

SOYAL

**701Server
MODBUS
IO
Mapping**

Version 1.02

Date January 7, 2022

AR721H & 727HV3 控制器 IO 與 Modbus IO 對應表

DO-0			
Pp	控制器功能對應	狀態	值
00	Door Relay	On/Off	1/0
01	Alarm Relay	On/Off	1/0
02			1/0
03			1/0
04			1/0
05			1/0
06			1/0
07			
08			
09			
10			
11			
12			
13			
14			
15			

DI-0			
Pp	控制器功能對應	狀態	值
00	Door Sensor	Open/Close	1/0
01	Arm Status	ARMING/Disarm	1/0
02	Egress	Close/Open	1/0
03	Alarm Status (Force or Open too long)	On/Off	
04	Door Open too Long	On/Off	
05	Force Open Alarm (非法開門)	On/Off	
06	Duress Alarm	On/Off	
07			
08			
09			
10			
11			
12			
13			
14			
15	Online	RS485 卡機連線狀態	

511	Fire State		1/0
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AR725E & AR837E & AR721Ev2 控制器 IO Modbus IO 對應表: DO										
Main	WG							功能	狀態	值
256	272							Door Relay	On/Off	1/0
257	273							Alarm Relay	On/Off	1/0
258	274									1/0
259	275									1/0
260	276									1/0
261	277									1/0
262	278									1/0
263	279								On/Off	1/0
264	280									
265	281									
266	282									
267	283									
268	284									
269	285									
270	286									
271	287									

AR725E & 837E & AR721Ev2 控制器 IO Modbus IO 對應表: DI										
Main	WG							功能	狀態	值
256	272							Door Sensor	On/Off	1/0
257	273							Arm Status	On/Off	1/0
258	274							Egress		1/0
259	275							Alarm Status (Force /Open too long)		1/0
260	276							Door Open too Long		1/0
261	277							Force Open Alarm		1/0
262	278							Duress Alarm		1/0
263	279								On/Off	1/0
264	280									
265	281									
266	282									
267	283									
268	284									
269	285									
270	286									
271	287							On Line / Off Line	On/Off	1/0

511								Fire Alarm State		1/0
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AR721Ev2 外接控制器 IO Modbus IO 對應表: DO										
控制器站號										
01	02	03	04	05	06	07	08	功能	狀態	值
0	16	32	48	64	80	96	112	Door Relay	On/Off	1/0
1	17	33	49	65	81	97	113	Alarm Relay	On/Off	1/0
2	18	34	50	66	80	98	114			1/0
3	19	35	51	67	83	99	115			1/0
4	20	36	52	68	84	100	116			1/0
5	21	37	53	69	85	101	117			1/0
6	22	38	54	70	86	102	118			1/0
7	23	39	55	71	87	103	119			1/0
8	24	40	56	72	88	104	120			
9	25	41	57	73	89	105	121			
10	26	42	58	74	90	106	122			
11	27	43	59	75	91	107	123			
12	28	44	60	76	92	108	124			
13	29	45	61	77	93	109	125			
14	30	46	62	78	94	110	126			
15	31	47	63	79	95	111	127			

AR721Ev2 外接控制器 IO Modbus IO 對應表: DO										
控制器站號										
09	10	11	12	13	14	15	16	功能	狀態	值
128	144	160	176	192	208	224	240	Door Relay	On/Off	1/0
129	145	161	177	193	209	225	241	Alarm Relay	On/Off	1/0
130	146	162	178	194	210	226	242			1/0
131	147	163	179	195	211	227	243			1/0
132	148	164	180	196	212	228	244			1/0
133	149	165	181	197	213	229	245			1/0
134	150	166	182	198	214	230	246			1/0
135	151	167	183	199	215	231	247			1/0
136	152	168	184	200	216	232	248			
137	153	169	185	201	217	233	249			
138	154	170	186	202	218	234	250			
139	155	171	187	203	219	235	251			
140	156	172	188	204	22	236	252			
141	157	173	189	205	221	237	253			
142	158	174	190	206	222	238	254			
143	159	175	191	207	223	239	255			

AR721Ev2 外接控制器 IO Modbus IO 對應表: DI										
控制器站號										
01	02	03	04	05	06	07	08	功能	狀態	值
0	16	32	48	64	80	96	112	Door Sensor	Open/Close	1/0
1	17	33	49	65	81	97	113	Arm Status	Arm/Disarm	1/0
2	18	34	50	66	80	98	114	Egress	Close/Open	1/0
3	19	35	51	67	83	99	115	Alarm On (Force or Open too long)	On/Off	1/0
4	20	36	52	68	84	100	116	Door Open too Long	On/Off	1/0
5	21	37	53	69	85	101	117	Force Open Alarm	On/Off	1/0
6	22	38	54	70	86	102	118	Duress Alarm	On/Off	1/0
7	23	39	55	71	87	103	119			1/0
8	24	40	56	72	88	104	120			
9	25	41	57	73	89	105	121			
10	26	42	58	74	90	106	122			
11	27	43	59	75	91	107	123			
12	28	44	60	76	92	108	124			
13	29	45	61	77	93	109	125			
14	30	46	62	78	94	110	126			
15	31	47	63	79	95	111	127	RS485 Reader On Line / Off Line	On/Off	1/0

AR721Ev2 外接控制器 IO Modbus IO 對應表: DI										
控制器站號										
09	10	11	12	13	14	15	16	功能	狀態	值
128	144	160	176	192	208	224	240	Door Sensor	Open/Close	1/0
129	145	161	177	193	209	225	241	Arm Status	Arm/Disarm	1/0
130	146	162	178	194	210	226	242	Egress	Close/Open	1/0
131	147	163	179	195	211	227	243	Alarm On (Force or Open too long)	On/Off	1/0
132	148	164	180	196	212	228	244	Door Open too Long	On/Off	1/0
133	149	165	181	197	213	229	245	Force Open Alarm	On/Off	1/0
134	150	166	182	198	214	230	246	Duress Alarm	On/Off	1/0
135	151	167	183	199	215	231	247			1/0
136	152	168	184	200	216	232	248			
137	153	169	185	201	217	233	249			
138	154	170	186	202	218	234	250			
139	155	171	187	203	219	235	251			
140	156	172	188	204	22	236	252			
141	157	173	189	205	221	237	253			
142	158	174	190	206	222	238	254			
143	159	175	191	207	223	239	255	RS485 Reader On Line / Off Line	On/Off	1/0

511								Fire State	On/Off	1/0
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AR727CM-IO (TCP Port 1601) IO 與 Modbus IO 對應表

DO-0			
Pp	控制器功能對應	狀態	值
00	DO-0	On/Off	1/0
01	DO-1	On/Off	1/0
02	DO-2	On/Off	1/0
03	DO-3	On/Off	1/0
04	DO-4	On/Off	1/0
05	DO-5	On/Off	1/0
06	DO-6	On/Off	1/0
07	DO-7	On/Off	1/0
08			
09			
10			
11			
12			
13			
14			
15			

DI-0			
Pp	控制器功能對應	狀態	值
00	DI-0	Open/Close	1/0
01	DI-1	Open/Close	1/0
02	DI-2	Open/Close	1/0
03	DI-3	Open/Close	1/0
04	DI-4	Open/Close	1/0
05	DI-5	Open/Close	1/0
06	DI-6	Open/Close	1/0
07	DI-7	Open/Close	1/0
08			
09			
10			
11			
12			
13			
14			
15	Online	RS485 卡機連線狀態	

511	Fire State		1/0
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AR403MO (RS-485) IO 與 Modbus IO 對應表

DO-0			
Pp	控制器功能對應	狀態	值
00	DO-0	On/Off	1/0
01	DO-1	On/Off	1/0
02	DO-2	On/Off	1/0
03	DO-3	On/Off	1/0
04			
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			

DI-0			
Pp	控制器功能對應	狀態	值
00	DI-0	Open/Close	1/0
01	DI-1	Open/Close	1/0
02	DI-2	Open/Close	1/0
03	DI-3	Open/Close	1/0
04			
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15	Online	RS485 卡機連線狀態	

701ServerSQL Modbus Bridge分區點位址指定 (IO Address assignment)

701ServerSQL內建的Modbus TCP轉Modbus RTU的橋接功能。可支援16分區、每一分區254部控制器及每控制器4096點。由於Modbus IO Address並無Area的分區欄位，所以必須將701ServerSQL分區碼帶入Modbus IO Address內才能完整運用超過千萬點的分區IO點。

計算公式如下： $\text{Area Modbus IO Address} = (\text{Area Code}) * 4096 + (\text{Controller IO Address})$ 。

例如實體IO在分區(Area):3，控制器站號:2，IO點位:251加入區碼以後 IO Address變成:12539。

Modbus IO	範圍	
Area	0 ~ 15	
Node ID	1 ~ 254	
IO Address	0 ~ 4096	16 Bits

IO Address Bit Mapping

IO Address	16 Bits Modbus Address	
Modbus Format	Bit 15~12	Bits 11 ~00
701ServerSQL Format	Area Code	Modbus IO Address