







### 2.2-1. Analog Input

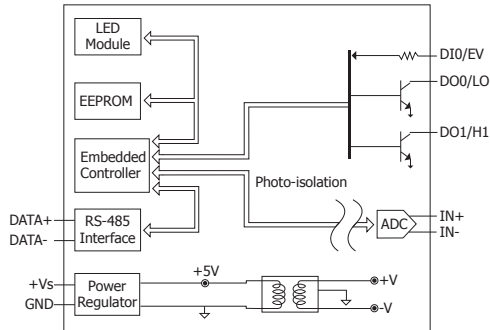
Voltage & Current Input Module (General Grade)						
Model Name	I-7012(D)	I-7012F(D)	I-7017	I-7017F	I-7017C	I-7017FC
Pictures						
Channel	1		8		8	
Wiring	Differential		Differential (Note 1)		Differential	
Input Range	+/-150 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V, +/-20 mA (requires optional external 125 Ω resistor)		+/-150 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V, +/-20 mA (requires optional external 125 Ω resistor)		+/-20 mA, 0~20 mA, 4~20 mA	
Resolution	16-bit	12/16-bit	16-bit	12/16-bit	16-bit	12/16-bit
Accuracy	Normal mode	0.1%		0.1%		0.1%
	Fast mode	-	0.5%	-	0.5%	-
Sampling Rate	Normal mode	10 Hz		10 Hz		10 Hz
	Fast mode	-	100 Hz	-	60 Hz	-
Input Impedance	20 M		20 M		20 M	
Common Voltage Protection	+/-10 V <sub>cc</sub>		+/-15 V <sub>cc</sub>		+/-15 V <sub>cc</sub>	
Individual Channel Configuration	-		-		-	
Overvoltage Protection	+/-15 V <sub>cc</sub>		+/-35 V <sub>cc</sub>		+/-35 V <sub>cc</sub>	
System	Yes					
Dual Watchdog	Yes					
ESD (IEC 61000-4-2)	+/-2 kV		+/-2 kV for I-7017 +/-4 kV for M-7017	+/-2 kV	+/-2 kV	+/-4 kV
EFT (IEC 61000-4-4)	-		+/-4 kV for M-7017	-	+/-4 kV	
Intra-Module Isolation, Field-to-Logic	3000 V <sub>cc</sub>					
Power Input	10 ~ 30 V <sub>cc</sub>					
Power Consumption	1.3 W; 1.9 W for (D) version		1.3 W		1.7 W	1.3 W
<p><b>Note1:</b> I-7017 and I-7017F are 6-channel differential and 2-channel single-ended, or 8-channel differential. M-7017 is 8-channel differential.</p> <p><b>Note2:</b> I-7012(D) and I-7012F(D) both include 1 DI and 2 DO channels. The specification is as follows</p>						
Digital Input			Digital Output			
Channel	1		Channel	2		
Contact	Dry		Type	Open Collector		
Sink/Source (NPN/PNP)	Source		Sink/Source (NPN/PNP)	Sink		
On Voltage Level	Close to GND		Load Voltage	3.5 ~ 30 V <sub>cc</sub>		
Off Voltage Level	Open		Max. Load Current	30 mA/Channel		
Counter (50 Hz, 16-bit)	Yes		Power-on Value	Yes		
Input Impedance	3 kΩ		Safe Value	Yes		
Overvoltage Protection	+/-30 V <sub>cc</sub>					

Voltage & Current Input Module (Industrial Grade)				
Model Name	I-7017R M-7017R	I-7017R-A5 M-7017R-A5	I-7017RC M-7017RC	I-7017Z M-7017Z
Pictures				
Channel	8		8	10/20 (Note 1)
Wiring	Differential		Differential	Diff./Single-Ended
Input Range	+/-150 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V, +/-20 mA (requires optional external 125 Ω resistor)	+/-50 V, +/-150 V	+/-20 mA, 0~20 mA, 4~20 mA	+/-150 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V +/-20 mA , 0 ~ 20 mA , 4 ~ 20 mA (Jumper selectable)
Resolution	12/16-bit		12/16-bit	
Accuracy	Normal mode	0.1%		0.1%
	Fast mode	0.5%		0.5%
Sampling Rate	Normal mode	10 Hz		10 Hz
	Fast mode	60 Hz	50 Hz	60 Hz
Input Impedance	2 M		2 M	
Common Voltage Protection	+/-200 V <sub>DC</sub>		+/-200 V <sub>DC</sub>	+/-200 V <sub>DC</sub>
Individual Channel Configuration			Yes	
Overvoltage Protection	240 V <sub>rms</sub>	+/-200 V <sub>DC</sub>		240 V <sub>rms</sub>
System				
Dual Watchdog	Yes			
ESD (IEC 61000-4-2)	+/-4 kV		+/-4 kV	
EFT (IEC 61000-4-4)	+/-4 kV		+/-4 kV	
Intra-Module Isolation, Field-to-Logic	3000 V <sub>DC</sub>			
Power Input	10 ~ 30 V <sub>DC</sub>			
Power Consumption	1.3 W		1.3 W	2.0 W
<p><b>Note1:</b> Differential wiring can be used for voltage input and current input. Single-Ended wiring can be used for voltage input only.</p> <p><b>Note2:</b> For high noisy industrial application, the user should choose I-7017Z, M-7017Z, I-7017R, M-7017R, I-7017R-A5, I-7017RC, M-7017RC.</p>				

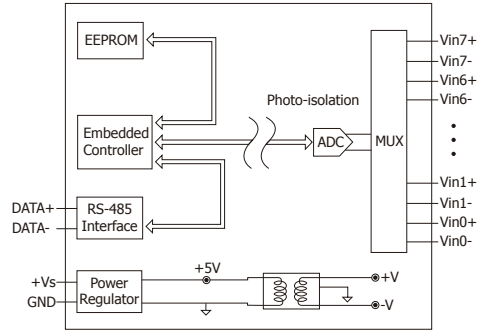


### Internal I/O Structure

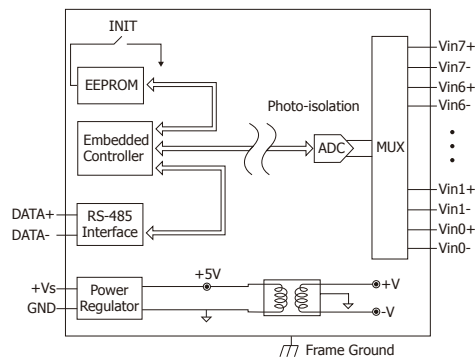
**I-7012(D)/I-7012F(D)**



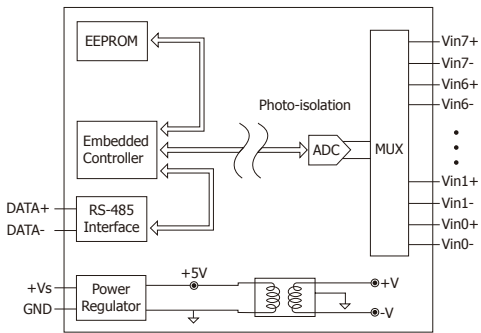
**I-7017**



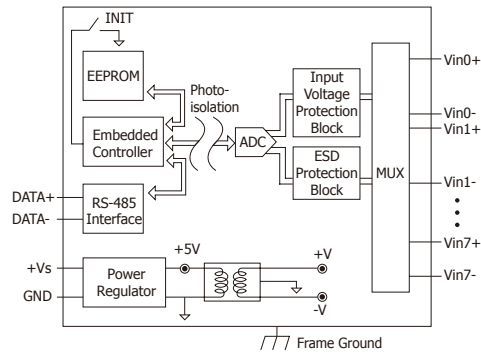
**M-7017**



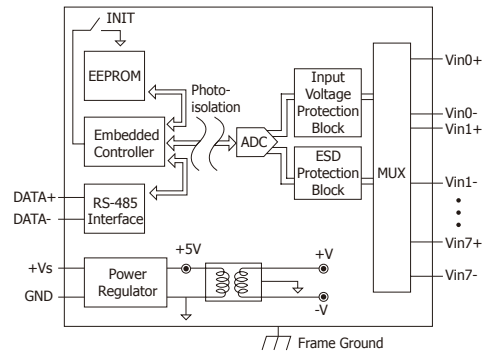
**I-7017F**



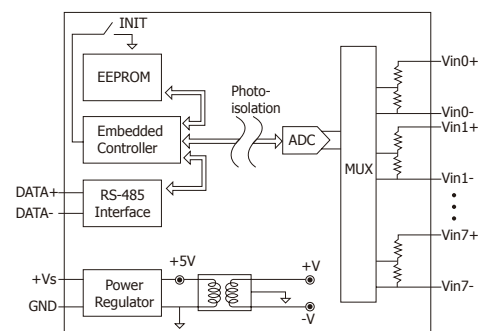
**I-7017R**



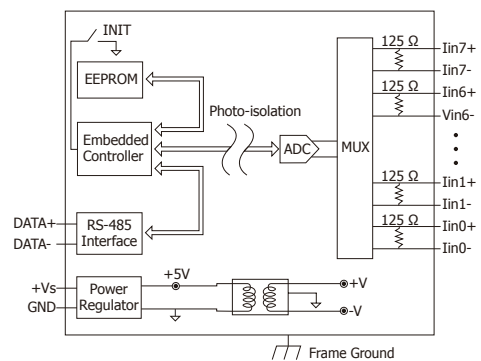
**M-7017R**



**I-7017R-A5/M-7017R-A5**

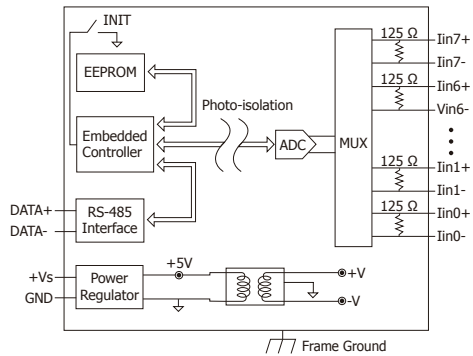


**I-7017C/M-7017C**

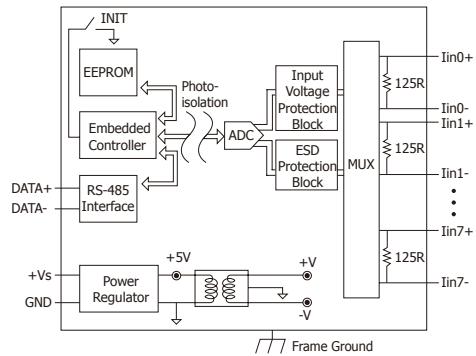


## Internal I/O Structure

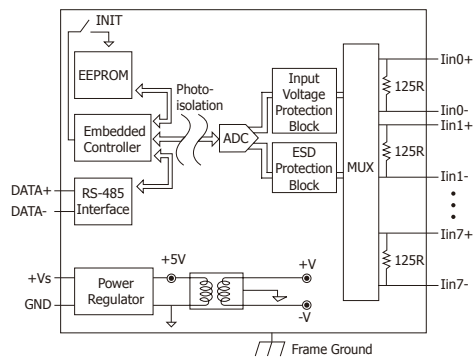
**I-7017FC**



**I-7017RC**



**M-7017RC**



**I-7017Z/M-7017Z**

