



Weather MicroServer with Modbus TCP/IP Slave Interface or Modbus/RTU over COM2 (RS-485)

32-Bit Registers

All data accessed via (read only) Input Registers [Modbus Function Code 3]

Data type **Long** = Signed 32 bit value

Data type **Float** = 32 bit floating point value

Node 1

Measurement	Description	Starting Modbus Offset	Columbia data type	Modbus Address	OPC data type
umtLastMeasTime	Time of last measurement	1	posix time	30001	Long
	Last measurement time stamp	3	posix time	30003	Long
umtWindSpeed	Wind speed	5	float	30005	Float
	Wind speed time stamp	7	posix time	30007	Long
umtRawWindDir	Wind direction - unadjusted	9	float	30009	Float
	Wind direction - unadjusted time stamp	11	posix time	30011	Long
umtAdjWindDir	Wind direction	13	float	30013	Float
	Wind direction time stamp	15	posix time	30015	Long
umtRelHumidity	Relative humidity	17	float	30017	Float
	Relative humidity time stamp	19	posix time	30019	Long
umtRawBaromPress	Barometric pressure - unadjusted	21	float	30021	Float
	Barometric pressure - unadjusted time stamp	23	posix time	30023	Long
umtAdjBaromPress	Barometric pressure	25	float	30025	Float
	Barometric pressure time stamp	27	posix time	30027	Long
umtTrueNorthOffset	Electronics Compass wind direction offset	29	float	30029	Float
	Electronics Compass wind direction offset time stamp	31	posix time	30031	Long
umtLastRain	Last reported time of rainfall	33	float	30033	Float
	Last reported time of rainfall time stamp	35	posix time	30035	Long
umtTemp1	Air temperature	37	float	30037	Float
	Air temperature time stamp	39	posix time	30039	Long
umtWindChill	Wind chill	41	float	30041	Float
	Wind chill time stamp	43	posix time	30043	Long
umtHeatIndex	Heat index	45	float	30045	Float
	Heat index time stamp	47	posix time	30047	Long
umtDewPoint	Dew Point	49	float	30049	Float
	Dew Point time stamp	51	posix time	30051	Long
umtDensityAltitude	Density Altitude	53	float	30053	Float

	Density Altitude time stamp	55	posix time	30055	Long
umt3SecRollAvgWindSpeed	3-sec avg of wind speed	57	float	30057	Float
	3-sec avg of wind speed time stamp	59	posix time	30059	Long
umt3SecRollAvgWindDir	3-sec avg of wind direction	61	float	30061	Float
	3-sec avg of wind direction time stamp	63	posix time	30063	Long
umt2MinRollAvgWindSpeed	2-min avg of wind speed	65	float	30065	Float
	2-min avg of wind speed time stamp	67	posix time	30067	Long
umt2MinRollAvgWindDir	2-min avg of adjusted wind direction	69	float	30069	Float
	2-min avg of adjusted wind direction time stamp	71	posix time	30071	Long
umt10MinRollAvgWindSpeed	10-min avg of wind speed	73	float	30073	Float
	10-min avg of wind speed time stamp	75	posix time	30075	Long
umt10MinRollAvgWindDir	10-min avg of adjusted wind direction	77	float	30077	Float
	10-min avg of adjusted wind direction time stamp	79	posix time	30079	Long
umt10MinWindGustDir	10-min wind direction at max wind speed	81	float	30081	Float
	10-min wind direction at max wind speed time stamp	83	posix time	30083	Long
umt10MinWindGustSpeed	10-min max wind speed	85	float	30085	Float
	10-min max wind speed time stamp	87	posix time	30087	Long
umt10MinWindGustTime	Time of 10-min max wind speed	89	posix time	30089	Long
	Time of 10-min max wind speed time stamp	91	posix time	30091	Long
umt60MinWindGustDir	60-min wind direction at max wind speed	93	float	30093	Float
	60-min wind direction at max wind speed time stamp	95	posix time	30095	Long
umt60MinWindGustSpeed	60-min max wind speed	97	float	30097	Float
	60-min max wind speed time stamp	99	posix time	30099	Long
umt60MinWindGustTime	Gust time stamp during the last 60 min	101	posix time	30101	Long
	Gust time stamp during the last 60 min time stamp	103	posix time	30103	Long
umtRainToday	Rain for the day	105	float	30105	Float
	Rain for the day time stamp	107	posix time	30107	Long
umtRainThisWeek	Rain for the week	109	float	30109	Float
	Rain for the week time stamp	111	posix time	30111	Long
umtRainThisMonth	Rain for the month	113	float	30113	Float
	Rain for the month time stamp	115	posix time	30115	Long
umtRainThisYear	Rain for the year	117	float	30117	Float
	Rain for the year time stamp	119	posix time	30119	Long
umtRainRate	Rain rate	121	float	30121	Float
	Rain rate time stamp	123	posix time	30123	Long
umtHailToday	Hail today	125	float	30125	Float
	Hail today time stamp	127	posix time	30127	Long
umtLastHail	Last hail	129	float	30129	Float
	Last hail time stamp	131	posix time	30131	Long
umtHailRate	Hail rate	133	float	30133	Float
	Hail rate time stamp	135	posix time	30135	Long
umtWetBulbGlobeTemp	Wet bulb globe temperataure	137	float	30137	Float

	Wet bulb globe temperataure time stamp	139	posix time	30139	Long
umtSaturatedVaporPressure	Saturated vapor pressure	141	float	30141	Float
	Saturated vapor pressure time stamp	143	posix time	30143	Long
umtVaporPressure	Vapor pressure	145	float	30145	Float
	Vapor pressure time stamp	147	posix time	30147	Long
umtDryAirPressure	Dry air pressure	149	float	30149	Float
	Dry air pressure time stamp	151	posix time	30151	Long
umtDryAirDensity	Dry air density	153	float	30153	Float
	Dry air density time stamp	155	posix time	30155	Long
umtAbsoluteHumidity	Absolute humidity	157	float	30157	Float
	Absolute humidity time stamp	159	posix time	30159	Long
umtAirDensityRatio	Air density ratio	161	float	30161	Float
	Air density ratio time stamp	163	posix time	30163	Long
umtAdjustedAltitude	Adjusted altitude	165	float	30165	Float
	Adjusted altitude time stamp	167	posix time	30167	Long
umtSAECorrectionFactor	SAE correction factor	169	float	30169	Float
	SAE correction factor time stamp	171	posix time	30171	Long
umtWetAirDensity	Wet air density	173	float	30173	Float
	Wet air density time stamp	175	posix time	30175	Long
umtWetBulbTemp	Wet bulb temperature	177	float	30177	Float
	Wet bulb temperature time stamp	179	posix time	30179	Long
umtExtinctionCoefficient	Visibility extinction coefficient	181	float	30181	Float
	Visibility extinction coefficient time stamp	183	posix time	30183	Long
umtVisibility	Visibility in miles	185	float	30185	Float
	Visibility time stamp	187	posix time	30187	Long
umtLux	Visibility sensor light meter reading	189	float	30189	Float
	Light meter reading time stamp	191	posix time	30191	Long
umtDayNight	Visibility sensor day/night indicator	193	float	30193	Float
	Day/Night indicator time stamp	195	posix time	30195	Long
umtWindSpeed_2	Wind speed - 2nd sensor	197	float	30197	Float
	Wind speed - 2nd sensor time stamp	199	posix time	30199	Long
umtRawWindDir_2	Wind direction - 2nd sensor	201	float	30201	Float
	Wind direction time stamp - 2nd sensor	203	posix time	30203	Long
umt3SecRollAvgWindSpeed_2	3-sec avg of wind speed - 2nd sensor	205	float	30205	Float
	3-sec avg of wind speed time stamp - 2nd sensor	207	posix time	30207	Long
umt3SecRollAvgWindDir_2	3-sec avg of wind direction - 2nd sensor	209	float	30209	Float
	3-sec avg of wind direction time stamp - 2nd sensor	211	posix time	30211	Long
umt2MinRollAvgWindSpeed_2	2-min avg of wind speed - 2nd sensor	213	float	30213	Float
	2-min avg of wind speed time stamp - 2nd sensor	215	posix time	30215	Long
umt2MinRollAvgWindDir_2	2-min avg of wind direction - 2nd sensor	217	float	30217	Float
	2-min avg of wind direction time stamp - 2nd sensor	219	posix time	30219	Long
umt10MinRollAvgWindSpeed_2	10-min avg of wind speed - 2nd sensor	221	float	30221	Float

umt10MinRollAvgWindDir_2	10-min avg of wind speed time stamp - 2nd sensor	223	posix time	30223	Long
	10-min avg of wind direction - 2nd sensor	225	float	30225	Float
umt60MinWindGustDir_2	10-min avg of wind direction time stamp - 2nd sensor	227	posix time	30227	Long
	60-min wind direction at max wind speed - 2nd sensor	229	float	30229	Float
umt60MinWindGustSpeed_2	60-min wind direction at max wind speed time stamp - 2nd sensor	231	posix time	30231	Long
	60-min max wind speed - 2nd sensor	233	float	30233	Float
umt60MinWindGustTime_2	60-min max wind speed time stamp- 2nd sensor	235	posix time	30235	Long
	Gust time stamp during the last 60 min - 2nd sensor	237	float	30237	Float
umt10MinWindGustDir_2	Gust time stamp during the last 60 min time stamp - 2nd sensor	239	posix time	30239	Long
	10-min wind direction at max wind speed - 2nd sensor	241	float	30241	Float
umt10MinWindGustSpeed_2	10-min wind direction at max wind speed time stamp - 2nd sensor	243	posix time	30243	Long
	10-min max wind speed - 2nd sensor	245	float	30245	Float
umt10MinWindGustTime_2	10-min max wind speed time stamp- 2nd sensor	247	posix time	30247	Long
	Gust time stamp during the last 10 min - 2nd sensor	249	float	30249	Float
umtTemp2	Gust time stamp during the last 10 min time stamp - 2nd sensor	251	posix time	30251	Long
	Temperature 2	253	float	30253	Float
umtTemp3	Temperature 2 time stamp	255	posix time	30255	Long
	Temperature 3	257	float	30257	Float
umtTemp4	Temperature 3 time stamp	259	posix time	30259	Long
	Temperature 4	261	float	30261	Float
umtSolarRadiation	Temperature 4 time stamp	263	posix time	30263	Long
	Solar Radiation	265	float	30265	Float
umtSolarRadiation_2	Solar Radiation time stamp	267	posix time	30267	Long
	Solar Radiation 2	269	float	30269	Float
umtSolarRadiation_3	Solar Radiation 2 time stamp	271	posix time	30271	Long
	Solar Radiation 3	273	float	30273	Float
umtSolarRadiation_4	Solar Radiation 3 time stamp	275	posix time	30275	Long
	Solar Radiation 4	277	float	30277	Float
umtRainLastHr	Solar Radiation 4 time stamp	279	posix time	30279	Long
	Rain Last Hour	281	float	30281	Float
	Rain Last Hour time stamp	283	posix time	30283	Long

Notes:

For each of the available measurements, the two registers immediately following the value contain the posix time value of the time that value was last updated. For example: the wind speed value is stored in registers 5 and 6. The last update timestamp is stored in registers 7 and 8 and is a 32-bit integer value.

The posix time values are 32-bit integers; All the values are Modbus input registers.

16-Bit Registers

The 16-bit unsigned scaled integer registers

Data type: Unsigned scaled integers

Parameter value = (unsigned 16-bit integer + Offset)/Factor

Measurement	Description	Register	Min	Max	factor	offset
umtLastMeasTime		32001	na			
umtWindSpeed	Wind speed	32002	0	160	368	0
umtRawWindDir	Raw wind direction	32003	0	360	163	0
umtAdjWindDir	Adjusted wind direction	32004	0	360	163	0
umtRelHumidity	Relative humidity	32005	0	100	590	0
umtRawBaromPress	Raw barometric pressure	32006	15	35	2950	44250
umtAdjBaromPress,	Adjusted barometric pressure	32007	15	35	2950	44250
umtTrueNorthOffset		32008	na			
umtLastRain		32009	na			
umtTemp1	Temperature 1	32010	-70	160	256	-17920
umtWindChill	Wind chill	32011	-70	160	256	-17920
umtHeatIndex	Heat index	32012	-70	160	256	-17920
umtDewPoint	Dew point	32013	-70	160	256	-17920
umtDensityAltitude		32014	na			
umt3SecRollAvgWindSpeed	3-sec avg of wind speed	32015	0	160	368	0
umt3SecRollAvgWindDir	3-sec avg of wind direction	32016	0	360	163	0
umt2MinRollAvgWindSpeed	2-min avg of wind speed	32017	0	160	368	0
umt2MinRollAvgWindDir	2-min avg of adjusted wind direction	32018	0	360	163	0
umt10MinRollAvgWindSpeed	10-min avg of wind speed	32019	0	160	368	0
umt10MinRollAvgWindDir	10-min avg of adjusted wind direction	32020	0	360	163	0
umt10MinWindGustDir	10-min wind direction at max wind speed	32021	0	360	163	0
umt10MinWindGustSpeed	10-min max wind speed	32022	0	160	368	0
umt10MinWindGustTime		32023	na			
umt60MinWindGustDir	60-min wind direction at max wind speed	32024	0	360	163	0
umt60MinWindGustSpeed	60-min max wind speed	32025	0	160	368	0
umt60MinWindGustTime		32026	na			
umtRainToday	Rain for the day	32027	0	500	118	0
umtRainThisWeek	Rain for the week	32028	0	500	118	0
umtRainThisMonth	Rain for the month	32029	0	500	118	0
umtRainThisYear	Rain for the year	32030	0	500	118	0
umtRainRate	Rain rate	32031	0	20	2950	0
umtHailToday		32032	na			
umtLastHail		32033	na			
umtHailRate		32034	na			

umtWetBulbGlobeTemp	Wet bulb globe temperature	32035	-70	160	256	-17920
umtSaturatedVaporPressure		32036	na			
umtVaporPressure		32037	na			
umtDryAirPressure		32038	na			
umtDryAirDensity		32039	na			
umtAbsoluteHumidity		32040	na			
umtAirDensityRatio		32041	na			
umtAdjustedAltitude		32042	na			
umtSAECorrectionFactor		32043	na			
umtWetAirDensity		32044	na			
umtWetBulbTemp	Wet bulb Temperature	32045	-70	160	256	-17920
umtExtinctionCoefficient		32046	na			
umtVisibility		32047	na			
umtLux		32048	na			
umtDayNight		32049	na			
umtWindSpeed_2	Wind speed - 2nd sensor	32050	0	160	368	0
umtRawWindDir_2		32051	0	360	163	0
umt3SecRollAvgWindSpeed_2	3-sec avg of wind speed - 2nd sensor	32052	0	160	368	0
umt3SecRollAvgWindDir_2	3-sec avg of wind direction - 2nd sensor	32053	0	360	163	0
umt2MinRollAvgWindSpeed_2	2-min avg of wind speed - 2nd sensor	32054	0	160	368	0
umt2MinRollAvgWindDir_2	2-min avg of wind direction - 2nd sensor	32055	0	360	163	0
umt10MinRollAvgWindSpeed_2	10-min avg of wind speed - 2nd sensor	32056	0	160	368	0
umt10MinRollAvgWindDir_2	10-min avg of wind direction - 2nd sensor	32057	0	360	163	0
umt60MinWindGustDir_2	60-min wind direction at max wind speed - 2nd sensor	32058	0	360	163	0
umt60MinWindGustSpeed_2	60-min max wind speed - 2nd sensor	32059	0	160	368	0
umt60MinWindGustTime_2	Gust time stamp during the last 60 min - 2nd sensor	32060	na			
umt10MinWindGustDir_2	10-min wind direction at max wind speed - 2nd sensor	32061	0	360	163	0
umt10MinWindGustSpeed_2	10-min max wind speed - 2nd sensor	32062	0	160	368	0
umt10MinWindGustTime_2	Gust time stamp during the last 10 min - 2nd sensor	32063	na			
umtTemp2	Temperature 2	32064	-70	160	256	-17920
umtTemp3	Temperature 3	32065	-70	160	256	-17920
umtTemp4	Temperature 4	32066	-70	160	256	-17920
umtSolarRadiation	Solar Radiation	32067	0	2000	29	0
umtSolarRadiation_2	Solar Radiation 2	32068	0	2000	29	0
umtSolarRadiation_3	Solar Radiation 3	32069	0	2000	29	0
umtSolarRadiation_4	Solar Radiation 4	32070	0	2000	29	0
umtRainLastHr	Rain Last Hour	32071	0	40	1475	0