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FG529x , FG540x , FG628x MODBUS

Ver A00	2007-09-27	SK	
Ver B00	2010-02-15	SK	Updated
Ver C00	2010-05-18	SK	Updated
Ver D00	2011-03-07	SK	Updated
Ver D00	2011-03-24	SK	Updated Span_ANG
Ver D01	2011-06-04	SK	Updated AutoCal_Bit
Ver D02	2011-06-21	SK	Updated BiDirectional_Bit
Ver D03	2011-08-24	SK	Updated Base_Scale
Ver D04	2011-08-31	SK	Updated Damp_Ang
Ver D05	2012-04-26	SK	Updated BaudRate, StopBit
Ver D06	2013-04-18	SK	Instructions.
Ver D07	2013-05-14	SK	Updated registers
Ver D08	2014-03-25	SK	Updated register > Command_Bit; // 0- Non 1- Offset Cal
Ver D09	2015-01-05	SK	Span_ANG for 4-20mA
Ver D10	2015-01-05	SK	Reg 25 pressure integer part Reg 26 pressure decimal part
Ver D11	2015-09-03	SK	**19- Alarm Status 0- Normal, 1- Larm 2- Larm disabled**
Ver D12	2015-11-02	SK	
Ver D13	2016-03-13	SK	**Damp = 0 >> Damp=1...**

Instructions:

1- MODBUS addresses must be between 5 and 220 (5……220).
2- All Values are signed integers (16 bits) MSB + LSB
3- Standard RTU
4- Additional information about the MODBUS: http://www.modbus.org/
5- Keep the readings of the register counts lower than 10.
6-

MODBUS exception codes

1	Illegal_Function
2	Illegal_Data_Address
3	Illegal_Data_Value
4	Slave_Device_Failure
5	Acknowledge
6	slave_device_Busy
7	Negative_Acknoledge
8	Memory_Parity_Error

Error Codes

0	Wrong address
1	Wrong modbus function
2	Too many bytes in frame
3	Too few bytes frame
4	Wrong nr of registers
5	Too many registers
6	Too many registers
7	OK
8	Bad CRC

4 Read Input Registers (All integers)

1-	Current Pressure (Pa)	**in Pascal (rounded)**	
2-	Analog Out		
3-	Normal Larm Status	0- Normal,	1- Larm
4-	Normal LowLarm Status	0- Normal	1- Larm
5-	Normal HighLarm Status	0- Normal	1- Larm
6-	Setbback Larm Status	0- Normal	1- Larm
7-	Setbback LowLarm Status	0- Normal	1- Larm
8-	Setbback HighLarm Status	0- Normal	1- Larm
9-	Standby_Larm_Status	0- Normal	1- Larm
10-	Standby LowLarm Status	0- Normal	1- Larm
11-	Standby HighLarm Status	0- Normal	1- Larm
12-	Sound Larm	0- Sound Off	1- Sound On
13-	Relay Larm	0- Relay Off	1- Relay On
14-	EXT_MUTE Input	0- Normal	1- Active
15-	Func Input	0- Normal	1- Active
16-	MUTE	0- Normal	1- Active
17-	Device Status	0- OK 1- Busy	
18-	Alarm Level	0- No alarm 1- RED LED ON 2- SOUND ON 3- RELAY ACTIVATED 4- MUTE ACTIVATED	
19-	**Alarm Status**	**0- Normal,**	**1- Larm** **2- Larm disabled**
20-	Mode Status	0- Normal Mode 1- Standby Mode 2- SetBack Mode	
21-	Filter Status	0- None 1- Red 2- Yellow 4- Green 1 8- Green 2 16- Green 3 50 -SOUND ON	
22-	Larm Status	0- Normal 1- Normal High Larm 2- Normal Low Larm 3- StandBy Normal 4- *** *Not used* 5- *** *Not used* 6- SetBack Normal 7- SetBack High Larm 8- SetBack Low Larm	
23-	Freeze	0- Normal 1- Open Door	
24-	Current Temperature		
25-	**Current Value**	**In selected "Unit" (integer part)**	
26-	**Current Value**	**In selected "Unit" (decimal part)**	

03 Read Holding Registers (All integers)

1- Device
2- Software Version
3- Serial Nr
4- Address
5- Area (X . 1000)
6- KFact (X . 1000)
7- P-Gain
8- I-Gain
9- Dead Band
10- Output Polarity
11- Reserved
12- Reserved
13- P2-Gain
14- I2-Gain
15- Dead Band2
16- Span_ANG
17- BaudRate
0- 4800
1- 9600
2- 19200
3- 38400
4- 57600
5- 115200

18- StopBit

19- Not Used
20- Not Used

21- Unit

1	Pascal
2	m/s
3	L/s
4	mbar
5	Inch H2O

22 Sens_Typ

0	Sens_Type	= 125 Pa
1	Sens_ Type	= 250
2	Sens_Type	= 500
3	Sens_Type	= 1250
4	Sens_Type	= 2500
5	Sens_Type	= 5000
6	Sens_Type	= +/- 62
7	Sens_Type	= +/- 125
8	Sens_Type	= +/- 250
9	Sens_Type	= +/- 500
10	Sens_Type	= +/- 1250
11	Sens_Type	= +/- 2500
15	Sens_Type	= +/- 2500 special, visas som +2500 pasc
16	Sens_Type	= +/- 250; LBA

23 Out_Scale Heltal t.ex 1000
24- Set_Point
25- Normal_High

26- Normal_Low
27- Setback_Set
28- Setback High
29- Setback Low
30- Standby_Set
31- Standby_High
32- Standby_Low
33- ALARM DELAY Time in Second
34- Relay Delay Time in Second
35- Mute Time Time in Second
36- Larm Reset 0- Off 1- On
37- Audio 0- Audio Enabled 1- Audio Disabled
38- KeyPad_Bit 0: Keys Enabled 1- Keys Disabled
39- Code_Bit 0: Code Enabled 1- Code Disabled
40- OutVal 1- 0 - 5 Volt
2- 0 -10 Volt
3- 1 -10 Volt
4- 2 -10 Volt
5- 4 -20 mA
41- Damp_Disp 0- 0.1 Sec
1- 0.5 Sec
2- 1 Sec
3- 2 Sec
4- 5 Sec
5- 10 Sec
42- Rest_Bit 0- SetBack 1-StandBy
43- Max Damp
44- Min Damp

45- Max Position
46- Return Time
47- Ext In
48- Out Function
1- Linear
2- Velocity
3- Flow
49- Input
50- Relay Connected To 0- Larm 1- Process
51- Relay Func 0- Norm 1- Reversed

52- AutoCal_Bit 0- Off 1- On

53- BiDirectional_Bit 0- Off 1- On

54- Base_Scale

55- Damp_Ang 0- 0.1 Sec
1- 0.5 Sec
2- 1 Sec
3- 2 Sec
4- 5 Sec
5- 10 Sec
56- Command_Bit; // 0- Non 1- Offset Cal

57- Span_ANG for 4-20mA

58- Larm 0- Enable, 1- Disable

62- Base Scale 0
63- Base Scale 1
64- Base Scale 2
65- Base Scale 3
66- Base Scale 4
67- Base Scale 5
68- Base Scale 6
69- Base Scale 7
70- Base Scale 8
71- Base Scale 9
72- Base Scale 10

06 Write Single Holding Register