

Digital Motor Protection Relay



DSP-SS1

Panel Mounting Type

DSP-SS1

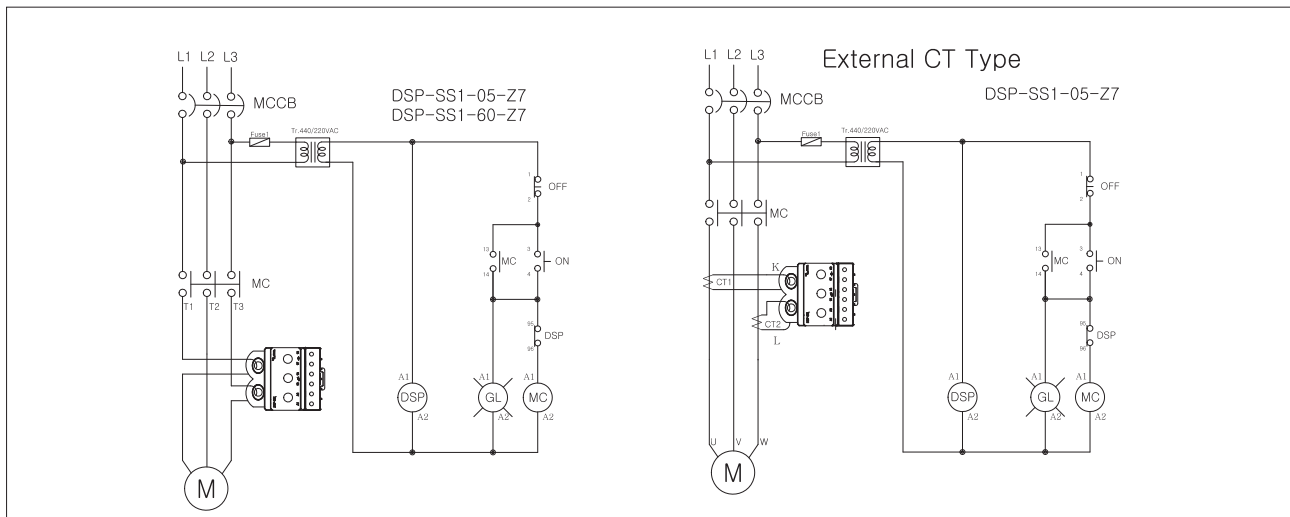
Main Features

- MCU based digital control : optimized protection
- Compact size, Practical simple application
 - Protection : – Over current / Under current, Phase Loss, Locked rotor
 - Protection for Phase loss and Locked rotor is executed based on over current
 - Possible to check actual current and trip state based on LED indication
- 3 phase load protection through 2 CT
- To cover wide and precise current range for the protection
 - 10 Type : – Definite T-I : 0.3A~12A(0.3~6A for external CT)
 - Matched with external CT : 1~600A, secondary rating of external CT is 5A
 - 60 Type : Definite T-I : 2A~60A
- LED Indication

DIV	LED Indication		Description
Control Power	POWER/RUN		Green LED is turned on
Motor operation			Red LED is turned on
Over / Under current protection	POWER/RUN		Red LED is flickered with 1sec interval during o-time
	TRIP		Yellow LED is turned on
Trip Cause Indication			
Cause		POWER(Green)/RUN(Red)	
Phase Loss	L1	Red LED is turned on continuously by the pattern with 1sec(on)–1sec(off)–1sec(on)	■ ■ ■ ■ ■ ■ ■ ■ ■ ■
	L2	Red LED is turned on continuously by the pattern with 1sec(on)–0.5sec(off)–0.5sec(on)	■ ■ ■ ■ ■ ■ ■ ■ ■ ■
	L3	Red LED is turned on continuously by the pattern with 1sec(on)–0.5sec(off)–0.5sec(on)–0.5sec(off)–0.5sec(on)	■ ■ ■ ■ ■ ■ ■ ■ ■ ■
Locked Rotor	Trip Yellow LED is flickered by the pattern with 1sec(on)–1sec(off)–1sec(on)		■ ■ ■ ■ ■ ■ ■ ■ ■ ■

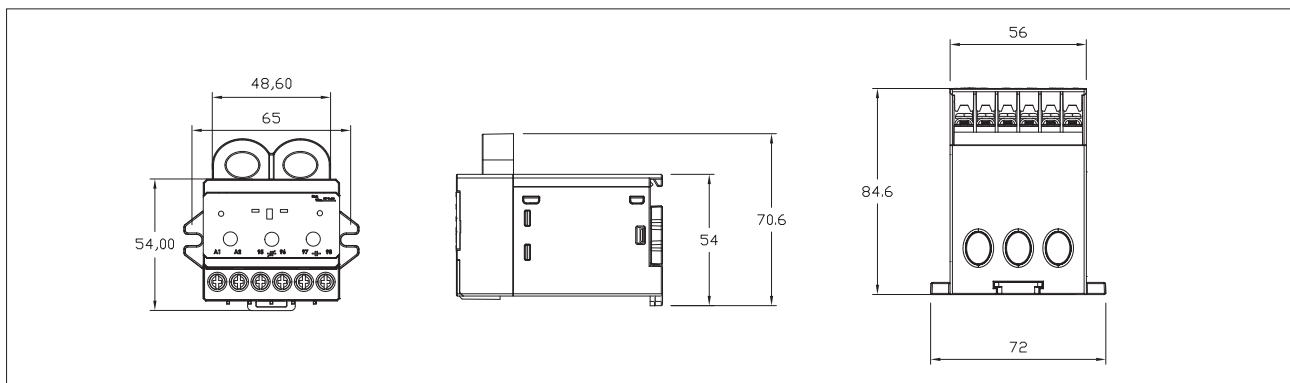
- Convenient functional selection by DIP SW
 - N type : trip output(95–96,97–98) is energized in case control power is loaded
 - R type : trip output(95–96,97–98) is not energized in case control power is loaded
 - trip output is not responded for selection of DIP SW in case normal operation is processed
 - RP ON : able state to protect reverse phase protection • RP OFF : disable state to protect reverse phase protection
- Reset after tripped
 - Manual : press “RESET” SW
 - Electrical : control power(A1–A2) off
 - possible to make remote control by power switch with remote distance
- Self-diagnostic function : “TEST” SW

Application Sequence Diagram



Note : It is required that external auxiliary power relay shall be matched with trip output of DSP in order to meet large capacity of contactor

Dimension



Order Form

No.	Feature	Description
1	Type	DSP-SS1
2	Rating Current	10 : 0.3~12A 60 : 2~60A Combined with external 2CT C12:100/5 2CT CC2:150/5 2CT C22:200/5 2CT C32:300/5 2CT
3	Control Power	Z7 : 24~240VAC
4	P	NIL: Standard Type P: Customized Type
e.g	DSP-SS1-10Z7	Panel Mounting Type 0.3~12A, 24~240VAC, 50/60Hz Able to use external CT
	DSP-SS1-60Z7	Panel Mounting Type 2~60A, 24~240VAC, 50/60Hz Not available for external CT

Samwha DSP Ltd.
DIGITAL STANDARD PROTECTION

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Digital Motor Protection Relay



DSP-SS1-AR

Panel Mounting Type

DSP-SS1-AR

Main Features

- MCU based digital control : optimized protection
- Compact size, Practical simple application
 - Protection : – Over current / Under current, Phase Loss, Locked rotor
 - Protection for Phase loss and Locked rotor is executed based on over current
 - Possible to check actual current and trip state based on LED indication
- 3 phase load protection through 2 CT
- To cover wide and precise current range for the protection
 - 10 Type : – Definite T-I : 0.3A~12A(0.3~6A for external CT)
 - Matched with external CT : 1~600A, secondary rating of external CT is 5A
 - 60 Type : Definite T-I : 2A~60A

■ LED Indication

DIV	LED Indication	Description
Control Power	POWER/RUN	Green LED is turned on
Motor operation		Red LED is turned on
Over / Under current protection	POWER/RUN	Red LED is flickerd with 1sec interval during o-time
	TRIP	Yellow LED is turned on

Trip Cause Indication		
Cause	POWER(Green)/RUN(Red)	
Phase Loss	L1 Red LED is turned on continuously by the pattern with 1sec(on)–1sec(off)–1sec(on)	
	L2 Red LED is turned on continuously by the pattern with 1sec(on)–0.5sec(off)–0.5sec(on)	
	L3 Red LED is turned on continuously by the pattern with 1sec(on)–0.5sec(off)–0.5sec(on)–0.5sec(off)–0.5sec(on)	
Locked Rotor	Trip Yellow LED is flickered by the pattern with 1sec(on)–1sec(off)–1sec(on)	

■ Convenient functional selection by DIP SW

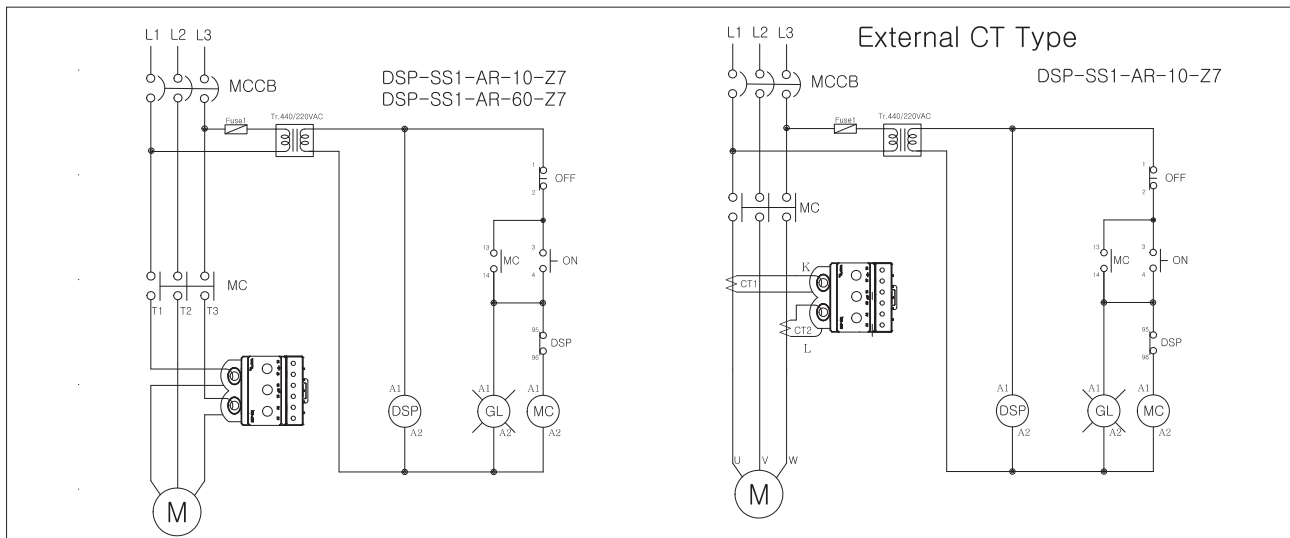
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- R type : trip output(95–96,97–98) is not energized in case control power is loaded
 - trip output is not responded for selection of DIP SW in case normal operation is processed
- RP ON : able state to protect reverse phase protection • RP OFF : disable state to protect reverse phase protection

■ Reset after tripped

- Manual : press “RESET” SW after presetting “OFF” for R-Time knob • Automatic : after R-Time
- Electrical : control power(A1–A2) off
 - possible to make remote control by power switch with remote distance

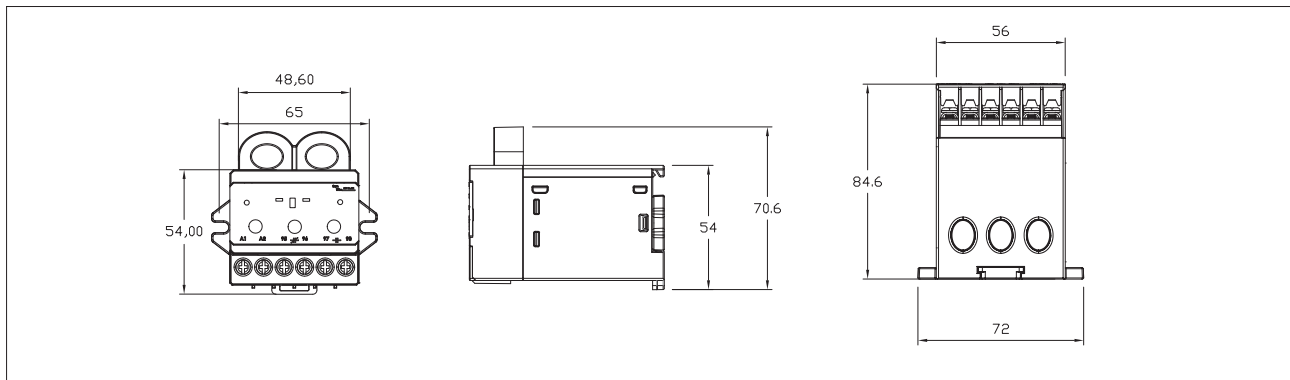
■ Self-diagnostic function : “TEST” SW

Application Sequence Diagram



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