

## • DSP-SS

### Abstraction

- Compact size/Energy save type
- Current range of each type : 0.5~6A, 3~30A, 5~60A
- Wide protection current range : 0.5~600A with External CT
- Free voltage control power
- Operating indication & checking actual working current  
: LED/turned on red
- Stable operation in working environment
- Reset : Manual(instant)/Power-off
- Standard type:de-energized in case control power is on  
(optional type : energized)



### Usage

- Over current protection relay for low voltage induction motor
- Mechanical shock detection
- Current relay job to check a fault
- Possible to replace existing protection relay

### Function

- Over current : trip after preset o-time
- Phase loss : trip after preset o-time through preset d-time by over current
- Locked rotor : trip after preset d-time
- To check actual current : LED
- Green LED : control power, operation
- Red LED : trip, over current state

### How to preset

Division	Preset	Description
Starting trip delay time	D-TIME	<ul style="list-style-type: none"> <li>- Preset D-TIME greater than necessary time to meet safe motor starting due to starting current as turning knob</li> <li>- Adjustable d-time : 0~60 sec</li> </ul>
Over current Trip delay time	O-TIME	<ul style="list-style-type: none"> <li>- Preset necessary o-time to stop a motor in case of over current condition as turning knob</li> <li>- Adjustable o-time : 0.2~12 sec</li> </ul>

1. Start a motor after positioning current knob to maximum value
2. Slowly turn the knob anti-clockwisely in operating state, then positioned value of knob that red LED flickers is a point of actual load current(100%).
3. Nextly turn the knob clockwisely a bit of angle right untill red LED is turned off, then fix its position
4. Finally this position is matched with 110~120% of actual load current

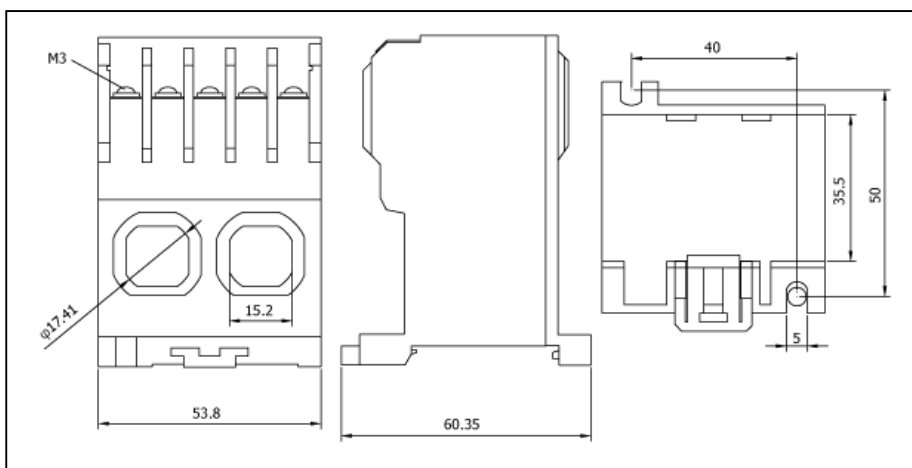
### Self-diagnostics

- Keep physically pressing state for TEST button untill preset added time (o-time + d-time) has elapsed while the control power is on and motor is stopped, then LED to indicate over current state(OL) will be turned on and trip output is energized as if it trips under motor working state due to over current
- Press Reset button to make reset after test trip, then LED is turned off and return to initial state

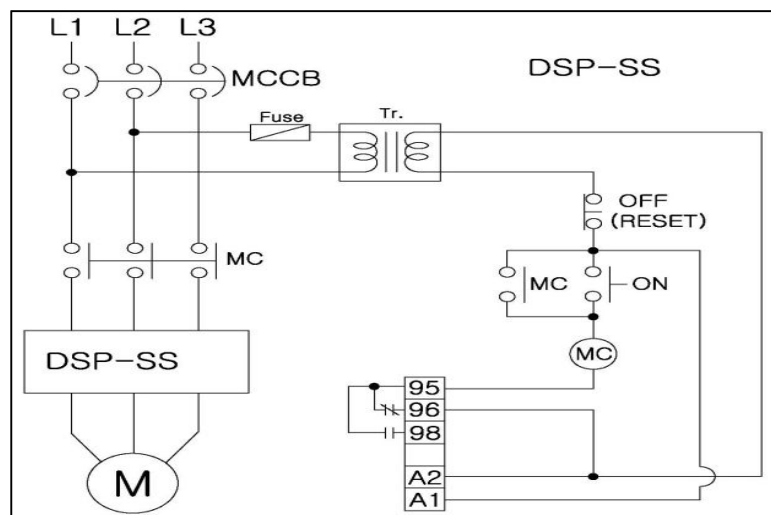
## Technical specification

DIV		Description
Load Current range	06 Type	0.5A~6A or with external CT
	30 Type	3A~30A
	60 Type	5A~60A
Time preset	Starting delay time(dt)	0.2~60sec/def.
	over current trip delay time(ot)	*0.2~12sec/def.
Reset		*Manual(instant):reset sw
		*Power off:remote
		*Auto : instant
Allowable error	Time	±15%
	Current	±15%
Control power	24	*24VAC/DC
	220	*90V ~ 260VAC,50/60Hz
	440	*380V ~ 440VAC,50/60Hz
Trip output relay	Main : 95-96-98	1c(1-SPDT),3A/Resistive
Application environment	temperature	Operation -25°C~+70°C
		Storage -40°C~+80°C
	Humidity	30~85%,non-condensing
Insulation Resistance		50 Mohm or more/500VDC, circuit-case
Withstanding Voltage		*circuit-case:AC 2000V,60Hz, 1 min
		*contact-contact:AC1000V,60Hz,1min
Installation		35mm DIN rail, screw
Power consumption		0.5W Max

## Dimension



## Application Sequence Diagram



## Order form

- DSP-1(Type)-2(Rating current)-3(Control Power)-4(Initial output state)-5(Auto Reset : optional condition if necessary)

Item	Reference Code	Remarks
DSP-SS	DSP-SS-06-24-R	0.5~6A,24VAC/DC,de-energized initial output
	DSP-SS-06-220-R	0.5~6A,90-260VAC,de-energized initial output
	DSP-SS-06-440-R	0.5~6A,380-440VAC,de-energized initial output
	DSP-SS-06-24-N	0.5~6A,24VAC/DC,energized initial output
	DSP-SS-06-220-N	0.5~6A,90-260VAC,energized initial output
	DSP-SS-06-440-N	0.5~6A,380-440VAC,energized initial output
	DSP-SS-30-24-R	3~30A,24VAC/DC,de-energized initial output
	DSP-SS-30-220-R	3~30A,90-260VAC,de-energized initial output
	DSP-SS-30-440-R	3~30A,380-440VAC,de-energized initial output
	DSP-SS-30-24-N	3~30A,24VAC/DC,energized initial output
	DSP-SS-30-220-N	3~30A,90-260VAC,energized initial output
	DSP-SS-30-440-N	3~30A,380-440VAC,energized initial output
	DSP-SS-60-24-R	5~60A,24VAC/DC,de-energized initial output
	DSP-SS-60-220-R	5~60A,90-260VAC,de-energized initial output
	DSP-SS-60-420-R	5~60A,380-440VAC,de-energized initial output
	DSP-SS-60-24-N	5~60A,24VAC/DC,energized initial output
	DSP-SS-60-220-N	5~60A,90-260VAC,energized initial output
	DSP-SS-60-440-N	5~60A,380-440VAC,energized initial output

- Auto reset type

\* Reference code : Basic code + A(suffix code)

Item	Reference Code	Remarks
DSP-SS	DSP-SS-06-24-R-A	0.5~6A,24VAC/DC,de-energized initial output,auto reset
	DSP-SS-06-220-R-A	0.5~6A,90-260VAC,de-energized initial output,auto reset
	DSP-SS-06-440-R-A	0.5~6A,380-440VAC,de-energized initial output,auto reset
	DSP-SS-06-24-N-A	0.5~6A,24VAC/DC,energized initial output,auto reset
	DSP-SS-06-220-N-A	0.5~6A,90-260VAC,energized initial output,auto reset
	DSP-SS-06-440-N-A	0.5~6A,380-440VAC,energized initial output,auto reset
	DSP-SS-30-24-R-A	3~30A,24VAC/DC,de-energized initial outputv
	DSP-SS-30-220-R-A	3~30A,90-260VAC,de-energized initial outputv
	DSP-SS-30-440-R-A	3~30A,380-440VAC,de-energized initial output,auto reset
	DSP-SS-30-24-N-A	3~30A,24VAC/DC,energized initial output,auto reset
	DSP-SS-30-220-N-A	3~30A,90-260VAC,energized initial outputv
	DSP-SS-30-440-N-A	3~30A,380-440VAC,energized initial output,auto reset
	DSP-SS-60-24-R-A	5~60A,24VAC/DC,de-energized initial output,auto reset
	DSP-SS-60-220-R-A	5~60A,90-260VAC,de-energized initial output,auto reset
	DSP-SS-60-420-R-A	5~60A,380-440VAC,de-energized initial output,auto reset
	DSP-SS-60-24-N-A	5~60A,24VAC/DC,energized initial output,auto reset
	DSP-SS-60-220-N-A	5~60A,90-260VAC,energized initial output,auto reset
	DSP-SS-60-440-N-A	5~60A,380-440VAC,energized initial output,auto reset

### \*Note

Auto reset time is instant, so if auto reset time is not instant,but specific time(1min or 3min), this should be ordered separately from above reference code and the additional cost is added above basic auto type with instant time.

In this case reference code is basic code - A - 1(1min) or3(3min)