2.2.7. Analog Output Module

Analog Output Module				
Model Name	**I-7021**	**I-7021P**	**I-7022**	**I-7024**
			M-7022	**M-7024**
Pictures				
Analog Output				
Channels	1		2	4
Wiring	Unipolar		Unipolar	Bipolar/Unipolar
Range	0 ~ 10 V, 0 ~ 20 mA, 4 ~ 20 mA		0 ~ 10 V, 0 ~ 20 mA, 4 ~ 20 mA	0 ~ 5 V, ±5 V, 0 ~ 10 V, ±10 V, 0 ~ 20 mA, 4 ~ 20 mA
Resolution	12-bit	16-bit	12-bit	14-bit
★ Accuracy	0.1%	0.02%	0.1%	0.1%
DA Output Response Time	10 ms		10 ms	10 ms
Open Wire Detection (for current only)	Yes		Yes	-
★ Channel to Channel Isolation	-		Yes	-
★ Power-on Value	Yes		Yes	Yes
★ Safe Value	Yes		Yes	Yes
Digital Input				
Channels	-			-
Contact				
Sink/Source (NPN/PNP)				
On Voltage Level				
Off Voltage Level				
★ Counter (50 Hz, 16-bit)				
Input Impedance				
Overvoltage Protection				
System				
★ Dual Watchdog	Yes			Yes
ESD (IEC 61000-4-2)	±2 kV			±2 kV
EFT (IEC 61000-4-4)	-			-
RS (IEC 61000-4-3)	-			-
Intra-Module Isolation, Field-to-Logic	3000 V_{DC}			3000 V_{DC}
Power Input	10 ~ 30 V_{DC}			
Power Consumption	1.8 W	1.8 W	3.0 W	2.4 W

Common Voltage Protection

The typical application is to monitor the charging status of the batteries in series. The voltage of each battery is +10 V_{DC} so the first battery is +10 V_{DC}, the second battery is +20 V_{DC} etc. The differential voltage of the 20th battery is only +10 V_{DC} between vin+ and vin- terminal, while the common voltage is up to 200 V_{DC}. If the common voltage of the analog input module is not large enough, then it can not measure the correct voltage of the battery in charging. ICP DAS analog input modules provide +/-200 V_{DC} high common voltage for industrial applications.

RS-485 I/O Products