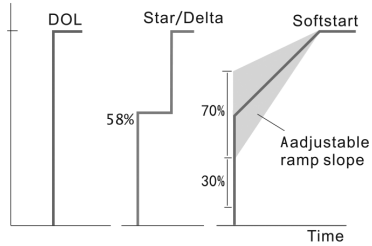
Note *2: The function is available by using optional SSR switch on operating panel

Technical Data

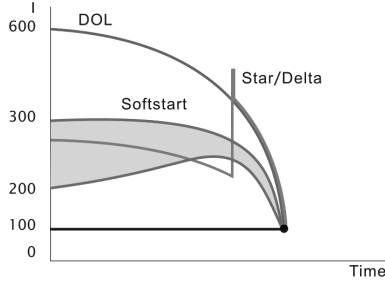
Input Voltage	: 220/400/500V AC 50/60Hz
Control Source Voltage	: 100 to 240V AC or 24V DC 50/60Hz
Current class	: 1.5A to 150A
Initial Voltage	: 30% to 70%
Start Slope	: 1 to 30 Sec
Stop Slope	: 0 to 30 Sec
Overload	: $3 \times I_e$ for 7 Sec Valid for 50 % on time and 50 % off time.
Times of start per hour	: <5, 5-10 (light load or no-load)
Overload grade	: 10A
Operation Environmental temperature	: 0°C to + 50°C (32°F to 122°F)
Store temperature	: -40°C to +70°C (-40°F to 158°F)
Maximum altitude	: 1000m (3280ft)
Ingress Protection grade	: IP21

Dimensions : Millimetres

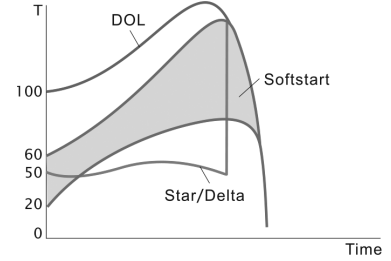
Motor Voltage



Motor current

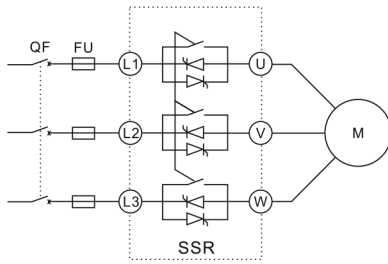


Torque

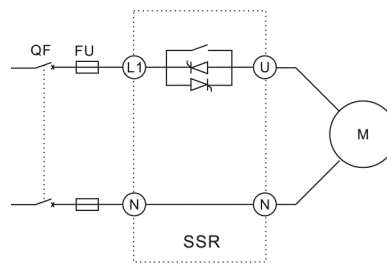


Internal Control Diagram:

1. 3P3(Only Use For Three Phase Motor)

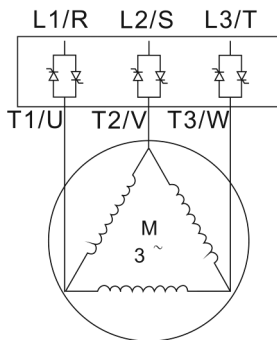


2. 1P1(Only Use For Single Phase Motor)

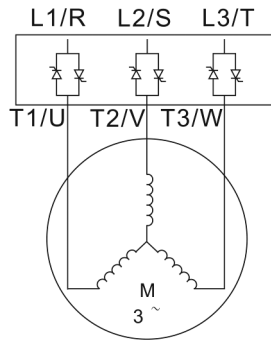


Soft Starter Wiring Mode

1. Δ External Wiring



2. Y External Wiring



Part Number	Rated power of the motor			Rated current	Structure	Weight
	220V Pe/kW	400V Pe/kW	500V Pe/kW	Ie A	F	kg
MP-R401T5-A-3P3	0.37	0.75	1.1	1.5	A	1
MP-R402T2-A-3P3	0.55	1.1	1.5	2.2	A	1
MP-R4003-A-3P3	0.75	1.5	2.2	3	A	1
MP-R404T5-A-3P3	1.1	2.2	3.7	4.5	A	1
MP-R407T5-A-3P3	1.5	3.7	5.5	7.5	A	1
MP-R4011-A-3P3	2.2	5.5	7.5	11	A	1
MP-R4015-A-3P3	3.7	7.5	11	15	B	1.4
MP-R4022-A-3P3	5.5	11	15	22	B	1.4
MP-R4030-A-3P3	7.5	15	18.5	30	C	2.4
MP-R4037-A-3P3	11	18.5	22	37	C	2.4
MP-R4045-A-3P3	15	22	30	45	C	2.4
MP-R4060-A-3P3	18.5	30	37	60	C	2.4
MP-R4075-A-3P3	22	37	45	75	C	2.4
MP-R4090-A-3P3	25	45	55	90	D	5
MP-R40110-A-3P3	30	55	75	110	D	5.2
MP-R40150-A-3P3	37	75	90	150	D	5.2

Note: 1. 1T5 means 1.5A, 4T5 means 4.5A, 7T5 means 7.5A in Rated current.
 2. Other voltage classes can be made to order.

Technical data

General	
Frequency	50/60Hz ±5Hz
Rated Main Voltage	220-500+10%V AC (chosed by customer); 400V AC × 10% (acquiescent)
Control Source Voltage	100-240V AC-15%+10% or 24V DC(chosed by customer); 100-240V AC 110% (acquiescent)
The motor adapted	Three-phase squirrel-cage induction motor
Times of start per hour	<5 at400% FLA
Operating data	
Motor rated operational current	Motor full load current: 1.5-150A
Initial voltage	30 to 70%Un
Start Slope	1-30 seconds
Stop Slope	0-30 seconds
Motor protections	
Over current	During start, operation, stop, output current over limit
Unbalanced Current	Output current unbalanced level beyond the setting
1 st over load	May set to 10A,10...overload protection base on the setting to delay protection stop
Missing phase/No voltage	Stop the softstarter when 1 or 2 phases failed or no voltage input
Thyristor(SCR) overtemp	Stop the softstarter when the radiator temperature rises above 80°C
Phase sequence	Forbid starting when the input phase sequence is wrong (If the function is unnecessary, please tell us before ordering)

Part Number Table

Description	Part Number
Soft Starter, 3-Phase Control, 0.75kW, 400V	MP-R401T5-A-3P3
Soft Starter, 3-Phase Control, 1.1kW, 400V	MP-R402T2-A-3P3
Soft Starter, 3-Phase Control, 1.5kW, 400V	MP-R4003-A-3P3
Soft Starter, 3-Phase Control, 2.2kW, 400V	MP-R404T5-A-3P3
Soft Starter, 3-Phase Control, 3.7kW, 400V	MP-R407T5-A-3P3
Soft Starter, 3-Phase Control, 5.5kW, 400V	MP-R4011-A-3P3
Soft Starter, 3-Phase Control, 7.5kW, 400V	MP-R4015-A-3P3
Soft Starter, 3-Phase Control, 11kW, 400V	MP-R4022-A-3P3
Soft Starter, 3-Phase Control, 15kW, 400V	MP-R4030-A-3P3
Soft Starter, 3-Phase Control, 18.5kW, 400V	MP-R4037-A-3P3
Soft Starter, 3-Phase Control, 22kW, 400V	MP-R4045-A-3P3
Soft Starter, 3-Phase Control, 30kW, 400V	MP-R4060-A-3P3
Soft Starter, 3-Phase Control, 37kW, 400V	MP-R4075-A-3P3
Soft Starter, 3-Phase Control, 45kW, 400V	MP-R4090-A-3P3
Soft Starter, 3-Phase Control, 55kW, 400V	MP-R40110-A-3P3
Soft Starter, 3-Phase Control, 75kW, 400V	MP-R40150-A-3P3

Important Notice : This data sheet and its contents (the "Information") belong to the members of the AVNET group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp Pro is the registered trademark of Premier Farnell Limited 2019.