

REXROTH GENERATOR SPEED CONTROL

ROADTEC SCREEDS UTILIZE ELECTRIC HEAT PRODUCED BY A HYDRAULICALLY DRIVEN 34 KILOWATT GENERATOR. ELECTRIC HEAT IS A HIGHLY EFFECTIVE METHOD OF DISTRIBUTING HEAT TO SCREED PLATES. THIS HYDRAULIC GENERATOR IS CONTROLLED BY A REXROTH GENERATOR CONTROL BOX. THIS CONTROL BOX WILL NEED TO BE CONFIGURED TO REACH THE CORRECT OPERATING OUTPUT. THIS IS COMMONLY REFERRED TO AS "GSC PROGRAMMING". REFER TO THE FOLLOWING INSTRUCTIONS TO SET THE CORRECT GSC CONFIGURATION.

- 1) THE OPERATING VARIABLES FOR THE GSC ARE DIVIDED INTO PARAMETERS AND SETUP.
- 2) PARAMETERS ARE ITEMS RELATED TO TUNING AND DRIVE. THE DRIVE CAN BE OPERATED WHILE MAKING CHANGES.
- 3) SETUP ITEMS ARE CONFIGURATION OPTIONS THAT MUST BE DEFINED PRIOR TO OPERATING. THIS MENU CANNOT BE ACCESSED WHEN THE DRIVE IS OPERATING.
- 4) POWER UP THE GSC BUT DO NOT START THE GENERATOR. PRESS BOTH ENTER AND ESC FOR SEVERAL SECONDS TO ACCESS THE MENUS. USE UP AND DOWN, FOLLOWED BY ENTER, TO SELECT THE DESIRED MENU. THE LED DISPLAY WILL SCROLL THE CURRENT MENU OR ITEM.
- 5) MOVE BETWEEN ITEMS IN A MENU WITH UP OR DOWN, WHEN NAMES ARE DISPLAYED. SELECT THE FIRST ITEM OF INTEREST BY PRESSING ENTER. WHEN THE CORRESPONDING NUMBER OR OPTION IS DISPLAYED, UP OR DOWN CHANGES THE VALUE OR OPTION. CHANGES ONLY TAKE EFFECT AFTER ENTER IS PRESSED. AT THIS LEVEL, ENTER TOGGLES BETWEEN AN ITEM NAME AND IT'S SETTING, WITHOUT ADVANCING AN ITEM. NOTE THE ESC ALWAYS RETURNS TO THE PREVIOUS MENU, OPTION OR LEVEL. MOVE TO THE NEXT ITEM WHEN THE NAME IS DISPLAYED.
- 6) REFER TO THE CHARTS ON THE FOLLOWING PAGES WHEN CONFIGURING THE GSC CONTROL BOX

REXROTH GENERATOR SPEED CONTROL

ITEM	DESCRIPTION	SP-100/RP-180/RP-185	RP-230
PARAMETERS			
AC FREQ TRIM	OFFSET TO FREQUENCY SETTING.	0	0
START/STOP RAMP	TIME GENERATOR RAMP UP AND DOWN STARTING AND STOPPING.	8	4
MANUAL STROKE	LIMITS MAXIMUM PUMP DISPLACEMENT DURING MANUAL MODE.	55	68
PROPORTIONAL	TUNING PARAMETERS. CONTROL SIGNAL IS LINEAR COMBINATION OF ERROR SIGNAL, ITS INTEGRAL AND ITS DERIVATIVE.	0.1	0.1
INTEGRAL		1.0	1.0
DAMPING		60	60
DISPLACEMENT	USED WITH FEED FORWARD. ADJUSTS PUMP SPEED IN DIRECT PROPORTION TO CHANGE IN PUMP SPEED.	1.15	1.15
FREQ FAULT	SETS MAXIMUM TOLERANCE FOR FREQUENCY VARIATION.	30	20
OVERVOLT LIMIT	MAXIMUM VOLTAGE BEFORE FAULT.	274	274
LO TEMP LIMIT	SWITCH OVER TEMPERATURE TO LOW TEMP PARAMETERS.	32	32
LO TEMP RAMP	LOW TEMP START/STOP RAMP.	20	20
LO TEMP "P"	LOW TEMP PROPORTIONAL GAIN.	8.0	8.0
LO TEMP "I"	LOW TEMP INTEGRAL.	0.0	0.0
LO TEMP DAMPING	LOW TEMP DAMPING.	0.0	0.0
SETTINGS			
FREQUENCY	FREQUENCY SETPOINT	60	60
FEEDBACK	FEEDBACK MODE	AC	AC
PULSE/REV	USED WITH PULSE OR FEED FORWARD FEEDBACK MODE.	23	20
TEMP START	ON ENABLES LOW TEMP PARAMETERS.	OFF	OFF
FEEDBACK FAULT	ON ENABLES FAULT SHUTDOWN WHEN GENERATOR SIGNAL IS LOST.	ON	ON
OVERVOLTAGE	ON ENABLES FAULT SHUTDOWN WHEN AC VOLTAGES EXCEEDS OVERVOLT LIMIT.	ON	ON
OVERVOLTAGE RESPONSE	EXCESS VOLTAGE RESPONSE TIME.	SLOW ¹	SLOW ¹
FREQ FAULT	DETERMINES WHETHER FREQUENCY FAULT DETECTION IS FOR TOO HIGH, TOO LOW A FREQUENCY; OR BOTH.	BOTH	BOTH
LOW BATTERY	PREVENTS STARTING IF BATTERY VOLTAGE IS BELOW 9.0V.	ON	ON

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GSC CONFIGURATION FOR 34 KVA ROADTEC GENERATOR

ITEM	DESCRIPTION	SP-100/RP-180/RP-185	RP-230
PARAMETERS			
AC FREQ TRIM	OFFSET TO FREQUENCY SETTING.	0	
START/STOP RAMP	TIME GENERATOR RAMP UP AND DOWN STARTING AND STOPPING.	8	
MANUAL STROKE	LIMITS MAXIMUM PUMP DISPLACEMENT DURING MANUAL MODE.	50	
PROPORTIONAL	TUNING PARAMETERS. CONTROL SIGNAL IS LINEAR COMBINATION OF ERROR SIGNAL, ITS INTEGRAL AND ITS DERIVATIVE.	0.1	
INTEGRAL		1.0	
DAMPING		60	
DISPLACEMENT	USED WITH FEED FORWARD. ADJUSTS PUMP SPEED IN DIRECT PROPORTION TO CHANGE IN PUMP SPEED.	1.00	
FREQ FAULT	SETS MAXIMUM TOLERANCE FOR FREQUENCY VARIATION.	30	
OVERVOLT LIMIT	MAXIMUM VOLTAGE BEFORE FAULT.	274	
LO TEMP LIMIT	SWITCH OVER TEMPERATURE TO LOW TEMP PARAMETERS.	32	
LO TEMP RAMP	LOW TEMP START/STOP RAMP.	20	
LO TEMP "P"	LOW TEMP PROPORTIONAL GAIN.	8.0	
LO TEMP "I"	LOW TEMP INTEGRAL.	0.0	
LO TEMP DAMPING	LOW TEMP DAMPING.	0.0	
SETTINGS			
FREQUENCY	FREQUENCY SETPOINT	60	
FEEDBACK	FEEDBACK MODE	AC	
PULSE/REV	USED WITH PULSE OR FEED FORWARD FEEDBACK MODE.	23	
TEMP START	ON ENABLES LOW TEMP PARAMETERS.	OFF	
FEEDBACK FAULT	ON ENABLES FAULT SHUTDOWN WHEN GENERATOR SIGNAL IS LOST.	ON	
OVERVOLTAGE	ON ENABLES FAULT SHUTDOWN WHEN AC VOLTAGES EXCEEDS OVERVOLT LIMIT.	ON	
OVERVOLTAGE RESPONSE	EXCESS VOLTAGE RESPONSE TIME.	SLOW ²	
FREQ FAULT	DETERMINES WHETHER FREQUENCY FAULT DETECTION IS FOR TOO HIGH, TOO LOW A FREQUENCY; OR BOTH.	BOTH	
LOW BATTERY	PREVENTS STARTING IF BATTERY VOLTAGE IS BELOW 9.0V.	ON	
MODE	SELECT AUTOMATIC FREQUENCY CONTROL OR MANUAL.	AUTO	
SOL MAXIMUM	MAXIMUM SOLENOID CURRENT AVAILABLE.	1.2	
SOL MINIMUM	MINIMUM SOLENOID CURRENT AVAILABLE.	0.45	
SOL FREQUENCY	PWM FREQUENCY.	250	
FEED FORWARD SETUP	USED FOR TUNING FEED FORWARD	OFF	