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WARRANTY

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iR2
Communication Manual



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iR2 Serial Communication Register List

Command	Command Index	Function	Command Bytes	# Of Characters	Default value (ex: with Analog Output option)
RW	01	SP1	3	6	1003E8
RW	02	SP2	3	6	1003E8
GPRW	03	RDGOFF	3	6	A00000
RW	04	ANLOFF	3	6	C001F4
RW	05	ID	2	4	0000
-	06	N/A	-	-	-
RW	07	INPUT	1	2	02
GPRW	08	RDGCNF	1	2	41
RW	09	AL1CNFG	1	2	81
RW	0A	AL2CNFG	1	2	00
RW	0B	LOOP BREAK TIME	2	4	003B
RW	0C	OUT1CNF	1	2	00
RW	0D	OUT2CNF	1	2	62
RW	0E	RAMPTIME	2	4	0000
RW	0F	ANLSCL	3	6	9186A0
RW	10	COMM.PARAMETERS	1	2	0D
RW	11	COLOR	1	2	09
RW	12	AL1LO	3	6	A003E8
RW	13	AL1HI	3	6	200FA0
GPRW	14	RDGSCL	3	6	100001
RW	15	AL2LO	3	6	A003E8
RW	16	AL2HI	3	6	200FA0
GPRW	17	PB1/DEAD BAND	2	4	00C8
GPRW	18	RESET 1	2	4	00B4
GPRW	19	RATE 1	2	4	0
GPRW	1A	CYCLE 1	1	2	7
-	1B	N/A	-	-	-
GPRW	1C	PB2/DEAD BAND	2	4	00C8
GPRW	1D	CYCLE 2	1	2	7
RW	1E	SOAK TIME	2	4	0
RW	1F	BUS FORMAT	1	2	14
GPRW	20	DATA FORMAT	1	2	2
RW	21	ADDRESS	1	2	1
RW	22	Transit Time Interval	2	4	10
R(W?)	23	?	3	6	814585
RW	24	Miscellaneous	1	2	0
RW	25	C.J. OFFSET ADJ.	3	6	200000

RW	26	Recognition Character	1	2	2A
RW	27	%LOW	1	2	0
RW	28	%HI	1	2	63
RW	30	EMISSIVITY Value	2	4	03E8
RW	31	SLOP Value	2	4	03E8
RW	44	VOLT OFFSET (ANLG. CAL.)	2	4	0000
RW	45	VOLT SCALE (ANLG. CAL.)	2	4	8000
RW	46	CURR. OFFSET (ANLG. CAL.)	2	4	0000
RW	47	CURR.SCALE (ANLG. CAL.)	2	4	8000
D	01	DISABLE ALARM 1	0	0	-
D	02	DISABLE ALARM 2	0	0	-
D	03	STANDBY	0	0	-
D	04	DISABLE SELF	0	0	-
E	01	ENABLE ALARM 1	0	0	-
E	02	ENABLE ALARM 2	0	0	-
E	03	DISABLE STANDBY	0	0	-
E	04	ENABLE SELF	0	0	-
X	01	SEND READING(SGLE.COLR)	0	0	-
X	02	SEND PEAK READING	0	0	-
X	03	SEND VALLEY READING	0	0	-
X	04	SEND READING(DUAL COLR)	0	0	
X	05	CALIBRATION (DATA STRING)	0	0	
U	01	SEND ALARM STATUS	0	0	-
U	03	SEND SW VERSION	0	0	(Dec. #)
V	01	SEND DATA STRING	0	0	-
Z	02	HARD RESET	0	0	-

iR2 Modbus Comm. Register Description List

FUNCTION CODE	REGISTER	FUNCTION	NUMBER of BYTE	Default value (ex: with Analog Output option)
03/04, 06	01	SP1 : SETPOINT 1 VALUE	2	03E8
03/04, 06	02	SP2 : SETPOINT 2 VALUE	2	03E8
(N/A)	03	(N/A)	x	X
(N/A)	04	(N/A)	x	X
03/04, 06	05	ID : Security ID code	2	0000
(N/A)	06	(N/A)	X	X
03/04, 06	07	IR : INPUT CONFIGURATION (*)	1	02
03/04, 06	08	RdG.CNF : READING CONFIG (**)	2	41
03/04, 06	09	AL1/ANLG.OUTPUT CNFG	1	81
03/04, 06	0A	AL2/ANLG.OUTPUT CNFG	1	0000
03/04, 06	0B	LOOP BREAK TIME VALUE	2	003B
03/04, 06	0C	OUTPUT 1 CONFIGURATION	1	00
03/04, 06	0D	OUTPUT 2 CONFIGURATION	1	62
03/04, 06	0E	RAMP TIME VALUE	2	0000
(N/A)	0F	(N/A)	X	X
03/04, 06	10	COMM. PARAMETERS	1	0D
(N/A)	11	(N/A)	1	X
03/04, 06	12	ALARM1 LOW VALUE	2	03E8
03/04, 06	13	ALARM1 HIGH VALUE	2	05DC
(N/A)	14	(N/A)	X	X
03/04, 06	15	ALARM2 LOW VALUE	2	0320
03/04, 06	16	ALARM2 HIGH VALUE	2	03E8
03/04, 06	17	PB1/DEAD BAND1 VALUE	2	00C8
03/04, 06	18	RESET1 VALUE(Time in Sec.)	2	00B4
03/04, 06	19	RATE 1 VALUE(Time in Sec.)	2	0000
03/04, 06	1A	CYCLE 1 VALUE(Time in Sec.)	1	07
(N/A)	1B	(N/A)	X	X
03/04, 06	1C	PB2/DEAD BAND2 VALUE	2	00C8
03/04, 06	1D	CYCLE 2 VALUE(Time in Sec.)	1	07
03/04, 06	1E	SOAK TIME	2	0000
03/04, 06	1F	BUS FORMAT	1	14
03/04, 06	20	DATA FORMAT	1	02
03/04, 06	21	ADDRESS	1	01
03/04, 06	22	TRANSIT TIME	2	0010
(N/A)	23	(N/A)	X	X
(N/A)	24	(N/A)	X	X
(N/A)	25	(N/A)	X	X
03/04, 06	26	RECOGNITION CHARACTER	1	2A
03/04	27	PROCESS VALUE	2	(Main Reading)
03/04	28	PEAK VALUE	2	
03/04	29	VALLEY VALUE	2	
03/04	2A	SOFTWARE VERSION	1	

(*) Format description of Register Location 07:

BIT POSITION								<i>I R</i> (INPUT CONFIGURATION) FORMAT REGISTER = 07		
7	6	5	4	3	2	1	0			Value to be read or written:
							0	Laser Off		
							1	Laser On		
						0		Dual Color		
						1		Single Color		
0	0	0	0	0	0	0	0	Dual Color	Laser Off	00
0	0	0	0	0	0	0	1	Dual Color	Laser ON	01
0	0	0	0	0	0	1	0	Single Color	Laser Off	<u>02</u>
0	0	0	0	0	0	1	1	Single Color	Laser ON	03

(**) Format description of Register Location 08:

BIT POSITION								<i>RdG</i> (READING CONFIGURATION) FORMAT REGISTER = 08		
7	6	5	4	3	2	1	0			
				0	0	0	1	°C		
				1	0	0	1	°F		
0	0	0						<i>FLtR</i> (FILTER TIME CONSTANT) = 0001		
0	0	1						<i>FLtR</i> (FILTER TIME CONSTANT) = 0002		
0	1	0						<i>FLtR</i> (FILTER TIME CONSTANT) = <u>0004</u>		
0	1	1						<i>FLtR</i> (FILTER TIME CONSTANT) = 0008		
1	0	0						<i>FLtR</i> (FILTER TIME CONSTANT) = 0016		
1	0	1						<i>FLtR</i> (FILTER TIME CONSTANT) = 0032		
1	1	0						<i>FLtR</i> (FILTER TIME CONSTANT) = 0064		
1	1	1						<i>FLtR</i> (FILTER TIME CONSTANT) = 0128		

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3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

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