• *DSP-3ESS*

Abstraction

- Compact size/Energy save type
- Current range of each type : 0.5~6A, 3~30A, 5~60A
- Over current, Phase loss, Locked rotor
  : phase loss, loked rotor by over current
  : reverse phase by incoming voltage
- 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

- Reverse phase by incoming voltage:instant trip
- 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
- Reverse phase by incoming voltage:instant trip
- Phase loss : trp after preset o-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
- Yellow LED : reverse phase

How to preset

Division	Preset	Description
Starting trip delay time	D-TIME	*Preset d-time greater than neccessary time to meet safe motor starting due to starting current as turning knob *Adjustable d-time : 0~60sec
Over current Trip delay time	O-TIME	*Preset neccessary o-time to stop a motor in case of over current condition as turning knob *Adjustable o-time : 0.2~12 sec

1. Start a motor after positioning current knob to maximum value position
2. Slowly turn the knob anti-clockwisely in operating state, then positioned value of knob that red LED flickers is a ponit 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

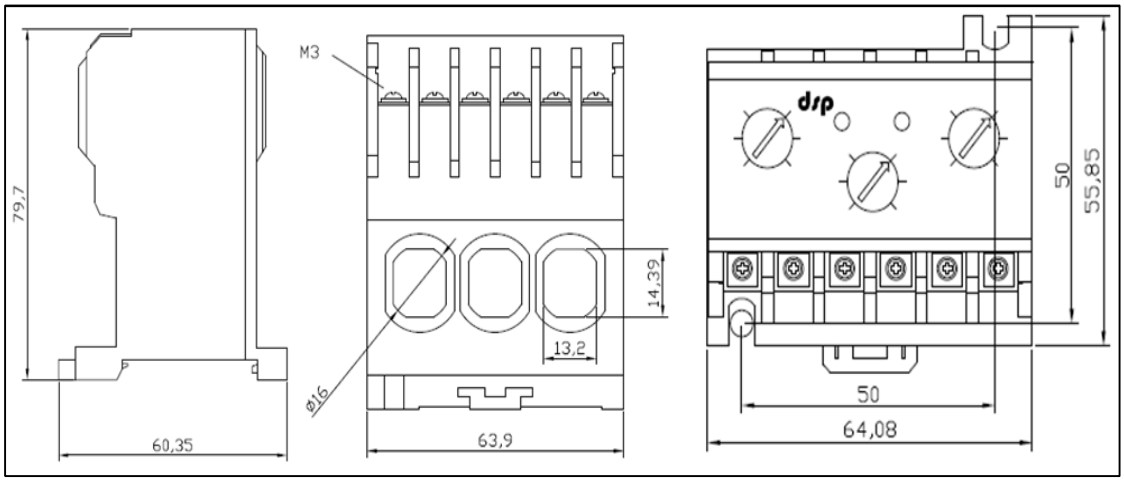
Self-diagnostics

- Keep physically pressing state for TEST button untill preset added time (o-time + d-time) has elapsedwhile 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

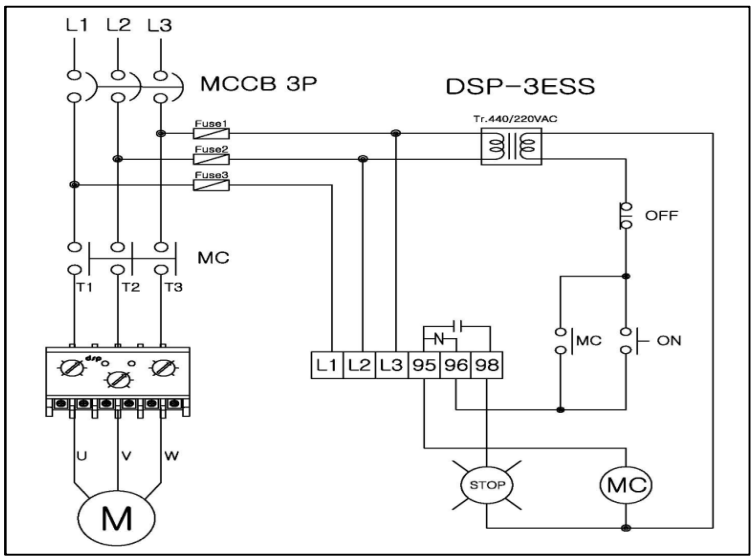
Technical specification

DIV			Description
Load Current range	06 Type		0.5A~6A or 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%
Line voltage	24		*24VAC/DC
	220		*3 phase, 90V ~ 260VAC,50/60Hz
	440		*3 phase ,380V ~440VAC,50/60Hz
Trip output relay	Main : 95-96-98		1c(1-SPDT),3A/Resistive
Application environment	temperature	Operation	-25OC~+70OC
		Storage	-40OC~+80OC
	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(Output initial state) -5(Auto Reset)

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

- Auto reset type

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