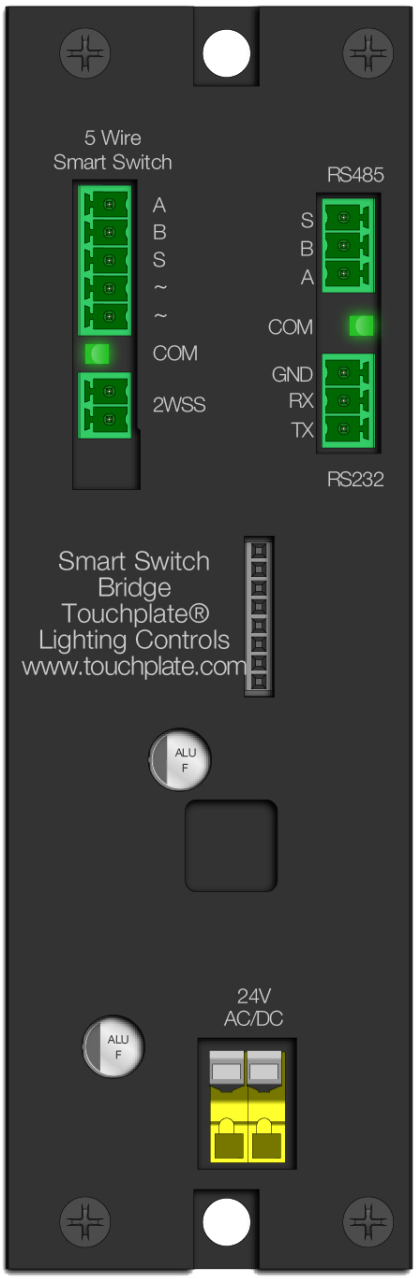
touch-plate®
LIGHTING CONTROLS

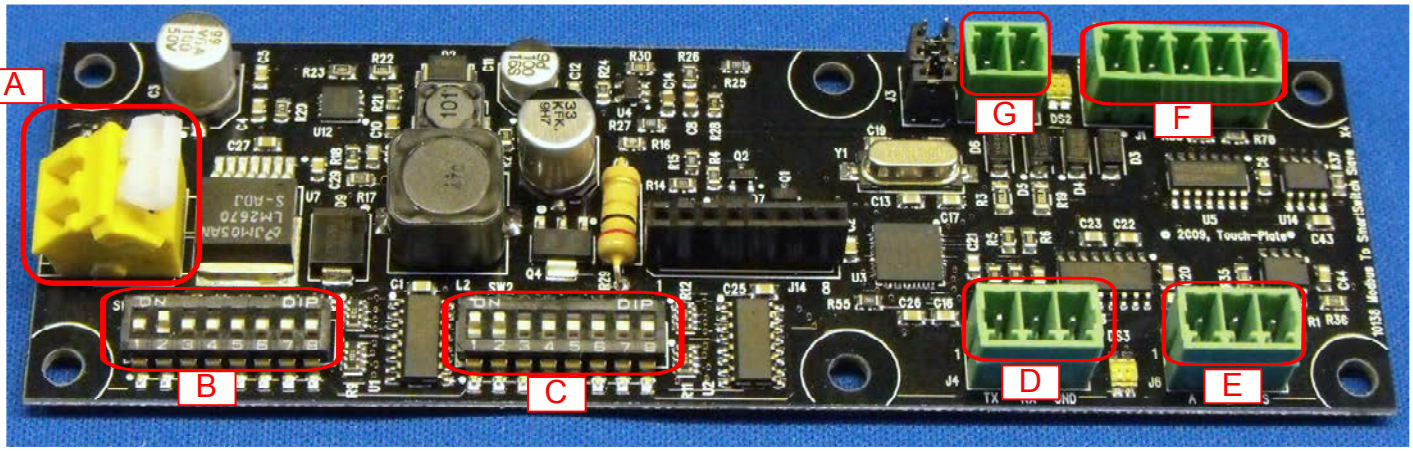
10138

Modbus - SmartSwitch Gateway



Features

- Easy Integration of SmartSwitches into a Modbus network
- Supports up to 8 two-wire SmartSwitch stations, or up to 50 five-wire SmartSwitch stations
- Each button has its own momentary and maintain registers
- Button press buffer register allows for monitoring a single register for all button presses
- Supports intensity, color, and flash patterns for station LEDs (certain station types only)
- Modbus RTU RS485 Interface
- Baud rates up to 115.2K supported



A – 24V AC or DC power Input
B – Modbus Address DIP
C – Modbus Baud Rate, Parity, & Stop Bits DIP
D – Modbus RS232 Port
E – Modbus RS485 Port
F – 5 Wire SmartSwitch Port
G – 2 Wire SmartSwitch Port

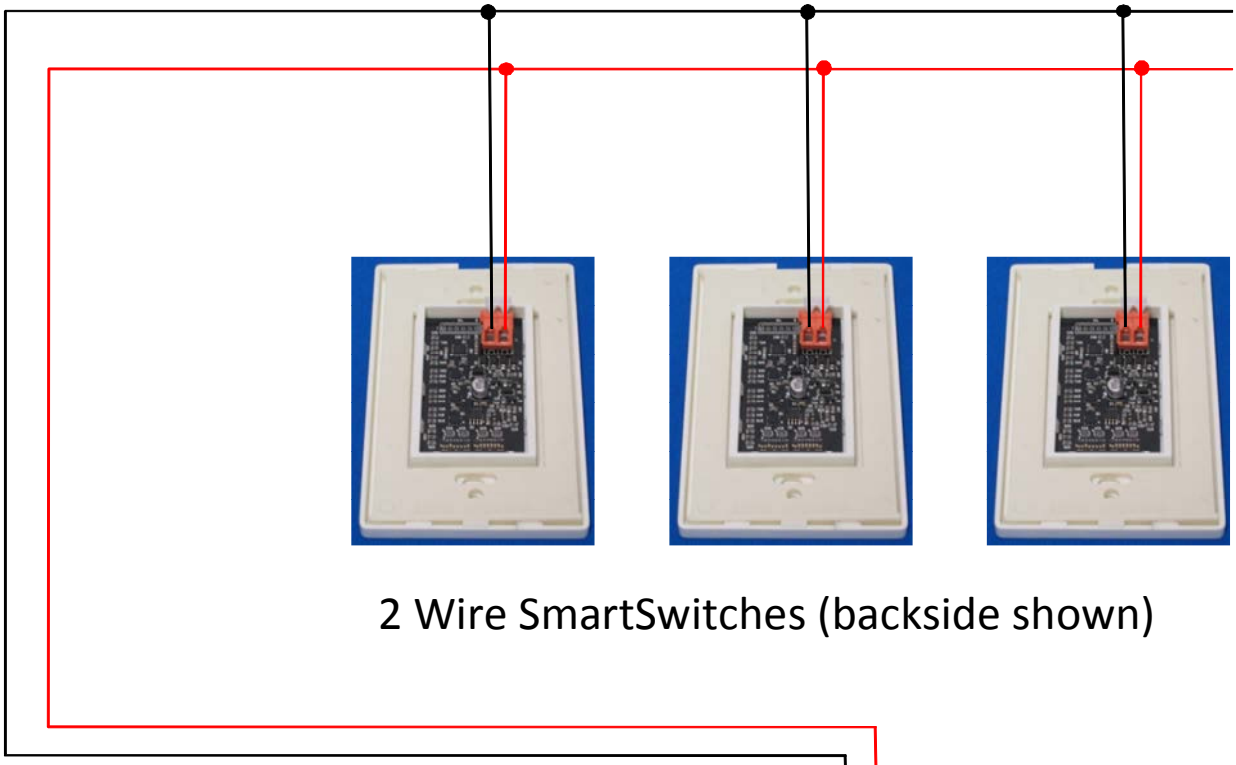
Specifications

Electrical
Rate Voltage: 18 – 24 V AC or DC, Power supply must be Class 2
Power Consumption: 1.7VA + 0.75VA for each SmartSwitch attached

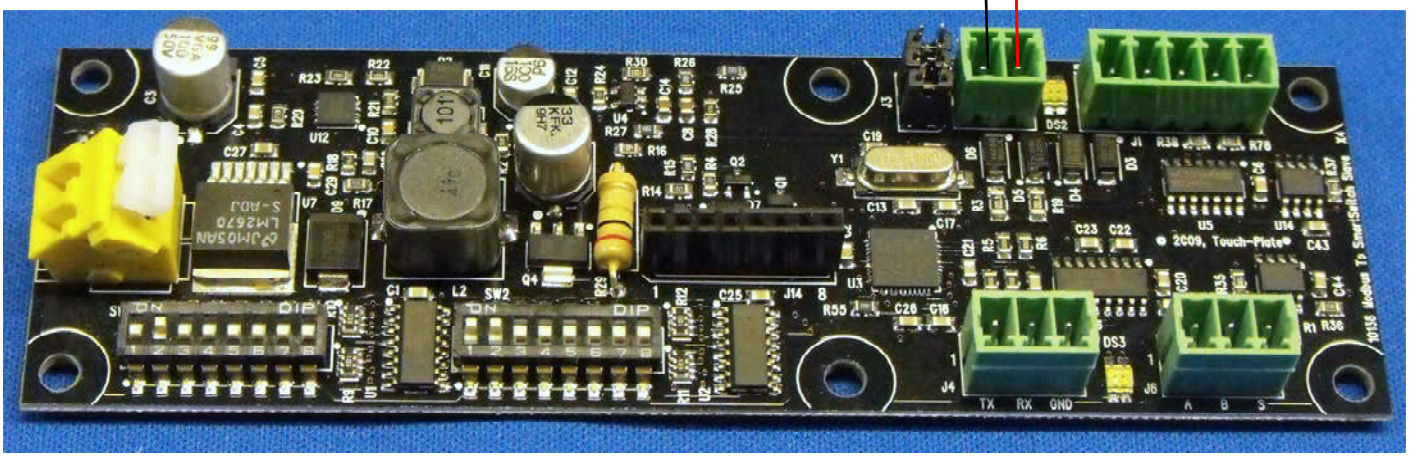
Dimensions
1.76" width x 5.6" long

Connecting 2 wire SmartSwitches

To additional 2 wire SmartSwitches (total 8)

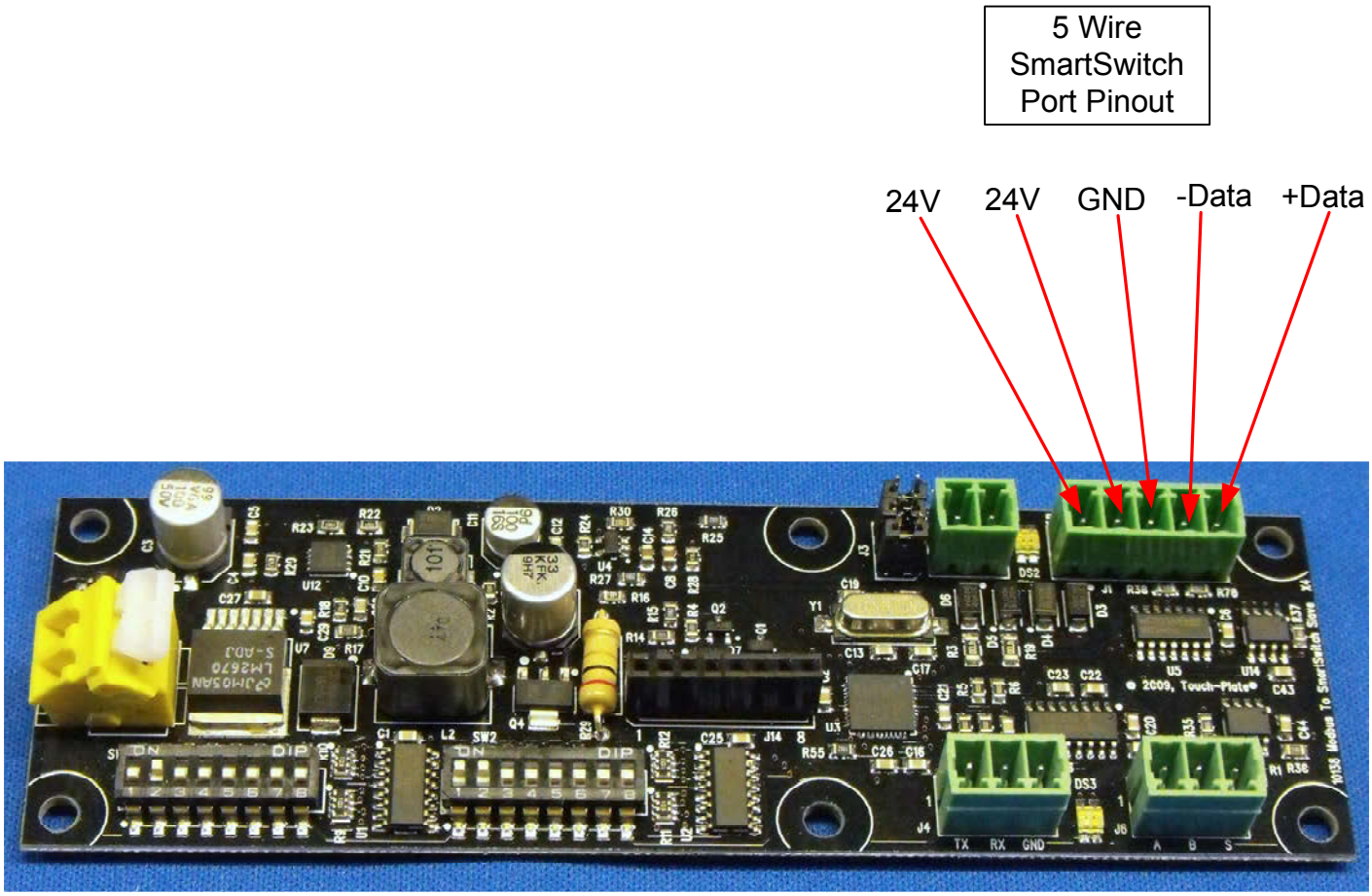


2 Wire SmartSwitches (backside shown)

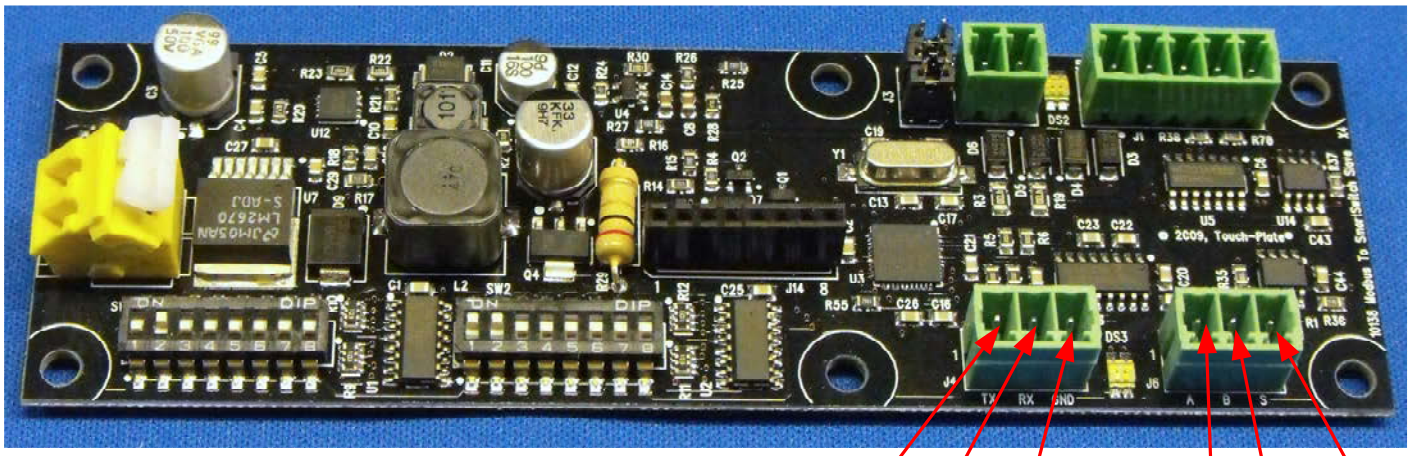


- Use Belden 9740 cable or Equivalent
- Wire connections are not polarity sensitive
- Max cable length is 500 feet

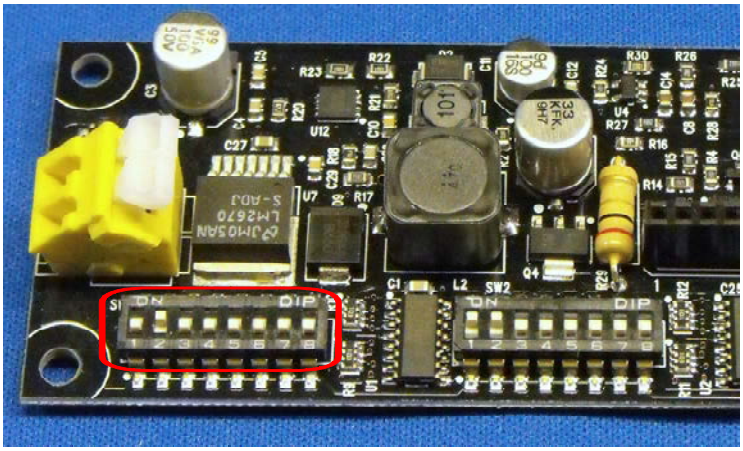
SmartSwitches can be connected to either the 2 wire or 5 wire port. Both ports can be used at the same time, allowing for a mix of 2 wire and 5 wire stations.



- Use Belden 1502 cable or Equivalent
- Connect in a daisy chain manner
- Up to 50 Five-wire SmartSwitches can be daisy chained together.



Modbus communication to the gateway can be either through the RS-232 port or through the RS-485 port. Only use one port at a time. There is no configuration to change to switch from one port to the other.



Set the Modbus address using the SW1 DIP switches.

Positional Value	1	2	4	8	16	32	64	128
Switch Number	1	2	3	4	5	6	7	8

Address								
0*	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
19	ON	ON	OFF	OFF	ON	OFF	OFF	OFF
20	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
21	ON	OFF	ON	OFF	ON	OFF	OFF	OFF
22	OFF	ON	ON	OFF	ON	OFF	OFF	OFF
23	ON	ON	ON	OFF	ON	OFF	OFF	OFF
24	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
25	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
26	OFF	ON	OFF	ON	ON	OFF	OFF	OFF
27	ON	ON	OFF	ON	ON	OFF	OFF	OFF
28	OFF	OFF	ON	ON	ON	OFF	OFF	OFF
29	ON	OFF	ON	ON	ON	OFF	OFF	OFF
30	OFF	ON	ON	ON	ON	OFF	OFF	OFF
31	ON	ON	ON	ON	ON	OFF	OFF	OFF

Positional Value	1	2	4	8	16	32	64	128
Switch Number	1	2	3	4	5	6	7	8

Address								
32	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
33	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF
34	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
35	ON	ON	OFF	OFF	OFF	ON	OFF	OFF
36	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF
37	ON	OFF	ON	OFF	OFF	ON	OFF	OFF
38	OFF	ON	ON	OFF	OFF	ON	OFF	OFF
39	ON	ON	ON	OFF	OFF	ON	OFF	OFF
40	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF
41	ON	OFF	OFF	ON	OFF	ON	OFF	OFF
42	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
43	ON	ON	OFF	ON	OFF	ON	OFF	OFF
44	OFF	OFF	ON	ON	OFF	ON	OFF	OFF
45	ON	OFF	ON	ON	OFF	ON	OFF	OFF
46	OFF	ON	ON	ON	OFF	ON	OFF	OFF
47	ON	ON	ON	ON	OFF	ON	OFF	OFF
48	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF
49	ON	OFF	OFF	OFF	ON	ON	OFF	OFF
50	OFF	ON	OFF	OFF	ON	ON	OFF	OFF
51	ON	ON	OFF	OFF	ON	ON	OFF	OFF
52	OFF	OFF	ON	OFF	ON	ON	OFF	OFF
53	ON	OFF	ON	OFF	ON	ON	OFF	OFF
54	OFF	ON	ON	OFF	ON	ON	OFF	OFF
55	ON	ON	ON	OFF	ON	ON	OFF	OFF
56	OFF	OFF	OFF	ON	ON	ON	OFF	OFF
57	ON	OFF	OFF	ON	ON	ON	OFF	OFF
58	OFF	ON	OFF	ON	ON	ON	OFF	OFF
59	ON	ON	OFF	ON	ON	ON	OFF	OFF
60	OFF	OFF	ON	ON	ON	ON	OFF	OFF
61	ON	OFF	ON	ON	ON	ON	OFF	OFF
62	OFF	ON	ON	ON	ON	ON	OFF	OFF
63	ON	ON	ON	ON	ON	ON	OFF	OFF

Positional Value	1	2	4	8	16	32	64	128
Switch Number	1	2	3	4	5	6	7	8

Address								
64	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF
65	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF
66	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF
67	ON	ON	OFF	OFF	OFF	OFF	ON	OFF
68	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF
69	ON	OFF	ON	OFF	OFF	OFF	ON	OFF
70	OFF	ON	ON	OFF	OFF	OFF	ON	OFF
71	ON	ON	ON	OFF	OFF	OFF	ON	OFF
72	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF
73	ON	OFF	OFF	ON	OFF	OFF	ON	OFF
74	OFF	ON	OFF	ON	OFF	OFF	ON	OFF
75	ON	ON	OFF	ON	OFF	OFF	ON	OFF
76	OFF	OFF	ON	ON	OFF	OFF	ON	OFF
77	ON	OFF	ON	ON	OFF	OFF	ON	OFF
78	OFF	ON	ON	ON	OFF	OFF	ON	OFF
79	ON	ON	ON	ON	OFF	OFF	ON	OFF
80	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF
81	ON	OFF	OFF	OFF	ON	OFF	ON	OFF
82	OFF	ON	OFF	OFF	ON	OFF	ON	OFF
83	ON	ON	OFF	OFF	ON	OFF	ON	OFF
84	OFF	OFF	ON	OFF	ON	OFF	ON	OFF
85	ON	OFF	ON	OFF	ON	OFF	ON	OFF
86	OFF	ON	ON	OFF	ON	OFF	ON	OFF
87	ON	ON	ON	OFF	ON	OFF	ON	OFF
88	OFF	OFF	OFF	ON	ON	OFF	ON	OFF
89	ON	OFF	OFF	ON	ON	OFF	ON	OFF
90	OFF	ON	OFF	ON	ON	OFF	ON	OFF
91	ON	ON	OFF	ON	ON	OFF	ON	OFF
92	OFF	OFF	ON	ON	ON	OFF	ON	OFF
93	ON	OFF	ON	ON	ON	OFF	ON	OFF
94	OFF	ON	ON	ON	ON	OFF	ON	OFF
95	ON	ON	ON	ON	ON	OFF	ON	OFF

Positional Value	1	2	4	8	16	32	64	128
Switch Number	1	2	3	4	5	6	7	8

Address								
96	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF
97	ON	OFF	OFF	OFF	OFF	ON	ON	OFF
98	OFF	ON	OFF	OFF	OFF	ON	ON	OFF
99	ON	ON	OFF	OFF	OFF	ON	ON	OFF
100	OFF	OFF	ON	OFF	OFF	ON	ON	OFF
101	ON	OFF	ON	OFF	OFF	ON	ON	OFF
102	OFF	ON	ON	OFF	OFF	ON	ON	OFF
103	ON	ON	ON	OFF	OFF	ON	ON	OFF
104	OFF	OFF	OFF	ON	OFF	ON	ON	OFF
105	ON	OFF	OFF	ON	OFF	ON	ON	OFF
106	OFF	ON	OFF	ON	OFF	ON	ON	OFF
107	ON	ON	OFF	ON	OFF	ON	ON	OFF
108	OFF	OFF	ON	ON	OFF	ON	ON	OFF
109	ON	OFF	ON	ON	OFF	ON	ON	OFF
110	OFF	ON	ON	ON	OFF	ON	ON	OFF
111	ON	ON	ON	ON	OFF	ON	ON	OFF
112	OFF	OFF	OFF	OFF	ON	ON	ON	OFF
113	ON	OFF	OFF	OFF	ON	ON	ON	OFF
114	OFF	ON	OFF	OFF	ON	ON	ON	OFF
115	ON	ON	OFF	OFF	ON	ON	ON	OFF
116	OFF	OFF	ON	OFF	ON	ON	ON	OFF
117	ON	OFF	ON	OFF	ON	ON	ON	OFF
118	OFF	ON	ON	OFF	ON	ON	ON	OFF
119	ON	ON	ON	OFF	ON	ON	ON	OFF
120	OFF	OFF	OFF	ON	ON	ON	ON	OFF
121	ON	OFF	OFF	ON	ON	ON	ON	OFF
122	OFF	ON	OFF	ON	ON	ON	ON	OFF
123	ON	ON	OFF	ON	ON	ON	ON	OFF
124	OFF	OFF	ON	ON	ON	ON	ON	OFF
125	ON	OFF	ON	ON	ON	ON	ON	OFF
126	OFF	ON	ON	ON	ON	ON	ON	OFF
127	ON	ON	ON	ON	ON	ON	ON	OFF

Positional Value	1	2	4	8	16	32	64	128
Switch Number	1	2	3	4	5	6	7	8

Address								
128	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
129	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON
130	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON
131	ON	ON	OFF	OFF	OFF	OFF	OFF	ON
132	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON
133	ON	OFF	ON	OFF	OFF	OFF	OFF	ON
134	OFF	ON	ON	OFF	OFF	OFF	OFF	ON
135	ON	ON	ON	OFF	OFF	OFF	OFF	ON
136	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON
137	ON	OFF	OFF	ON	OFF	OFF	OFF	ON
138	OFF	ON	OFF	ON	OFF	OFF	OFF	ON
139	ON	ON	OFF	ON	OFF	OFF	OFF	ON
140	OFF	OFF	ON	ON	OFF	OFF	OFF	ON
141	ON	OFF	ON	ON	OFF	OFF	OFF	ON
142	OFF	ON	ON	ON	OFF	OFF	OFF	ON
143	ON	ON	ON	ON	OFF	OFF	OFF	ON
144	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON
145	ON	OFF	OFF	OFF	ON	OFF	OFF	ON
146	OFF	ON	OFF	OFF	ON	OFF	OFF	ON
147	ON	ON	OFF	OFF	ON	OFF	OFF	ON
148	OFF	OFF	ON	OFF	ON	OFF	OFF	ON
149	ON	OFF	ON	OFF	ON	OFF	OFF	ON
150	OFF	ON	ON	OFF	ON	OFF	OFF	ON
151	ON	ON	ON	OFF	ON	OFF	OFF	ON
152	OFF	OFF	OFF	ON	ON	OFF	OFF	ON
153	ON	OFF	OFF	ON	ON	OFF	OFF	ON
154	OFF	ON	OFF	ON	ON	OFF	OFF	ON
155	ON	ON	OFF	ON	ON	OFF	OFF	ON
156	OFF	OFF	ON	ON	ON	OFF	OFF	ON
157	ON	OFF	ON	ON	ON	OFF	OFF	ON
158	OFF	ON	ON	ON	ON	OFF	OFF	ON
159	ON	ON	ON	ON	ON	OFF	OFF	ON

Positional Value	1	2	4	8	16	32	64	128
Switch Number	1	2	3	4	5	6	7	8

Address								
160	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON
161	ON	OFF	OFF	OFF	OFF	ON	OFF	ON
162	OFF	ON	OFF	OFF	OFF	ON	OFF	ON
163	ON	ON	OFF	OFF	OFF	ON	OFF	ON
164	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
165	ON	OFF	ON	OFF	OFF	ON	OFF	ON
166	OFF	ON	ON	OFF	OFF	ON	OFF	ON
167	ON	ON	ON	OFF	OFF	ON	OFF	ON
168	OFF	OFF	OFF	ON	OFF	ON	OFF	ON
169	ON	OFF	OFF	ON	OFF	ON	OFF	ON
170	OFF	ON	OFF	ON	OFF	ON	OFF	ON
171	ON	ON	OFF	ON	OFF	ON	OFF	ON
172	OFF	OFF	ON	ON	OFF	ON	OFF	ON
173	ON	OFF	ON	ON	OFF	ON	OFF	ON
174	OFF	ON	ON	ON	OFF	ON	OFF	ON
175	ON	ON	ON	ON	OFF	ON	OFF	ON
176	OFF	OFF	OFF	OFF	ON	ON	OFF	ON
177	ON	OFF	OFF	OFF	ON	ON	OFF	ON
178	OFF	ON	OFF	OFF	ON	ON	OFF	ON
179	ON	ON	OFF	OFF	ON	ON	OFF	ON
180	OFF	OFF	ON	OFF	ON	ON	OFF	ON
181	ON	OFF	ON	OFF	ON	ON	OFF	ON
182	OFF	ON	ON	OFF	ON	ON	OFF	ON
183	ON	ON	ON	OFF	ON	ON	OFF	ON
184	OFF	OFF	OFF	ON	ON	ON	OFF	ON
185	ON	OFF	OFF	ON	ON	ON	OFF	ON
186	OFF	ON	OFF	ON	ON	ON	OFF	ON
187	ON	ON	OFF	ON	ON	ON	OFF	ON
188	OFF	OFF	ON	ON	ON	ON	OFF	ON
189	ON	OFF	ON	ON	ON	ON	OFF	ON
190	OFF	ON	ON	ON	ON	ON	OFF	ON
191	ON	ON	ON	ON	ON	ON	OFF	ON

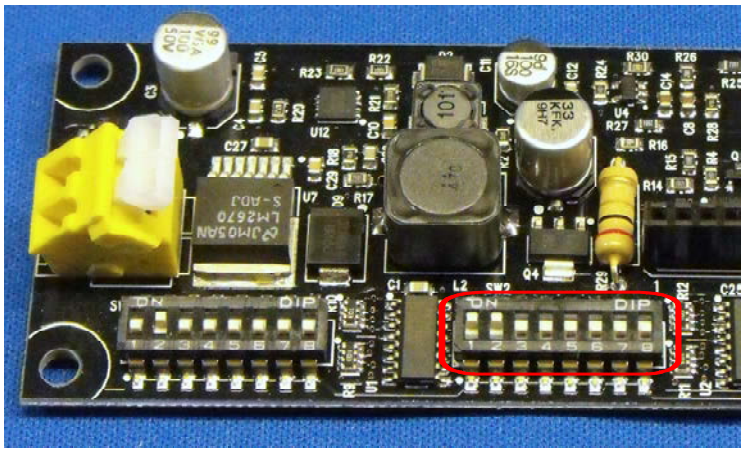
Positional Value	1	2	4	8	16	32	64	128
Switch Number	1	2	3	4	5	6	7	8

Address								
192	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON
193	ON	OFF	OFF	OFF	OFF	OFF	ON	ON
194	OFF	ON	OFF	OFF	OFF	OFF	ON	ON
195	ON	ON	OFF	OFF	OFF	OFF	ON	ON
196	OFF	OFF	ON	OFF	OFF	OFF	ON	ON
197	ON	OFF	ON	OFF	OFF	OFF	ON	ON
198	OFF	ON	ON	OFF	OFF	OFF	ON	ON
199	ON	ON	ON	OFF	OFF	OFF	ON	ON
200	OFF	OFF	OFF	ON	OFF	OFF	ON	ON
201	ON	OFF	OFF	ON	OFF	OFF	ON	ON
202	OFF	ON	OFF	ON	OFF	OFF	ON	ON
203	ON	ON	OFF	ON	OFF	OFF	ON	ON
204	OFF	OFF	ON	ON	OFF	OFF	ON	ON
205	ON	OFF	ON	ON	OFF	OFF	ON	ON
206	OFF	ON	ON	ON	OFF	OFF	ON	ON
207	ON	ON	ON	ON	OFF	OFF	ON	ON
208	OFF	OFF	OFF	OFF	ON	OFF	ON	ON
209	ON	OFF	OFF	OFF	ON	OFF	ON	ON
210	OFF	ON	OFF	OFF	ON	OFF	ON	ON
211	ON	ON	OFF	OFF	ON	OFF	ON	ON
212	OFF	OFF	ON	OFF	ON	OFF	ON	ON
213	ON	OFF	ON	OFF	ON	OFF	ON	ON
214	OFF	ON	ON	OFF	ON	OFF	ON	ON
215	ON	ON	ON	OFF	ON	OFF	ON	ON
216	OFF	OFF	OFF	ON	ON	OFF	ON	ON
217	ON	OFF	OFF	ON	ON	OFF	ON	ON
218	OFF	ON	OFF	ON	ON	OFF	ON	ON
219	ON	ON	OFF	ON	ON	OFF	ON	ON
220	OFF	OFF	ON	ON	ON	OFF	ON	ON
221	ON	OFF	ON	ON	ON	OFF	ON	ON
222	OFF	ON	ON	ON	ON	OFF	ON	ON
223	ON	ON	ON	ON	ON	OFF	ON	ON

Positional Value	1	2	4	8	16	32	64	128
Switch Number	1	2	3	4	5	6	7	8

Address								
224	OFF	OFF	OFF	OFF	OFF	ON	ON	ON
225	ON	OFF	OFF	OFF	OFF	ON	ON	ON
226	OFF	ON	OFF	OFF	OFF	ON	ON	ON
227	ON	ON	OFF	OFF	OFF	ON	ON	ON
228	OFF	OFF	ON	OFF	OFF	ON	ON	ON
229	ON	OFF	ON	OFF	OFF	ON	ON	ON
230	OFF	ON	ON	OFF	OFF	ON	ON	ON
231	ON	ON	ON	OFF	OFF	ON	ON	ON
232	OFF	OFF	OFF	ON	OFF	ON	ON	ON
233	ON	OFF	OFF	ON	OFF	ON	ON	ON
234	OFF	ON	OFF	ON	OFF	ON	ON	ON
235	ON	ON	OFF	ON	OFF	ON	ON	ON
236	OFF	OFF	ON	ON	OFF	ON	ON	ON
237	ON	OFF	ON	ON	OFF	ON	ON	ON
238	OFF	ON	ON	ON	OFF	ON	ON	ON
239	ON	ON	ON	ON	OFF	ON	ON	ON
240	OFF	OFF	OFF	OFF	ON	ON	ON	ON
241	ON	OFF	OFF	OFF	ON	ON	ON	ON
242	OFF	ON	OFF	OFF	ON	ON	ON	ON
243	ON	ON	OFF	OFF	ON	ON	ON	ON
244	OFF	OFF	ON	OFF	ON	ON	ON	ON
245	ON	OFF	ON	OFF	ON	ON	ON	ON
246	OFF	ON	ON	OFF	ON	ON	ON	ON
247	ON	ON	ON	OFF	ON	ON	ON	ON
248*	OFF	OFF	OFF	ON	ON	ON	ON	ON
249*	ON	OFF	OFF	ON	ON	ON	ON	ON
250*	OFF	ON	OFF	ON	ON	ON	ON	ON
251*	ON	ON	OFF	ON	ON	ON	ON	ON
252*	OFF	OFF	ON	ON	ON	ON	ON	ON
253*	ON	OFF	ON	ON	ON	ON	ON	ON
254*	OFF	ON	ON	ON	ON	ON	ON	ON
255*	ON	ON	ON	ON	ON	ON	ON	ON

* Addresses 0, 248 – 255 are not valid for Modbus



Set the Baud rate, Parity, and Stop bits using the SW2 DIP switches, all unused switches should be off.

1	2	3	Baud
OFF	OFF	OFF	9600
ON	OFF	OFF	19200
OFF	ON	OFF	28800
ON	ON	OFF	38400
OFF	OFF	ON	57600
ON	OFF	ON	76800
OFF	ON	ON	115.2K

4	Parity
OFF	Even
ON	NONE

5	Stop Bits
OFF	1
ON	2

Description	Register Type	Address
Momentary Inputs	Discrete Input Registers	1 to 400
Maintain Inputs	Discrete Input Registers	1001 to 1400
LED Control	Holding Registers	10001 to 10400
Button Press FIFO	Input Register	61001

Register Address	Register Type	Description
1 to 400	Discrete Inputs	Momentary Inputs

These registers expose the state of the station buttons. There is a register for each of the station buttons. Register 1 is Station 1/Button 1, Register 9 is Station 2/Button 1, etc. Each station requires 8 registers. On SmartSwitches with less than 8 buttons some registers will be unused. Register # = ((Station #-1)*8+ Button #) Example (Station 7-1)*8+Button 3)=6*8+3= Register 51

Momentary inputs toggle state each time a button is pressed. If Station 1/Button 1 is pressed register 1 will read as a 1. If the same button is pressed again register 1 will read as a 0.

Register Address	Register Type	Description
1001 to 1400	Discrete Inputs	Maintain Inputs

These registers expose the state of the station buttons. There is a register for each of the station buttons. Register 1001 is Station 1/Button 1, Register 1009 is Station 2/Button 2, etc. Some versions of the SmartSwitches have 8 buttons so each station is take 8 registers. On SmartSwitches with less than 8 buttons some registers will be unused. Register # = 1000+((Station #-1)*8+ Button #) Example… 1000+ (Station 7-1)*8+Button 3)=1000+6*8+3= Register 1051

Maintain inputs will read as a 1 while the button is pressed and held, and read as 0 when the button is released.

Register Address	Register Type	Description
61001	Input Register	Button Press FIFO Buffer

This read-only register allow you to retrieve the button presses and releases from a FIFO buffer, similar to the keyboard buffer on a computer. When a button is pressed its number (1 to 400, indicating falling edge) is added to the to the buffer. When the button is released the button number +1000 is added to the buffer (1001 to 1400 indicating rising edge). When read the first value in the buffer is returned. That value is then cleared and the remaining values in the buffer shift one position. When the buffer is empty a read will return 0. Values remain the in buffer until read, there is no automatic timeout of values.

This register allows you to see all button presses and releases while only polling a single register.

Register Address	Register Type	Description
10001 to 10400	Holding Registers	Button Color/Intensity/Flash pattern value

These registers allow you to set the LED color, LED intensity, and LED flash pattern for each LED on every station. Register 10001 is Station 1/LED 1, register 10009 is Station 2/LED 1. Each station uses 8 registers, one for each LED. On stations with less than 8 LEDs some registers are unused. The table below shows what value to write to achieve a particular intensity, color, and flash pattern. Writing 0 will turn the LED off until another value is written. Register # = 10000+(Station # - 1)*8+LED #

Color	Intensity	Slow flash		Slow flash reverse		Fast flash		Fast flash reverse		Wink		Wink reverse		On	
		Dec.	Hex	Dec.	Hex	Dec.	Hex	Dec.	Hex	Dec.	Hex	Dec.	Hex	Dec.	Hex
Red	25%	9	09	10	0A	11	0B	12	0C	13	0D	14	0E	15	0F
Red	50%	73	49	74	4A	75	4B	76	4C	77	4D	78	4E	79	4F
Red	75%	137	89	138	8A	139	8B	140	8C	141	8D	142	8E	143	8F
Red	100%	201	C9	202	CA	203	CB	204	CC	205	CD	206	CE	207	CF
Green	25%	17	11	18	12	19	13	20	14	21	15	22	16	23	17
Green	50%	81	51	82	52	83	53	84	54	85	55	86	56	87	57
Green	75%	145	91	146	92	147	93	148	94	149	95	150	96	151	97
Green	100%	209	D1	210	D2	211	D3	212	D4	213	D5	214	D6	215	D7
Blue	25%	25	19	26	1A	27	1B	28	1C	29	1D	30	1E	31	1F
Blue	50%	89	59	90	5A	91	5B	92	5C	93	5D	94	5E	95	5F
Blue	75%	153	99	154	9A	155	9B	156	9C	157	9D	158	9E	159	9F
Blue	100%	217	D9	218	DA	219	DB	220	DC	221	DD	222	DE	223	DF
Yellow	25%	33	21	34	22	35	23	36	24	37	25	38	26	39	27
Yellow	50%	97	61	98	62	99	63	100	64	101	65	102	66	103	67
Yellow	75%	161	A1	162	A2	163	A3	164	A4	165	A5	166	A6	167	A7
Yellow	100%	225	E1	226	E2	227	E3	228	E4	229	E5	230	E6	231	E7
Purple	25%	41	29	42	2A	43	2B	44	2C	45	2D	46	2E	47	2F
Purple	50%	105	69	106	6A	107	6B	108	6C	109	6D	110	6E	111	6F
Purple	75%	169	A9	170	AA	171	AB	172	AC	173	AD	174	AE	175	AF
Purple	100%	233	E9	234	EA	235	EB	236	EC	237	ED	238	EE	239	EF
Cyan	25%	49	31	50	32	51	33	52	34	53	35	54	36	55	37
Cyan	50%	113	71	114	72	115	73	116	74	117	75	118	76	119	77
Cyan	75%	177	B1	178	B2	179	B3	180	B4	181	B5	182	B6	183	B7
Cyan	100%	241	F1	242	F2	243	F3	244	F4	245	F5	246	F6	247	F7
White	25%	57	39	58	3A	59	3B	60	3C	61	3D	62	3E	63	3F
White	50%	121	79	122	7A	123	7B	124	7C	125	7D	126	7E	127	7F
White	75%	185	B9	186	BA	187	BB	188	BC	189	BD	190	BE	191	BF
White	100%	249	F9	250	FA	251	FB	252	FC	253	FD	254	FE	255	FF

Example #1: Writing 219 to Holding register 10001 would turn on the first LED on station #1 to blue at 100% intensity, with a fast flash.

Example #2: Writing 215 to Holding register 10009 would turn on the first LED on station #2 to green at 100% intensity, with no flash pattern (solid on).