736P Radionics™ POPIT Interface Module

Description

The Model 736P Radionics™ POPIT Interface Module allows a Radionics™ POPIT System to interface to a DMP panel, while maintaining the existing Radionics™ wiring.

The 736P is supervised and connects to either the DMP Keypad bus or LX-Bus™ and supports up to 32 Keypad bus zones and up to 100 LX-Bus zones. For XR100 Series, connect directly to the on-board LX-Bus. For XR500 Series or XR2500F panels, connect directly to the on-board LX-Bus or to an interface card.

All fire device installations must be in accordance with the manufacturer's instructions, NFPA standards, and the Authority Having Jurisdiction (AHJ) requirements.

Wiring Distance

The maximum wire distance between any 736P and the DMP Keypad bus or LX-Bus circuit is 10 feet. To increase the wiring distance, install an auxiliary power supply, such as a DMP Model 505-12. For listed installations, the power supply must be listed for fire protective signaling systems, regulated, and power limited. Refer to the 710/710F Bus Splitter/Repeater Module Installation Guide (LT-0310) for complete information.

Radionics™ Terminology

The Radionics™ **ZONEX** (**Zon**e **Ex**pansion system) is the zone expansion bus, much like the DMP LX-Bus. A **POPEX** (**P**oint **O**f **P**rotection **Ex**pander) is the device that provides the ZONEX, similar to a DMP 481 Zone Expansion Interface Card that provides an LX-Bus.

The **POPIT** (**P**oint **O**f **P**rotection **I**nput **T**ransponder) is a device on the ZONEX that provides a point to connect a protection device to, much like a DMP 711 Single Point Zone Expander Module. Finally, the **OctoPOPIT** is a ZONEX device that provides several points to connect protection devices to, similar to a DMP 714-8 Zone Expander and a 481 combined. A POPEX is not required when using an OctoPOPIT.

Compatible Radionics™ Devices

The 736P Module supports the following Radionics™ POPEX and OctoPOPIT devices:

- D8125 POPEX Zone Expander
- D8128A OctoPOPIT for 63-point bus
- D8128C OctoPOPIT for 63-point or 119-point bus

Mounting to Walls

The 736P ships installed in a decorative high impact plastic case that mounts directly to walls, backboards or other flat surfaces. Wire entrances on the case back and front make installation easy. The plastic case bottom half contains two screw holes for mounting the case on single-gang switch boxes or rings.

Mounting in Panel Enclosures

The 736P Module can also be installed in DMP enclosures using the standard 3-hole pattern.

1. Mount the plastic standoffs to the enclosure using the three included Phillips head screws.
2. Insert the screws from the outside of the enclosure through the holes and into the plastic standoff which mounts on the inside of the enclosure and tighten.
3. After the securing the standoffs onto the enclosure, snap the 736P onto the standoffs.

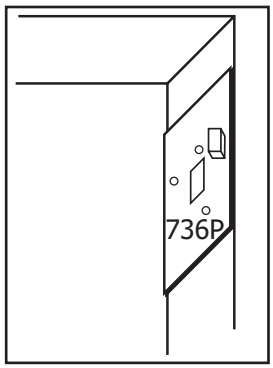

Figure 1: 736P Mounting

Wiring the 736P

The 736P interfaces with a DMP panel using the keypad bus or the LX-Bus. After setting the jumper headers, wire the 736P to the panel and to the Radionics™ modules as described in the following sections and as illustrated in Figure 2.

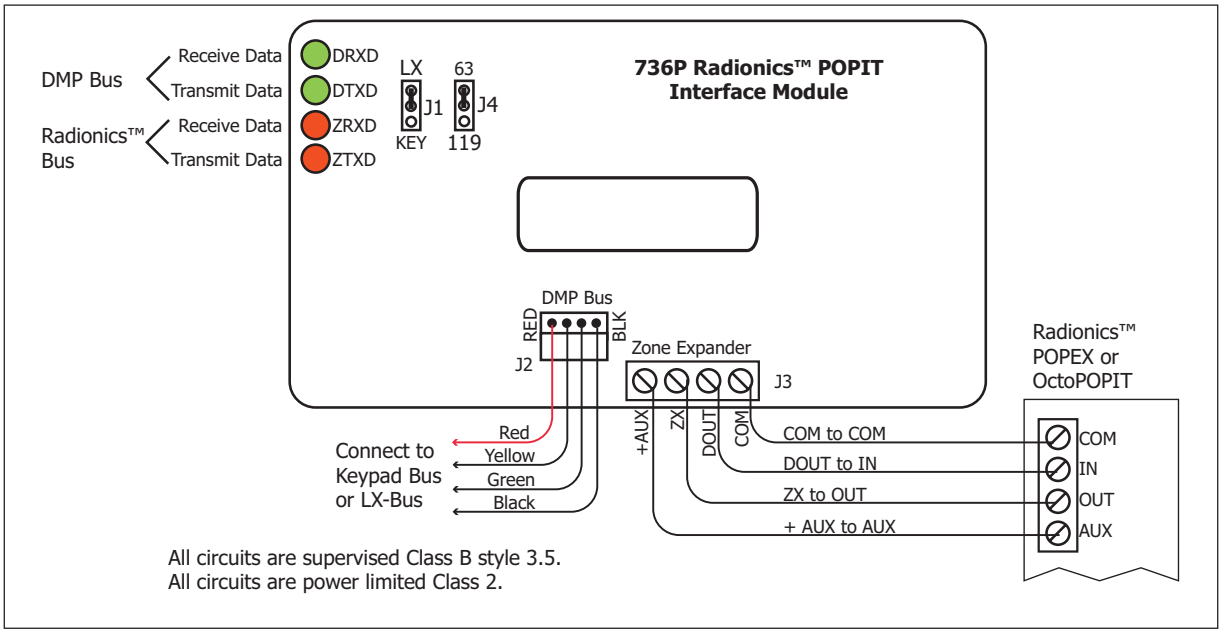

Figure 2: 736P Wiring

736P DMP Bus Header (J1)

When connecting to the Keypad bus, place the J1 jumper across the two bottom pins marked **KEY**. When connecting to the LX-Bus, place the J1 jumper across the two top pins marked **LX**.

736P DMP Bus Connector (J2)

For Keypad bus connection, connect the provided dual-ended 4-wire harness from the **DMP BUS** header (J2) to the panel J8 header.

For LX-Bus connection, plug the provided dual-ended 4-wire harness from the **DMP BUS** header (J2) onto the panel on-board LX-Bus (J22) or an installed interface card.

Wiring Specifications for Keypad or LX-Bus

1. DMP recommends using 18 or 22-gauge **unshielded** wire for all keypad and LX-Bus circuits. **Do Not** use twisted pair or shielded wire for LX-Bus and keypad bus data circuits. To maintain auxiliary power integrity when using 22-gauge wire do not exceed 500 feet. When using 18-gauge wire do not exceed 1,000 feet. Install an additional power supply to increase the wire length or add devices.
2. Maximum distance for any one circuit (length of wire) is 2,500 feet regardless of the wire gauge. This distance can be in the form of one long wire run or multiple branches with all wiring totaling no more than 2,500 feet. As wire distance from the panel increases, DC voltage on the wire decreases.
3. Maximum number of devices per 2,500 foot circuit is 40.
   Note: Each panel allows a specific number of supervised keypads. Add additional keypads in the unsupervised mode. Refer to the panel installation guide for the specific number of supervised keypads allowed.
4. Maximum voltage drop between the panel (or auxiliary power supply) and any device is 2.0 VDC. If the voltage at any device is less than the required level, add an auxiliary power supply at the end of the circuit. When voltage is too low, the devices cannot operate properly.

For additional information refer to the panel installation guide and LX-Bus/Keypad Bus Wiring Application Note (LT-2031) or the 710/710F Installation Guide (LT-0310).

Zone Expander Connector (J3)

Connect the Radionics™ POPEX and OctoPOPIT modules to the (J3) connector on 736P **ZONE EXPANDER**. The maximum wire distance between the 736P and any Radionics™ POPEX and OctoPOPIT is 10 feet.

ZONEX Bus Header (J4)

This jumper selects the type of Radionics™ ZONEX Bus that connects to the 736P module. To select a 63-point (horizontal or vertical) bus, place the J4 jumper across the two top pins marked **63**. To select the expanded, 119-point bus, place the J4 jumper across the two bottom pins marked **119**. See Figure 2.

POPEX Power Wiring

Because the Radionics D8125 Zone Expander is rated to operate over a voltage range of 10.2 to 14 VDC, 50mA, a power supply must be listed for fire protective signaling systems, power limited, and provide a voltage range within 10.2 VDC to 14.0 VDC.

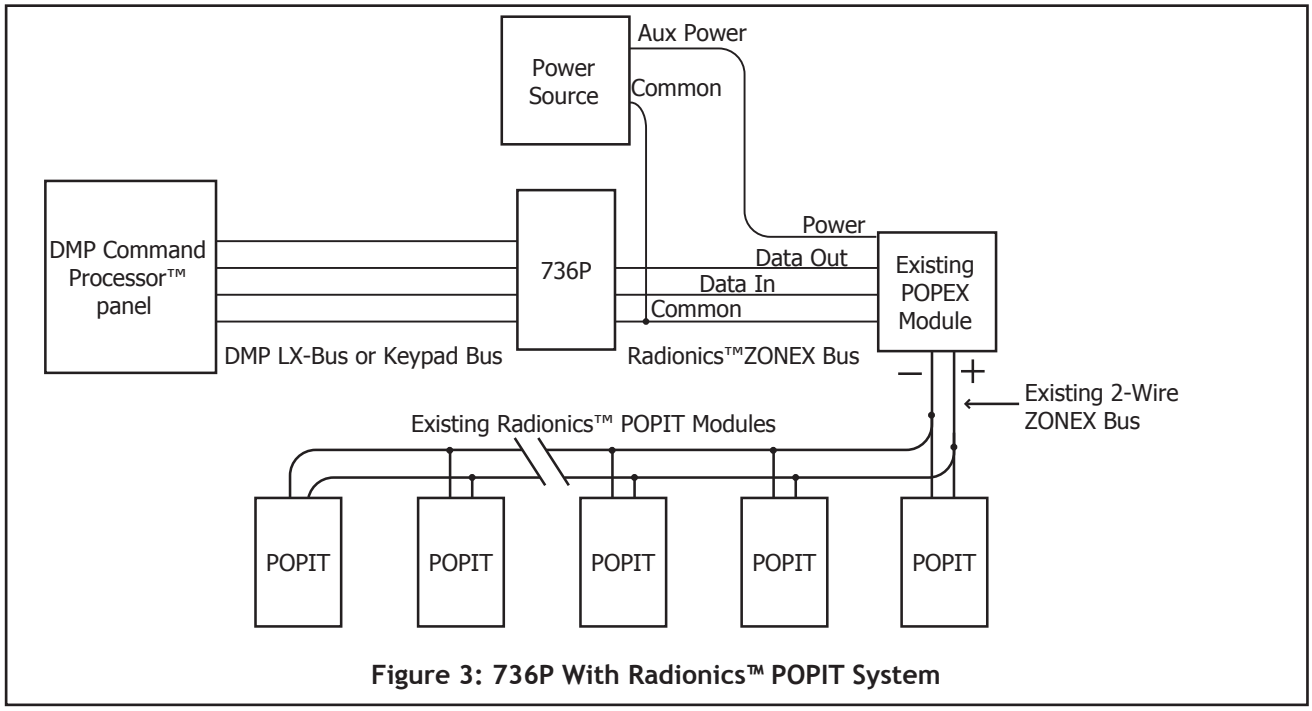

Figure 3: 736P With Radionics™ POPIT System

Converting ZONEX Points to DMP Zones

At power up the 736P communicates with the Radionics™ POPEX or OctoPOPIT module and creates a table of equivalent DMP zone addresses. The current zone states are received from the Radionics™ module and transmitted to the DMP panel (Normal, Open, Shorted). The conversion tables show the Radionics™ point number and the corresponding DMP zone number for the LX-Bus™ and Keypad Bus. Once the corresponding DMP zone is determined from the tables, it must be programmed into the panel.

How to Use the Tables

The conversion tables on the following pages provide the Radionics™ ZONEX module switch setting and the expanded 119-point Radionics™ ZONEX Bus #1 and ZONEX Bus #2 numbers.

To find a corresponding DMP zone from either table, select the Radionics™ ZONEX point, the appropriate DMP bus type, and the appropriate DMP panel type. Table 1 lists the Keypad bus numbers for all DMP panels. Table 2 lists LX-Bus numbers for XR100/XR500 Series or XR2500F panels.

Note: XR100 Series panels only support LX-Bus 1 zone numbers.

Find the ZONEX Bus point number in Table 1 and the corresponding DMP Keypad bus zone number is listed in one of the columns to the right. For Table 2, find the ZONEX Bus point number and the corresponding DMP LX-Bus zone number is listed in one of the columns to the right.

Example: ZONEX Bus #1 point 022 on the expanded 119-point ZONEX Bus connected to a DMP LX-Bus 1 corresponds to DMP zone 513 on an XR500 or XR100 panel.

Note: Radionics™ points 109 to 127 and 229 to 247 are not supported. Those ZONEX Bus points can be reassigned to any available unused zones on the DMP panel.

Zone Finder Feature

The Zone Finder feature built into the DMP XR500 Series, XR2500F, XR100 Series Command Processor panels is a diagnostic function that allows an installer to identify an unknown zone in the system. To identify a zone, fault the Radionics point and the panel identifies the zone by displaying the equivalent DMP zone number at the keypad. Refer to the XR500 Series/XR2500F Programming Guide (LT-0679) or the XR100 Series Programming Guide (LT-0896) for additional information on this feature.

Compliance Listing Specifications

To comply with ANSI/UL 365 Police-Connected Burglary Systems or ANSI/UL 609 Local Burglary Alarm Systems, the 736P Module must be mounted in a Listed enclosure with a tamper installed.

For listed fire applications, the wiring connection must be 18 gauge or greater, unless the wire complies with the requirements of the NEC 1999, and the wiring consists of two or more insulated conductors under a non-metallic jacket.

Table 1: ZONEX Bus to DMP Panel Keypad Bus Zone Conversion

Switch Settings							ZONEX Bus #1 Expansion (119)	ZONEX Bus #2 Expansion (119)	Keypad Bus				
									XT30/XT50	XRSuper6	XR20	XR40/XR100	XR500 Series/XR2500F
0	1	2	3	4	5	6	9	129	11	7	11	11	11
0	1	2	3	4	5	–	10	130	12	8	12	12	12
0	1	2	3	4	–	6	11	131	13	9	13	13	13
0	1	2	3	4	–	–	12	132	14	10	14	14	14
0	1	2	3	–	5	6	13	133	21	21	21	21	21
0	1	2	3	–	5	–	14	134	22	22	22	22	22
0	1	2	3	–	–	6	15	135	23	23	23	23	23
0	1	2	3	–	–	–	16	136	24	24	24	24	24
0	1	2	–	4	5	6	17	137	31	31	31	31	31
0	1	2	–	4	5	–	18	138	32	32	32	32	32
0	1	2	–	4	–	6	19	139	33	33	33	33	33
0	1	2	–	4	–	–	20	140	34	34	34	34	34
0	1	2	–	–	5	6	21	141	41	41	41	41	41
0	1	2	–	–	5	–	22	142	42	42	42	42	42
0	1	2	–	–	–	6	23	143	43	43	43	43	43
0	1	2	–	–	–	–	24	144	44	44	44	44	44
0	1	–	3	4	5	6	25	145	51			51	51
0	1	–	3	4	5	–	26	146	52			52	52
0	1	–	3	4	–	6	27	147	53			53	53
0	1	–	3	4	–	–	28	148	54			54	54
0	1	–	3	–	5	6	29	149				61	61
0	1	–	3	–	5	–	30	150				62	62
0	1	–	3	–	–	6	31	151				63	63
0	1	–	3	–	–	–	32	152				64	64
0	1	–	–	4	5	6	33	153				71	71
0	1	–	–	4	5	–	34	154				72	72
0	1	–	–	4	–	6	35	155				73	73
0	1	–	–	4	–	–	36	156				74	74
0	1	–	–	–	5	6	37	157				81	81
0	1	–	–	–	5	–	38	158				82	82
0	1	–	–	–	–	6	39	159				83	83
0	1	–	–	–	–	–	40	160				84	84
0	–	2	3	4	5	6	41	161					91
0	–	2	3	4	5	–	42	162					92
0	–	2	3	4	–	6	43	163					93
0	–	2	3	4	–	–	44	164					94
0	–	2	3	–	5	6	45	165					101
0	–	2	3	–	5	–	46	166					102
0	–	2	3	–	–	6	47	167					103
0	–	2	3	–	–	–	48	168					104
0	–	2	–	4	5	6	49	169					111
0	–	2	–	4	5	–	50	170					112
0	–	2	–	4	–	6	51	171					113
0	–	2	–	4	–	–	52	172					114
0	–	2	–	–	5	6	53	173					121
0	–	2	–	–	5	–	54	174					122
0	–	2	–	–	–	6	55	175					123
0	–	2	–	–	–	–	56	176					124
0	–	–	3	4	5	6	57	177					131
0	–	–	3	4	5	–	58	178					132
0	–	–	3	4	–	6	59	179					133
0	–	–	3	4	–	–	60	180					134
0	–	–	3	–	5	6	61	181					141
0	–	–	3	–	5	–	62	182					142
0	–	–	3	–	–	6	63	183					143
0	–	–	3	–	–	–	64	184					144
0	–	–	–	4	5	6	65	185					151
0	–	–	–	4	5	–	66	186					152
0	–	–	–	4	–	6	67	187					153
0	–	–	–	4	–	–	68	188					154
0	–	–	–	–	5	6	69	189					161
0	–	–	–	–	5	–	70	190					162
0	–	–	–	–	–	6	71	191					163
0	–	–	–	–	–	–	72	192					164

Table 2: ZONEX Bus to DMP LX-Bus Zone Conversion

Switch Settings							ZONEX Bus #1	XR500 Series/XR2500F/ XR100 Series (LX-Bus #1 ONLY)					ZONEX Bus #2	XR500 Series/XR2500F/ XR100 Series (LX-Bus #1 ONLY)				
							Expansion (119)	#1	#2	#3	#4	#5	Expansion (119)	#1	#2	#3	#4	#5
0	1	2	3	4	5	6	9	500	600	700	800	900	129	500	600	700	800	900
0	1	2	3	4	5	–	10	501	601	701	801	901	130	501	601	701	801	901
0	1	2	3	4	–	6	11	502	602	702	802	902	131	502	602	702	802	902
0	1	2	3	4	–	–	12	503	603	703	803	903	132	503	603	703	803	903
0	1	2	3	–	5	6	13	504	604	704	804	904	133	504	604	704	804	904
0	1	2	3	–	5	–	14	505	605	705	805	905	134	505	605	705	805	905
0	1	2	3	–	–	6	15	506	606	706	806	906	135	506	606	706	806	906
0	1	2	3	–	–	–	16	507	607	707	807	907	136	507	607	707	807	907
0	1	2	–	4	5	6	17	508	608	708	808	908	137	508	608	708	808	908
0	1	2	–	4	5	–	18	509	609	709	809	909	138	509	609	709	809	909
0	1	2	–	4	–	6	19	510	610	710	810	910	139	510	610	710	810	910
0	1	2	–	4	–	–	20	511	611	711	811	911	140	511	611	711	811	911
0	1	2	–	–	5	6	21	512	612	712	812	912	141	512	612	712	812	912
0	1	2	–	–	5	–	22	513	613	713	813	913	142	513	613	713	813	913
0	1	2	–	–	–	6	23	514	614	714	814	914	143	514	614	714	814	914
0	1	2	–	–	–	–	24	515	615	715	815	915	144	515	615	715	815	915
0	1	–	3	4	5	6	25	516	616	716	816	916	145	516	616	716	816	916
0	1	–	3	4	5	–	26	517	617	717	817	917	146	517	617	717	817	917
0	1	–	3	4	–	6	27	518	618	718	818	918	147	518	618	718	818	918
0	1	–	3	4	–	–	28	519	619	719	819	919	148	519	619	719	819	919
0	1	–	3	–	5	6	29	520	620	720	820	920	149	520	620	720	820	920
0	1	–	3	–	5	–	30	521	621	721	821	921	150	521	621	721	821	921
0	1	–	3	–	–	6	31	522	622	722	822	922	151	522	622	722	822	922
0	1	–	3	–	–	–	32	523	623	723	823	923	152	523	623	723	823	923
0	1	–	–	4	5	6	33	524	624	724	824	924	153	524	624	724	824	924
0	1	–	–	4	5	–	34	525	625	725	825	925	154	525	625	725	825	925
0	1	–	–	4	–	6	35	526	626	726	826	926	155	526	626	726	826	926
0	1	–	–	4	–	–	36	527	627	727	827	927	156	527	627	727	827	927
0	1	–	–	–	5	6	37	528	628	728	828	928	157	528	628	728	828	928
0	1	–	–	–	5	–	38	529	629	729	829	929	158	529	629	729	829	929
0	1	–	–	–	–	6	39	530	630	730	830	930	159	530	630	730	830	930
0	1	–	–	–	–	–	40	531	631	731	831	931	160	531	631	731	831	931
0	–	2	3	4	5	6	41	532	632	732	832	932	161	532	632	732	832	932
0	–	2	3	4	5	–	42	533	633	733	833	933	162	533	633	733	833	933
0	–	2	3	4	–	6	43	534	634	734	834	934	163	534	634	734	834	934
0	–	2	3	4	–	–	44	535	635	735	835	935	164	535	635	735	835	935
0	–	2	3	–	5	6	45	536	636	736	836	936	165	536	636	736	836	936
0	–	2	3	–	5	–	46	537	637	737	837	937	166	537	637	737	837	937
0	–	2	3	–	–	6	47	538	638	738	838	938	167	538	638	738	838	938
0	–	2	3	–	–	–	48	539	639	739	839	939	168	539	639	739	839	939
0	–	2	–	4	5	6	49	540	640	740	840	940	169	540	640	740	840	940
0	–	2	–	4	5	–	50	541	641	741	841	941	170	541	641	741	841	941
0	–	2	–	4	–	6	51	542	642	742	842	942	171	542	642	742	842	942
0	–	2	–	4	–	–	52	543	643	743	843	943	172	543	643	743	843	943
0	–	2	–	–	5	6	53	544	644	744	844	944	173	544	644	744	844	944
0	–	2	–	–	5	–	54	545	645	745	845	945	174	545	645	745	845	945
0	–	2	–	–	–	6	55	546	646	746	846	946	175	546	646	746	846	946
0	–	2	–	–	–	–	56	547	647	747	847	947	176	547	647	747	847	947
0	–	–	3	4	5	6	57	548	648	748	848	948	177	548	648	748	848	948
0	–	–	3	4	5	–	58	549	649	749	849	949	178	549	649	749	849	949
0	–	–	3	4	–	6	59	550	650	750	850	950	179	550	650	750	850	950
0	–	–	3	4	–	–	60	551	651	751	851	951	180	551	651	751	851	951
0	–	–	3	–	5	6	61	552	652	752	852	952	181	552	652	752	852	952
0	–	–	3	–	5	–	62	553	653	753	853	953	182	553	653	753	853	953
0	–	–	3	–	–	6	63	554	654	754	854	954	183	554	654	754	854	954
0	–	–	3	–	–	–	64	555	655	755	855	955	184	555	655	755	855	955
0	–	–	–	4	5	6	65	556	656	756	856	956	185	556	656	756	856	956
0	–	–	–	4	5	–	66	557	657	757	857	957	186	557	657	757	857	957
0	–	–	–	4	–	6	67	558	658	758	858	958	187	558	658	758	858	958

Switch Settings							ZONEX Bus #1	XR500 Series/XR2500F/ XR100 Series (LX-Bus #1 ONLY)					ZONEX Bus #2	XR500 Series/XR2500F/ XR100 Series (LX-Bus #1 ONLY)				
							Expansion (119)	#1	#2	#3	#4	#5	Expansion (119)	#1	#2	#3	#4	#5
0	–	–	–	4	–	–	68	559	659	759	859	959	188	559	659	759	859	959
0	–	–	–	–	5	6	69	560	660	760	860	960	189	560	660	760	860	960
0	–	–	–	–	5	–	70	561	661	761	861	961	190	561	661	761	861	961
0	–	–	–	–	–	6	71	562	662	762	862	962	191	562	662	762	862	962
0	–	–	–	–	–	–	72	563	663	763	863	963	192	563	663	763	863	963
–	1	2	3	4	5	6	73	564	664	764	864	964	193	564	664	764	864	964
–	1	2	3	4	5	–	74	565	665	765	865	965	194	565	665	765	865	965
–	1	2	3	4	–	6	75	566	666	766	866	966	195	566	666	766	866	966
–	1	2	3	4	–	–	76	567	667	767	867	967	196	567	667	767	867	967
–	1	2	3	–	5	6	77	568	668	768	868	968	197	568	668	768	868	968
–	1	2	3	–	5	–	78	569	669	769	869	969	198	569	669	769	869	969
–	1	2	3	–	–	6	79	570	670	770	870	970	199	570	670	770	870	970
–	1	2	3	–	–	–	80	571	671	771	871	971	200	571	671	771	871	971
–	1	2	–	4	5	6	81	572	672	772	872	972	201	572	672	772	872	972
–	1	2	–	4	5	–	82	573	673	773	873	973	202	573	673	773	873	973
–	1	2	–	4	–	6	83	574	674	774	874	974	203	574	674	774	874	974
–	1	2	–	4	–	–	84	575	675	775	875	975	204	575	675	775	875	975
–	1	2	–	–	5	6	85	576	676	776	876	976	205	576	676	776	876	976
–	1	2	–	–	5	–	86	577	677	777	877	977	206	577	677	777	877	977
–	1	2	–	–	–	6	87	578	678	778	878	978	207	578	678	778	878	978
–	1	2	–	–	–	–	88	579	679	779	879	979	208	579	679	779	879	979
–	1	–	3	4	5	6	89	580	680	780	880	980	209	580	680	780	880	980
–	1	–	3	4	5	–	90	581	681	781	881	981	210	581	681	781	881	981
–	1	–	3	4	–	6	91	582	682	782	882	982	211	582	682	782	882	982
–	1	–	3	–	5	6	93	584	684	784	884	984	213	584	684	784	884	984
–	1	–	3	–	5	–	94	585	685	785	885	985	214	585	685	785	885	985
–	1	–	3	–	–	6	95	586	686	786	886	986	215	586	686	786	886	986
–	1	–	3	–	–	–	96	587	687	787	887	987	216	587	687	787	887	987
–	1	–	–	4	5	6	97	588	688	788	888	988	217	588	688	788	888	988
–	1	–	–	4	5	–	98	589	689	789	889	989	218	589	689	789	889	989
–	1	–	–	4	–	6	99	590	690	790	890	990	219	590	690	790	890	990
–	1	–	–	4	–	–	100	591	691	791	891	991	220	591	691	791	891	991
–	1	–	–	–	5	6	101	592	692	792	892	992	221	592	692	792	892	992
–	1	–	–	–	5	–	102	593	693	793	893	993	222	593	693	793	893	993
–	1	–	–	–	–	6	103	594	694	794	894	994	223	594	694	794	894	994
–	1	–	–	–	–	–	104	595	695	795	895	995	224	595	695	795	895	995
–	–	2	3	4	5	6	105	596	696	796	896	996	225	596	696	796	896	996
–	–	2	3	4	5	–	106	597	697	797	897	997	226	597	697	797	897	997
–	–	2	3	4	–	6	107	598	698	798	898	998	227	598	698	798	898	998
–	–	2	3	4	–	–	108	599	699	799	899	999	228	599	699	799	899	999

Specifications

Operating Voltage	12 VDC
Current Draw	25mA
Dimensions	4.5" W x 2.75" H x 1.75" D
Wire Specification	Accepts 12 to 22 AWG wire

Panel Compatibility

XT Series, XR100/XR500 Series, XR2500F, XRSuper6, XR20, XR40 Panels.

Radionics™ Compatibility

D8125 POPEX Zone Expander
D8128A OctoPOPIT for 63-point bus
D8128C OctoPOPIT for 63-point or 119-point bus

Listings and Approvals

California State Fire Marshal (CSFM)
Underwriters Laboratories (UL) Listed
Commercial Burglar and Fire Accessory Radionics Interface Module

ANSI/UL 365	Police Connected Burglar
ANSI/UL 609	Local Burglar
ANSI/UL 864	Fire Protective Signaling
ANSI/UL 985	Household Fire Warning
ANSI/UL 1023	Household Burglar
ANSI/UL 1076	Proprietary Burglar
ANSI/UL 1610	Central Station Burglar
ANSI/UL 1635	Digital Burglar

Digital Monitoring Products
800-641-4282
www.dmp.com
Made in the USA
INTRUSION • FIRE • ACCESS • NETWORKS
2500 North Partnership Boulevard
Springfield, Missouri 65803-8877