

SECTION P PUMP STATUS

Revision Date: 8-18-23

PUMP CALL TO RUN STATUS

Pump 1-6 Call To Run Status provides status of when the Controller is calling the pumps to run. However, external pump fault / enable logic, such as Motor Thermal, may prevent a pump from actually running. The status may be read from Modbus Coils 41 - 46 (Modbus Register 40003 Bits 8 - 13). See page T-1.

PUMP AVAILABLE FOR SERVICE STATUS

Pump 1-6 Available For Service Status provides status of when the pumps are available for service, based on the status of the Pump Disable Discrete Inputs. See pages A-2 and A-7 for more details. The status may be read from Modbus Coils 177 - 182 (Modbus Register 40012 Bits 0 - 5). See page T-3.

ELAPSED TIME METERS

Pump 1-6 Elapsed Time Meters keep track of how many hours the pumps have run since the last time the meters were reset. The values read from these registers are intended for use in comparing the pump run time of one pump with the run time of the other pumps at the station, for the purpose of checking for uneven run times. (Uneven run times is an indication of a maintenance problem with one of the pumps.) Periodically the comparison of run times should be made and the registers should reset to zero. The data may be read from Modbus Registers 41891 - 41896. The ETM data is stored in non-volatile memory so that the data is not lost during a power outage. To reset the ETMs to zero, momentarily set the respective Coil (113 - 118) in Modbus Register 40008. See page T-2.

User / Operator Info.	SCADA	Description of Data	
Parameter	Register Address		
Elapsed Time Meter Data			
Etd.1	41891	Pump 1 - Elapsed Time Meter (hours and 1/10 hours)	Range: 0.0 - 6553.5 hours
Etd.2	41892	Pump 2 - Elapsed Time Meter (hours and 1/10 hours)	Range: 0.0 - 6553.5 hours
Etd.3	41893	Pump 3 - Elapsed Time Meter (hours and 1/10 hours)	Range: 0.0 - 6553.5 hours
Etd.4	41894	Pump 4 - Elapsed Time Meter (hours and 1/10 hours)	Range: 0.0 - 6553.5 hours
Etd.5	41895	Pump 5 - Elapsed Time Meter (hours and 1/10 hours)	Range: 0.0 - 6553.5 hours
Etd.6	41896	Pump 6 - Elapsed Time Meter (hours and 1/10 hours)	Range: 0.0 - 6553.5 hours
Elapsed Time Meter Reset - To Reset Elapsed Time Meters to zero momentarily set Modbus Coils 11-118 (Register 40008 Bits 0-5).			

LAST RUN CYCLE TIME METERS

For this feature the Main Control Board Operating Program Revision Number must be: 3 or Higher.

Pump 1-6 Last Run Cycle Time Meters keep track of how long a pump ran during its last run cycle. The data may be read from Modbus Registers 41897 - 41902. The data is stored in non-volatile memory so that the data is not lost during a power outage. To reset the meters to zero, momentarily set Modbus Coil 161 - 166 (Modbus Register 40011 Bits 0-5). See page T-3.

User / Operator Info.	SCADA	Description of Data
Parameter	Register Address	
Last Run Cycle Time Meter Data		
LrCd.1	41897	Pump 1 Last Run Cycle Time Meter (minutes and 1/10 minutes) Range: 0.0 - 6553.5 minutes
LrCd.2	41898	Pump 2 Last Run Cycle Time Meter (minutes and 1/10 minutes) Range: 0.0 - 6553.5 minutes
LrCd.3	41899	Pump 3 Last Run Cycle Time Meter (minutes and 1/10 minutes) Range: 0.0 - 6553.5 minutes
LrCd.4	41900	Pump 4 Last Run Cycle Time Meter (minutes and 1/10 minutes) Range: 0.0 - 6553.5 minutes
LrCd.5	41901	Pump 5 Last Run Cycle Time Meter (minutes and 1/10 minutes) Range: 0.0 - 6553.5 minutes
LrCd.6	41902	Pump 6 Last Run Cycle Time Meter (minutes and 1/10 minutes) Range: 0.0 - 6553.5 minutes
Last Run Cycle Meter Reset - To Reset Last Run Cycle Meters to zero momentarily set Modbus Coils 161-166 (Register 40011 Bits 0-5).		

PUMP START COUNTERS

For this feature the Main Control Board Operating Program Revision Number must be: 3 or Higher.

Pump 1-6 Start Counters keep track of how many pump starts have occurred since the last time the counters were reset. The data may be read from Modbus Registers 41903 - 41908. The data is stored in non-volatile memory so that it is not lost during a power outage. To reset the counters to zero, momentarily set Modbus Coil 167 - 172 (Modbus Register 40011 Bits 6-11). See page T-3.

User / Operator Info.	SCADA	Description of Data
Parameter	Register Address	
Pump Start Counter Data		
PSCd.1	41903	Pump 1 Start Counter (Number of Pump Starts) Range: 0 - 65535 Starts
PSCd.2	41904	Pump 2 Start Counter (Number of Pump Starts) Range: 0 - 65535 Starts
PSCd.3	41905	Pump 3 Start Counter (Number of Pump Starts) Range: 0 - 65535 Starts
PSCd.4	41906	Pump 4 Start Counter (Number of Pump Starts) Range: 0 - 65535 Starts
PSCd.5	41907	Pump 5 Start Counter (Number of Pump Starts) Range: 0 - 65535 Starts
PSCd.6	41908	Pump 6 Start Counter (Number of Pump Starts) Range: 0 - 65535 Starts
Pump Start Counter Reset - To Reset Pump Start Counters to zero momentarily set Modbus Coils 167-172 (Register 40011 Bits 6-11).		

PUMP STATUS - Touchscreen HMI SCREEN

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	Call To Run Status	Elapsed Run Time (hours)	Last Run Cycle Time (minutes)	Number of Pump Starts
Pump 1	OFF NOT AVAILABLE FOR SERVICE	1,234.5	1,234.5	12,345
Pump 2	OFF NOT AVAILABLE FOR SERVICE	1,234.5	1,234.5	12,345
Pump 3	OFF NOT AVAILABLE FOR SERVICE	1,234.5	1,234.5	12,345
Pump 4	OFF NOT AVAILABLE FOR SERVICE	1,234.5	1,234.5	12,345
Pump 5	OFF NOT AVAILABLE FOR SERVICE	1,234.5	1,234.5	12,345
Pump 6	OFF NOT AVAILABLE FOR SERVICE	1,234.5	1,234.5	12,345

Parameters: Etd.1 - Etd.6
LrCd.1 - LrCd.6
PSCd.1 - PSCd.6