PTL110S Pick-to-Light Device Register Map

Holding Registers

Holding Registers for Device Information

Address without Offset	Address with Offset	Description	Holding Register Representation
1000	1001	Low word model number	Example: 0x0002A734 (hex) = 173876 (dec)
1001	1002	High word model number	High word = 0x0002 Low word = 0xA734
1002	1003	Model version (BCD)	
1003–1018	1004–1019	Model name, string	
1019	1020	Low word configuration number	Example: 0x00016D43 (hex) = 93507 (dec)
1020	1021	High word configuration number	High word = 0x0001 Low word = 0x6D43
1021	1022	Configuration version (BCD)	
1022–1037	1023–1038	Serial number/date code, string	
1038–1053	1039–1054	Serial number, string	

Holding Registers for Outputs

Use these registers to differentiate sensor outputs or turn them off.

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value
6000	6001	Touch sensor output (if present)	0 = Disabled 1 = Primary 2 = Secondary	1
6001	6002	Touch sensor on delay (ms)	0–65535	0
6002	6003	Optical sensor output (if present)	0 = Disabled 1 = Primary 2 = Secondary	1
6003	6004	Optical sensor on delay (ms)	0–65535	0

Holding Registers to Configure Modbus Communication

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value
6100	6101	Modbus physical slave ID of the device	1–247	1
6101	6102	Baud rate	12 = 1200 24 = 2400 48 = 4800 96 = 9600 192 = 19200 384 = 38400	192
6102	6103	Parity	0 = none 1 = odd 2 = even	0
6103	6104	Stop Bits	1 = 1 2 = 2 3 = 1.5	1

Holding Registers for Device-Specific Configuration

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value
6200	6201	Indicator intensity, basic mode only	0 = Low 1 = Standard 2 = High	1
6201	6202	Device orientation (if display is present in the device)	0 = Standard (touch sensor/indicator located on the right) 1 = Inverted (touch sensor/indicator located on the left)	0
6202	6203	Touch sensor sensitivity (if touch sensor is present in the device)	0 = Low 1 = Standard 2 = High	1
6203	6204	Scrolling display settings (if display is present in the device)	0 = Off 1 = Enabled, slow speed 2 = Enabled, standard speed 3 = Enabled, high speed	2
6204	6205	Display startup message (if display is present in the device)	0 = None 1 = Show Modbus settings (slave ID, baud, data bits, parity bit, stop bit) 2 = Show custom message (6400-6409)	1
6205	6206	Custom startup message display time (ms) (if display is present in the device)	0 through 65535 (65535 value is infinite)	3000
6206	6207	First decimal place function (if display is present in the device)	0 = Off 1 = Steady on 2 = Flashing 3 = Communication 4 = Power+Communication 5 = Activation	0
6207	6208	Second decimal place function (if display is present in the device)	0 = Off 1 = Steady on 2 = Flashing 3 = Communication 4 = Power+Communication 5 = Activation	0
6208	6209	Third decimal place function (if display is present in the device)	0 = Off 1 = Steady on 2 = Flashing 3 = Communication 4 = Power+Communication 5 = Activation	4
6209	6210	Display encoding for register 8703 (if display is present in the device)	0 = ASCII 1 = Decimal Numeric	0

Holding Registers to Configure State Mode

Refer to the Instruction Manual for a description of these settings.

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value
6300	6301	Enable state mode	0 = Disabled 1 = Enabled	0
6301	6302	Waiting State: Animation	0 = Off 1 = Steady 2 = Flash 3 = Two Color Flash 4 = Half/Half Top/Bottom 5 = Half/Half Left/Right 6 = Half/Half Rotate 7 = Chase 8 = Intensity Sweep	0

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value
6302	6303	Waiting State: Color 1	0 = Red 1 = Green 2 = Yellow 3 = Blue 4 = Magenta 5 = Cyan 6 = White 7 = Amber 8 = Rose 9 = Lime Green 10 = Orange 11 = Sky Blue 12 = Violet 13 = Spring Green	0
6303	6304	Waiting State: Color 2	0 = Red 1 = Green 2 = Yellow 3 = Blue 4 = Magenta 5 = Cyan 6 = White 7 = Amber 8 = Rose 9 = Lime Green 10 = Orange 11 = Sky Blue 12 = Violet 13 = Spring Green	0
6304	6305	Waiting State: Intensity for color 1	0 = High 1 = Medium 2 = Low 3 = Off	1
6305	6306	Waiting State: Intensity for color 2	0 = High 1 = Medium 2 = Low 3 = Off	1
6306	6307	Waiting State: Animation speed	0 = Slow 1 = Standard 2 = Fast	1
6307	6308	Waiting State: Animation pattern	0 = Normal 1 = Strobe 2 = 3-Pulse 3 = SOS 4 = Random	0
6308	6309	Waiting State: Animation direction	0 = Clockwise 1 = Counterclockwise	0
6309	6310	Waiting State: Visual on delay (ms)	0–65535	0
6310	6311	Waiting State: Visual off delay (ms)	0–65535	0
6311	6312	Reserved	-	
6312	6313	Mispick State: Animation	0 = Off 1 = Steady 2 = Flash 3 = Two Color Flash 4 = Half/Half Top/Bottom 5 = Half/Half Left/Right 6 = Half/Half Rotate 7 = Chase 8 = Intensity Sweep	2

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value
6313	6314	Mispick State: Color 1	0 = Red 1 = Green 2 = Yellow 3 = Blue 4 = Magenta 5 = Cyan 6 = White 7 = Amber 8 = Rose 9 = Lime Green 10 = Orange 11 = Sky Blue 12 = Violet 13 = Spring Green	0
6314	6315	Mispick State: Color 2	0 = Red 1 = Green 2 = Yellow 3 = Blue 4 = Magenta 5 = Cyan 6 = White 7 = Amber 8 = Rose 9 = Lime Green 10 = Orange 11 = Sky Blue 12 = Violet 13 = Spring Green	0
6315	6316	Mispick State: Intensity for color 1	0 = High 1 = Medium 2 = Low 3 = Off	0
6316	6317	Mispick State: Intensity for color 2	0 = High 1 = Medium 2 = Low 3 = Off	0
6317	6318	Mispick State: Animation speed	0 = Slow 1 = Standard 2 = Fast	2
6318	6319	Mispick State: Animation pattern	0 = Normal 1 = Strobe 2 = 3-Pulse 4 = SOS 5 = Random	2
6319	6320	Mispick State: Animation direction	0 = Clockwise 1 = Counterclockwise	0
6320	6321	Mispick State: Visual on delay (ms)	0–65535	0
6321	6322	Mispick State: Visual off delay (ms)	0–65535	3000
6322	6323	Reserved	-	
6323	6324	Job State: Animation	0 = Off 1 = Steady 2 = Flash 3 = Two Color Flash 4 = Half/Half Top/Bottom 5 = Half/Half Left/Right 6 = Half/Half Rotate 7 = Chase 8 = Intensity Sweep	1

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value
6324	6325	Job State: Color 1	0 = Red 1 = Green 2 = Yellow 3 = Blue 4 = Magenta 5 = Cyan 6 = White 7 = Amber 8 = Rose 9 = Lime Green 10 = Orange 11 = Sky Blue 12 = Violet 13 = Spring Green	1
6325	6326	Job State: Color 2	0 = Red 1 = Green 2 = Yellow 3 = Blue 4 = Magenta 5 = Cyan 6 = White 7 = Amber 8 = Rose 9 = Lime Green 10 = Orange 11 = Sky Blue 12 = Violet 13 = Spring Green	0
6326	6327	Job State: Intensity for color 1	0 = High 1 = Medium 2 = Low 3 = Off	1
6327	6328	Job State: Intensity for color 2	0 = High 1 = Medium 2 = Low 3 = Off	1
6328	6329	Job State: Animation speed	0 = Slow 1 = Standard 2 = Fast	1
6329	6330	Job State: Animation pattern	0 = Normal 1 = Strobe 2 = 3-Pulse 3 = SOS 4 = Random	0
6330	6331	Job State: Animation direction	0 = Clockwise 1 = Counterclockwise	0
6331	6332	Job State: Visual on delay (ms)	0–65535	0
6332	6333	Job State: Visual off delay (ms)	0–65535	0
6333	6334	Reserved	-	
6334	6335	Acknowledge State: Animation	0 = Off 1 = Steady 2 = Flash 3 = Two Color Flash 4 = Half/Half Top/Bottom 5 = Half/Half Left/Right 6 = Half/Half Rotate 7 = Chase 8 = Intensity Sweep	1

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value
6335	6336	Acknowledge State: Color 1	0 = Red 1 = Green 2 = Yellow 3 = Blue 4 = Magenta 5 = Cyan 6 = White 7 = Amber 8 = Rose 9 = Lime Green 10 = Orange 11 = Sky Blue 12 = Violet 13 = Spring Green	2
6336	6337	Acknowledge State: Color 2	0 = Red 1 = Green 2 = Yellow 3 = Blue 4 = Magenta 5 = Cyan 6 = White 7 = Amber 8 = Rose 9 = Lime Green 10 = Orange 11 = Sky Blue 12 = Violet 13 = Spring Green	0
6337	6338	Acknowledge State: Intensity for color 1	0 = High 1 = Medium 2 = Low 3 = Off	1
6338	6339	Acknowledge State: Intensity for color 2	0 = High 1 = Medium 2 = Low 3 = Off	1
6339	6340	Acknowledge State: Animation speed	0 = Slow 1 = Standard 2 = Fast	1
6340	6341	Acknowledge State: Animation pattern	0 = Normal 1 = Strobe 2 = 3-Pulse 3 = SOS 4 = Random	0
6341	6342	Acknowledge State: Animation direction	0 = Clockwise 1 = Counterclockwise	0
6342	6343	Acknowledge State: Visual on delay (ms)	0–65535	0
6343	6344	Acknowledge State: Visual off delay (ms)	0–65535	1000
6344	6345	Reserved	-	
6345	6346	Secondary Acknowledge State: Animation	0 = Off 1 = Steady 2 = Flash 3 = Two Color Flash 4 = Half/Half Top/Bottom 5 = Half/Half Left/Right 6 = Half/Half Rotate 7 = Chase 8 = Intensity Sweep	1

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value
6346	6347	Secondary Acknowledge State: Color 1	0 = Red 1 = Green 2 = Yellow 3 = Blue 4 = Magenta 5 = Cyan 6 = White 7 = Amber 8 = Rose 9 = Lime Green 10 = Orange 11 = Sky Blue 12 = Violet 13 = Spring Green	3
6347	6348	Secondary Acknowledge State: Color 2	0 = Red 1 = Green 2 = Yellow 3 = Blue 4 = Magenta 5 = Cyan 6 = White 7 = Amber 8 = Rose 9 = Lime Green 10 = Orange 11 = Sky Blue 12 = Violet 13 = Spring Green	0
6348	6349	Secondary Acknowledge State: Intensity for color 1	0 = High 1 = Medium 2 = Low 3 = Off	1
6349	6350	Secondary Acknowledge State: Intensity for color 2	0 = High 1 = Medium 2 = Low 3 = Off	1
6350	6351	Secondary Acknowledge State: Animation speed	0 = Slow 1 = Standard 2 = Fast	1
6351	6352	Secondary Acknowledge State: Animation pattern	0 = Normal 1 = Strobe 2 = 3-Pulse 3 = SOS 4 = Random	0
6352	6353	Secondary Acknowledge State: Animation direction	0 = Clockwise 1 = Counterclockwise	0
6353	6354	Secondary Acknowledge State: Visual on delay (ms)	0–65535	0
6354	6355	Secondary Acknowledge State: Visual off delay (ms)	0–65535	1000
6355	6356	Reserved	-	

Holding Registers to Define a Custom Startup Message

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value
6400–6409	6401–6410	Custom display startup message (if display is present in the device)		

Holding Registers for Test Mode

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value
6500	6501	Enable test mode Indicator will flash blue and display will show slave ID	0 = Off 1 = Enabled	0

Holding Registers to Restore Factory Defaults

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value
6600	6601	Restore factory defaults. Set 6601 and 6602 to the correct key to initiate the selected factory reset type (hard or soft).	0 = Disabled 1 = Enable a hard reset (restore all defaults) 2 = Enable a soft reset (restore all defaults except the Modbus communication settings in registers 6100-6103)	0
6601	6602	Restore factory defaults key 1	43690 = Enable	0
6602	6603	Restore factory defaults key 2	21845 = Enable	0

Holding Registers When Common ID is Active

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value
7940	7941	Modbus slave ID of active device, same as register 6100		
7941	7942	Device output latch register; values in this register will latch until acknowledged and cleared by the master (either by changing the value in this register or in register 8700) OR will clear after the timeout elapses as defined in register 8812	0 = None triggered 1 = Primary triggered 2 = Secondary triggered 3 = Both triggered	
7942	7943	Device output status; values in this register will reflect the real time status of the device's outputs	0 = None triggered 1 = Primary triggered 2 = Secondary triggered 3 = Both triggered	

Main Holding Registers Used in Runtime

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value
8700	8701	Device Job state, used in State Mode to designate a device as active (moves devices from Waiting State to Job State and vice versa) Any write to this register resets the device latch in Register 7941	0 = Waiting State 1–65535 = Job State	0
8701	8702	Job animation Primary enumeration is active when device is in Basic Mode, value in register 6300 is 0 Secondary enumeration is active when device is in State Mode, value in register 6300 is 1. This value will then override the value in register 6323	Primary Enumeration: 0 = Off 1 = Steady 2 = Flash 3 = Strobe 11–20 N-Pulse (N = Index - 10) (e.g. 13 = 3 Pulse) Secondary Enumeration: 0 = Off 1 = Steady 2 = Flash 3 = Two Color Flash 4 = Half/Half Top/Bottom 5 = Half/Half Left/Right 6 = Half/Half Rotate 7 = Chase 8 = Intensity Sweep	0

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value
8702	8703	Job color Primary enumeration is active when device is in Basic Mode, value in register 6300 is 0 Secondary enumeration is active when device is in State Mode, value in register 6300 is 1. This value will then override the value in register 6324.	Primary Enumeration: 0 = Off 1 = Red 2 = Green 3 = Yellow 4 = Blue 5 = Magenta 6 = Cyan 7 = White 8 = Amber 9 = Rose 10 = Lime Green 11 = Orange 12 = Sky Blue 13 = Violet 14 = Spring Green	0
			Secondary Enumeration: 0 = Red 1 = Green 2 = Yellow 3 = Blue 4 = Magenta 5 = Cyan 6 = White 7 = Amber 8 = Rose 9 = Lime Green 10 = Orange 11 = Sky Blue 12 = Violet 13 = Spring Green	
8703–8752	8704–8753	Characters for the display Primary enumeration: null terminated ASCII string or numeric representation (defined in register 6209), each register holds 2 characters (i.e. 8703 holds values for characters 1 and 2 and 8752 holds values for characters 99 and 100 in the string) Secondary enumeration: decimal encoded, decimal value in the register will show on the display	Primary Enumeration: ASCII encoded 65535 = Blank display	
			Secondary Enumeration: Decimal encoded 0–65534 = decimal shown on the display 65535 = Blank	

Common ID Configuration Holding Registers

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value
8810	8811	Common ID	1–247	195
8811	8812	Global on delay that applies to both inputs (touch and optical sensor) (stacks on top of on delays in registers 6001 and 6003) (ms)	0–65535 (65535 value is infinite)	0
8812	8813	Latch timeout for 7941 (ms)	0–65535 (65535 value is infinite)	1000
8813	8814	Minimum output on time for register 7942, off delay (ms)	0–65535 (65535 value is infinite)	1000

Input Registers

Address	Description	Input Register Representation	Default Value
300	CPU Temperature C		
301	Board Temperature C		
2000	Modbus Bus Message Count		
2001	Modbus Bus Comm Error Count		
2002	Modbus Bus Exception Error Count		
2003	Mobus Server Message Count		
2004	Modbus Server NACK Count		
2005	Modbus Bus Character Overrun Count		
2006	Modbus Bus Overrun Count		

Address	Description	Input Register Representation	Default Value
2007	Modbus Noise Error		
2008	Modbus Parity Error		
2009	Modbus Frame Error		
2010	Modbus Crc Error		
2011	Modbus Illegal Function		
2012	Modbus Illegal Data Address		
2013	Modbus Illegal Data Value		
2014	Modbus Device Failure		