HGM1790N Controller Configuration Guide.

Notes:

Wire positions are clearly marked on rear of controller.

Before starting to configure HGM1790N controller, you must connect battery to terminals 1 & 2 as shown on the back of the controller. Link between terminal 2 (battery +) and terminal 3 (E Stop) This shuts off the E stop alarm to allow programming. E stop needs constant battery + supply for generator to run, break this supply and E stop is engaged.

Press and hold the down arrow to the right of the digital display for four seconds to bring you into password input. Password is 0318.

To increase number in each field - press Auto, to decrease number in each field - press start, to move across press downward facing arrow beside digital display.

First number displayed is 0, move across to second password field and press auto 3 times to increase this number to 3, then move to the next field and press auto once to select number , then move across field again and press start twice to select number 8.

You are now in programme setting mode showing P00. Press auto to move to next programme and start to move back to previous programme. Press Stop to exit programme mode at any time and save changes made therein

Set programmes as shown or suggested below.

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| P00 | Start Delay (time before starter is engaged) | Suggest 2 secs |
| P01 | Stop Delay (time from when remote start signal is deactivated to generator stop) | Suggest 2 secs  |
| P02 | Starting attempts made automatically | Suggest 3. If engine does not start, fail to start alarm will show after 3 starting attempts. |
| P03 | Preheat time. Set at 0 if no glow plugs used or time in seconds if they are used. |  |
| P4 | Cranking time – time in seconds that starter motor will run or until engine starts. | Suggest 8 seconds |
| P05 | Crank rest time – Time in seconds between starting attempts | Suggest 10 seconds |
| P06 | Safety Delay On – time elapsed before shutdown to allow oil pressure to rise and engine to run normally under protection. | Suggest 10 seconds |
| P07 | Start Idle Time – Idle running time of generator after starting engine  | Suggest 1 second |
| P08 | Warming up time -  | Suggest to set at 0 |
| P09 | Cool down time – amount of time generator runs after stop button is pressed or auto start is disconnected | If in auto mode, suggest 180 seconds, press stop button twice to stop manually. |
| P10 | Stop Idle Time | Set at 0 |
| P11 | ETS solenoid hold – used when fuel solenoid is energised to stop | Suggest 15 seconds if ETS is used, otherwise set at 0 |
| P12 | Fail to stop delay | Suggest set at 0 |
| P13 | Flywheel teeth. Count teeth on flywheel if MPU is used | Leve as is if MPU is not used |
| P14 | Generator Poles | Set at 4 for 1500 rpm generator and 2 for 3000 rpm  |
| P15 | Generator abnormal time | Suggest set at 3 alarm delay for gen over and under voltage |
| P16 | Generator over volts | Suggest set at 250 volts |
| P17 | Generator under volts | Suggest set at 190 volt |
| P18 | Engine under speed. | Suggest set at 1350 |
| P19 | Engine over speed | Suggest set at 1600 |
| P20 | Generator under frequency | Suggest set at 45 HZ |
| P21 | Generator over frequency | Suggest set at 55 HZ |
| P22 | High Temp | Suggest set at 98 |
| P23 | Low oil pressure | Suggest set at 120 |
| P24 | Low liquid level | Suggest set at 10 |
| P25 | Battery over volts | Suggest set at 15 V for 12 Volt & 30V for 24 Volt system |
| P26 | Battery under volts | Suggest 10 V for 12 Volt system and 20V for 24 Volt  |
| P27 | CT Ratio (CT Value) | Set as required |
| P28 | Full Load Current | Suggest set according to generators rating plate |
| P29 | Over Currant | Suggest set according to generator rating plate |
| P30 | Over Current Delay Time | Suggest 30 seconds |
| P31 | Action  | O: Warn 1: shutdown 2: cooling and shutdown |
| P32 | Relay Output for common fault alarm | Suggest set at 1 |
| P33 | Digital Input | Auxiliary Shutdown |
| P34 | Digital shutdown delay | Set as required if used |
| P35 | Power Mode | Set at 0 |
| P36 | Password Set | Pre-set at 0318 |
| P37 | Crank disconnect - 0:MPU,1:Gen HZ, 2:MPU+GenHZ, 3:MPU+OP, 4:Gen HZ+OP, 5:Gen HZ +MPU+OP | Suggest Set 1 unless MPU is used |
| P38 | Disconnect engine speed | Suggest 250 if MPU is used |
| P39 | Disconnect Generator HZ | Suggest set at 9HZ  |
| P40 | Disconnect Oil Pressure | Suggest set at 180kPa if using OP disconnect |
| P41 | AC System – 0:3Phase 4 wire – 1:2P 3 wire – 2:1P 2 wire – 3:3P 3 wire | Suggest set at 2 for single phase sensing, input terminals 11 & 12 on controller |
| P42 | Temp sensor type. 1:digital closed(switch) 4:VDO | Set as required, usually option 1 for temp switch close to stop |
| P43 | Oil Pressure Sensor type. 1:digital closed, 4:VDO | Set as required, usually option 1: for standard oil light switch |
| P44 | Fuel level sensor | Suggest 0:not used |
| P45 | Disconnect oil pressure delay | Suggest 0.0 |
| P46  | P46 & P47 | Set at 0 |
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