



ECCORRECTION INFACT INFACT ELM-P4C4 A-channel Isolated Digital Input and A-channel Isolated Digital Output Module

R Features
Sink-type Digital Outputs
Source-type Digital Inputs
Photocouple Isolation
All Channels Can Be Used As 16-bit Counters
Dual Watchdog
Configurable Power-on Value Settings
Configurable Safe Value Settings
Cost-effective
Wide Operating Temperature Range: -25 ~ +75°C

Pin Assignments .

Introduction

The tM-P4C4 provides 4 channels for digital input and 4 channels for digital output, each of which features photocouple isolation. The tM-P4C4 supports sink-type output with short circuit protection, while input is source-type. All input channels can be used an 16-bit counters. There are options for configuring power-on and safe digital output values. 4 kV ESD protection and 3750 Vpc intra-module isolation are also provided.

Applications .

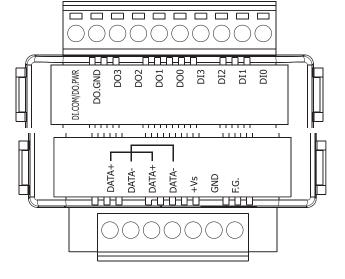
- All Types of On/Off Control
- Food and Beverage Systems
- Industrial AutomationIndustrial Machinery

• Building Automation

- Semiconductor Fabrication
- Control Systems

System Specifications _

CommunicationInterfaceRS-485Format(N, 8, 1), (N, 8, 2), (O, 8, 1), (E, 8, 1)Baud Rate1200 ~ 115200 bpsProtocolDCON, Modbus/RTU, Modbus/ASCIIDrotocolDCON, Modbus/RTU, Modbus/ASCIIDual WatchdogYes, Module (2.3 seconds), communication (Programmable)Dual Watchdog1 LED as Power Indicator LED IndicatorsFormany SecondsIntra-module Isolation , siled-to-Logic A Sty VocENS Protection4 4k V Contact for Each Terminal 4 8k V Air for Random Point ENG IEE G 1000 -4-4) 4 4k Vor Onver Power RequirementsEverse Polarity Protection A Sty Max. Power RequirementsColspan= 1 Sign Max. Power RequirementsEverse Polarity Protection A Sty Max. Power RequirementsEverse Polarity ProtectionSo Max.Power Sign Max 27 mm Dianesions (W x L x H) S 2m m x 98 mm x 27 mm EversententEversententEversententDianesing TermentEversententEversententEversententEversententEversen			
FormatNoteFormat(N, 8, 1), (N, 8, 2), (O, 8, 1), (E, 8, 1)Baud Rate1200 ~ 115200 bpsProtocolDCON, Modbus/RTU, Modbus/ASCIIDual WatchdogYes, Module (2.3 seconds), communication (Programmable)LED IndicatorsTess Module (2.3 seconds), communication (Programmable)Power1 LED as Power IndicatorIsolation3750 VbcIntra-module Isolation, Field-to-Logic3750 VbcESD (IEC 61000-4-2)±4 kV Contact for Each Terminal ±8 kV Air for Random PointEFT (IEC 61000-4-2)±4 kV for PowerPower RequirementsYes, 10 ~ 30 VbcReverse Polarity ProtectionYes, 10 ~ 30 VbcPowerd from Terminal BlockYes, 10 ~ 30 VbcConsumption0.5 W Max.Mechanical52 mm x 98 mm x 27 mmDimensions (W x L x H)52 mm x 98 mm x 27 mmInstallationDIN-Rail MountingEnvironmentImage Add Add Add Add Add Add Add Add Add Ad	Communication		
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Dual Watchdog Yes, Module (2.3 seconds), Communication (Programmable) LED Indicators ItED as Power Indicator Power 1 LED as Power Indicator Intra-module Isolation, Field-to-Logic 3750 Vbc EMS Protection 3750 Vbc ESD (IEC 61000-4-2) #4 kV Contact for Each Terminal #8 kV Air for Random Point EFT (IEC 61000-4-2) #4 kV for Power Power Requirements Yes, 10 ~ 30 Vbc Reverse Polarity Protection Yes, 10 ~ 30 Vbc Consumption 52 mm x 98 mm x 27 mm Dimensions (W x L x H) 52 mm x 98 mm x 27 mm Installation DIN-Rail Mounting	Baud Rate	1200 ~ 115200 bps	
Dual watchdogCommunication (Programmable)LED IndicatorsPower1 LED as Power IndicatorIntra-module Isolation, Field-to-Logic3750 VocEMS Protection3750 VocESD (IEC 61000-4-2)±4 kV Contact for Each Terminal ±8 kV Air for Random PointEFT (IEC 61000-4-2)±4 kV for PowerPower RequirementsYesReverse Polarity ProtectionYes, 10 ~ 30 VocPowered from Terminal BlockYes, 10 ~ 30 VocConsumption52 M Max.MechanicalJun x 98 mm x 27 mmInstallationJUN-Rail MountingEnvironmentInstall Mounting	Protocol	DCON, Modbus/RTU, Modbus/ASCII	
Power 1 LED as Power Indicator Isolation Intra-module Isolation, Field-to-Logic Intra-module Isolation, Field-to-Logic 3750 Voc EMS Protection #4 kV Contact for Each Terminal ESD (IEC 61000-4-2) #4 kV Contact for Each Terminal EFT (IEC 61000-4-2) #4 kV for Power Power Requirements #4 kV for Power Reverse Polarity Protection Yes, 10 ~ 30 Voc Consumption 0.5 W Max. Mechanical 52 mm x 98 mm x 27 mm Dimensions (W x L x H) 52 mm x 98 mm x 27 mm Installation DIN-Rail Mounting	Dual Watchdog		
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Field-to-Logic 3/50 Vbc EMS Protection #4 kV Contact for Each Terminal ±8 kV Air for Random Point ±8 kV Air for Random Point #4 kV for Power Power Requirements Reverse Polarity Protection Yes, 10 ~ 30 Vbc Consumption 0.5 W Max. Mechanical Dimensions (W x L x H) 52 mm x 98 mm x 27 mm Installation DIN-Rail Mounting Environment Enviro	Isolation		
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ESD (IEC 61000-4-2) ±8 kV Air for Random Point EFT (IEC 61000-4-4) ±4 kV for Power Power Requirements ************************************	EMS Protection		
±8 kV Air for Random Point EFT (IEC 61000-4-4) ±4 kV for Power Power Requirements Yes Reverse Polarity Protection Yes, 10 ~ 30 Voc Powered from Terminal Block Yes, 10 ~ 30 Voc Consumption 0.5 W Max. Mechanical 52 mm x 98 mm x 27 mm Dinstallation DIN-Rail Mounting Environment 1	ESD (IEC 61000 4 2)	±4 kV Contact for Each Terminal	
Power Requirements Reverse Polarity Protection Yes Powered from Terminal Block Yes, 10 ~ 30 Vpc Consumption 0.5 W Max. Mechanical Dimensions (W x L x H) 52 mm x 98 mm x 27 mm Installation DIN-Rail Mounting Environment	L3D (ILC 01000-+-2)	±8 kV Air for Random Point	
Reverse Polarity Protection Yes Powered from Terminal Block Yes, 10 ~ 30 Vbc Consumption 0.5 W Max. Mechanical 52 mm x 98 mm x 27 mm Dimensions (W x L x H) 52 mm x 98 mm x 27 mm Installation DIN-Rail Mounting Environment 1000 mm x 10000 mm x 1000 mm x 1000 mm x 1000 mm x 10000 mm x 100000 mm x 1000000 mm x 1000000 mm x 10000000000	EFT (IEC 61000-4-4)	±4 kV for Power	
Powered from Terminal Block Yes, 10 ~ 30 VDC Consumption 0.5 W Max. Mechanical Dimensions (W x L x H) 52 mm x 98 mm x 27 mm Installation DIN-Rail Mounting Environment	Power Requirements		
Consumption 0.5 W Max. Mechanical Dimensions (W x L x H) 52 mm x 98 mm x 27 mm Installation DIN-Rail Mounting Environment	Reverse Polarity Protection	Yes	
Mechanical Dimensions (W x L x H) 52 mm x 98 mm x 27 mm Installation DIN-Rail Mounting Environment Installation	Powered from Terminal Block	Yes, 10 ~ 30 V _{DC}	
Dimensions (W x L x H) 52 mm x 98 mm x 27 mm Installation DIN-Rail Mounting Environment Image: Comparison of Compa	Consumption	0.5 W Max.	
Installation DIN-Rail Mounting Environment	Mechanical		
Environment	Dimensions (W x L x H)	52 mm x 98 mm x 27 mm	
	Installation	DIN-Rail Mounting	
Operating Temperature -25 ~ +75°C	Environment		
	Operating Temperature	-25 ~ +75°C	
Storage Temperature -30 ~ +75°C	Storage Temperature	-30 ~ +75°C	
Humidity 10 ~ 95% RH, Non-condensing	Humidity	10 ~ 95% RH, Non-condensing	



I/O Specifications

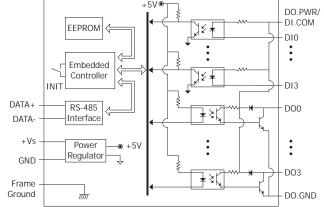
Digital Input/Counter		
Input Channels		4
Туре		Wet Contact (Source)
On Voltage	e Level	+3.5 V _{DC} ~ 50 V _{DC}
Off Voltage	e Level	+1 V Max.
Input Impe	edance	10 KΩ, 0.66 W
	Channels	4
Counters	Max. Count	65535 (16-bit)
Max. Input Frequency		100 Hz
Min. Pulse Width		5 ms
Overvoltage Protection		70 V _{DC}
Digital Output		
Output Cha	annels	4
Туре		Isolated Open Collector (Sink)
Max. Load Current		700 mA/channel
Load Voltage		3.5 Vdc ~ 50 Vdc
Overvoltage Protection		60 V _{DC}
Overload Protection		Yes
Short Circuit Protection		Yes
Power-on Value		Yes, Programmable
Safe Value		Yes, Programmable

Wire Connections _____

Digital Input/ Counter	ON State Readback as 1	OFF State Readback as 0
	+3.5 ~ +50 V _{DC}	OPEN or <1 V _{DC}
Source	Dix 10K → → To other DI.COW/DO.PWR : channels	Dix 10K

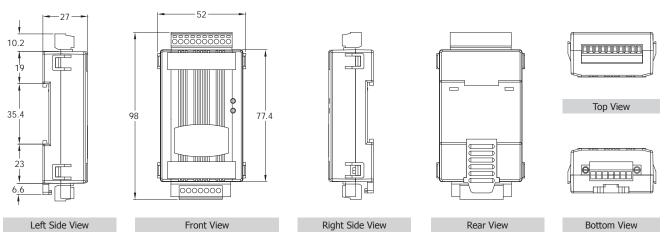
Output Type	ON State Readback as 1	OFF State Readback as 0
	Relay ON	Relay OFF
Drive Relay		
Resistance Load		+ I I COM/DO.PWR DOx DOx DO.GND

Block Diagram _____ +5V®7



3 Tiny RS-485 Remote I/O Modules

Dimensions (Units: mm) _



Ordering Information _____

tM-P4C4 CR	4-channel Isolation Digital Input and 4-channel Isolation Digital Output Module (RoHS)

Related Products _____

tM-7561 CR	Isolated USB to RS-485 Converter (RoHS)	tM-7510U CR Isolated RS-485 Repeater (RoHS)
tM-7520U CR	Isolated RS-232 to RS-485 Converter (RoHS)	MDR-20-24 CR 24W Single Output Industrial DIN-Rail Power Supply (RoHS)

tM-P4C4