

Register Description

CTR 210i



Revision 2

Software Revision: 2.00



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Attention!

Important!

These instructions should be used in conjunction with the Standard Installation and Operating Instructions for CTR.

Table of Contents

1. Register description.....	4
1.1. Holding Register (Basis 4xxx).....	4
1.1.1. Working variables.....	4
1.1.2. Parameter variables.....	6

1. Register description

This chapter lists all the registers that can be addressed via the Modbus interface.

1.1. Holding Register (Basis 4xxxx)

1.1.1. Working variables

Reg. no.	Description	Data type	Access	Modbus function
1	Device identification, Value '6' is read	16 Bit Int	R/O	3
2	Version number e. g. 105 for version 1.05	16 Bit Int	R/O	3
3	Device no.	16 Bit Int	R/O	3
4	Input 1. AD converter	16 Bit Int	R/O	3
5	Input 2. AD converter	16 Bit Int	R/O	3
6	Input 3. AD converter	16 Bit Int	R/O	3
7	Input 1 normiert (0-100%)	16 Bit Int	R/O	3
8	Input 2 normiert (0-100%)	16 Bit Int	R/O	3
9	Input 3 normiert (0-100%)	16 Bit Int	R/O	3
10	Sollwert 1 standardised (0-100%)	16 Bit Int	R/O	3
11	Sollwert 2 standardised (0-100%)	16 Bit Int	R/O	3
12	Hand-flag – Controller 1	16 Bit Int	R/O	3
13	Hand-flag – Controller 2	16 Bit Int	R/O	3
14	Status - Alarms bit0 - Alarm1 bit1 - Alarm2 bit2 - Alarm3 bit3 - Alarm4 bit4 - Alarm5 bit5 - Alarm6	16 Bit Int	R/O	3
15	Status – digital inputs		R/O	3
16	Status – digital outputs		R/O	3
17	Status – sensor break bit0 - Ain1 bit1 - Ain2 bit2 - Ain3		R/O	
18	Analog output 1 standardised (0-100%)	16 Bit Int	R/O	
19	Analog output 2 standardised (0-100%)	16 Bit Int	R/O	3
20	PWM-Register for analog output 1	16 Bit Int	R/W	03, 06, 16
21	PWM-Register for analog output 2	16 Bit Int	R/W	03, 06, 16
22	0 – blocked controlling analog outputs from controller. The outputs could be controlled by the registser 20 and 21.	16 Bit Int	R/W	03, 06, 16
23	Setpoint_Write – if set to 1 the setpoint are written to the FRAM	16 Bit Int	R/W	03, 06, 16
24	Parameter_Write – if set to 1 the parameters are written to FRAM	16 Bit Int	R/W	03, 06, 16
25-40	not used	16 Bit Int	R/O	3

Reg. no.	Description	Data type	Access	Modbus function
41	main setpoint	16 Bit Int	R/W	03, 06, 16
42	setpoint di_1	Flag	R/W	03, 06, 16
43	setpoint di_2	Flag	R/W	03, 06, 16
44	setpoint di_3	Flag	R/W	03, 06, 16
45	setpointdi_4	Flag	R/W	03, 06, 16
46	setpoint di_5	16 Bit Int	R/W	03, 06, 16
47	setpoint di_6	Flag	R/W	03, 06, 16
48	main setpoint for VHT-Controller	16 Bit Int	R/W	03, 06, 16
49	setpoint di_1 f. VHT-Controller	16 Bit Int	R/W	03, 06, 16
50	setpoint di_2 f. VHT-Controller	16 Bit Int	R/W	03, 06, 16
51	setpoint di_3 f. VHT-Controller	16 Bit Int	R/W	03, 06, 16
52	setpoint di_4 f. VHT-Controller		R/W	03, 06, 16
53	setpoint di_5 f. VHT-Controller		R/W	03, 06, 16
54	setpoint di_6 f. VHT-Controller		R/W	03, 06, 16
55	setpoint for second controller		R/W	03, 06, 16
56	Y0 - Par1		R/W	03, 06, 16
57	Y0 - Par2		R/W	03, 06, 16
58	Y0 - Par3		R/W	03, 06, 16

1.1.2. Parameter variables

Reg. no.	Description	Data type	Access	Modbus function
1001	kp_1	16 Bit Int	R/W	03, 06, 16
1002	kp_2	16 Bit Int	R/W	03, 06, 16
1003	kp_3	16 Bit Int	R/W	03, 06, 16
1004	kd_1	16 Bit Int	R/W	03, 06, 16
1005	kd_2	16 Bit Int	R/W	03, 06, 16
1006	kd_3	16 Bit Int	R/W	03, 06, 16
1007	tn_1	16 Bit Int	R/W	03, 06, 16
1008	tn_2	16 Bit Int	R/W	03, 06, 16
1009	tn_3	16 Bit Int	R/W	03, 06, 16
1010	reserve	16 Bit Int	R/W	03, 06, 16
1011	reserve	16 Bit Int	R/W	03, 06, 16
1012	reserve	16 Bit Int	R/W	03, 06, 16
1013	tv_1	16 Bit Int	R/W	03, 06, 16
1014	tv_2	16 Bit Int	R/W	03, 06, 16
1015	tv_3	16 Bit Int	R/W	03, 06, 16
1016	decp_1	16 Bit Int	R/W	03, 06, 16
1017	decp_2	16 Bit Int	R/W	03, 06, 16
1018	reserve	16 Bit Int	R/W	03, 06, 16
1019	dsp_x0_1	16 Bit Int	R/W	03, 06, 16
1020	dsp_x0_2	16 Bit Int	R/W	03, 06, 16
1021	dsp_x100_1	16 Bit Int	R/W	03, 06, 16
1022	dsp_x100_2	16 Bit Int	R/W	03, 06, 16
1023	sp_min_1	16 Bit Int	R/W	03, 06, 16
1024	sp_min_2	16 Bit Int	R/W	03, 06, 16
1025	sp_max_1	16 Bit Int	R/W	03, 06, 16
1026	sp_max_2	16 Bit Int	R/W	03, 06, 16
1027	sp_min_VHT	16 Bit Int	R/W	03, 06, 16
1028	sp_max_VHT	16 Bit Int	R/W	03, 06, 16
1029	s_sp_1	16 Bit Int	R/W	03, 06, 16
1030	s_sp_2	16 Bit Int	R/W	03, 06, 16
1031	s_sp_VHT	16 Bit Int	R/W	03, 06, 16
1032	reserve	16 Bit Int	R/W	03, 06, 16
1033	sp_ramp	16 Bit Int	R/W	03, 06, 16
1034	reserve	16 Bit Int	R/W	03, 06, 16
1035	out_min_1	16 Bit Int	R/W	03, 06, 16
1036	out_min_2	16 Bit Int	R/W	03, 06, 16
1037	out_max_1	16 Bit Int	R/W	03, 06, 16
1038	out_max_2	16 Bit Int	R/W	03, 06, 16
1039	out_s_1	16 Bit Int	R/W	03, 06, 16
1040	reserve	16 Bit Int	R/W	03, 06, 16
1041	out_s_2	16 Bit Int	R/W	03, 06, 16
1042	reserve	16 Bit Int	R/W	03, 06, 16
1043	out_init_1	16 Bit Int	R/W	03, 06, 16
1044	out_init_2	16 Bit Int	R/W	03, 06, 16

Reg. no.	Description	Data type	Access	Modbus function
1045	out_ramp	16 Bit Int	R/W	03, 06, 16
1046	reserve	16 Bit Int	R/W	03, 06, 16
1047	reserve	16 Bit Int	R/W	03, 06, 16
1048	reserve	16 Bit Int	R/W	03, 06, 16
1049	sfxd	16 Bit Int	R/W	03, 06, 16
1050	sensor_min	16 Bit Int	R/W	03, 06, 16
1051	sensor_max	16 Bit Int	R/W	03, 06, 16
1052	sensor_time	16 Bit Int	R/W	03, 06, 16
1053	filter_1	16 Bit Int	R/W	03, 06, 16
1054	filter_2	16 Bit Int	R/W	03, 06, 16
1055	filter_3	16 Bit Int	R/W	03, 06, 16
1056	Ain1_Start	16 Bit Int	R/W	03, 06, 16
1057	Ain2_Start	16 Bit Int	R/W	03, 06, 16
1058	Ain3_Start	16 Bit Int	R/W	03, 06, 16
1059	Ain1_End	16 Bit Int	R/W	03, 06, 16
1060	Ain2_End	16 Bit Int	R/W	03, 06, 16
1061	Ain3_End	16 Bit Int	R/W	03, 06, 16
1062-1065	Caption_1	String 8 Char.	R/W	03, 06, 16
1066-1069	Caption_2	String 8 Char.	R/W	03, 06, 16
1070	reserve	16 Bit Int	R/W	03, 06, 16
1071	c1	16 Bit Int	R/W	03, 06, 16
1072	c2	16 Bit Int	R/W	03, 06, 16
1073	c3	16 Bit Int	R/W	03, 06, 16
1074	c4	16 Bit Int	R/W	03, 06, 16
1075	c5	16 Bit Int	R/W	03, 06, 16
1076	c6	16 Bit Int	R/W	03, 06, 16
1077-1080	reserve	16 Bit Int	R/W	03, 06, 16
1081	alarm_stat_1	16 Bit Int	R/W	03, 06, 16
1082	alarm_stat_2	16 Bit Int	R/W	03, 06, 16
1083	alarm_stat_3	16 Bit Int	R/W	03, 06, 16
1084	alarm_stat_4	16 Bit Int	R/W	03, 06, 16
1085	alarm_stat_5	16 Bit Int	R/W	03, 06, 16
1086	alarm_stat_6	16 Bit Int	R/W	03, 06, 16
1087	alarm_value_1	16 Bit Int	R/W	03, 06, 16
1088	alarm_value_2	16 Bit Int	R/W	03, 06, 16
1089	alarm_value_3	16 Bit Int	R/W	03, 06, 16
1090	alarm_value_4	16 Bit Int	R/W	03, 06, 16
1091	alarm_value_5	16 Bit Int	R/W	03, 06, 16
1092	alarm_value_6	16 Bit Int	R/W	03, 06, 16
1093	alarm_hyst_1	16 Bit Int	R/W	03, 06, 16
1094	alarm_hyst_2	16 Bit Int	R/W	03, 06, 16
1095	alarm_hyst_3	16 Bit Int	R/W	03, 06, 16
1096	alarm_hyst_4	16 Bit Int	R/W	03, 06, 16
1097	alarm_hyst_5	16 Bit Int	R/W	03, 06, 16

Register description

Reg. no.	Description	Data type	Access	Modbus function
1098	alarm_hyst_6	16 Bit Int	R/W	03, 06, 16
1099	alarm_time_base	16 Bit Int	R/W	03, 06, 16
1100	Contrast	16 Bit Int	R/W	03, 06, 16
1101	aout_stat_1	16 Bit Int	R/W	03, 06, 16
1102	aout_stat_2	16 Bit Int	R/W	03, 06, 16
1103	aout_rng_beg_1	16 Bit Int	R/W	03, 06, 16
1104	aout_rng_beg_2	16 Bit Int	R/W	03, 06, 16
1105	aout_rgn_end_1	16 Bit Int	R/W	03, 06, 16
1106	aout_rng_end_2	16 Bit Int	R/W	03, 06, 16
1107, 1108	reserve	16 Bit Int	R/W	03, 06, 16
1109	din_stat_1	16 Bit Int	R/W	03, 06, 16
1110	din_stat_2	16 Bit Int	R/W	03, 06, 16
1111	din_stat_3	16 Bit Int	R/W	03, 06, 16
1112	din_stat_4	16 Bit Int	R/W	03, 06, 16
1113	din_stat_5	16 Bit Int	R/W	03, 06, 16
1114	din_stat_6	16 Bit Int	R/W	03, 06, 16
1115	dout_stat_1	16 Bit Int	R/W	03, 06, 16
1116	dout_stat_2	16 Bit Int	R/W	03, 06, 16
1117	dout_stat_3	16 Bit Int	R/W	03, 06, 16
1118	dout_stat_4	16 Bit Int	R/W	03, 06, 16
1119	dout_stat_5	16 Bit Int	R/W	03, 06, 16
1120	dout_stat_6	16 Bit Int	R/W	03, 06, 16
1121	dout_rng_beg_1	16 Bit Int	R/W	03, 06, 16
1122	dout_rng_beg_2	16 Bit Int	R/W	03, 06, 16
1123	dout_rng_beg_3	16 Bit Int	R/W	03, 06, 16
1124	dout_rng_beg_4	16 Bit Int	R/W	03, 06, 16
1125	dout_rng_beg_5	16 Bit Int	R/W	03, 06, 16
1126	dout_rng_beg_6	16 Bit Int	R/W	03, 06, 16
1127	dout_rng_end_1	16 Bit Int	R/W	03, 06, 16
1128	dout_rng_end_2	16 Bit Int	R/W	03, 06, 16
1129	dout_rng_end_3	16 Bit Int	R/W	03, 06, 16
1130	dout_rng_end_4	16 Bit Int	R/W	03, 06, 16
1131	dout_rng_end_5	16 Bit Int	R/W	03, 06, 16
1132	dout_rng_end_6	16 Bit Int	R/W	03, 06, 16
1133	dout_tcyc_1	16 Bit Int	R/W	03, 06, 16
1134	dout_tcyc_2	16 Bit Int	R/W	03, 06, 16
1135	dout_tcyc_3	16 Bit Int	R/W	03, 06, 16
1136	dout_tcyc_4	16 Bit Int	R/W	03, 06, 16
1137	dout_tcyc_5	16 Bit Int	R/W	03, 06, 16
1138	dout_tcyc_6	16 Bit Int	R/W	03, 06, 16
1139	aout_i_beg_1	16 Bit Int	R/W	03, 06, 16
1140	aout_i_beg_2	16 Bit Int	R/W	03, 06, 16
1141	aout_i_end_1	16 Bit Int	R/W	03, 06, 16
1142	aout_i_end_2	16 Bit Int	R/W	03, 06, 16
1143	sp_ext_stat	16 Bit Int	R/W	03, 06, 16
1144	out_ext_stat	16 Bit Int	R/W	03, 06, 16

Reg. no.	Description	Data type	Access	Modbus function
1145	ctrl_type	16 Bit Int	R/W	03, 06, 16
1146	y0_mode	16 Bit Int	R/W	03, 06, 16
1147	lang_mode	16 Bit Int	R/W	03, 06, 16
1148	dsp_phys_mode_1	16 Bit Int	R/W	03, 06, 16
1149	dsp_phys_mode_2	16 Bit Int	R/W	03, 06, 16
1150		16 Bit Int	R/W	03, 06, 16
1151		16 Bit Int	R/W	03, 06, 16
1152		16 Bit Int	R/W	03, 06, 16
1153		16 Bit Int	R/W	03, 06, 16
1154		16 Bit Int	R/W	03, 06, 16
1155		16 Bit Int	R/W	03, 06, 16
1156		16 Bit Int	R/W	03, 06, 16
1157		16 Bit Int	R/W	03, 06, 16
1158		16 Bit Int	R/W	03, 06, 16
1159		16 Bit Int	R/W	03, 06, 16
1160		16 Bit Int	R/W	03, 06, 16
1161		16 Bit Int	R/W	03, 06, 16
1162		16 Bit Int	R/W	03, 06, 16
1163		16 Bit Int	R/W	03, 06, 16
1164		16 Bit Int	R/W	03, 06, 16
1165		16 Bit Int	R/W	03, 06, 16
1166		16 Bit Int	R/W	03, 06, 16
1167	code_manual	16 Bit Int	R/W	03, 06, 16
1168	code_param	16 Bit Int	R/W	03, 06, 16
1169	code_stru	16 Bit Int	R/W	03, 06, 16
1170	code_calib	16 Bit Int	R/W	03, 06, 16
1171	code_prg	16 Bit Int	R/W	03, 06, 16
1172	code_ltg	16 Bit Int	R/W	03, 06, 16
1173		16 Bit Int	R/W	03, 06, 16
1174		16 Bit Int	R/W	03, 06, 16
1175	cal_ain1_0	16 Bit Int	R/W	03, 06, 16
1176	cal_ain1_100	16 Bit Int	R/W	03, 06, 16
1177	cal_ain2_0	16 Bit Int	R/W	03, 06, 16
1178	cal_ain2_100	16 Bit Int	R/W	03, 06, 16
1179	cal_ain3_0	16 Bit Int	R/W	03, 06, 16
1180	cal_ain3_100	16 Bit Int	R/W	03, 06, 16
1181	cal_out1_0	16 Bit Int	R/W	03, 06, 16
1182	cal_out1_100	16 Bit Int	R/W	03, 06, 16
1183	cal_out2_0	16 Bit Int	R/W	03, 06, 16
1184	cal_out2_100	16 Bit Int	R/W	03, 06, 16
1185		16 Bit Int	R/W	03, 06, 16
1186	alarm_r_gradx	16 Bit Int	R/W	03, 06, 16
1187	alarm_hy_gradx	16 Bit Int	R/W	03, 06, 16
1188	alarm_r_dy	16 Bit Int	R/W	03, 06, 16
1189	alarm_hy_dy	16 Bit Int	R/W	03, 06, 16
1190	alarm_r_dx	16 Bit Int	R/W	03, 06, 16