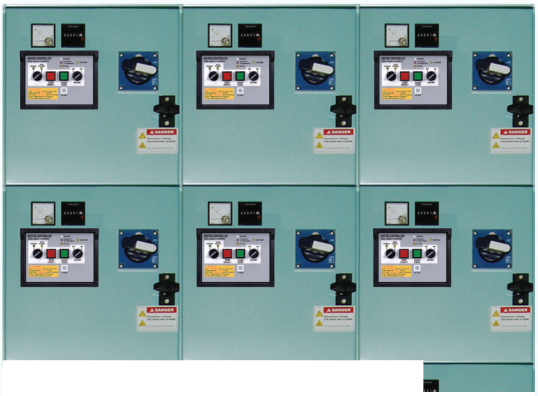
PATENT No.0483573
DESIGN REGISTRATION No.0322702 / 0322703



- PERFECT PROVISION AGAINST NOISE
  (NO SHIELD & GROUNDING REQUIRED ON INSTALLATION)
  EMC/EMI-EN 60945
- SELF-DIAGNOSTIC FUNCTION (STAND-BY STARTER)
- 4WIRE HARDWARE COMMUNICATION
- FLAME RETARDANT ENCLOSURE & IP65 FRONT SIDE
- EMERGENCY CONTROL FUNCTION

MOTOR CONTROLLER

- STAND-BY START (2 or 3 STAND-BY)
- 2 SPEED REVERSIBLE START
- 2 SPEED START
- REVERSIBLE START
- CONSTANT START
  (AUTO / MANUAL, REMOTE / LOCAL, Y-D START)

MOTOR CONTROLLER

SMC-500 / 500B SERIES

GENERAL INFORMATION

The SMC 500 / 500B series motor controllers are high quality products combined with related functions and especially developed to be easily applied to marine system, power plant, steel, chemical plant and any other places where the motors should be controlled.
They comply with various international standards, and standardized circuit is adopted. In addition to a basic function, the controller has applicable functions, and control circuit consists of high quality components up to various standards.
Particularly, the enclosure is made of flame retardant polycarbonate material, and it has the highest electric insulation and strong resistance to shock.
And also, it's weight is very light. So, it can be easily applied in any environmental conditions.
The SMC 500 / 500B series improves the reliability of control circuit and correctness of assembling for starter, and saves the design M/h for group start panel. Moreover, the size of a starter can be reduced about 30% compared with starter without SMC 500 / 500B series.
Starter with SMC 500 / 500B series can be superior in quality, and it's design and assembling can be standardized. Also, maintenance can be done easily, promptly, and can be managed systematically.
As the major point, SMC 500 series have sequential start (UVR/UVP), alarm signal out and remote control, and SMC-503, 504, 504R models have the prevention against inrush current while changing direction or speed.
Especially, SMC-505 model has common circuit (function) to 2 or 3 stand-by, so design and maintenance can be done economically.
and it has interlock device and auto-changeover function (by intercommunication function between the running, stand-by and steady motors) for various abnormal conditions.
As a result, SMC-505 model can be expansively applied to the special function.

CAUTION

For safety, read and give attention to "CAUTION" and "MANUAL".

"CAUTION" notice with the left symbol must be observed, otherwise (for your daily habit or behavior) the controller can be seriously damaged and some problem on system can occur.

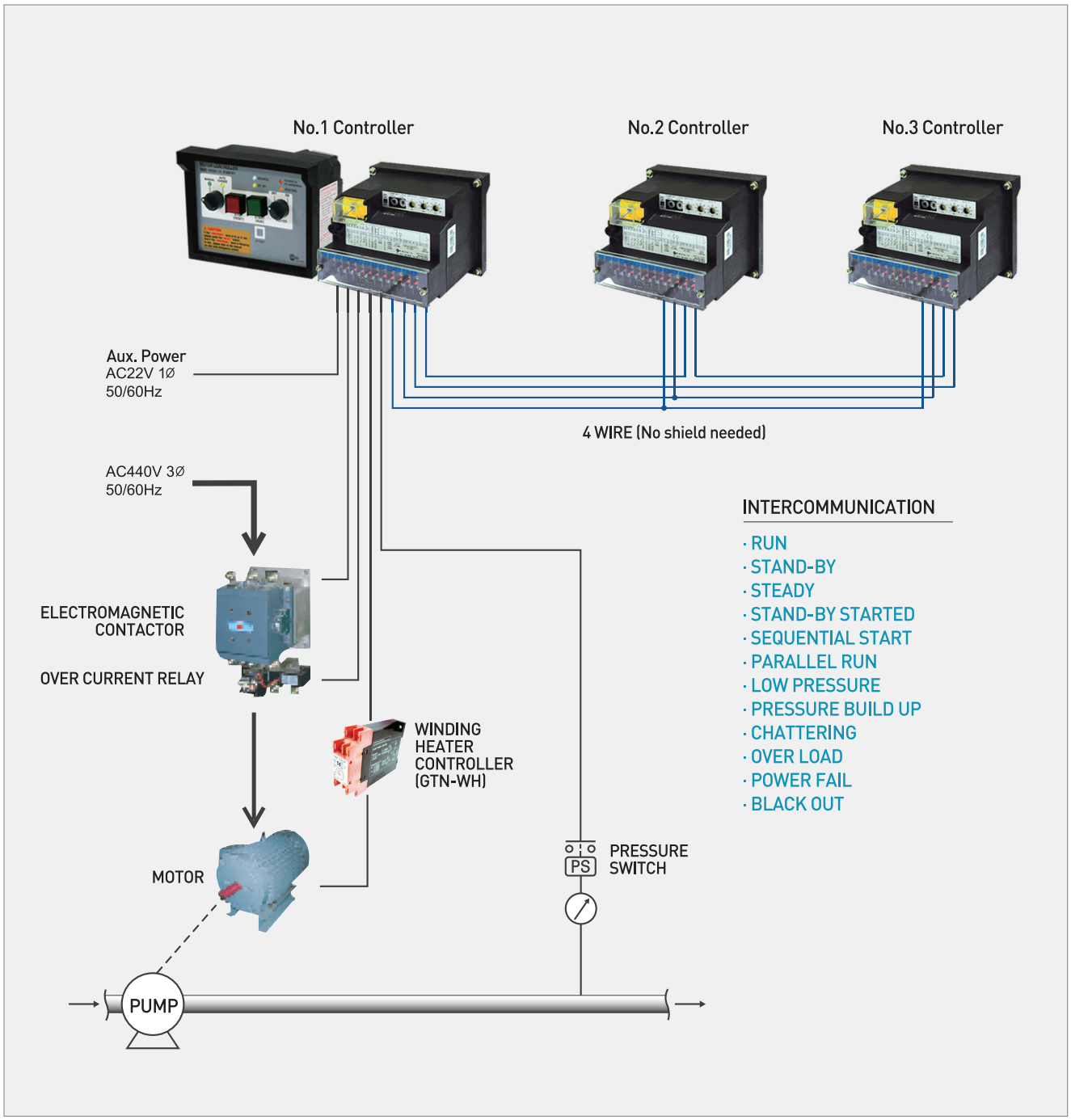
SMC 500 SERIES / 500B SERIES & INDEX

GENERAL INFORMATION

The SMC 505 series is applied to the automatic changeover system. In this system, 2 or 3 motors are monitored their operations and the controllers communicate with each other, and in case some trouble occurs to the running motor, pressure or control system, the stand-by motor starts automatically and runs instead of the running motor or parallel with running motor.
As the major point, SMC 505 series has common circuit to 2 or 3 stand-by, so design and maintenance can be done economically.
And it has interlock device and auto-changeover function (by 4 wires hardware intercommunication function between running, stand-by and steady state which is not under influence of noise.) for various abnormal conditions.
As a result, SMC 505 series can expansively applied to the special function.
And also, it has sequential start function (UVP / UVR), self diagnosis, alarm signal output, remote control and manual emergency control function.

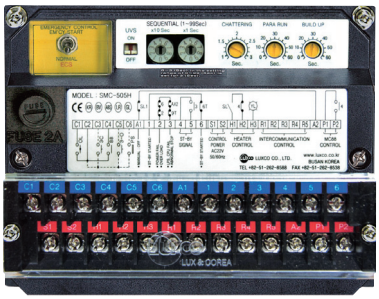
Note.) Refer to the technical manual to see the detail description of function.

SYSTEM LAYOUT

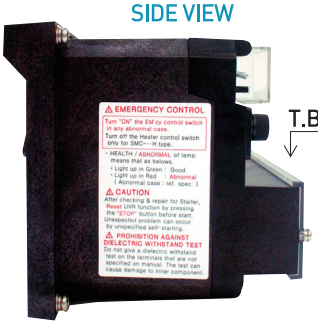


SMC-505H

REAR VIEW

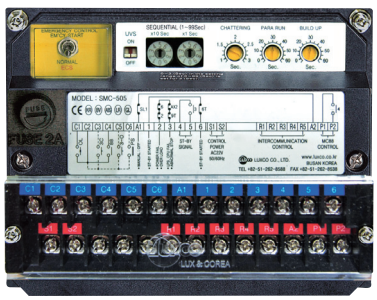


SIDE VIEW



SMC-505

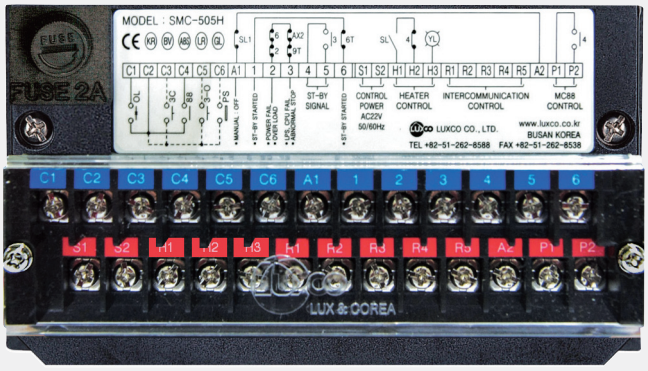
REAR VIEW



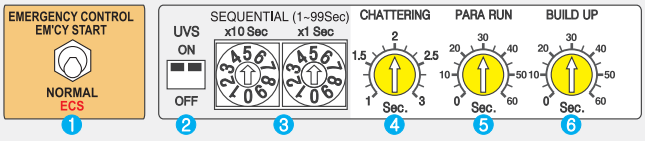
FRONT VIEW LAYOUT

①	NAME OF PRODUCT	MOTOR CONTROLLER
②	MODEL NAME	SMC-505 OR 505H
③	MANUAL MODE INDICATOR	LIGHT UP IN GREEN
④	AUTO CHANGE MODE INDICATOR	LIGHT UP IN YELLOW
⑤	MANUAL/ AUTO CHANGE SWITCH	Ø18 SELECTOR SWITCH
⑥	STOP BUTTON	18 x 18 RED
⑦	START BUTTON WITH LAMP	18 x 18 GREEN
⑧	LAMP TEST BUTTON	TACT SWITCH
⑨	SOURCE INDICATOR	LIGHT UP IN WHITE
⑩	CONDITION INDICATOR	DUAL COLOR LED - HEALTH : LIGHT UP IN GREEN - ABNORMAL : ① LIGHT UP STEADILY IN "RED" WITH ALARM SIGNAL OUTPUT.(SYSTEM ABNORMAL) ② FLICKERING IN "RED" WITH ALARM SIGNAL OUTPUT.(SELF DIAGNOSIS SYSTEM : CPU FAIL)
⑪	STAND-BY INDICATOR	LIGHT UP IN YELLOW
⑫	HEATER SWITCH	Ø18 SELECTOR SWITCH
⑬	HEATING INDICATOR	LIGHT UP IN ORANGE

T.B LAYOUT (SMC-505H)

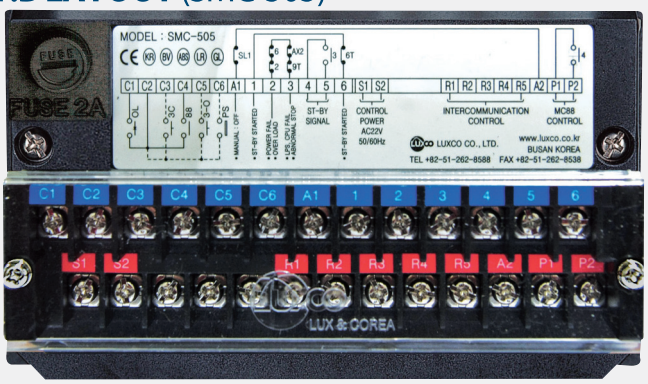


PRE. SET (SWITCH & TIMER) (SMC-505 & 505H)

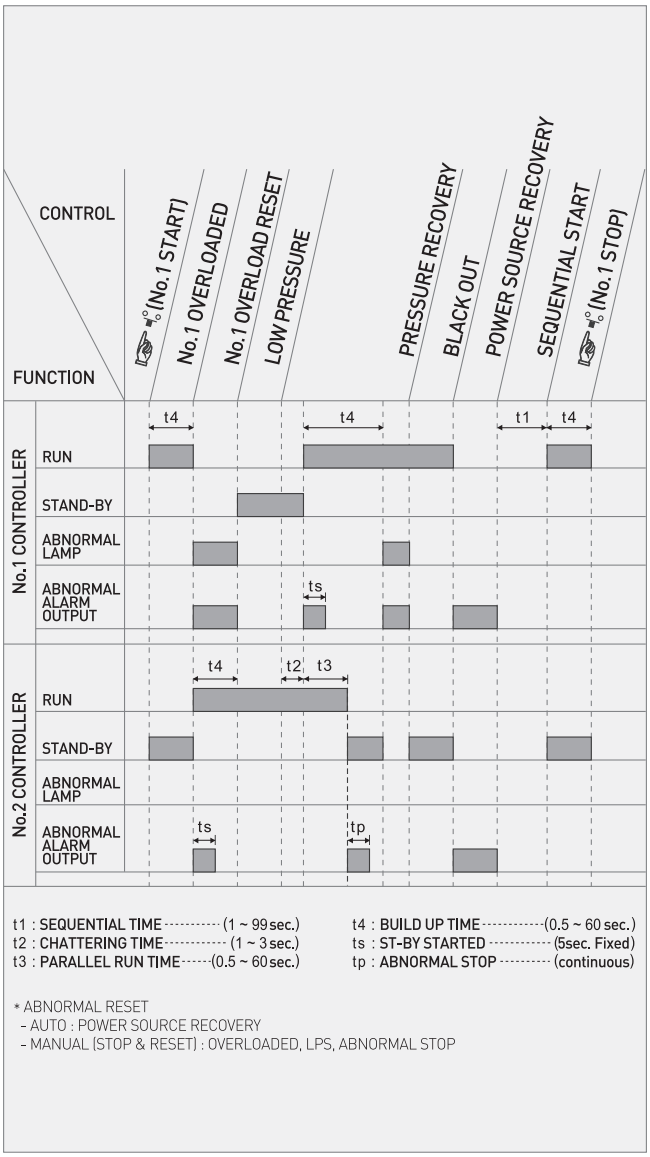


①	ECS SWITCH	EM'CY START BY TOGGLE SWITCH
②	UVS SWITCH	SEQUENTIAL START BY DIP SWITCH UVR - UNDER VOLTAGE RELEASE : (SEQUENTIAL START ACTION) UVS SET "ON" POSITION UVP - UNDER VOLTAGE PROTECTION : (NO SEQUENTIAL START ACTION UVS SET "OFF" POSITION
③	SEQUENTIAL TIMER	1~99 SEC. ADJUSTABLE BY DIGITAL SWITCH 0~1 (SEC.) IN THE SETTING RANGE OF 0~99 (SEC.) IS SET FOR 1(SEC.)
④	CHATTERING TIMER	1~3 SEC. ADJUSTABLE BY V / R
⑤	PARA RUN TIMER	0.5~60 SEC. ADJUSTABLE BY V / R
⑥	BUILD UP TIMER	0.5~60 SEC. ADJUSTABLE BY V / R

T.B LAYOUT (SMC-505)



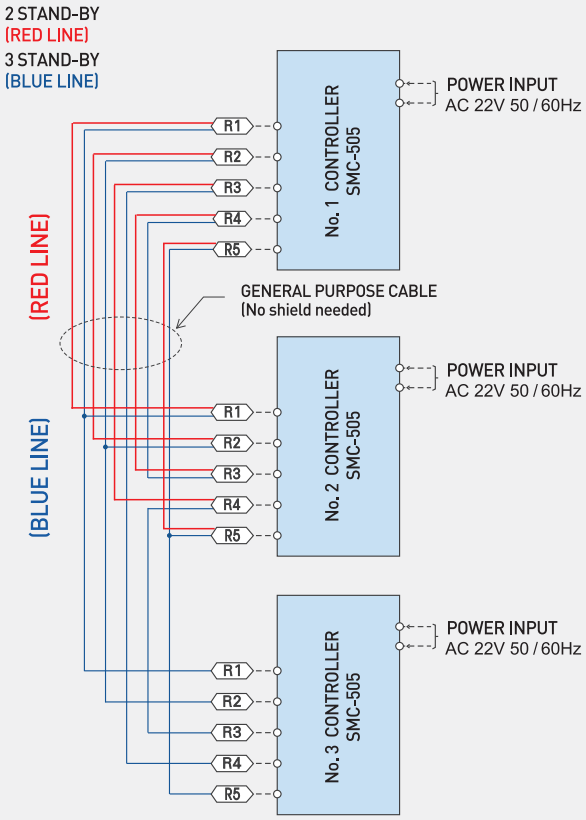
FUNCTION TIMING FLOW CHART FOR 2 STAND-BY



t1 : SEQUENTIAL TIME ---------- (1 ~ 99 sec.)
t2 : CHATTERING TIME ---------- (1 ~ 3 sec.)
t3 : PARALLEL RUN TIME ------ (0.5 ~ 60 sec.)
t4 : BUILD UP TIME ---------- (0.5 ~ 60 sec.)
ts : ST-BY STARTED ---------- (5sec. Fixed)
tp : ABNORMAL STOP ---------- (continuous)

* ABNORMAL RESET
- AUTO : POWER SOURCE RECOVERY
- MANUAL (STOP & RESET) : OVERLOADED, LPS, ABNORMAL STOP

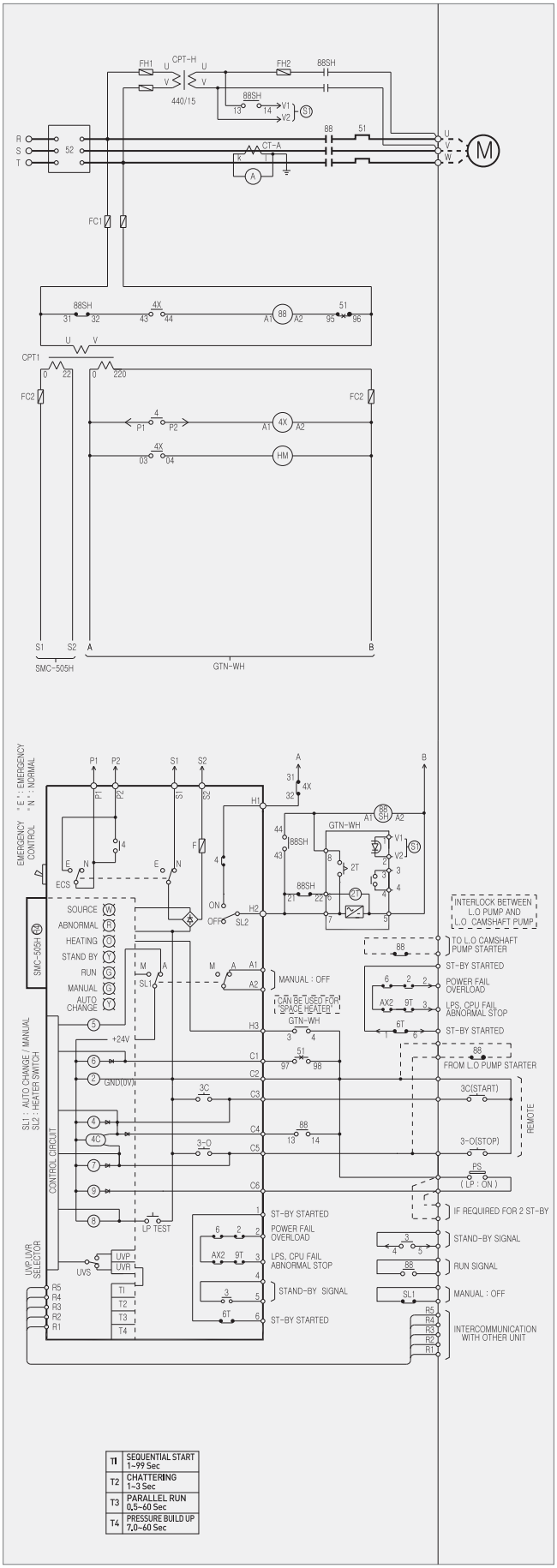
TRANSMISSION / RECEIPT WIRING DIAGRAM



FUNCTION TABLE

MODE			CONDITION		
No.1 STARTER	No.2 STARTER	No.3 STARTER	No.1 MOTOR	No.2 MOTOR	No.3 MOTOR
AUTO CHANGE	AUTO CHANGE	AUTO CHANGE	RUN	STAND-BY	STEADY
			STEADY	RUN	STAND-BY
			STAND-BY	STEADY	RUN
			RUN	ABNORMAL	STAND-BY
			STAND-BY	RUN	ABNORMAL
			ABNORMAL	STAND-BY	RUN
			RUN	RUN	STAND-BY
			STAND-BY	RUN	RUN
			RUN	STAND-BY	RUN
AUTO CHANGE	AUTO CHANGE	MANUAL or EMERGENCY CONTROL	RUN	STAND-BY	
			STAND-BY	RUN	
MANUAL or EMERGENCY CONTROL	AUTO CHANGE	AUTO CHANGE		RUN	STAND-BY
				STAND-BY	RUN
AUTO CHANGE	MANUAL or EMERGENCY CONTROL	AUTO CHANGE	STAND-BY		RUN
			RUN		STAND-BY

SMC-505H CONNECTION DIAGRAM



SMC-505 CONNECTION DIAGRAM