

**DMX-SSR8**

**DMX 8-channel Solid-State Relay Output Module  
Information and Installation Guide**

## OVERVIEW

The DMX-SSR8 is a DMX512-A ("DMX") compatible, 8-channel solid-state relay output modules designed for fixed installations. The module is capable of switching up to 8 loads from 8 DMX slots. It features an optically-isolated receiver to eliminate ground loops. The module accepts a wide voltage range from 12 – 24 VDC. An optional kit is available for mounting the module on a DIN rail.

## ORDERING INFORMATION

Model	Output Channels	DIN Mounting Kit
DMX-SSR8	8	DIN-DMX-SR8

## MODULE INFORMATION

Dimensions	6.4" x 2.875"
Supply Voltage	12 – 24 VDC ±10%
Power Consumption (max.)	6 W
Output Channels	8
Relay Output Contacts	NO, COM
Relay Output Rating	10 A / 230 VAC
DIN Rail Mountable	Yes, with optional kit
DMX IN Isolated Receiver	Yes, 1kV isolation
DMX IN Termination	Yes, built-in DIP switch selectable
DMX THRU Port	Yes, passive loop
DMX Unit Load	1
DMX Start Slot	Selectable, from 1 - 512 (0 - 511 on DIP switch)
DMX Update Rate	Full 44 updates/second
DMX Start Code Handling	Responds to NULL start code, all others ignored
DMX Data Loss Handling	Maintain last state
DMX Output Activation	0 - 127 – Off / 128 - 255 – On

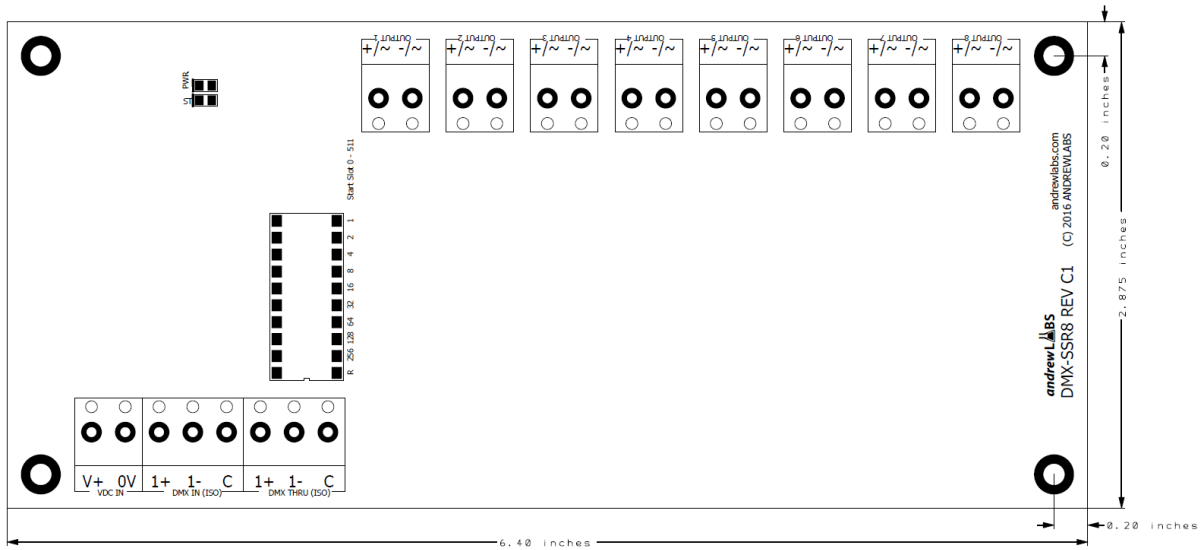
## OPERATION

Each solid-state relay output is controlled by a single DMX slot, beginning from the configured start slot, and incrementing sequentially for each subsequent SSR output. The SSR output is off if the value of the DMX slot is 0 - 127, otherwise, it is on if the value of the slot is 128 - 255. Each SSR has an LED indicator which lights up when it is activated. During normal operation, the ST LED flashes once every second. The ST LED turns off if data loss is detected. The PWR LED lights when power is supplied to the module.

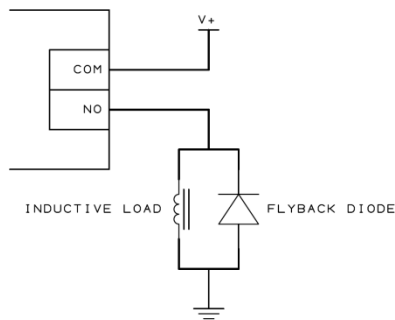
## INSTALLATION

- Mount securely using mount points on corners of PCB (4 x 3.2mm dia. for M3 screws), or with optional DIN mounting kit.
- Connect power supply to "VDC IN" terminals.
- Connect DMX output from DMX master or previous unit to "DMX IN" terminals.
- Connect "DMX THRU" terminals to next unit. If the DMX-SSR8 is the last unit in daisy chain, turn on "R" switch on DIP switch to terminate the DMX bus with the built-in 120R resistor.
- Connect controlled devices to relay outputs (see INDUCTIVE LOADS below).
- Select the DMX start slot using the DIP switch (see CONFIGURING THE START SLOT below).

## BOARD LAYOUT



## INDUCTIVE LOADS (DC-ONLY)



A flyback diode must be connected across inductive DC loads to avoid damage to output solid-state relay.

## CONFIGURING THE START SLOT

The DMX start slot is configurable from 1 – 512. A position on the DIP switch should be off if the setting is '0', and on if the setting is '1'. Refer to the start slot listing below for specific DIP settings.

Example:

Start Slot – 80, DIP Setting – 001001111 (binary value – 79)

DIP Switch Position	256	128	64	32	16	8	4	2	1
Setting	Off	Off	On	Off	Off	On	On	On	On

## DMX START SLOT LISTING

Start Slot	DIP Setting	Start Slot	DIP Setting	Start Slot	DIP Setting	Start Slot	DIP Setting
1	00000000	65	00100000	129	01000000	193	01100000
2	00000001	66	00100001	130	01000001	194	01100001
3	00000010	67	00100010	131	01000010	195	01100010
4	00000011	68	00100011	132	01000011	196	01100011
5	00000100	69	00100100	133	01000100	197	01100100
6	00000101	70	00100101	134	01000101	198	01100101
7	00000110	71	00100110	135	01000110	199	01100110
8	00000111	72	00100111	136	01000111	200	01100111
9	00000100	73	00100100	137	01000100	201	01100100
10	00000101	74	00100101	138	01000101	202	01100101
11	00000110	75	00100110	139	01000110	203	01100110
12	00000111	76	00100111	140	01000111	204	01100111
13	00000100	77	00100100	141	01000100	205	01100100
14	00000101	78	00100101	142	01000101	206	01100101
15	00000110	79	00100110	143	01000110	207	01100110
16	00000111	80	00100111	144	01000111	208	01100111
17	00001000	81	00101000	145	01001000	209	01101000
18	00001001	82	00101001	146	01001001	210	01101001
19	00001010	83	00101010	147	01001010	211	01101010
20	00001011	84	00101011	148	01001011	212	01101011
21	00001100	85	00101100	149	01001100	213	01101100
22	00001101	86	00101101	150	01001101	214	01101101
23	00001110	87	00101110	151	01001110	215	01101110
24	00001111	88	00101111	152	01001111	216	01101111
25	00001100	89	00101100	153	01001100	217	01101100
26	00001101	90	00101101	154	01001101	218	01101101
27	00001110	91	00101110	155	01001110	219	01101110
28	00001111	92	00101111	156	01001111	220	01101111
29	00001100	93	00101100	157	01001100	221	01101100
30	00001101	94	00101101	158	01001101	222	01101101
31	00001110	95	00101110	159	01001110	223	01101110
32	00001111	96	00101111	160	01001111	224	01101111
33	00010000	97	00110000	161	01010000	225	01110000
34	00010001	98	00110001	162	01010001	226	01110001
35	00010010	99	00110010	163	01010010	227	01110010
36	00010011	100	00110011	164	01010011	228	01110011
37	00010100	101	00110100	165	01010100	229	01110100
38	00010101	102	00110101	166	01010101	230	01110101
39	00010110	103	00110110	167	01010110	231	01110110
40	00010111	104	00110111	168	01010111	232	01110111
41	00010100	105	00110100	169	01010100	233	01110100
42	00010101	106	00110101	170	01010101	234	01110101
43	00010110	107	00110110	171	01010110	235	01110110
44	00010111	108	00110111	172	01010111	236	01110111
45	00010100	109	00110100	173	01010100	237	01110100
46	00010101	110	00110101	174	01010101	238	01110101
47	00010110	111	00110110	175	01010110	239	01110110
48	00010111	112	00110111	176	01010111	240	01110111
49	00011000	113	00111000	177	01011000	241	01111000
50	00011001	114	00111001	178	01011001	242	01111001
51	00011010	115	00111010	179	01011010	243	01111010
52	00011011	116	00111011	180	01011011	244	01111011
53	00011100	117	00111100	181	01011100	245	01111100
54	00011101	118	00111101	182	01011101	246	01111101
55	00011110	119	00111110	183	01011110	247	01111110
56	00011111	120	00111111	184	01011111	248	01111111
57	00011100	121	00111100	185	01011100	249	01111100
58	00011101	122	00111101	186	01011101	250	01111101
59	00011110	123	00111110	187	01011110	251	01111110
60	00011111	124	00111111	188	01011111	252	01111111
61	00011100	125	00111100	189	01011100	253	01111100
62	00011101	126	00111101	190	01011101	254	01111101
63	00011110	127	00111110	191	01011110	255	01111110
64	00011111	128	00111111	192	01011111	256	01111111

Start Slot	DIP Setting	Start Slot	DIP Setting	Start Slot	DIP Setting	Start Slot	DIP Setting
257	10000000	321	10100000	385	11000000	449	11100000
258	10000001	322	10100001	386	11000001	450	11100001
259	10000010	323	10100010	387	11000010	451	11100010
260	10000011	324	10100011	388	11000011	452	11100011
261	10000100	325	10100100	389	11000100	453	11100100
262	10000101	326	10100101	390	11000101	454	11100101
263	10000110	327	10100110	391	11000110	455	11100110
264	10000111	328	10100111	392	11000111	456	11100111
265	10001000	329	10100100	393	11001000	457	11100100
266	10001001	330	10100101	394	11001001	458	11100101
267	10001010	331	10100110	395	11001010	459	11100110
268	10001011	332	10100111	396	11001011	460	11100111
269	10001100	333	10100110	397	11001100	461	11100110
270	10001101	334	10100111	398	11001101	462	11100111
271	10001110	335	10100111	399	11001110	463	11100111
272	10001111	336	10100111	400	11001111	464	11100111
273	10001000	337	10101000	401	11001000	465	11101000
274	10001001	338	10101001	402	11001001	466	11101001
275	10001010	339	10101010	403	11001010	467	11101010
276	10001011	340	10101011	404	11001011	468	11101011
277	10001100	341	10101010	405	11001100	469	11101100
278	10001101	342	10101011	406	11001101	470	11101101
279	10001110	343	10101011	407	11001110	471	11101110
280	10001111	344	10101011	408	11001111	472	11101111
281	10001100	345	10101100	409	11001100	473	11101100
282	10001101	346	10101101	410	11001101	474	11101101
283	10001110	347	10101101	411	11001110	475	11101110
284	10001111	348	10101101	412	11001111	476	11101111
285	10001100	349	10101110	413	11001110	477	11101110
286	10001101	350	10101110	414	11001110	478	11101110
287	10001110	351	10101110	415	11001110	479	11101110
288	10001111	352	10101111	416	11001111	480	11101111
289	10010000	353	10110000	417	11010000	481	11110000
290	10010001	354	10110001	418	11010001	482	11110001
291	10010010	355	10110010	419	11010010	483	11110010
292	10010011	356	10110011	420	11010011	484	11110011
293	10010100	357	10110100	421	11010100	485	11110100
294	10010101	358	10110101	422	11010101	486	11110101
295	10010110	359	10110110	423	11010110	487	11110110
296	10010111	360	10110111	424	11010111	488	11110111
297	10010100	361	10110100	425	11010100	489	11110100
298	10010101	362	10110101	426	11010101	490	11110101
299	10010110	363	10110110	427	11010110	491	11110110
300	10010111	364	10110111	428	11010111	492	11110111
301	10010100	365	10110110	429	11010110	493	11110110
302	10010101	366	10110110	430	11010110	494	11110110
303	10010110	367	10110111	431	11010111	495	11110111
304	10010111	368	10110111	432	11010111	496	11110111
305	10011000	369	10111000	433	11011000	497	11111000
306	10011001	370	10111001	434	11011001	498	11111001
307	10011010	371	10111010	435	11011010	499	11111010
308	10011011	372	10111011	436	11011011	500	11111011
309	10011100	373	10111010	437	11011010	501	11111010
310	10011101	374	10111011	438	11011011	502	11111011
311	10011110	375	10111011	439	11011011	503	11111011
312	10011111	376	10111011	440	11011011	504	11111011
313	10011100	377	10111100	441	11011100	505	11111100
314	10011101	378	10111101	442	11011101	506	11111101
315	10011110	379	10111101	443	11011101	507	11111101
316	10011111	380	10111101	444	11011101	508	11111101
317	10011100	381	10111110	445	11011110	509	11111110
318	10011101	382	10111110	446	11011110	510	11111110
319	10011110	383	10111110	447	11011110	511	11111110
320	10011111	384	10111111	448	11011111	512	11111111