DIMS 816R

8 / 16 Channel Digital Input Modules
MODBUS over RS485 Serial Interface

Operation Manual

This brief manual is primarily meant for quick reference to wiring connections and parameter searching. For more details on operation and application; please log on to www.ppiindia.net

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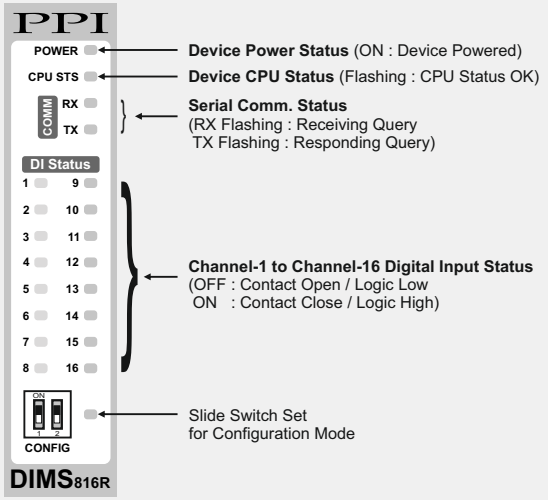
Dec 2024

Modbus Data Type	MODBUS Address	Values
1. Select Digital Input Type *Configuration Parameter (Stored in Non-Volatile memory)*		
Holding Register Function Code (0x06 & 0x10)	1598	Value / DI Type 0 – Dry (Potential-Free) Open / Close Contact **or** Open Drain / Collector (Sink) 1 – Wet Open / Close Contact **or** Voltage Level Default : Dry (Potential-Free) Open / Close Contact **or** Open Drain / Collector (Sink)
Coils Function Code (0x05 & 0x0F)	149	Coil / DI Type 0 – Dry (Potential-Free) Open / Close Contact **or** Open Drain / Collector (Sink) 1 – Wet Open / Close Contact **or** Voltage Level Default : Dry (Potential-Free) Open / Close Contact **or** Open Drain / Collector (Sink)
2. Instantaneous Digital Input Status (Read-Only Parameters) *Run Time Parameter (Read Only)*		
Bit-Mapped Input or Holding Register *Function Code (0x03 or 0x04)*	1	Bit 15 . . Bit 7 . . Bit 1 Bit 0 DI-1 Status DI-2 Status DI-8 Status DI-16 Status 8 Ch : Bits 8 to 15 are unused - ignore Bit Value / DI Status 0 – Contact Open / Logic Low 1 – Contact Close / Logic High
Discrete Input (Coils) *Function Code (0x01 & 0x02)*	1 to 8 (8 Channel) 1 to 16 (16 Channel)	Coil Value / DI Status 0 – Contact Open / Logic Low 1 – Contact Close / Logic High
3 (a). Low-to-High Latched Digital Input Status (Read-Only Parameters) *Run Time Parameter (Read Only)*		
Bit-Mapped Input or Holding Register *Function Code (0x03 or 0x04)*	2	Bit 15 . . Bit 7 . . Bit 1 Bit 0 DI-1 Low-to-High Latched Status DI-2 Low-to-High Latched Status DI-8 Low-to-High Latched Status DI-16 Low-to-High Latched Status 8 Ch : Bits 8 to 15 are unused - ignore Bit Value / DI Status 0 – No 'Low-to-High' Transition 1 – 'Low-to-High' Transition Detected
Discrete Input (Coils) *Function Code (0x01 & 0x02)*	17 to 24 (8 Channel) 17 to 32 (16 Channel)	Coil Value / DI Status 0 – No 'Low-to-High' Transition 1 – 'Low-to-High' Transition Detected

Modbus Data Type	MODBUS Address	Values
3 (b). Low-to-High Acknowledge Command *Run Time Parameter (Not Stored in non-volatile memory)*		
Bit-Mapped Holding Register Function Code (0x06 & 0x10)	102	Bit 15 . . Bit 7 . . Bit 1 Bit 0 DI-1 Low-to-High Acknowledge DI-2 Low-to-High Acknowledge DI-8 Low-to-High Acknowledge DI-16 Low-to-High Acknowledge 8 Ch : Bits 8 to 15 are unused - ignore Bit Value / DI Status 0 – No Effect 1 – 'Low-to-High' Status Cleared
Coils Function Code (0x05 & 0x0F)	117 to 124 (8 Channel) 117 to 132 (16 Channel)	Coil Value / DI Status 0 – No Effect 1 – 'Low-to-High' Status Cleared
4 (a). High-to-Low Latched Digital Input Status (Read-Only Parameters) *Run Time Parameter (Read Only)*		
Bit-Mapped Input or Holding Register *Function Code (0x03 or 0x04)*	3	Bit 15 . . Bit 7 . . Bit 1 Bit 0 DI-1 High-to-Low Latched Status DI-2 High-to-Low Latched Status DI-8 High-to-Low Latched Status DI-16 High-to-Low Latched Status 8 Ch : Bits 8 to 15 are unused - ignore Bit Value / DI Status 0 – No 'High-to-Low' Transition 1 – 'High-to-Low' Transition Detected
Discrete Input (Coils) *Function Code (0x01 & 0x02)*	33 to 40 (8 Channel) 33 to 48 (16 Channel)	Coil Value / DI Status 0 – No 'High-to-Low' Transition 1 – 'High-to-Low' Transition Detected
4 (b). High-to-Low Acknowledge Command *Run Time Parameter (Not Stored in non-volatile memory)*		
Bit-Mapped Holding Register Function Code (0x06 & 0x10)	103	Bit 15 . . Bit 7 . . Bit 1 Bit 0 DI-1 High-to-Low Acknowledge DI-2 High-to-Low Acknowledge DI-8 High-to-Low Acknowledge DI-16 High-to-Low Acknowledge 8 Ch : Bits 8 to 15 are unused - ignore Bit Value / DI Status 0 – No Effect 1 – 'High-to-Low' Status Cleared
Coils Function Code (0x05 & 0x0F)	133 to 140 (8 Channel) 133 to 148 (16 Channel)	Coil Value / DI Status 0 – No Effect 1 – 'High-to-Low' Status Cleared

Modbus Data Type	MODBUS Address	Values
5. Digital Filter *Configuration Parameter (Stored in Non-Volatile memory)*		
Holding Register Function Code (0x06 & 0x10)	11 to 18 (8 Channel) 11 to 26 (16 Channel)	1 to 30000 mSec (Default : 10 mSec)

FRONT PANEL & CONFIGURATION MODE

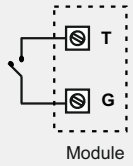


Configuration Mode

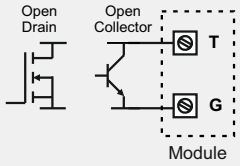
Switch Position	ON 1 2 Down	ON 1 2 Up
Mode Indicator	OFF	ON
Operation Mode	Normal	Configuration
Communication Parameter Values	User Set values for *Module Slave ID, Baud Rate & Parity*	*Module Slave ID : 1* *Baud Rate : 9600* *Parity : None*

DIGITAL INPUT CHANNELS

Dry Contact

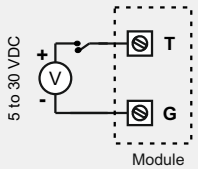


Open Drain / Collector

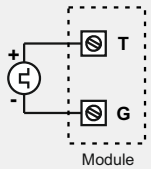


T = 1, 2, ...15, 16

Wet Contact

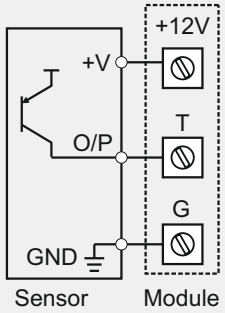


Voltage Level

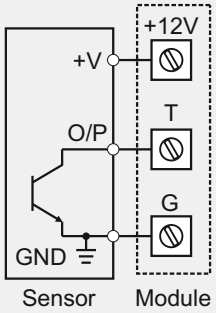


T = 1, 2, ...15, 16

PNP Input (12V Internal Sensor Excitation)

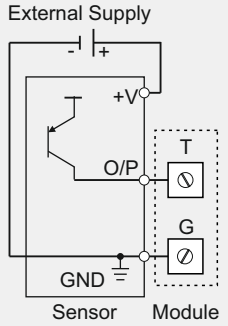


NPN Input (12V Internal Sensor Excitation)

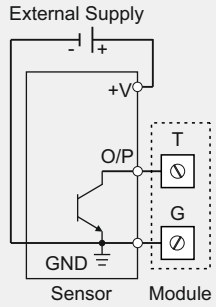


T = 1, 2, ...15, 16

PNP Input (5 to 30VDC External Sensor Excitation)

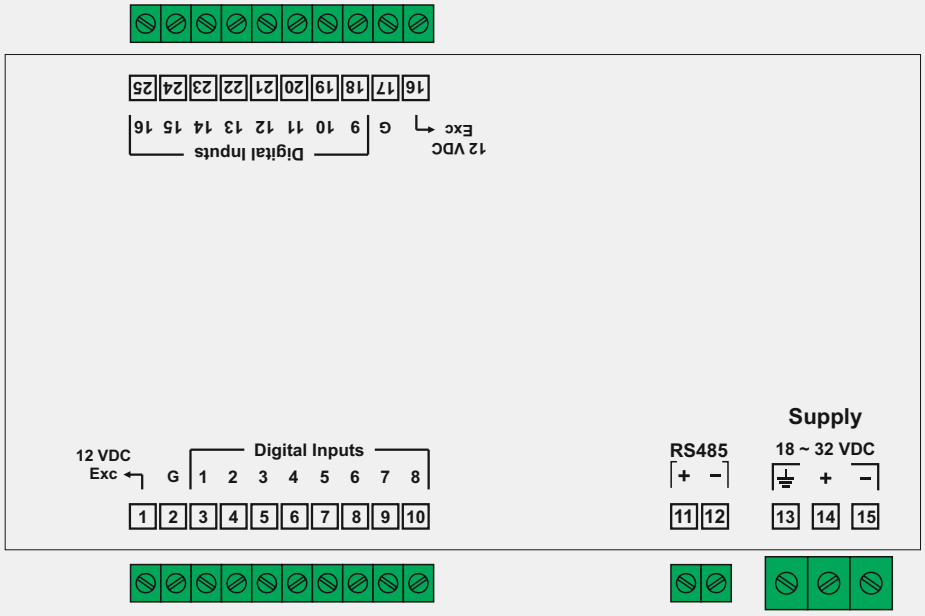


NPN Input (5 to 30VDC External Sensor Excitation)

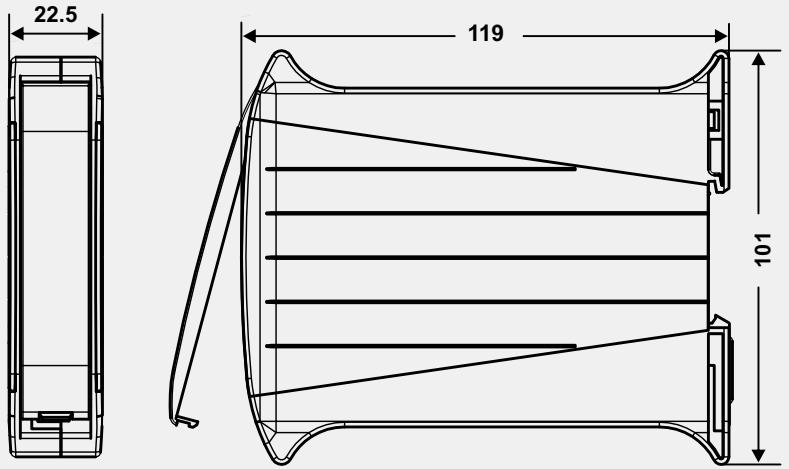


T = 1, 2, ...15, 16

ELECTRICAL CONNECTIONS



OVERALL DIMENSION



All Dimensions are in mm

Width (W) : 22.5 mm, Height (H) : 101.0 mm, Depth (D) : 119.0 mm