Modbus Register
B7000 TOC/TN/TP

V1.1

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B7000 TOC/TN/TP V1.1

Name	Register	Data Type	Length	Access Mode	Discrete Range	Min / Max	Description
find complete register list on the next pages	0		1				for B7000 Software min. V02.13.00

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Modbus Register
B7000 BioTector TOC TN TP Analyzer
V 1.1

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B7000 BioTector TOC TN TP Analyzer V 1.1
REACTION RESULTS Registers

NAME	REGISTER	DATA TYPE	LENGTH	ACCESS MODE	MIN/MAX	DESCRIPTION
STREAM_1_RLOG_TIC	40001 40002	Float	2	R	< -1.0e6,1.0e6 >	Stream 1: TIC Last on-line TIC reading Note: reading this register updates the value in its _TIME register.
STREAM_1_RLOG_TOC	40003 40004	Float	2	R	< -1.0e6,1.0e6 >	Stream 1: TOC Last on-line TOC reading Note: reading this register updates the value in its _TIME register.
STREAM_1_RLOG_TC	40005 40006	Float	2	R	< -1.0e6,1.0e6 >	Stream 1: TC Last on-line TC reading Note: reading this register updates the value in its _TIME register.
STREAM_1_RLOG_VOC	40007 40008	Float	2	R	< -1.0e6,1.0e6 >	Stream 1: VOC Last on-line VOC reading Note: reading this register updates the value in its _TIME register.
STREAM_1_RLOG_TN	40009 40010	Float	2	R	< -1.0e6,1.0e6 >	Stream 1: TN Last on-line TN reading Note: reading this register updates the value in its _TIME register.
STREAM_1_RLOG_TP	40011 40012	Float	2	R	< -1.0e6,1.0e6 >	Stream 1: TP Last on-line TP reading Note: reading this register updates the value in its _TIME register.
STREAM_1_RLOG_COD	40013 40014	Float	2	R	< -1.0e6,1.0e6 >	Stream 1: COD Last on-line COD reading Note: reading this register updates the value in its _TIME register.
STREAM_1_RLOG_BOD	40015 40016	Float	2	R	< -1.0e6,1.0e6 >	Stream 1: BOD Last on-line BOD reading Note: reading this register updates the value in its _TIME register.
STREAM_1_RLOG_TPR	40025 40026	Float	2	R	< -1.0e6,1.0e6 >	Stream 1: TPR Last on-line TPR reading Note: reading this register updates the value in its _TIME register.
STREAM_2_RLOG_TIC	40029 40030	Float	2	R	< -1.0e6,1.0e6 >	Stream 2: TIC Last on-line TIC reading Note: reading this register updates the value in its _TIME register.
STREAM_2_RLOG_TOC	40031 40032	Float	2	R	< -1.0e6,1.0e6 >	Stream 2: TOC Last on-line TOC reading Note: reading this register updates the value in its _TIME register.

NAME	REGISTER	DATA TYPE	LENGTH	ACCESS MODE	MIN/MAX	DESCRIPTION
STREAM_2_RLOG_TC	40033 40034	Float	2	R	< -1.0e6,1.0e6 >	Stream 2: TC Last on-line TC reading Note: reading this register updates the value in its _TIME register.
STREAM_2_RLOG_VOC	40035 40036	Float	2	R	< -1.0e6,1.0e6 >	Stream 2: VOC Last on-line VOC reading Note: reading this register updates the value in its _TIME register.
STREAM_2_RLOG_TN	40037 40038	Float	2	R	< -1.0e6,1.0e6 >	Stream 2: TN Last on-line TN reading Note: reading this register updates the value in its _TIME register.
STREAM_2_RLOG_TP	40039 40040	Float	2	R	< -1.0e6,1.0e6 >	Stream 2: TP Last on-line TP reading Note: reading this register updates the value in its _TIME register.
STREAM_2_RLOG_COD	40041 40042	Float	2	R	< -1.0e6,1.0e6 >	Stream 2: COD Last on-line COD reading Note: reading this register updates the value in its _TIME register.
STREAM_2_RLOG_BOD	40043 40044	Float	2	R	< -1.0e6,1.0e6 >	Stream 2: BOD Last on-line BOD reading Note: reading this register updates the value in its _TIME register.
STREAM_2_RLOG_TPR	40053 40054	Float	2	R	< -1.0e6,1.0e6 >	Stream 2: TPR Last on-line TPR reading Note: reading this register updates the value in its _TIME register.
STREAM_3_RLOG_TIC	40057 40058	Float	2	R	< -1.0e6,1.0e6 >	Stream 3: TIC Last on-line TIC reading Note: reading this register updates the value in its _TIME register.
STREAM_3_RLOG_TOC	40059 40060	Float	2	R	< -1.0e6,1.0e6 >	Stream 3: TOC Last on-line TOC reading Note: reading this register updates the value in its _TIME register.
STREAM_3_RLOG_TC	40061 40062	Float	2	R	< -1.0e6,1.0e6 >	Stream 3: TC Last on-line TC reading Note: reading this register updates the value in its _TIME register.
STREAM_3_RLOG_VOC	40063 40064	Float	2	R	< -1.0e6,1.0e6 >	Stream 3: VOC Last on-line VOC reading Note: reading this register updates the value in its _TIME register.
STREAM_3_RLOG_TN	40065 40066	Float	2	R	< -1.0e6,1.0e6 >	Stream 3: TN Last on-line TN reading Note: reading this register updates the value in its _TIME register.
STREAM_3_RLOG_TP	40067 40068	Float	2	R	< -1.0e6,1.0e6 >	Stream 3: TP Last on-line TP reading Note: reading this register updates the value in its _TIME register.

NAME	REGISTER	DATA TYPE	LENGTH	ACCESS MODE	MIN/MAX	DESCRIPTION
STREAM_3_RLOG_COD	40069 40070	Float	2	R	< -1.0e6,1.0e6 >	Stream 3: COD Last on-line COD reading Note: reading this register updates the value in its _TIME register.
STREAM_3_RLOG_BOD	40071 40072	Float	2	R	< -1.0e6,1.0e6 >	Stream 3: BOD Last on-line BOD reading Note: reading this register updates the value in its _TIME register.
STREAM_3_RLOG_TPR	40081 40082	Float	2	R	< -1.0e6,1.0e6 >	Stream 3: TPR Last on-line TPR reading Note: reading this register updates the value in its _TIME register.
STREAM_4_RLOG_TIC	40085 40086	Float	2	R	< -1.0e6,1.0e6 >	Stream 4: TIC Last on-line TIC reading Note: reading this register updates the value in its _TIME register.
STREAM_4_RLOG_TOC	40087 40088	Float	2	R	< -1.0e6,1.0e6 >	Stream 4: TOC Last on-line TOC reading Note: reading this register updates the value in its _TIME register.
STREAM_4_RLOG_TC	40089 40090	Float	2	R	< -1.0e6,1.0e6 >	Stream 4: TC Last on-line TC reading Note: reading this register updates the value in its _TIME register.
STREAM_4_RLOG_VOC	40091 40092	Float	2	R	< -1.0e6,1.0e6 >	Stream 4: VOC Last on-line VOC reading Note: reading this register updates the value in its _TIME register.
STREAM_4_RLOG_TN	40093 40094	Float	2	R	< -1.0e6,1.0e6 >	Stream 4: TN Last on-line TN reading Note: reading this register updates the value in its _TIME register.
STREAM_4_RLOG_TP	40095 40096	Float	2	R	< -1.0e6,1.0e6 >	Stream 4: TP Last on-line TP reading Note: reading this register updates the value in its _TIME register.
STREAM_4_RLOG_COD	40097 40098	Float	2	R	< -1.0e6,1.0e6 >	Stream 4: COD Last on-line COD reading Note: reading this register updates the value in its _TIME register.
STREAM_4_RLOG_BOD	40099 40100	Float	2	R	< -1.0e6,1.0e6 >	Stream 4: BOD Last on-line BOD reading Note: reading this register updates the value in its _TIME register.
STREAM_4_RLOG_TPR	40103 40104	Float	2	R	< -1.0e6,1.0e6 >	Stream 4: TPR Last on-line TPR reading Note: reading this register updates the value in its _TIME register.
STREAM_5_RLOG_TIC	40107 40108	Float	2	R	< -1.0e6,1.0e6 >	Stream 5: TIC Last on-line TIC reading Note: reading this register updates the value in its _TIME register.

NAME	REGISTER	DATA TYPE	LENGTH	ACCESS MODE	MIN/MAX	DESCRIPTION
STREAM_5_RLOG_TOC	40109 40110	Float	2	R	< -1.0e6,1.0e6 >	Stream 5: TOC Last on-line TOC reading Note: reading this register updates the value in its _TIME register.
STREAM_5_RLOG_TC	40111 40112	Float	2	R	< -1.0e6,1.0e6 >	Stream 5: TC Last on-line TC reading Note: reading this register updates the value in its _TIME register.
STREAM_5_RLOG_VOC	40113 40114	Float	2	R	< -1.0e6,1.0e6 >	Stream 5: VOC Last on-line VOC reading Note: reading this register updates the value in its _TIME register.
STREAM_5_RLOG_TN	40115 40116	Float	2	R	< -1.0e6,1.0e6 >	Stream 5: TN Last on-line TN reading Note: reading this register updates the value in its _TIME register.
STREAM_5_RLOG_TP	40117 40118	Float	2	R	< -1.0e6,1.0e6 >	Stream 5: TP Last on-line TP reading Note: reading this register updates the value in its _TIME register.
STREAM_5_RLOG_COD	40119 40120	Float	2	R	< -1.0e6,1.0e6 >	Stream 5: COD Last on-line COD reading Note: reading this register updates the value in its _TIME register.
STREAM_5_RLOG_BOD	40121 40122	Float	2	R	< -1.0e6,1.0e6 >	Stream 5: BOD Last on-line BOD reading Note: reading this register updates the value in its _TIME register.
STREAM_5_RLOG_TPR	40125 40126	Float	2	R	< -1.0e6,1.0e6 >	Stream 5: TPR Last on-line TPR reading Note: reading this register updates the value in its _TIME register.
STREAM_6_RLOG_TIC	40129 40130	Float	2	R	< -1.0e6,1.0e6 >	Stream 6: TIC Last on-line TIC reading Note: reading this register updates the value in its _TIME register.
STREAM_6_RLOG_TOC	40131 40132	Float	2	R	< -1.0e6,1.0e6 >	Stream 6: TOC Last on-line TOC reading Note: reading this register updates the value in its _TIME register.
STREAM_6_RLOG_TC	40133 40134	Float	2	R	< -1.0e6,1.0e6 >	Stream 6: TC Last on-line TC reading Note: reading this register updates the value in its _TIME register.
STREAM_6_RLOG_VOC	40135 40136	Float	2	R	< -1.0e6,1.0e6 >	Stream 6: VOC Last on-line VOC reading Note: reading this register updates the value in its _TIME register.
STREAM_6_RLOG_TN	40137 40138	Float	2	R	< -1.0e6,1.0e6 >	Stream 6: TN Last on-line TN reading Note: reading this register updates the value in its _TIME register.

NAME	REGISTER	DATA TYPE	LENGTH	ACCESS MODE	MIN/MAX	DESCRIPTION
STREAM_6_RLOG_TP	40139 40140	Float	2	R	< -1.0e6,1.0e6 >	Stream 6: TP Last on-line TP reading Note: reading this register updates the value in its _TIME register.
STREAM_6_RLOG_COD	40141 40142	Float	2	R	< -1.0e6,1.0e6 >	Stream 6: COD Last on-line COD reading Note: reading this register updates the value in its _TIME register.
STREAM_6_RLOG_BOD	40143 40144	Float	2	R	< -1.0e6,1.0e6 >	Stream 6: BOD Last on-line BOD reading Note: reading this register updates the value in its _TIME register.
STREAM_6_RLOG_TPR	40147 40148	Float	2	R	< -1.0e6,1.0e6 >	Stream 6: TPR Last on-line TPR reading Note: reading this register updates the value in its _TIME register.
RLOG_SMPL_STATUS	40200 40201	Float	2	R	< 0.0,100.0 >	Sample status Quality of sample, measured by the ultrasonic sensor Note: reading this register updates the value in its _TIME register.
RLOG_SMPL_STATUS_TIME	40202 40203	integer	2	R	0x00000000-0xFFFFFFFF	Time, Date of last Sample status reading
STREAM_1_RLOG_TIC_TIME	40300 40301	integer	2	R	0x00000000-0xFFFFFFFF	Stream 1: Time, Date of last on-line TIC reading
STREAM_1_RLOG_TOC_TIME	40302 40303	integer	2	R	0x00000000-0xFFFFFFFF	Stream 1: Time, Date of last on-line TOC reading
STREAM_1_RLOG_TC_TIME	40304 40305	integer	2	R	0x00000000-0xFFFFFFFF	Stream 1: Time, Date of last on-line TC reading
STREAM_1_RLOG_VOC_TIME	40306 40307	integer	2	R	0x00000000-0xFFFFFFFF	Stream 1: Time, Date of last on-line VOC reading
STREAM_1_RLOG_TN_TIME	40308 40309	integer	2	R	0x00000000-0xFFFFFFFF	Stream 1: Time, Date of last on-line TN reading
STREAM_1_RLOG_TP_TIME	40310 40311	integer	2	R	0x00000000-0xFFFFFFFF	Stream 1: Time, Date of last on-line TP reading
STREAM_1_RLOG_COD_TIME	40312 40313	integer	2	R	0x00000000-0xFFFFFFFF	Stream 1: Time, Date of last on-line COD reading
STREAM_1_RLOG_BOD_TIME	40314 40315	integer	2	R	0x00000000-0xFFFFFFFF	Stream 1: Time, Date of last on-line BOD reading
STREAM_1_RLOG_TPR_TIME	40324 40325	integer	2	R	0x00000000-0xFFFFFFFF	Stream 1: Time, Date of last on-line TPR reading
STREAM_2_RLOG_TIC_TIME	40328 40329	integer	2	R	0x00000000-0xFFFFFFFF	Stream 2: Time, Date of last on-line TIC reading
STREAM_2_RLOG_TOC_TIME	40330 40331	integer	2	R	0x00000000-0xFFFFFFFF	Stream 2: Time, Date of last on-line TOC reading

NAME	REGISTER	DATA TYPE	LENGTH	ACCESS MODE	MIN/MAX	DESCRIPTION
STREAM_2_RLOG_TC_TIME	40332 40333	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 2: Time, Date of last on-line TC reading
STREAM_2_RLOG_VOC_TIME	40334 40335	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 2: Time, Date of last on-line VOC reading
STREAM_2_RLOG_TN_TIME	40336 40337	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 2: Time, Date of last on-line TN reading
STREAM_2_RLOG_TP_TIME	40338 40339	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 2: Time, Date of last on-line TP reading
STREAM_2_RLOG_COD_TIME	40340 40341	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 2: Time, Date of last on-line COD reading
STREAM_2_RLOG_BOD_TIME	40342 40343	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 2: Time, Date of last on-line BOD reading
STREAM_2_RLOG_TPR_TIME	40352 40353	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 2: Time, Date of last on-line TPR reading
STREAM_3_RLOG_TIC_TIME	40356 40357	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 3: Time, Date of last on-line TIC reading
STREAM_3_RLOG_TOC_TIME	40358 40359	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 3: Time, Date of last on-line TOC reading
STREAM_3_RLOG_TC_TIME	40360 40361	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 3: Time, Date of last on-line TC reading
STREAM_3_RLOG_VOC_TIME	40362 40363	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 3: Time, Date of last on-line VOC reading
STREAM_3_RLOG_TN_TIME	40364 40365	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 3: Time, Date of last on-line TN reading
STREAM_3_RLOG_TP_TIME	40366 40367	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 3: Time, Date of last on-line TP reading
STREAM_3_RLOG_COD_TIME	40368 40369	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 3: Time, Date of last on-line COD reading
STREAM_3_RLOG_BOD_TIME	40370 40371	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 3: Time, Date of last on-line BOD reading
STREAM_3_RLOG_TPR_TIME	40380 40381	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 3: Time, Date of last on-line TPR reading
STREAM_4_RLOG_TIC_TIME	40384 40385	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 4: Time, Date of last on-line TIC reading
STREAM_4_RLOG_TOC_TIME	40386 40387	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 4: Time, Date of last on-line TOC reading
STREAM_4_RLOG_TC_TIME	40388 40389	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 4: Time, Date of last on-line TC reading
STREAM_4_RLOG_VOC_TIME	40390 40391	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 4: Time, Date of last on-line VOC reading
STREAM_4_RLOG_TN_TIME	40392 40393	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 4: Time, Date of last on-line TN reading

NAME	REGISTER	DATA TYPE	LENGTH	ACCESS MODE	MIN/MAX	DESCRIPTION
STREAM_4_RLOG_TP_TIME	40394 40395	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 4: Time, Date of last on-line TP reading
STREAM_4_RLOG_COD_TIME	40396 40397	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 4: Time, Date of last on-line COD reading
STREAM_4_RLOG_BOD_TIME	40398 40399	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 4: Time, Date of last on-line BOD reading
STREAM_4_RLOG_TPR_TIME	40402 40403	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 4: Time, Date of last on-line TPR reading
STREAM_5_RLOG_TIC_TIME	40406 40407	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 5: Time, Date of last on-line TIC reading
STREAM_5_RLOG_TOC_TIME	40408 40409	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 5: Time, Date of last on-line TOC reading
STREAM_5_RLOG_TC_TIME	40410 40411	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 5: Time, Date of last on-line TC reading
STREAM_5_RLOG_VOC_TIME	40412 40413	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 5: Time, Date of last on-line VOC reading
STREAM_5_RLOG_TN_TIME	40414 40415	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 5: Time, Date of last on-line TN reading
STREAM_5_RLOG_TP_TIME	40416 40417	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 5: Time, Date of last on-line TP reading
STREAM_5_RLOG_COD_TIME	40418 40419	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 5: Time, Date of last on-line COD reading
STREAM_5_RLOG_BOD_TIME	40420 40421	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 5: Time, Date of last on-line BOD reading
STREAM_5_RLOG_TPR_TIME	40424 40425	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 5: Time, Date of last on-line TPR reading
STREAM_6_RLOG_TIC_TIME	40428 40429	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 6: Time, Date of last on-line TIC reading
STREAM_6_RLOG_TOC_TIME	40430 40431	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 6: Time, Date of last on-line TOC reading
STREAM_6_RLOG_TC_TIME	40432 40433	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 6: Time, Date of last on-line TC reading
STREAM_6_RLOG_VOC_TIME	40434 40435	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 6: Time, Date of last on-line VOC reading
STREAM_6_RLOG_TN_TIME	40436 40437	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 6: Time, Date of last on-line TN reading
STREAM_6_RLOG_TP_TIME	40438 40439	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 6: Time, Date of last on-line TP reading
STREAM_6_RLOG_COD_TIME	40440 40441	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 6: Time, Date of last on-line COD reading
STREAM_6_RLOG_BOD_TIME	40442 40443	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 6: Time, Date of last on-line BOD reading

NAME	REGISTER	DATA TYPE	LENGTH	ACCESS MODE	MIN/MAX	DESCRIPTION
STREAM_6_RLOG_TPR_TIME	40446 40447	integer	2	R	0x00000000- 0xFFFFFFFF	Stream 6: Time, Date of last on-line TPR reading

B7000 BioTector TOC TN TP Analyzer V 1.1
SETTINGS, CALIBRATION AND DIAGNOSTICS Registers

NAME	REGISTER	DATA TYPE	LENGTH	ACCESS MODE	MIN/MAX	DESCRIPTION
DEVICE_ADDR	40500	integer	1	R/W	0x0000-0x00C8	Device address on Modbus network.
DEVICE_ID	40501	integer	1	R/W	0x0000-0xFFFF	Device class ID code.
MANUF_ID	40502	integer	1	R/W	0x0000-0x00FF	Manufacture ID code.
DEVICE_SERIAL_ID	40503 40504 40505	uint48	3	R	0x000000000000- 0xFFFFFFFFFFFF	Device serial number.
PROTO_REV	40506	integer	1	R	0x0000-0x9999	Modbus protocol implementation revision, expressed in BCD code. rev AA.BB → 0xAABB
FRMW_REV	40507	integer	1	R	0x0000-0x9999	Device firmware revision, expressed in BCD code. rev AA.BB → 0xAABB
REGS_MAP_REV	40508	integer	1	R	0x0000-0x9999	Device Modbus registers map, expressed in BCD code. rev AA.BB → 0xAABB
LOCATION_STR	40509 40510 40511 40512 40513 40514 40515 40516	string	8	R/W	max. 16chars	Device location text info. The string has to be null terminated if shorter than max. size.
BAUDRATE	40517	integer	1	R/W	0x0000-0x0008	Indexed device baud rate used on Modbus. 0 – 1200 bps 1 – 2400 bps 2 – 4800 bps 3 – 9600 bps 4 – 14400 bps 5 – 19200 bps 6 – 38400 bps 7 – 57600 bps 8 – 115200 bps Note: default value should be 7, 57600bps.
SYS_TIMEDATE	40518 40519	integer	2	R/W	0x00000000- 0xFFFFFFFF	System time & date in seconds elapsed since 1.1.1970. Note: this reg can be changed only when system is fully stopped.

NAME	REGISTER	DATA TYPE	LENGTH	ACCESS MODE	MIN/MAX	DESCRIPTION
SYS_TIME	40520	integer	1	R/W	0x0000-0x3B3B	System time, encoded in higher/lower bytes. HH:MM → 0xHHMM Note: this reg can be changed only when system is fully stopped.
SYS_DATE	40521 40522	integer	2	R/W	0x00000000-0x1F0C0833	System date, encoded in 4 bytes bytes. higher word DAY:MON → 0xDDMM lower word YEAR → 0x0YYY Note: this reg can be changed only when system is fully stopped.
REACT_TIC_RANGE1	40550 40551	Float	2	R	< 0.0,1000000.0 >	TIC range 1 Note: shown as 0.0 if in the actual analysis mode this result not available.
REACT_TIC_RANGE2	40552 40553	Float	2	R	< 0.0,1000000.0 >	TIC range 2 Note: shown as 0.0 if in the actual analysis mode this result not available.
REACT_TIC_RANGE3	40554 40555	Float	2	R	< 0.0,1000000.0 >	TIC range 3 Note: shown as 0.0 if in the actual analysis mode this result not available.
REACT_TOC_RANGE1	40556 40557	Float	2	R	< 0.0,1000000.0 >	TOC range 1 Note: shown as 0.0 if in the actual analysis mode this result not available.
REACT_TOC_RANGE2	40558 40559	Float	2	R	< 0.0,1000000.0 >	TOC range 2 Note: shown as 0.0 if in the actual analysis mode this result not available.
REACT_TOC_RANGE3	40560 40561	Float	2	R	< 0.0,1000000.0 >	TOC range 3 Note: shown as 0.0 if in the actual analysis mode this result not available.
REACT_TC_RANGE1	40562 40563	Float	2	R	< 0.0,1000000.0 >	TC range 1 Note: shown as 0.0 if in the actual analysis mode this result not available.

NAME	REGISTER	DATA TYPE	LENGTH	ACCESS MODE	MIN/MAX	DESCRIPTION
REACT_TC_RANGE2	40564 40565	Float	2	R	< 0.0,1000000.0 >	TC range 2 Note: shown as 0.0 if in the actual analysis mode this result not available.
REACT_TC_RANGE3	40566 40567	Float	2	R	< 0.0,1000000.0 >	TC range 3 Note: shown as 0.0 if in the actual analysis mode this result not available.
REACT_TN_RANGE1	40568 40569	Float	2	R	< 0.0,1000000.0 >	TN range 1 Note: shown as 0.0 if in the actual analysis mode this result not available.
REACT_TN_RANGE2	40570 40571	Float	2	R	< 0.0,1000000.0 >	TN range 2 Note: shown as 0.0 if in the actual analysis mode this result not available.
REACT_TN_RANGE3	40572 40573	Float	2	R	< 0.0,1000000.0 >	TN range 3 Note: shown as 0.0 if in the actual analysis mode this result not available.
REACT_TP_RANGE1	40574 40575	Float	2	R	< 0.0,1000000.0 >	TP range 1 Note: shown as 0.0 if in the actual analysis mode this result not available.
REACT_TP_RANGE2	40576 40577	Float	2	R	< 0.0,1000000.0 >	TP range 2 Note: shown as 0.0 if in the actual analysis mode this result not available.
REACT_TP_RANGE3	40578 40579	Float	2	R	< 0.0,1000000.0 >	TP range 3 Note: shown as 0.0 if in the actual analysis mode this result not available.
REACT_TPR_RANGE1	40580 40581	Float	2	R	< 0.0,1000000.0 >	TPR range 1 Note: shown as 0.0 if in the actual analysis mode this result not available.
REACT_TPR_RANGE2	40582 40583	Float	2	R	< 0.0,1000000.0 >	TPR range 2 Note: shown as 0.0 if in the actual analysis mode this result not available.

NAME	REGISTER	DATA TYPE	LENGTH	ACCESS MODE	MIN/MAX	DESCRIPTION
REACT_TPR_RANGE3	40584 40585	Float	2	R	< 0.0,1000000.0 >	TPR range 3 Note: shown as 0.0 if in the actual analysis mode this result not available.
OXP_ANLS	40586	integer	1	R	0x0000-0x07FF	Show the current oxidation analysis type. bit 0 = TIC+TOC. bit 1 = TC. bit 2 = VOC. bit 3 = TIC+TOCe bit 4 = TCe bit 5 = TIC+TOCb bit 6 = TCb bit 7 = VOCb bit 8 = Fast TC
LQP_ANLS	40587	integer	1	R	0x0000-0x0017	Show the current liquid analysis type. bit 0 = TN. bit 1 = TP. bit 2 = TN+TP bit 3 = TPb bit 4 = TN+TPb bit 5 = TN+TPr+TP bit 6 = TN+TPr
AUTOCAL_PROG	40700	integer	1	R	0x0000-0x000F	bit 0 = off bit 1 = Monday bit 2 = Tuesday bit 3 = Wednesday bit 4 = Thursday bit 5 = Friday bit 6 = Saturday bit 7 = Sunday
AUTOCAL_PROG_TIME	40701	integer	1	R	0x0000-0x3B3B	Time of scheduled autocal, encoded in higher/lower bytes. HH:MM → 0xHHMM
CLOG_CAL_SELECT	40702	integer	1	R/W	0x0000-0x0004	0 = TIC 1 = TOC 2 = TC 3 = TN 4 = TP 5 = TPR Note: this register value defines value of all following CLOG_ registers. By writing into CLOG_CAL_SELECT register updates CLOG_ registers in the similar way the reading of CLOG_CALx_SPAN_STATUS or CLOG_CALx_ZERO does.

NAME	REGISTER	DATA TYPE	LENGTH	ACCESS MODE	MIN/MAX	DESCRIPTION
CLOG_CAL1_SPAN_STATUS	40703	integer	1	R	0x0000-0x007F	bit 0 = calibration bit 1 = check bit 2 = calibration successful bit 3 = result outside band bit 4 = calculated from other range bit 5 = calculated from TOC/TC result bit 6 = entered by operator Note: in case of calibration failure on master range, the derived results status need to be update as well.
CLOG_CAL1_SPAN_TIME	40704 40705	integer	2	R	0x00000000-0xFFFFFFFF	Time, Date of last calibration action Note: this register value is only updated when CLOG_CAL1_SPAN_STATUS register is read.
CLOG_CAL1_SPAN_STD	40706 40707	Float	2	R	< -1.0e6,1.0e6 >	Standard used Null if bits 4-6 set in "…status" register Note: this register value is only updated when CLOG_CAL1_SPAN_STATUS register is read.
CLOG_CAL1_SPAN_RSLT	40708 40709	Float	2	R	< -1.0e6,1.0e6 >	Result found Null if bits 4-6 set in "…status" register Note: this register value is only updated when CLOG_CAL1_SPAN_STATUS register is read.
CLOG_CAL1_SPAN_FACTOR	40710 40711	Float	2	R	< -1.0e6,1.0e6 >	Span adjustment factor currently in use Note: this register value is only updated when CLOG_CAL1_SPAN_STATUS register is read.
CLOG_CAL1_ZERO_STATUS	40712	integer	1	R/W	0x0000-0x007F	bit 0 = zero calibration bit 1 = zero check bit 2 = zero successful bit 3 = result outside band bit 4 = calculated from other range bit 5 = TIC: no zero required bit 6 = entered by operator
CLOG_CAL1_ZERO_TIME	40713 40714	integer	2	R	0x00000000-0xFFFFFFFF	Time, Date of last zero action Note: this register value is only updated when CLOG_CAL1_ZERO_STATUS register is read.
CLOG_CAL1_ZERO_OFFSET	40715 40716	Float	2	R	< -1.0e6,1.0e6 >	Zero offset currently in use Note: this register value is only updated when CLOG_CAL1_ZERO_STATUS register is read.
CLOG_CAL2_SPAN_STATUS	40717	integer	1	R	0x0000-0x007F	bit 0 = calibration bit 1 = check bit 2 = calibration successful bit 3 = result outside band bit 4 = calculated from other range bit 5 = calculated from TOC/TC result bit 6 = entered by operator

NAME	REGISTER	DATA TYPE	LENGTH	ACCESS MODE	MIN/MAX	DESCRIPTION
CLOG_CAL2_SPAN_TIME	40718 40719	integer	2	R	0x00000000-0xFFFFFFFF	Time, Date of last calibration action Note: this register value is only updated when CLOG_CAL2_SPAN_STATUS register is read.
CLOG_CAL2_SPAN_STD	40720 40721	Float	2	R	< -1.0e6,1.0e6 >	Standard used Null if bits 4-6 set in "…status" register Note: this register value is only updated when CLOG_CAL2_SPAN_STATUS register is read.
CLOG_CAL2_SPAN_RSLT	40722 40723	Float	2	R	< -1.0e6,1.0e6 >	Result found Null if bits 4-6 set in "…status" register Note: this register value is only updated when CLOG_CAL2_SPAN_STATUS register is read.
CLOG_CAL2_SPAN_FACTOR	40724 40725	Float	2	R	< -1.0e6,1.0e6 >	Span adjustment factor currently in use Note: this register value is only updated when CLOG_CAL2_SPAN_STATUS register is read.
CLOG_CAL2_ZERO_STATUS	40726	integer	1	R/W	0x0000-0x007F	bit 0 = zero calibration bit 1 = zero check bit 2 = zero successful bit 3 = result outside band bit 4 = calculated from other range bit 5 = TIC: no zero required bit 6 = entered by operator
CLOG_CAL2_ZERO_TIME	40727 40728	integer	2	R	0x00000000-0xFFFFFFFF	Time, Date of last zero action Note: this register value is only updated when CLOG_CAL2_ZERO_STATUS register is read.
CLOG_CAL2_ZERO_OFFSET	40729 40730	Float	2	R	< -1.0e6,1.0e6 >	Zero offset currently in use Note: this register value is only updated when CLOG_CAL2_ZERO_STATUS register is read.
CLOG_CAL3_SPAN_STATUS	40731	integer	1	R	0x0000-0x007F	bit 0 = calibration bit 1 = check bit 2 = calibration successful bit 3 = result outside band bit 4 = calculated from other range bit 5 = calculated from TOC/TC result bit 6 = entered by operator
CLOG_CAL3_SPAN_TIME	40732 40733	integer	2	R	0x00000000-0xFFFFFFFF	Time, Date of last calibration action Note: this register value is only updated when CLOG_CAL3_SPAN_STATUS register is read.
CLOG_CAL3_SPAN_STD	40734 40735	Float	2	R	< -1.0e6,1.0e6 >	Standard used Null if bits 4-6 set in "…status" register Note: this register value is only updated when CLOG_CAL3_SPAN_STATUS register is read.

NAME	REGISTER	DATA TYPE	LENGTH	ACCESS MODE	MIN/MAX	DESCRIPTION
CLOG_CAL3_SPAN_RSLT	40736 40737	Float	2	R	< -1.0e6,1.0e6 >	Result found Null if bits 4-6 set in "…status" register Note: this register value is only updated when CLOG_CAL3_SPAN_STATUS register is read.
CLOG_CAL3_SPAN_FACTOR	40738 40739	Float	2	R	< -1.0e6,1.0e6 >	Span adjustment factor currently in use Note: this register value is only updated when CLOG_CAL3_SPAN_STATUS register is read.
CLOG_CAL3_ZERO_STATUS	40740	integer	1	R/W	0x0000-0x007F	bit 0 = zero calibration bit 1 = zero check bit 2 = zero successful bit 3 = result outside band bit 4 = calculated from other range bit 5 = TIC: no zero required bit 6 = entered by operator
CLOG_CAL3_ZERO_TIME	40741 40742	integer	2	R	0x00000000- 0xFFFFFFFF	Time, Date of last zero action Note: this register value is only updated when CLOG_CAL3_ZERO_STATUS register is read.
CLOG_CAL3_ZERO_OFFSET	40743 40744	Float	2	R	< -1.0e6,1.0e6 >	Zero offset currently in use Note: this register value is only updated when CLOG_CAL3_ZERO_STATUS register is read.
PANEL_TEMP	40800 40801	Float	2	R	< -100.0,150.0 >	Current Enclosure Temperature, in deg C
ATM_PRESS	40802 40803	Float	2	R	< 0.0,250.0 >	Atmospheric pressure from sensor, in kPa
CO2A_ZERO	40804 40805	Float	2	R	< -1.0e6,1.0e6 >	CO2 analyser zero setting. Note: this register is reset to 0.0 after power-up and gets set during ANALYZER_ZERO reaction state.
COOLER_TEMP	40806 40807	Float	2	R	< -100.0,150.0 >	Cooler temperature, if measured, in deg C
TP_BOILER_TEMP	40808 40809	Float	2	R	< -100.0,150.0 >	TP boiler temperature
TP_MIX_BOILER_TEMP	40810 40811	Float	2	R	< -100.0,150.0 >	TP mixer boiler temperature

NAME	REGISTER	DATA TYPE	LENGTH	ACCESS MODE	MIN/MAX	DESCRIPTION
REACT_STREAM_VALVE	40816	integer	1	R	<0,6 >	Actual analysis reaction stream valve. 0 = no analysis on any stream valve 1 = analysis on stream 1 valve 2 = analysis on stream 2 valve 3 = analysis on stream 3 valve 4 = analysis on stream 4 valve 5 = analysis on stream 5 valve 6 = analysis on stream 6 valve
REACT_RANGE	40817	integer	1	R	<0,3 >	Actual analysis reaction range. 0 = no analysis reaction 1 = analysis reaction range 1 2 = analysis reaction range 2 3 = analysis reaction range 3
ACID_RGNT_STATUS	40818	integer	1	R	< 0,999 >	Estimation of days remaining for Acid
BASE_RGNT_STATUS	40819	integer	1	R	< 0,999 >	Estimation of days remaining for Base
TN_CLEAN_RGNT_STATUS	40820	integer	1	R	< 0,999 >	Estimation of days remaining for TN Cleaning fluid
DIW_RGNT_STATUS	40821	integer	1	R	< 0,999 >	Estimation of days remaining for DI water
C_RGNT_STATUS	40822	integer	1	R	< 0,999 >	Estimation of days remaining for Reagent C
D_RGNT_STATUS	40823	integer	1	R	< 0,999 >	Estimation of days remaining for Reagent D
REACT_CNTR	40824 40825	integer	2	R	0x00000000-0xFFFFFFFF	Reaction counter.
SERVICE_REQ	40826	integer	1	R	0x0000-0xFFFF	Service required in xxx days

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ERROR Registers

NAME	REGISTER	DATA TYPE	LENGTH	ACCESS MODE	MIN/MAX	DESCRIPTION
SYS_ALARM_STATUS	49930	integer	1	R	0x0000-0x000F	Alarm Status. Bitwise coding: bit 0 = fault. bit 1 = warning. bit 2 = notification. Bit 3 = DW warning.
SYS_COND_GRP	49950	integer	1	R	0x0000-0xFFFF	bit 0 = fault archive code 01, Low O2 Flow - EX bit 1 = fault archive code 02, Low O2 Flow - SO ..bit 15 Note: For description of Fault Archive codes please refer to User Manual Section "Troubleshooting of System Faults, Warnings and Notification Events"
SYS_COND_GRP	49951	integer	1	R	0x0000-0xFFFF	bit 0 = fault archive code 17, bit 1 = fault archive code 18, ..bit 15 Note: For description of Fault Archive codes please refer to User Manual Section "Troubleshooting of System Faults, Warnings and Notification Events"
		...	...	...		...
SYS_COND_GRP	49966	integer	1	R	0x0000-0xFFFF	bit 0 = fault archive code 241, bit 1 = fault archive code 242, ..bit 15 Note: For description of Fault Archive codes please refer to User Manual Section "Troubleshooting of System Faults, Warnings and Notification Events"

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STATUS & EXTERNAL CONTROL Registers

NAME	REGISTER	DATA TYPE	LENGTH	ACCESS MODE	MIN/MAX	DESCRIPTION
SYS_OP_STATUS	49931	integer	1	R	0x0000-0x003F	Operational Status. Bitwise coding: bit 0 = running. bit 1 = manual running. bit 2 = calibration running. bit 3 = zero running. bit 4 = remote standby activated. bit 5 = maintenance switch activated.
SYS_REM_CTRL	49932	integer	1	R/W	<0,7>	System remote control. 0 = no change 1 = system finish & stop 2 = analysis start 3 = zero cal start 4 = zero check start 5 = span cal start 6 = span check start 7 = reagents purge and zero
SYS_REM_CTRL_STANDBY	49933	integer	1	R/W	< 0,1 >	Set Remote Standby function. 0 = Modbus remote standby deactivated 1 = Modbus remote standby activated Note: the content of this register is internally OR'd with REMOTE STANDBY digital input line (if this one is available in the system).
SYS_REM_CTRL_SYNC	49934	integer	1	R	< 0,1 >	Synchronization output for remote control operation Note: works even without SYNC output defined in system.
SYS_REM_CTRL_RANGE	49935	integer	1	R/W	< 0,3 >	Select next range 0 = not selected / auto 1 = range 1 2 = range 2 3 = range 3 Note: if this register value is 0 then range is selected by EXT_RANGE_MUX1-2 digital input lines (if these one are available in the system). otherwise the content of this register takes precedence over the digital input lines.

NAME	REGISTER	DATA TYPE	LENGTH	ACCESS MODE	MIN/MAX	DESCRIPTION
SYS_REM_CTRL_STREAM	49936	integer	1	R/W	0x0000-0x007f	Next stream to be selected: bit 0 = Stream 1. bit 1 = Stream 2. bit 2 = Stream 3. bit 3 = Stream 4. bit 4 = Stream 5. bit 5 = Stream 6. Note: the content of this register is internally OR'd with STREAM SEL 1-6 digital input lines to activate/deactivate particular stream selection
SYS_DEBUG_MODE	45000	integer	1	R/W	0x0000-0x0001	System debug mode register. 0 – normal system operation 1 – system supplies pre-defined Modbus registers values