

Digihelic Modbus Register List		Rev 2. 9/28/07		
Process Value and Status Functions				
Absolute Address	Modbus register	Parameter	Operation	Description
0	40001	PV	Read Only	Displayed Process Value (PV)
1	40002	Internal Temp	Read Only	Internal temperature of unit, °F
2	40003	Unit Status	Read Only	Bit Type Data:
			[Low Byte]	bit 7: Alarm HI on
				bit 6: Not used
				bit 5: Not used
				bit 4: 1 = Under range
				bit 3: 1 = Over range
				bit 2: 1 = Alarm on
				bit 1: 1 = Set Point 2 on
				bit 0: 1 = Set Point 1 on
			[High Byte]	bit 7: Not used
				bit 6: Not used
				bit 5: Not used
				bit 4: Not used
				bit 3: Not used
				bit 2: X1K descriptor on
				bit 1: 1 = Maint. mode on
				bit 0: Alarm LO on
Display Functions				
3	40004	PV DPT	Read Only	Decimal Point Position, PV ONLY
				0 = 0
				1 = 0.0
				2 = 0.00
				3 = 0.000
				4 = .0000
4	40005	DPT	Read Only	Decimal Point Position, ALL EXCEPT PV
				0 = 0
				1 = 0.0
				2 = 0.00
				3 = 0.000
				4 = .0000
5	40006	PEAK	R/W	Peak Value, write any value to reset
6	40007	VALY	R/W	Valley Value, write any value to reset
8	40009	PdiS	R/W	Display STD/Percent 0 = STD 1 = Percent
9	40010	rESO	R/W	Display Resolution, 0 = 4 digit 1 = 3 digit
10	40011	DAMP	R/W	Dampening, 1-16

Communication Settings

Baud Rate: 9600

Data Bits: 8

Parity: none

Stop Bits: 1

The factory default address is 50 (32h)

Important notes!

1. Only Modbus RTU is supported.
2. All Modbus registers are **HOLDING** registers
3. Only one register can be read or written to at a time. If a Modbus command is sent to read or write multiple registers, an error will be returned.
4. For information about the Modbus protocol, visit www.modbus.org

Output Functions				
Absolute Address	Modbus register	Parameter	Operation	Description
11	40012	Ctrl	R/W	Control Type: 0 = Single Set Point 1 = Two Set Point 2 = Set Point/Alarm
12	40013	SP1L	R/W	Set Point 1 Low
13	40014	SP1H	R/W	Set Point 1 High
14	40015	SP2L	R/W	Set Point 2 Low
15	40016	SP2H	R/W	Set Point 2 High
16	40017	ALLO	R/W	Low Alarm
17	40018	ALHI	R/W	High Alarm
18	40019	ISP	R/W	Set Point One Action: 0 = Direct, 1 = Reverse
19	40020	AL	R/W	Alarm Type: 0 = High, 1 = Low, 2 = High/Low
20	40021	ALrE	R/W	Alarm Reset: 0 = On/OFF (auto), 1 = Hold (manual)
36	40037	Ack Alarm	Write Only	Write any value to manually reset Alarm
21	40022	ALiH	R/W	Low Alarm Inhibit: 0 = Off, 1 = On
22	40023	ALDL	R/W	Alarm delay, 0-100 seconds
Operation Functions				
23	40024	KFAC	R/W	K Factor, Setting = 1-200, actual value = setting/100 (0.01 to 2.00)
24	40025	ArEA	R/W	Duct Type: 0 = Circular, 1 = Rectangular
25	40026	DIA	R/W	Circular Duct Diameter, refer to instruction manual for setting range and resolution
26	40027	XDIM	R/W	Rectangular duct X dimension, refer to instruction manual for setting range and resolution
27	40028	YDIM	R/W	Rectangular duct Y dimension, refer to instruction manual for setting range and resolution
7	40008	PrES/UeL/FLO	R/W	Displayed Units. 0 = INWC, 1 = FTWC, 2 = MMWC, 3 = CMWC 4 = PSI, 5 = INHG, 6 = MMHG, 7 = MBAR 8 = PA, 9 = KPA, 10 = HPA, 11 = OZIN 12 = SFPM, 13 = M/S, 14 = SCFM, 15 = M ³ H
51	40052	FLOr	R/W	0 = HI 1 = LO

Advanced Functions				
Absolute Address	Modbus register	Parameter	Operation	Description
28	40029	POL	R/W	Displayed Value for Retransmission output = 4mA
29	40030	POH	R/W	Displayed Value for Retransmission output = 20mA
30	40031	MSP1	R/W	Maint. Set Point 1
31	40032	MSP2	R/W	Maint. Set Point 2
32	40033	ADDR	R/W	RS485 Address, 1-247
33	40034	WR	R/W	RS 485 Write Enable, 0 = Disable, 1 = Enable
50	40051	Maint.	R/W	Turn Maint. Mode on/off 0 = OFF 1 = ON
Calibration Functions				
47	40048	CAL Zero	Write Only	Write any value to calibrate zero
48	40049	CAL Span	Write Only	Write any value to calibrate span
Security Functions				
49	40050	SECr	R/W	Security Level
				Read Value = 1, 2, 3, 4
				Write value for Secure Level 1 = 10
				Write value for Secure Level 2 = 70
				Write value for Secure Level 3 = 90
				Write value for Secure Level 4 = 111
Miscellaneous Functions				
35	40036	Model No.	Read Only	0 = DH-001 0 - 0.1 INWC
				1 = DH-002 0 - 0.25 INWC
				2 = DH-003 0 - 0.5 INWC
				3 = DH-004 0 - 1.0 INWC
				4 = DH-005 0 - 2.5 INWC
				5 = DH-006 0 - 5 INWC
				6 = DH-007 0 - 10 INWC
				7 = DH-008 0 - 25 INWC
				8 = DH-009 0 - 50 INWC
				9 = DH-010 0 - 100 INWC
				10 = DH-011 +/- 0.1 INWC
				11 = DH-012 +/- 0.25 INWC
				12 = DH-013 +/- 0.5 INWC
				13 = DH-014 +/- 1.0 INWC
				14 = DH-015 +/- 2.5 INWC
				15 = DH-016 +/- 5.0 INWC
				16 = DH-017 +/- 10 INWC
37	40038	Software	Read Only	Software Version Number