

SECTION T

SC1000 SCADA MODBUS REGISTERS

Revision Date: 5-1-24

SCADA Register Address	Description of Register Contents (Where a Modbus Coil is represented by a Bit in a Register)															
40001	Coil															
	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
	Spare	Level Probe Backup Active Calling Pump(s) to Run	Telemetry D Status Discrete Input Function 39	On Generator Status Discrete Input Function 6	All Pump Disable Status Discrete Input Function 7	Telemetry C Status Discrete Input Function 38	Telemetry B Status Discrete Input Function 37	Float Control/Active Calling Pump(s) to Run	Telemetry A Status Discrete Input Function 36	Telemetry N Status Discrete Input Function 48	Telemetry M Status Discrete Input Function 47	Telemetry L Status Discrete Input Function 46	Telemetry K Status Discrete Input Function 45	Telemetry J Status Discrete Input Function 44	Low Level Alarm Status From All Source	High Level Alarm Status From All Source
	Bit															
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
40002	Coil															
	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
	Spare	FLC & LFC - Reset	Spare	Relay ROX5 - Remote Control With Parameter F.35 = 0	Relay ROX4 - Remote Control With Parameter F.34 = 0	Relay ROX3 - Remote Control With Parameter F.33 = 0	Relay ROX2 - Remote Control With Parameter F.32 = 0	Relay ROX1 - Remote Control With Parameter F.31 = 0	Spare	Pump 3 ETM - Reset	Pump 2 ETM - Reset	Pump 1 ETM - Reset	Spare	Pump 3 Remote Control Force Pump On	Pump 2 Remote Control Force Pump On	Pump 1 Remote Control Force Pump On
	Bit															
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
40008	Coil															
	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113
	Low Level Alarm Float Status Discrete Input Functions 11, 13	Pump Control - 1st On Level Discrete Input Function 16	Pump Control - 2nd On Level Discrete Input Function 17	Pump Control - 3rd On Level Discrete Input Function 18	Spare	Spare	High Level Alarm Status From Level Probe Backup	Spare	High Level Alarm Float Status Discrete Input Functions 12, 14, 19	Pump Control - Off Level Discrete Input Function 15	On Generator Status Discrete Input Function 6	All Pump Disable Status Discrete Input Function 7	Telemetry H Status Discrete Input Function 43	Telemetry G Status Discrete Input Function 42	Telemetry F Status Discrete Input Function 41	Telemetry E Status Discrete Input Function 40
	Bit															
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
40009	Coil															
	144	143	142	141	140	139	138	137	136	135	134	133	132	131	130	129
	Spare	Flush Cycle Active Status Calling All Pumps to Run	Flush Cycle Active Status Waiting For Well to Fill Up	Flush Cycle Active Status	Stop Flush Cycle	Start Flush Cycle	Spare	Force Pump Alternation Group 2	Force Pump Alternation Group 1	Spare	Float Control Fault Status Float Out of Sequence	Spare	Pump Cutoff High-High Level Active Disabling Pump Operation	Pump Cutoff Low-Low Level Active Disabling Pump Operation	Low Level Alarm Status From All Source	High Level Alarm Status From All Source
	Bit															
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

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SCADA Register Address	Description of Register Contents (Where a Modbus Coil is represented by a Bit in a Register)																
40010	160	159	158	157	156	155	154	153	152	151	150	149	148	147	146	145	Coil
	Spare	Spare	Spare	Relay Output ROX5 Status	Relay Output ROX4 Status	Relay Output ROX3 Status	Relay Output ROX2 Status	Relay Output ROX1 Status	Spare	Pump 3 Remote Control Disable Pump Operation	Pump 2 Remote Control Disable Pump Operation	Pump 1 Remote Control Disable Pump Operation	Spare	Pump 3 Called to Run Status	Pump 2 Called to Run Status	Pump 1 Called to Run Status	Bit
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
40035	560	559	558	557	556	555	554	553	552	551	550	549	548	547	546	545	Coil
	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Discrete Input D8 Status	Discrete Input D7 Status	Discrete Input D6 Status	Discrete Input D5 Status	Discrete Input D4 Status	Discrete Input D3 Status	Discrete Input D2 Status	Discrete Input D1 Status	Bit
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
40036	576	575	574	573	572	571	570	569	568	567	566	565	564	563	562	561	Coil
	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Discrete Input D12 Status	Discrete Input D11 Status	Discrete Input D10 Status	Discrete Input D9 Status	Bit
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
40037	592	591	590	589	588	587	586	585	584	583	582	581	580	579	578	577	Coil
	Level Probe Electrode E10 Status	Level Probe Electrode E9 Status	Level Probe Electrode E8 Status	Level Probe Electrode E7 Status	Level Probe Electrode E6 Status	Level Probe Electrode E5 Status	Level Probe Electrode E4 Status	Level Probe Electrode E3 Status	Level Probe Electrode E2 Status	Level Probe Electrode E1 Status	Level Probe Fault Status Electrode Out of Sequence	Spare	Spare	Spare	Spare	Spare	Bit
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	

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SCADA Register Address	Description of Register Contents (Where a Modbus Coil is represented by a Bit in a Register)																
40038	608	607	606	605	604	603	602	601	600	599	598	597	596	595	594	593	Coil
	Spare	Spare	Spare	Spare	Spare	Pump 3 Available For Service Status	Pump 2 Available For Service Status	Pump 1 Available For Service Status	Spare	Pump 3 Start Counter Reset	Pump 2 Start Counter Reset	Pump 1 Start Counter Reset	Spare	Pump 3 Last Run Cycle Time Reset	Pump 2 Last Run Cycle Time Reset	Pump 1 Last Run Cycle Time Reset	Bit
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
40039	624	623	622	621	620	619	618	617	616	615	614	613	612	611	610	609	Coil
	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Flow Calculator - Active Determining Pump 3 Outflow Rate Status	Flow Calculator - Active Determining Pump 2 Outflow Rate Status	Flow Calculator - Active Determining Pump 1 Outflow Rate Status	Flow Calculator - Active Determining Latest Inflow Rate Status	Flow Calculator - Active Forcing On Another Pump(s) Status	Flow Calculator Level Rising Too Fast Status	Flow Calculator Pump Outflow Rate & Run Time Reset	Flow Calculator Inflow Totalizer Reset	Flow Calculator Start New Day	Bit
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
40040	640	639	638	637	636	635	634	633	632	631	630	629	628	627	626	625	Coil
	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Analog Output (AOX1) Cal Force 20mA Output	Analog Output (AOX1) Cal Force 4.0mA Output	Analog Level Meter ALM1 Negative Sign Display	Spare	Level Simulation - Probe Up Control	Level Simulation - Probe Down Control	Level Simulation - Probe On / Off Control	Level Simulation - Analog On / Off Control	Bit
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
40041	656	655	654	653	652	651	650	649	648	647	646	645	644	643	642	641	Coil
	Spare	Spare	Spare	Spare	Parameter Security Alert Suspicious Activity - ENET1	Parameter Security Alert Suspicious Activity - COM1	Spare	Spare	Spare	Spare	Security Code Entry Value Entered Status - SCE3	Security Code Entry Value Entered Status - SCE2	Security Code Entry Value Entered Status - SCE1	Spare	Parameter Write Access Unlock Status - ENET1	Parameter Write Access Unlock Status - COM1	Bit
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	

SCADA MODBUS REGISTERS

SCADA Register Address	Description of Register Contents (Where a Modbus Coil is represented by a Bit in a Register)																
40045	720	719	718	717	716	715	714	713	712	711	710	709	708	707	706	705	Coil
	Fault Code Register (FLC) Has Non-zero Fault Code	FLC & LFC - Reset	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare	
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	Bit

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SCADA Register Address	Description of Register Contents	
40003	Pump 1 Elapsed Time Meter (hours and 1/10 hours)	Range: 0.0 - 6553.5 hours
40004	Pump 2 Elapsed Time Meter (hours and 1/10 hours)	Range: 0.0 - 6553.5 hours
40005	Pump 3 Elapsed Time Meter (hours and 1/10 hours)	Range: 0.0 - 6553.5 hours
40011	Wet Well Level (Parameter Ld.11) This shows the Level Input selected on Parameter P.22.	
40012	Setup Parameter - 1st Pump On Level	
40013	Setup Parameter - 1st Pump Off Level	
40014	Setup Parameter - 2nd Pump On Level	
40015	Setup Parameter - 2nd Pump Off Level	
40016	Setup Parameter - 3rd Pump On Level	
40017	Setup Parameter - 3rd Pump Off Level	
40020	Setup Parameter - High Level Alarm	
40021	Setup Parameter - Low Level Alarm	
40022	Force Lead Pump Position - Group 1 (Parameter P.18) 0 = Normal Alternation X = Pump X as Lead	
40023	Current Lead Pump Position - Group 1 (Parameter Ad.1)	
40024	Pump Speed Reference (Parameter Pd.41) (Percent of Full Speed, 0.0 - 100.0%)	
40025	Remote Control Level Input (Parameter rcLn) Note: For Remote Control of the Level Input to be active Parameter P.22 must be set on "4".	
40026	Force Lead Pump Position - Group 2 (Parameter P.19) 0 = Normal Alternation X = Pump X as Lead	
40027	Current Lead Pump Position - Group 2 (Parameter Ad.2)	
40046	Sets the Speed of the Pumps that are Remotely Forced On by Setting Coils 17 - 20. (Parameter P.65) (Percent of Full Speed, 0 - 100%)	
40047	Fault Code (Parameter FLC)	
40048	Last Fault Code (Parameter LFC)	

SCADA MODBUS REGISTERS

SCADA Register Address	Description of Register Contents	
40061	Analog Input AIX1 (12-Bit 819 - 4095) 819 with 4.0mA Input and 4095 with 20mA Input (Parameter A.100)	
40066	Analog Output AOX1 (12-Bit 819 - 4095) 819 with 4.0mA Output and 4095 with 20mA Output (Parameter A.200)	
-	Flow Calculator - See Section K	
40100	Pump 1 Last Run Cycle Time (minutes and 1/10 minutes)	Range: 0.0 - 6553.5 minutes
40101	Pump 2 Last Run Cycle Time (minutes and 1/10 minutes)	Range: 0.0 - 6553.5 minutes
40102	Pump 3 Last Run Cycle Time (minutes and 1/10 minutes)	Range: 0.0 - 6553.5 minutes
40104	Pump 1 Start Counter (Number of Pump Starts)	Range: 0 - 65535 Starts
40105	Pump 2 Start Counter (Number of Pump Starts)	Range: 0 - 65535 Starts
40106	Pump 3 Start Counter (Number of Pump Starts)	Range: 0 - 65535 Starts