

# iR Series



## Communication Interface Specifications

Model		iR-ETN	iR-COP	iR-ECAT
Expansion I/O module	Number of Bus Terminals	Depends on Power Consumption	Depends on Power Consumption	Depends on Power Consumption
	Digital Input Point	Max. 256	Max. 256	Max. 256
	Digital Output Point	Max. 128	Max. 128	Max. 128
	Analog Input Channel	Max. 64	Max. 64	Max. 64
	Analog Output Channel	Max. 64	Max. 64	Max. 64
Data Transfer Rate	10/100 Mbps	50k~1 Mbps	100 Mbps	
Max. Number of TCP/IP Connections	8 Connections			
Protocol	Modbus TCP/IP Server	CANopen Slave	EtherCat® Slave	
Power	Power Supply	24 VDC (-15%/+20%)	24 VDC (-15%/+20%)	24 VDC (-15%/+20%)
	Power Dissipation	Nominal 100mA@24VDC	Nominal 100mA@24VDC	Nominal 100mA@24VDC
	Current for Internal Bus	Max 2A@5VDC	Max 2A@5VDC	Max 2A@5VDC
	Current Consumption	220mA@5VDC	170mA@5VDC	270mA@5VDC
Specification	Electrical Isolation	Network to Logic : Isolation Logic to Field power : Isolation	Network to Logic : Isolation Logic to Field power : Isolation	Network to Logic : Isolation Logic to Field power : Isolation
	Back-up Fuse	≤ 1.6A Self-recovery	≤ 1.6A Self-recovery	≤ 1.6A Self-recovery
	PCB Coating	Yes	Yes	Yes
	Enclosure	Plastic	Plastic	Plastic
	Dimensions WxHxD	27 x 109 x 81 mm	27 x 109 x 81 mm	27 x 109 x 81 mm
	Weight	Approx. 0.15 kg	Approx. 0.15 kg	Approx. 0.15 kg
	Mount	35mm DIN rail mounting	35mm DIN rail mounting	35mm DIN rail mounting
Environment	Protection Structure	IP20	IP20	IP20
	Storage Temperature	-20° ~ 70° C (-4° ~ 158° F)	-20° ~ 70° C (-4° ~ 158° F)	-20° ~ 70° C (-4° ~ 158° F)
	Operating Temperature	0° ~ 55° C (32° ~ 131° F)	0° ~ 55° C (32° ~ 131° F)	0° ~ 55° C (32° ~ 131° F)
	Relative Humidity	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing)
Certification	EMC Immunity	Conforms to EN 55032: 2012+AC: 2013, Class A EN 61000-6-4: 2007+A1:2011 EN 55024: 2010+A1: 2015 EN 61000-6-2:2005	Conforms to EN 55032: 2012+AC: 2013, Class A EN 61000-6-4: 2007+A1:2011 EN 55024: 2010+A1: 2015 EN 61000-6-2:2005	Conforms to EN 55032: 2012+AC: 2013, Class A EN 61000-6-4: 2007+A1:2011 EN 55024: 2010+A1: 2015 EN 61000-6-2:2005

## Digital Input/Output Specifications



Model		iR-DI16-K	iR-DM16-P	iR-DM16-N
Number of Inputs		16	8	8
Input Logic		Sink or Source	Sink or Source	Sink or Source
Number of Outputs		0	8	8
Output Logic		N/A	Source	Sink
Current Consumption		83mA@5VDC	130mA@5VDC	130mA@5VDC
HIGH Level Input Voltage		15~28VDC	15~28VDC	15~28VDC
LOW Level Input Voltage		0~5 VDC	0~5 VDC	0~5 VDC
Output Voltage		N/A	11~28VDC	11~28VDC
Output Current		N/A	0.5A per channel (Max 4A)	0.5A per channel (Max 4A)
Specification	Enclosure	Plastic		
	Dimensions WxHxD	27 x 109 x 81 mm		
	Weight	Approx. 0.12 kg		
	Mount	35mm DIN rail mounting		
Environment	Protection Structure	IP20		
	Storage Temperature	-20° ~ 70° C (-4° ~ 158° F)		
	Operating Temperature	0° ~ 55° C (32° ~ 131° F)		
	Relative Humidity	10% ~ 90% (non-condensing)		
Connection	Cross-section	AWG 28-16		
Certification	EMC Immunity	Conforms to EN 55032: 2012+AC: 2013, Class A; EN 61000-6-4: 2007+A1:2011; EN 55024: 2010+A1: 2015; EN 61000-6-2:2005		



Model		iR-DQ16-P	iR-DQ16-N	iR-DQ08-R
Number of Inputs		0	0	0
Input Logic		N/A	N/A	N/A
Number of Outputs		16	16	8
Output Logic		Source	Sink	Relay
Current Consumption		196mA@5VDC	205mA@5VDC	220mA@5VDC
HIGH Level Input Voltage		N/A	N/A	N/A
LOW Level Input Voltage		N/A	N/A	N/A
Output Voltage		11~28VDC	11~28VDC	250VAC/ 30VDC
Output Current		0.5A per channel (Max 4A)	0.5A per channel (Max 4A)	2A per channel (Max 8A)
Specification	Enclosure	Plastic		
	Dimensions WxHxD	27 x 109 x 81 mm		
	Weight	Approx. 0.12 kg		
	Mount	35mm DIN rail mounting		
Environment	Protection Structure	IP20		
	Storage Temperature	-20° ~ 70° C (-4° ~ 158° F)		
	Operating Temperature	0° ~ 55° C (32° ~ 131° F)		
	Relative Humidity	10% ~ 90% (non-condensing)		
Connection	Cross-section	AWG 28-16		
Certification	EMC Immunity	Conforms to EN 55032: 2012+AC: 2013, Class A; EN 61000-6-4: 2007+A1:2011; EN 55024: 2010+A1: 2015; EN 61000-6-2:2005		



## Analog Input/Output Specifications

Model		iR-AI04-VI	iR-AM06-VI	iR-AQ04-VI
Number of Analog Inputs		4 ( $\pm 10V / \pm 20mA$ )	4 ( $\pm 10V / \pm 20mA$ )	0
Number of Analog outputs		0	2 ( $\pm 10V / \pm 20mA$ )	4 ( $\pm 10V / \pm 20mA$ )
Current Consumption		70mA@5VDC	70mA@5VDC	65mA@5VDC
Analog Power Supply		24 VDC(20.4 VDC~28.8 VDC) (-15%~+20%)	24 VDC(20.4 VDC~28.8 VDC) (-15%~+20%)	24 VDC(20.4 VDC~28.8 VDC) (-15%~+20%)
Specification	PCB Coating	Yes		
	Enclosure	Plastic		
	Dimensions WxHxD	27 x 109 x 81 mm		
	Weight	Approx. 0.12 kg		
	Mount	35mm DIN rail mounting		
Environment	Protection Structure	IP20		
	Storage Temperature	-20° ~ 70° C (-4° ~ 158° F)		
	Operating Temperature	0° ~ 55° C (32° ~ 131° F)		
	Relative Humidity	10% ~ 90% (non-condensing)		
Connection	Cross-section	AWG 28-16		AWG 24-16
Certification		Conforms to EN 55032: 2012+AC: 2013, Class A; EN 61000-6-4: 2007+A1:2011; EN 55024: 2010+A1: 2015; EN 61000-6-2:2005		



## Temperature Specifications

Model		iR-AI04-TR
Number of Input Channels		4 (RTD/ Thermocouple)
Current Consumption		65mA@5VDC
Analog Power Supply		24 VDC(20.4 VDC~28.8 VDC) (-15%~+20%)
Specification	PCB Coating	Yes
	Enclosure	Plastic
	Dimensions WxHxD	27 x 109 x 81 mm
	Weight	Approx. 0.12 kg
	Mount	35mm DIN rail mounting
Environment	Protection Structure	IP20
	Storage Temperature	-20° ~ 70° C (-4° ~ 158° F)
	Operating Temperature	0° ~ 55° C (32° ~ 131° F)
	Relative Humidity	10% ~ 90% (non-condensing)
Connection	Cross-section	AWG 28-16
Certification		Conforms to EN 55032: 2012+AC: 2013, Class A; EN 61000-6-4: 2007+A1:2011; EN 55024: 2010+A1: 2015; EN 61000-6-2:2005

Remote I/O

