



Rack ATS AP44•• and AP44••A Modbus Register Map

ATS4g and ATS5g

Release Date: December 2024

TME45997A

NOTE on NPS Group Data Reading:

Fill Client ID as the querying ATS's display ID in the NPS group (Not applicable for AP44•• SKUs)

NOTE on Special Data :

1. Received data with a value of -1 (or 0xFFFF or 65535 in different format) for the register(s) means the item is not supported or does not exist.
2. Received data with a value 0 for the register(s) means the register is reserved for future purpose.

Modicon Standard Register Number	Absolute Starting Register Number, (Hexadecimal)	Absolute Starting Register Number, (Decimal)	Bit	Data Point	Length # Registers	Data Type	Scale (Divide Reading By)	Description	Permission	AP44••	AP44••A
ATS4g and ATS5g Data Attributes											
NMC About Parameters											
40001	0000	0		BM_VERSION	8	ASCII		Boot Monitor Version	ReadOnly	•	•
40009	0008	8		AOS_VERSION	8	ASCII		AOS Version	ReadOnly	•	•
40017	0010	16		APP_VERSION	8	ASCII		APP Version	ReadOnly	•	•
40025	0018	24		NMC_MODEL_NUMBER	10	ASCII		NMC Model Number	ReadOnly	•	•
40035	0022	34		NMC_SERIAL_NUMBER	8	ASCII		NMC Serial Number	ReadOnly	•	•
40043	002A	42		NMC_HARDWARE_REVISION	4	ASCII		NMC Hardware Revision	ReadOnly	•	•
40047	002E	46		NMC_MANUFACTURE_DATE	6	ASCII		NMC Manufacture Date	ReadOnly	•	•
40053	0034	52		BM_BUILD_DATE	10	ASCII		Boot Monitor Build date	ReadOnly	•	•
40063	003E	62		BM_BUILD_TIME	10	ASCII		Boot Monitor Build time	ReadOnly	•	•
40073	0048	72		AOS_BUILD_DATE	10	ASCII		AOS Build Date	ReadOnly	•	•
40083	0052	82		AOS_BUILD_TIME	10	ASCII		AOS Build Time	ReadOnly	•	•
40093	005C	92		APP_BUILD_DATE	10	ASCII		Application Build date	ReadOnly	•	•
40103	0066	102		APP_BUILD_TIME	10	ASCII		Application Build time	ReadOnly	•	•
40113	0070	112		NMC_DATABLOCK_RESERVED	100	Integer		Reserved for future use.	ReadOnly	•	•
ATS About Parameters											
40213	00D4	212		NAME	125	ASCII		Module Name	ReadOnly	•	•
40338	0151	337		LOCATION	125	ASCII		Module Location	ReadOnly	•	•
40463	01CE	462		ATS_STATUS	1	ENUM		Module Status 0 - NORMAL 1 - WARNING 2- CRITICAL	ReadOnly	•	•
40464	01CF	463		MODEL_NUMBER	10	ASCII		Model Number	ReadOnly	•	•
40474	01D9	473		MANUFACTURE_DATE	6	ASCII		Manufacture Date	ReadOnly	•	•
40480	01DF	479		SERIAL_NUMBER	8	ASCII		Serial Number	ReadOnly	•	•
40488	01E7	487		HARDWARE_REVISION	4	ASCII		Hardware revision	ReadOnly	•	•
40492	01EB	491		NUM_PHASES	1	Integer	1	No of Phases	ReadOnly	•	•
40493	01EC	492		NUM_CB	1	Integer	1	No of Circuit Breakers	ReadOnly	•	•
40494	01ED	493		NUM_OUTLETS	1	Integer	1	No of Outlets	ReadOnly	•	•
40495	01EE	494		CONTROLLER_FIRMWARE_VERSION	4	ASCII		Controller Firmware version	ReadOnly	•	•

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40499	01F2	498		CONTROLLER_FIRMWARE_DATE	6	ASCII		Controller Firmware date	ReadOnly	●	●
40505	01F8	504		CONTROLLER_DOWNLOADER_VERSION	4	ASCII		Controller Downloader Version	ReadOnly	●	✘
40509	01FC	508		ATS_DATABLOCK_RESERVED	100	Integer		Reserved for future use.	ReadOnly	●	●
ATS Status											
40609	0260	608		SOURCE_A	1	ENUM		Source A status 0 = NOT OK 1 = OK 2 = Selected	ReadOnly	●	●
40610	0261	609		SOURCE_B	1	ENUM		Source B status 0 = NOT OK 1 = OK 2 = Selected	ReadOnly	●	●
40611	0262	610		PREFERRED_SOURCE	1	ENUM		Preferred source status 0 = Source A 1 = Source B 2 = None	ReadOnly	●	●
40612	0263	611		SELECTED_SOURCE	1	ENUM		Selected source status 0 = Source A 1 = Source B	ReadOnly	●	●
40613	0264	612		SWITCH_OVER	1	ENUM		Source switch over status 0 = Possible 1 = Not Possible	ReadOnly	●	●
40614	0265	613		SOURCE_A_24VDC_POWER_SUPPLY	1	ENUM		Source A 24V DC Power supply status 0 = OK 1 = FAIL	ReadOnly	●	✘
40615	0266	614		SOURCE_B_24VDC_POWER_SUPPLY	1	ENUM		Source B 24V DC Power supply status 0 = OK 1 = FAIL	ReadOnly	●	✘
40616	0267	615		SOURCE_A_BOOST_POWER_SUPPLY	1	ENUM		Source A Boost Power supply status 0 = OK 1 = FAIL	ReadOnly	●	✘
40617	0268	616		SOURCE_B_BOOST_POWER_SUPPLY	1	ENUM		Source B Boost Power supply status 0 = OK 1 = FAIL	ReadOnly	●	✘
40618	0269	617		DC_POWER_SUPPLY_VOLTAGE_3.3V	1	ENUM		3.3V DC power supply voltage 0 = OK 1 = FAIL	ReadOnly	●	✘
40619	026A	618		DC_POWER_SUPPLY_VOLTAGE_1.0V	1	ENUM		1.0V DC power supply voltage 0 = OK 1 = FAIL	ReadOnly	●	✘
40620	026B	619		PHASE_SYNC	1	ENUM		Phase synchronization status 0 = Sync 1 = Out of sync	ReadOnly	●	●
40621	026C	620		FRONT_PANEL	1	ENUM		Front panel status 0 = Locked 1 = Unlocked	ReadOnly	●	●
40622	026D	621		REDUNDANCY_LOSS_EVENT_COUNT	1	Integer	1	The count of occurrence of redundancy loss since the last reset	ReadOnly	●	●
40623	026E	622		SOURCE_SWITCH_EVENT_COUNT	1	Integer	1	The count of occurrence of source switch since the last reset	ReadOnly	●	●
40624	026F	623		OVER_CURRENT_EVENT_COUNT	1	Integer	1	The count of occurrence of over current event since the last reset	ReadOnly	●	✘
40625	0270	624		SOURCE_PREFERENCE_CHANGE_EVENT_COUNT	1	Integer	1	The count of occurrence of source preference change since the last reset	ReadOnly	●	●

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40626	0271	625		SPIKE/DROP_OUT_EVENT_COUNT	1	Integer	1	The count of occurrence of Spike/Drop out event since the last reset	ReadOnly	•	•
40627	0272	626		SURGE/DROOP_EVENT_COUNT	1	Integer	1	The count of occurrence of Surge/Droop event since the last reset	ReadOnly	•	•
40628	0273	627		FREQUENCY_LOSS_EVENT_COUNT	1	Integer	1	The count of occurrence of frequency loss event since the last reset	ReadOnly	•	•
40629	0274	628		SOURCE_A_FREQUENCY	1	Integer	1	Input frequency of source A in Hz	ReadOnly	•	•
40630	0275	629		SOURCE_B_FREQUENCY	1	Integer	1	Input frequency of source B in HZ	ReadOnly	•	•
40631	0276	630		SOURCE_A_RMS_VOLTAGE	1	Integer	1	Input voltage of source A(Line to neutral) in volts	ReadOnly	•	•
40632	0277	631		SOURCE_B_RMS_VOLTAGE	1	Integer	1	Input voltage of source B(Line to neutral) in volts	ReadOnly	•	•
40633	0278	632		SOURCE_A_24VDC_POWER_SUPPLY_VOLTAGE	1	Integer	1	Measured value of the 24V power supply voltages of source A in volts	ReadOnly	•	•
40634	0279	633		SOURCE_B_24VDC_POWER_SUPPLY_VOLTAGE	1	Integer	1	Measured value of the 24V power supply voltages of source B in volts	ReadOnly	•	•
40635	027A	634		SOURCE_A_BOOST_POWER_SUPPLY_VOLTAGE	1	Integer	1	Measured value of the boost voltages of source A in volts	ReadOnly	•	•
40636	027B	635		SOURCE_B_BOOST_POWER_SUPPLY_VOLTAGE	1	Integer	1	Measured value of the boost voltages of source B in volts	ReadOnly	•	•
40637	027C	636		DC_POWER_SUPPLY_VOLTAGE_3.3V	1	Integer	10	Measured value of internal 3.3V voltage in volts	ReadOnly	•	•
40638	027D	637		DC_POWER_SUPPLY_VOLTAGE_1.0V	1	Integer	10	Measured value of internal 1.0V voltage in volts	ReadOnly	•	X
40639	027E	638		UNIT_STATUS_DATABLOCK_RESERVED	100	Integer		Reserved for future use.	ReadOnly	•	•
Device Configuration											
40739	02E2	738		SOURCE_A_NAME	20	ASCII		Source A Name	ReadOnly	•	•
40759	02F6	758		SOURCE_B_NAME	20	ASCII		Source B Name	ReadOnly	•	•
40779	030A	778		NOMINAL_LINE_FREQUENCY	1	Integer	1	Nominal line frequency of the ATS in HZ	ReadOnly	•	•
40780	030B	779		NOMINAL_LINE_VOLTAGE	1	Integer	1	Nominal source line voltage of the device in volts	ReadOnly	•	•
40781	030C	780		FREQUENCY_DEVIATION	1	Integer	1	Range of acceptable frequency fluctuation to the nominal line frequency 3Hz above or below the normal frequency, 5Hz above or below the normal frequency, 10Hz above or below the normal frequency	ReadOnly	•	•
40782	030D	781		VOLTAGE_SENSITIVITY	1	ENUM		Sensitivity to change in voltage 0 = High 1 = Low	ReadOnly	•	•
40783	030E	782		VOLTAGE_TRANSFER_RANGE	1	ENUM		Range of acceptable voltage from power source 0 = Wide 1 = Medium 2 = narrow	ReadOnly	•	•
40784	030F	783		NARROW_VOLTAGE_TRANSFER_LIMIT	1	Integer	1	Voltage transfer limit is set to narrow in volts	ReadOnly	•	•
40785	0310	784		MEDIUM_VOLTAGE_TRANSFER_LIMIT	1	Integer	1	Voltage transfer limit is set to medium in volts	ReadOnly	•	•
40786	0311	785		WIDE_VOLTAGE_TRANSFER_LIMIT	1	Integer	1	Voltage transfer limit is set to wide in volts	ReadOnly	•	•
40787	0312	786		RATED_LOAD	1	Integer	1	Rated Current in amps	ReadOnly	•	•

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40788	0313	787		OUTPUT_APPARENT_POWER	1	Integer	100	Total Output apparent power measured in kVA	ReadOnly	•	•
40789	0314	788		DEV_CONFIG_RESERVED	100	Integer		Reserved for future use.	ReadOnly	•	•
Load Configuration Phase1 (Bank 1)											
Note: If no banks are present, Bank 1 parameters will read -1											
40889	0378	888		LOAD_STATE_P1_B1	1	ENUM		Load Status 1 = Low Load 2 = Normal Load 3 = Near Overload 4 = Overload	ReadOnly	•	•
40890	0379	889		OUTPUT_CURRENT_P1_B1	1	Integer	10	Device output current in amps	ReadOnly	•	•
40891	037A	890		PEAK_CURRENT_P1_B1	1	Integer	10	Peak load current in amps	ReadOnly	•	•
40892	037B	891		PEAK_CURRENT_CAPTURE_TIME_P1_B1	11	ASCII		Peak Current Capture Time MM/dd/yyyy hh:mm:ss, 11/02/2023 10:00:00	ReadOnly	•	•
40903	0386	902		LOW_LOAD_ALARM_THRESHOLD_P1_B1	1	Integer	1	Threshold for Low Load Warning in amps	ReadOnly	•	•
40904	0387	903		NEAR_OVERLOAD_ALARM_THRESHOLD_P1_B1	1	Integer	1	Threshold for Near overload Warning in amps	ReadOnly	•	•
40905	0388	904		OVERLOAD_ALARM_THRESHOLD_P1_B1	1	Integer	1	Threshold for overload Warning in amps	ReadOnly	•	•
40906	0389	905		DEV_CONFIG_P1_B1_RESERVED	100	Integer		Reserved for future use.	ReadOnly	•	•
Load Configuration Phase1 (Bank 2)											
Note: If no banks are present, Bank 2 parameters will read -1											
41006	03ED	1005		LOAD_STATE_P1_B2	1	ENUM		Load Status 1 = Low Load 2 = Normal Load 3 = Near Overload 4 = Overload	ReadOnly	•	•
41007	03EE	1006		OUTPUT_CURRENT_P1_B2	1	Integer	10	Device output current in amps	ReadOnly	•	•
41008	03EF	1007		PEAK_CURRENT_P1_B2	1	Integer	10	Peak load current in amps	ReadOnly	•	•
41009	03F0	1008		PEAK_CURRENT_CAPTURE_TIME_P1_B2	11	ASCII		Peak Current Capture Time MM/dd/yyyy hh:mm:ss, 11/02/2023 10:00:00	ReadOnly	•	•
41020	03FB	1019		LOW_LOAD_ALARM_THRESHOLD_P1_B2	1	Integer	1	Threshold for Low Load Warning in amps	ReadOnly	•	•
41021	03FC	1020		NEAR_OVERLOAD_ALARM_THRESHOLD_P1_B2	1	Integer	1	Threshold for Near overload Warning in amps	ReadOnly	•	•
41022	03FD	1021		OVERLOAD_ALARM_THRESHOLD_P1_B2	1	Integer	1	Threshold for overload Warning in amps	ReadOnly	•	•
41023	03FE	1022		DEV_CONFIG_P1_B2_RESERVED	100	Integer		Reserved for future use.	ReadOnly	•	•
Load Configuration Phase 1 for total											
41123	0462	1122		LOAD_STATE_P1_TOTAL	1	ENUM		Load Status 1 = Low Load 2 = Normal Load 3 = Near Overload 4 = Overload	ReadOnly	•	•
41124	0463	1123		OUTPUT_CURRENT_P1_TOTAL	1	Integer	10	Device output current in amps	ReadOnly	•	•
41125	0464	1124		PEAK_CURRENT_P1_TOTAL	1	Integer	10	Peak load current in amps	ReadOnly	•	•
41126	0465	1125		PEAK_CURRENT_START_TIME_P1_TOTAL	11	ASCII		Output Peak Current Reset Time	ReadOnly	•	•
41137	0470	1136		PEAK_CURRENT_CAPTURE_TIME_P1_TOTAL	11	ASCII		Peak Current Capture Time	ReadOnly	•	•
41148	047B	1147		LOW_LOAD_ALARM_THRESHOLD_P1_TOTAL	1	Integer	1	Threshold for Low Load Warning in amps	ReadOnly	•	•

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41149	047C	1148		NEAR_OVERLOAD_ALARM_THRESHOLD_P1_TOTAL	1	Integer	1	Threshold for Near overload Warning in amps	ReadOnly	•	•
41150	047D	1149		OVERLOAD_ALARM_THRESHOLD_P1_TOTAL	1	Integer	1	Threshold for overload Warning in amps	ReadOnly	•	•
41151	047E	1150		DEV_CONFIG_P1_TOTAL_RESERVED	824	Integer		Reserved for future use.	ReadOnly	•	•
ALARMS											
Note: (0 - Alarm not present, 1 - Alarm Present)											
41975	07B6	1974		LOST_REDUNDANCY	1	BOOLEAN		Automatic Transfer Switch: ATS has lost redundancy.	ReadOnly	•	•
41976	07B7	1975		SOURCE_FAULT_SOURCE_A	1	BOOLEAN		Automatic Transfer Switch: Source fault exists on source A	ReadOnly	•	•
41977	07B8	1976		SOURCE_FAULT_SOURCE_B	1	BOOLEAN		Automatic Transfer Switch: Source fault exists on source B	ReadOnly	•	•
41978	07B9	1977		OVER_VOLTAGE_VIOLATION_A	1	BOOLEAN		Automatic Transfer Switch: Over voltage violation on source A	ReadOnly	•	•
41979	07BA	1978		OVER_VOLTAGE_VIOLATION_B	1	BOOLEAN		Automatic Transfer Switch: Over voltage violation on source B	ReadOnly	•	•
41980	07BB	1979		UNDER_VOLTAGE_VIOLATION_A	1	BOOLEAN		Automatic Transfer Switch: Under voltage violation on source A	ReadOnly	•	•
41981	07BC	1980		UNDER_VOLTAGE_VIOLATION_B	1	BOOLEAN		Automatic Transfer Switch: Under voltage violation on source B	ReadOnly	•	•
41982	07BD	1981		OVER_FREQUENCY_VIOLATION_A	1	BOOLEAN		Automatic Transfer Switch: Over frequency violation on source A	ReadOnly	•	•
41983	07BE	1982		OVER_FREQUENCY_VIOLATION_B	1	BOOLEAN		Automatic Transfer Switch: Over frequency violation on source B	ReadOnly	•	•
41984	07BF	1983		UNDER_FREQUENCY_VIOLATION_A	1	BOOLEAN		Automatic Transfer Switch: Under frequency violation on source A	ReadOnly	•	•
41985	07C0	1984		UNDER_FREQUENCY_VIOLATION_B	1	BOOLEAN		Automatic Transfer Switch: Under frequency violation on source B	ReadOnly	•	•
41986	07C1	1985		SWITCH_RELAY_MALFUNCTIONED	1	BOOLEAN		Automatic Transfer Switch: Switch relay malfunctioned	ReadOnly	•	•
41987	07C2	1986		OPEN_FUSE_SOURCE_A	1	BOOLEAN		Automatic Transfer Switch: Possible open fuse source A	ReadOnly	•	•
41988	07C3	1987		OPEN_FUSE_SOURCE_B	1	BOOLEAN		Automatic Transfer Switch: Possible open fuse source B	ReadOnly	•	•
41989	07C4	1988		ALARMS_RESERVED	100	Integer		Reserved for future use.	ReadOnly	•	•
SENSOR											
Note: Not applicable for AP44**											
42089	0828	2088		SENSOR_TYPE	1	Integer	1	Universal Sensor Type 0: Temperature Sensor 1: Smoke Detector 2: Temperature/Humidity Sensor 3: Door Contact Sensor 4: Vibration Sensor 7: Dry Contact Sensor 8: Analog Voltage Sensor 9: Dry Contact I/O Accessory 14: Rope Leak Sensor 15: Spot Leak Sensor 17: Unknown Sensor 18: Not Connected	ReadOnly	X	•
42090	0829	2089		TEMP_ALARM_GEN	1	Integer	1	Temperature Alarm Generation status 0 - Disabled, no alarm triggered 1 - Enabled, alarm triggered when violating thresholds	ReadOnly	X	•

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42091	082A	2090		TEMP_SENSOR_STATE	1	Integer	1	Universal Sensor Temperature State 3: Normal 4: Over High Temperature 5: Over Maximum Temperature	ReadOnly	X	●
42092	082B	2091		TEMP_MEASURED	1	Integer	10	The most recent temperature measured in Degree C	ReadOnly	X	●
42093	082C	2092		TEMP_MAX	1	Integer	1	Temperature Maximum Threshold	ReadOnly	X	●
42094	082D	2093		TEMP_HIGH	1	Integer	1	Temperature High Threshold	ReadOnly	X	●
42095	082E	2094		TEMP_HYS	1	Integer	1	Temperature Hysteresis	ReadOnly	X	●
42096	082F	2095		TEMP_PEAK	1	Integer	10	Peak Temperature	ReadOnly	X	●
42097	0830	2096		PEAK_TEMP_START_TIME	11	ASCII		The date and time that the peak temperature was recorded Format is like MM/dd/yyyy hh:mm:ss, 11/02/2023 10:00:00	ReadOnly	X	●
42108	083B	2107		PEAK_TEMP_RESET_TIME	11	ASCII		The date and time of the most recent peak temperature reset Format is like MM/dd/yyyy hh:mm:ss, 11/02/2023 10:00:00	ReadOnly	X	●
42119	0846	2118		HUM_ALARM_GEN	1	Integer	1	Humidity Alarm Generation status 0 - Disabled, no alarm triggered 1 - Enabled, alarm triggered when violating thresholds	ReadOnly	X	●
42120	0847	2119		HUM_SESNOR_STATE	1	Integer	1	Universal Sensor Humidity State 1: Below Minimum Humidity 2: Below Low Humidity 3: Normal	ReadOnly	X	●
42121	0848	2120		HUM_MEASURED	1	Integer	1	The most recent humidity measured in %RH	ReadOnly	X	●
42122	0849	2121		HUM_LOW	1	Integer	1	Humidity Low Threshold	ReadOnly	X	●
42123	084A	2122		HUM_MIN	1	Integer	1	Humidity Minimum Threshold	ReadOnly	X	●
42124	084B	2123		HUM_HYS	1	Integer	1	Humidity Hysteresis	ReadOnly	X	●
42125	084C	2124		SENSOR_RESERVED	100	Integer	1	Reserved for future use.	ReadOnly	X	●
NPS											
Note: Not applicable for AP44**											
42225	08B0	2224		DISPLAY_ID	1	Integer	1	Display ID	ReadOnly	X	●
42226	08B1	2225		NPS_RESERVED	100	Integer		Reserved	ReadOnly	X	●