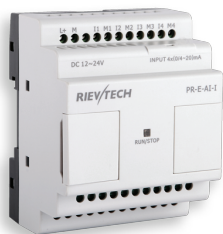


Expansion Modules



PR-E

- Model: PR-E-16AC-R AC
- Model: PR-E-16DC-DA-R DC
- Model: PR-E-16DC-DA-TN DC

- Model: PR-E-AI-I DC
- Model: PR-E-PT100 DC
- Model: PR-E-AQ-VI DC

Model: PR-E-RS485 DC

Specifications

Item	PR-E-16AC-R	PR-E-16DC-DA-R	PR-E-16DC-DA-TN
Nominal voltage	AC 110V-240V	DC 12-24V	
Operating limits	AC 85 - 265V	DC 10.8-28.8V	
The main frequency range	47-63Hz	-	
Immunity from micro power	-	Typ 5 ms	
Max startup current	-	Max 0.25A	
Isolation voltage	1780V AC	-	
Max absorbed power	53 mA (85V AC) 38 mA (265V AC)	3.5 W (10.8V DC) 4.5W (28.8V DC)	
Protection against polarity inversions	Yes		
Input No	8 (I1-I8)		
Digital input	8 (I1-I8)		
Analogue input	-	4 (I1-I4) (0..10V DC)	
Input voltage	AC 110-240V	DC 0-28.8V	
Input signal 0	AC 0-40V <0.03mA	(I1-I4) <0.1mA / (I5-I8) <1mA @ < 5V DC	
Input signal 1	AC 79-240V >0.06mA	(I1-I4) >0.3mA / (I5-I8) >1.7mA @ > 8V DC	
Input current	-	(I1-I4) 0.4mA / (I5-I8) 2.3mA @ 10.8V DC (I1-I4) 0.5mA / (I5-I8) 2.6mA @ 12.0 V DC (I1-I4) 1.2mA / (I5-I8) 5.2mA @ 24 V DC (I1-I4) 1.5mA / (I5-I8) 6.3mA @ 28.8 V DC	
Response time	0 to 1: 120V AC : Typ. 50 ms 240V AC : Typ. 30 ms 1 to 0: 120V AC : Typ. 90 ms 240V AC : Typ. 100 ms	(I1-I4): 0 to 1: Typ. 1.5 ms 1 to 0: Typ. 1.5 ms (I5-I8): 0 to 1: Typ. <1 ms 1 to 0: Typ. <1 ms	
Maximum counting frequency	Typ: 4 Hz	4 Hz	
Sensor type	Contact or 3-wire PNP		
Input type	-	Resistive	
Isolation between power supply and inputs	-		
Isolation between inputs	-		
Protection against polarity inversions	Yes	-	
Measurement range	-	DC 0-10V	
Input impedance	-	Min 24KΩ Max 72KΩ	
Input voltage	-	28.8 V DC max	
Resolution	-	9bit 0.015V	
Accuracy at 25 °C	-	± (Max 0.03)V	
Accuracy at 55 °C	-	± (Max 0.06)V	
Isolation between analog inputs and power supply	-		
Cable length	-	10 m max shielded & twisted	

Item	PR-E-RS485
Nominal voltage	DC 12-24V
Operating limits	DC 10.8-28.8V
Immunity from micro power	Typ 5 ms
Max. Startup current	Max. 0.1A
Max absorbed power	1.5 W (10.8V DC) 1.8W W (28.8V DC)
Protection against polarity inversions	Yes

Item	PR-E
Compatibility	PR-14, PR-18, PR-24
Certificate	
Operation Temp	-20 °C .. +55 °C
Storage Temp	-40 °C .. +70 °C
Protection	IP20
Dimensions	72*90*61 (Unit, mm) 4DIN
Installation	35mm-DIN rail or screw for installation
Weight	Approx. 300g

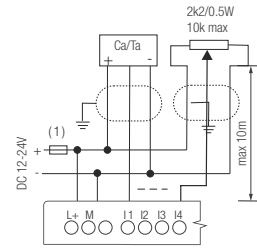
Item	PR-E-AI-I	PR-E-PT100	PR-E-AQ-VI
Nominal voltage	DC 12-24V		
Operating limits	DC 10.8-28.8V		
Immunity from micro power	Typ 5 ms		
Max. Startup current	Max. 0.25A		
Max absorbed power	1W	1.8W	
Protection against polarity inversions	Yes		
Input No	4 (I1-I4)	3 (I1-I3)	-
Digital input	-		
Analogue input	4 (AI1-AI4)	3 (AI1-AI3)	-
Analogue signal	0/4...20mA current	RTD PT100	-
Resolution	0.02mA 10bit	0.3°C 10bit	-
Measuring range	-	-50°C to +200°C	-
Accuracy at 25 °C	0.05mA	-	-
Output No	-	-	2(AQ1-AQ2)
Output signal	-	-	DC 0...10V or 0..20mA
Internal value and signal relationship	-	-	AQ1/2 (0..1000)= V1(0...10V)= I1(0...20mA)
Resolution	-	-	0.01V or 0.02mA 10bit
Accuracy at 25 °C	-	-	0.02V or 0.05mA
Cycle time for analog value generation	Typ. 50 ms		
Cable length	10 m max shielded & twisted		

Specifications

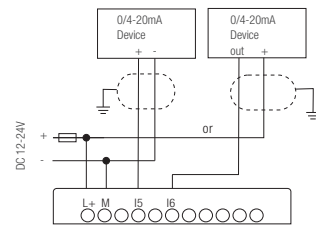
Item	PR-E-16AC-R	PR-E-16DC-DA-R	PR-E-16DC-DA-TN
Output No	8 (Q1-Q8)		
Output type	Relay output		Transistor PNP output
Continuous current	Q1-Q4: Resistive load 3A/Inductive load 1A Q5-Q8: Resistive load 10A/Inductive load 2A		Max. 0.3 A per channel
Max breaking voltage	AC 250 V DC 110 V		DC 5-30V
Max breaking current	10A		0.65A
Voltage drop	-		< 2 V for I=0.3 A (at state 1)
Galvanic isolation	Yes		-
Max allowable power force	(Q1-Q4) 500VA 100W (Q5-Q8) 1250VA 300W		-
Electrical durability expectancy	105 Operations at Rated Resistive Load		-
Mechanical life	107 Operations at No Load condition		-
Built-in protections	Against short-circuits: None Against overvoltages and overloads: None		
Response time	Operate Time : 15 ms max Release Time : 10 ms max		Make ≤ 70 ms Release ≤ 70 ms
Mechanism	10Hz		-
Resistor/light load	2Hz		10Hz
Sensitive load	0.5Hz		

Circuit diagrams

[DC analog inputs 0-10V - Power DC]

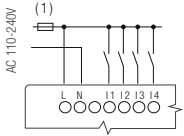


[DC analog inputs 0-20mA - Power DC]

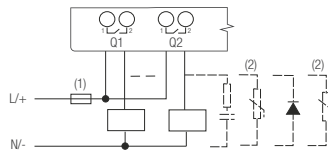


Circuit diagrams

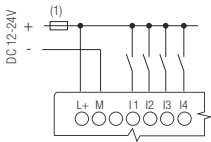
[Digital Input - Power AC]



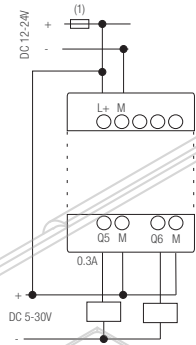
[Relay Outputs]



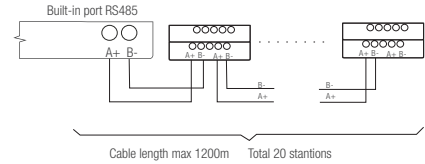
[Digital Input - Power DC]



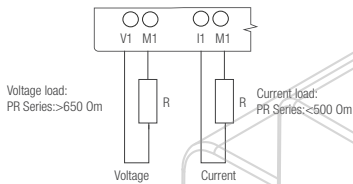
[Transistor Outputs PNP]



[RS485 Connection]



[DC Analog Outputs - 0-10V / 0-20mA]



(1) - Fuse, circuit-breaker or circuit protector
(2) - Inductive load;

(1) - Fuse, circuit-breaker or circuit protector
(2) - Inductive load;

