

MIL Connector Terminals with Transistors

# DRT2-□D32ML(-1)/□D16ML(-1)

## Very Compact 16-/32-point Remote Terminals

- Used in combination with Interface Conversion Boards (e.g., D-Sub) to connect to a wide range of interfaces.
- 35 x 60 x 80 mm (W x D x H)



### Smart Slave Functions

Operation time monitor	Contact operation counter	Unit conduction time monitor
Total ON time monitor	Unit comments	Connected device comments
Network power supply voltage monitor	I/O power supply monitor function	Communications error log function
Input filter (input or I/O only)	Power-ON inrush current protection (input or I/O only)	
Communications speed auto-detection	No need to wire Unit power supply	Last maintenance date

### Ordering Information

Specifications		I/O connections	Rated internal circuit power supply voltage	Rated I/O power supply voltage	Model	
Inputs	NPN (+ common)	32 points	MIL connector	24 VDC	DRT2-ID32ML	
	PNP (- common)				DRT2-ID32ML-1	
Outputs	NPN (- common)				DRT2-OD32ML	
	PNP (+ common)				DRT2-OD32ML-1	
I/O	NPN (input: + common, output: - common)	16 inputs/ 16 outputs	MIL connector		DRT2-MD32ML	
	PNP (input: - common, output: + common)				DRT2-MD32ML-1	
Inputs	NPN (+ common)	16 points			MIL connector	DRT2-ID16ML
	PNP (- common)					DRT2-ID16ML-1
Outputs	NPN (- common)			DRT2-OD16ML		
	PNP (+ common)			DRT2-OD16ML-1		
Inputs	NPN (+ common)	MIL connector (Connector with 10-cm cable)		DRT2-ID16MLX		
	PNP (- common)			DRT2-ID16MLX-1		
Outputs	NPN (- common)		DRT2-OD16MLX			
	PNP (+ common)		DRT2-OD16MLX-1			
Mounting Bracket					SRT2-ATT02	

## General Specifications

<b>Communications power supply voltage</b>	11 to 25 VDC (Supplied from the communications connector.)
<b>Communications power supply current consumption</b>	DRT2-ID32ML(-1): 100 mA DRT2-OD32ML(-1): 120 mA DRT2-MD32ML(-1): 110 mA DRT2-ID16ML(-1): 80 mA DRT2-OD16ML(-1): 80 mA DRT2-ID16MLX(-1): 80 mA DRT2-OD16MLX(-1): 80 mA
<b>Noise immunity</b>	Conforms to IEC61000-4-4, 2 kV (power line)
<b>Vibration resistance</b>	10 to 60 Hz, 0.7-mm double amplitude, 60 to 150 Hz, 50 m/s <sup>2</sup>
<b>Shock resistance</b>	150m/s <sup>2</sup>
<b>Dielectric strength</b>	500 VAC (between isolated circuits)
<b>Insulation resistance</b>	20 MΩ min.
<b>Ambient operating temperature</b>	-10°C to 55°C
<b>Ambient operating humidity</b>	25% to 85% (with no condensation)
<b>Ambient operating atmosphere</b>	No corrosive gases
<b>Ambient storage temperature</b>	-25°C to 65°C
<b>Mounting method</b>	DIN 35 mm-track mounting
<b>Weight</b>	120 g max. *

\* The Connector Cable provided with the DRT2-ID16MLX(-1) and DRT2-OD16MLX(-1) is 10 g max.

## Input Specifications

### ● 32-point Inputs Terminals with Connectors

Item	Model	DRT2-ID32ML	DRT2-ID32ML-1
<b>Internal I/O common</b>		NPN	PNP
<b>I/O points</b>		32 inputs	
<b>ON voltage</b>		17 VDC min. (between each input terminal and V)	17 VDC min. (between each input terminal and G)
<b>OFF voltage</b>		5 VDC max. (between each input terminal and V)	5 VDC max. (between each input terminal and G)
<b>OFF current</b>		1.0 mA max.	
<b>Input current</b>		24 VDC: 6.0 mA max./point 17 VDC: 3.0 mA max./point	
<b>ON delay time</b>		1.5 ms max.	
<b>OFF delay time</b>		1.5 ms max.	
<b>Number of circuits per common</b>		32 per common	

### ● 16-point Inputs/16-point Outputs Terminals with Connectors

#### ● 16-point Inputs Terminals with Connectors

Item	Model	DRT2-MD32ML DRT2-ID16ML DRT2-ID16MLX	DRT2-MD32ML-1 DRT2-ID16ML-1 DRT2-ID16MLX-1
<b>Internal I/O common</b>		NPN	PNP
<b>I/O points</b>		16 inputs	
<b>ON voltage</b>		17 VDC min. (between each input terminal and V)	17 VDC min. (between each input terminal and G)
<b>OFF voltage</b>		5 VDC max. (between each input terminal and V)	5 VDC max. (between each input terminal and G)
<b>OFF current</b>		1.0 mA max.	
<b>Input current</b>		24 VDC: 6.0 mA max./point 17 VDC: 3.0 mA max./point	
<b>ON delay time</b>		1.5 ms max.	
<b>OFF delay time</b>		1.5 ms max.	
<b>Number of simultaneously inputs</b>		16	
<b>Number of circuits per common</b>		16 per common	

## Output Specifications

### ● 32-point Outputs Terminals with Connectors

Item	Model	DRT2-OD32ML	DRT2-OD32ML-1
<b>Internal I/O common</b>		NPN	PNP
<b>I/O points</b>		32 outputs	
<b>Rated output current</b>		0.3 A/point, 4 A/common *	
<b>Residual voltage</b>		1.2 VDC max. (0.3 A DC between output and G terminal)	1.2 VDC max. (0.3 A DC between output and V terminal)
<b>Leakage current</b>		0.1 mA max.	
<b>ON delay time</b>		0.5 ms max.	
<b>OFF delay time</b>		1.5 ms max.	
<b>Number of circuits per common</b>		32 per common	

\* The maximum total load current is 4 A.  
The maximum current for the V and G terminals is 1 A per terminal.

### ● 16-point Inputs/16-point Outputs Terminals with Connectors

#### ● 16-point Outputs Terminals with Connectors

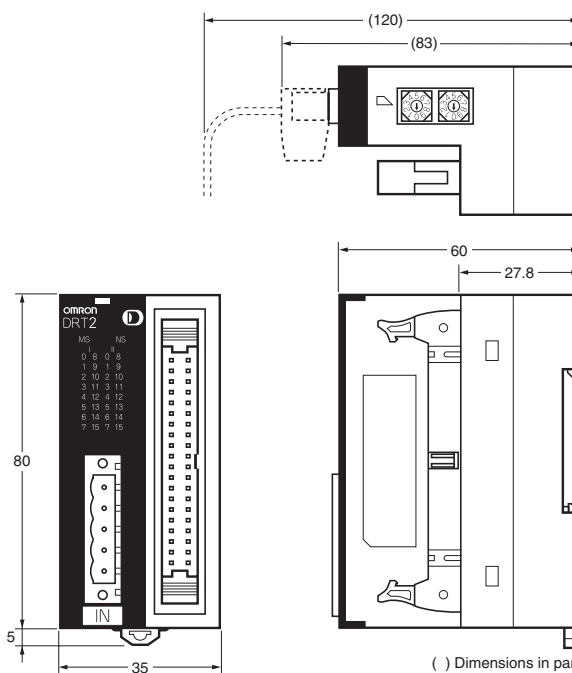
Item	Model	DRT2-MD32ML DRT2-OD16ML DRT2-OD16MLX	DRT2-MD32ML-1 DRT2-OD16ML-1 DRT2-OD16MLX-1
<b>Internal I/O common</b>		NPN	PNP
<b>I/O points</b>		16 outputs	
<b>Rated output current</b>		0.3 A/point, 4 A/common *	
<b>Residual voltage</b>		1.2 VDC max. (0.3 A DC between output and G terminal)	1.2 VDC max. (0.3 A DC between output and V terminal)
<b>Leakage current</b>		0.1 mA max.	
<b>ON delay time</b>		0.5 ms max.	
<b>OFF delay time</b>		1.5 ms max.	
<b>Number of circuits per common</b>		16 per common	

\* The maximum total load current is 2 A.  
The maximum current for the V and G terminals is 1 A per terminal.



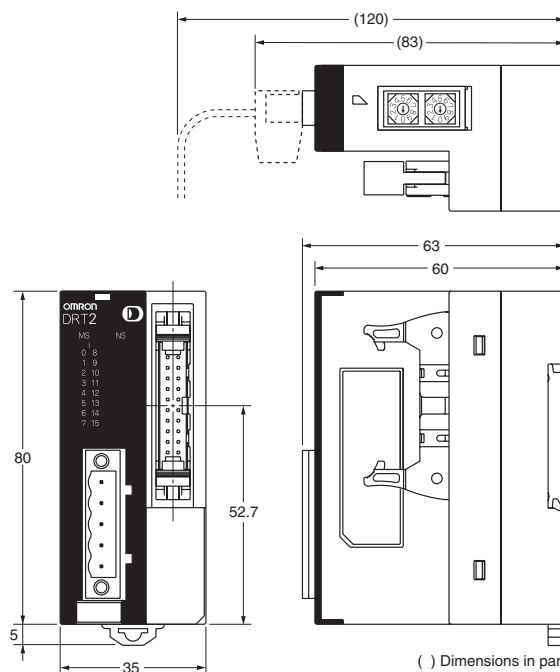
**Dimensions**

**DRT2-ID32ML(-1)**  
**DRT2-OD32ML(-1)**  
**DRT2-MD32ML(-1)**



( ) Dimensions in parentheses are reference values.

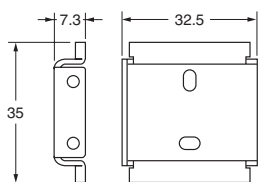
**DRT2-ID16ML(-1)**  
**DRT2-OD16ML(-1)**  
**DRT2-ID16MLX(-1)**  
**DRT2-OD16MLX(-1)**



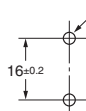
( ) Dimensions in parentheses are reference values.

**● Mounting Bracket B (Accessory)**

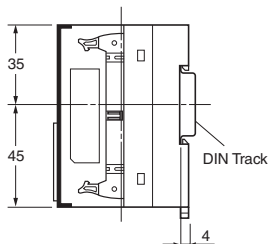
**SRT2-ATT02**



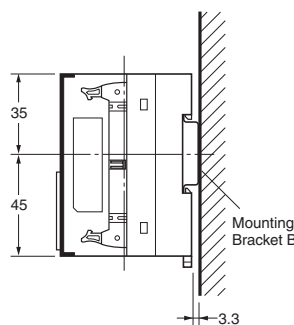
Mounting Hole Dimension  
 Two, 3.2 dia. or M3



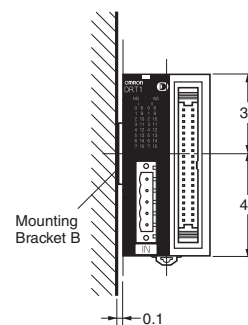
(DIN Track mounting)



(Vertical mounting on wall)

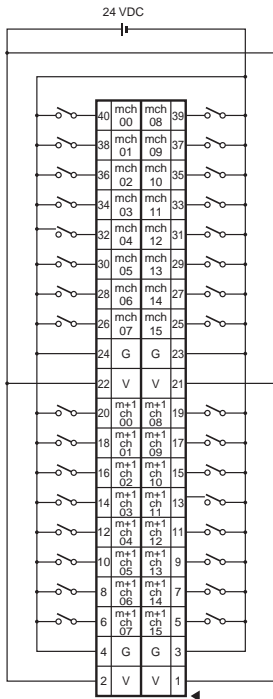


(Horizontal mounting on wall)

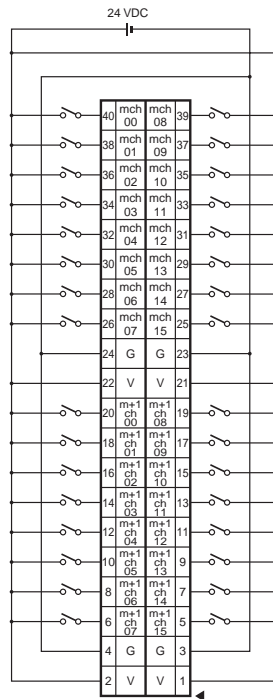


Wiring Diagrams

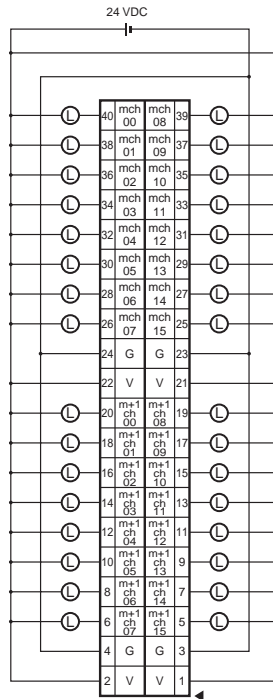
DRT2-ID32ML



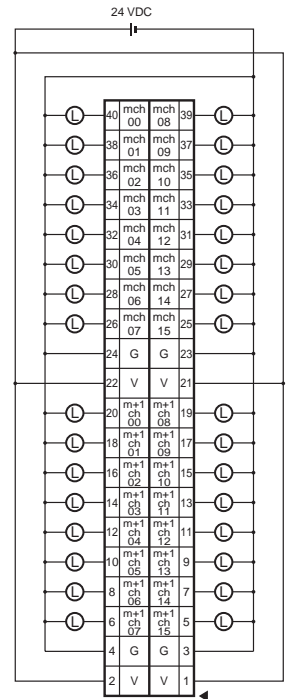
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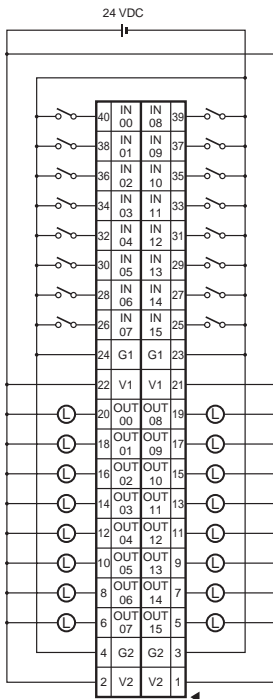
DRT2-OD32ML



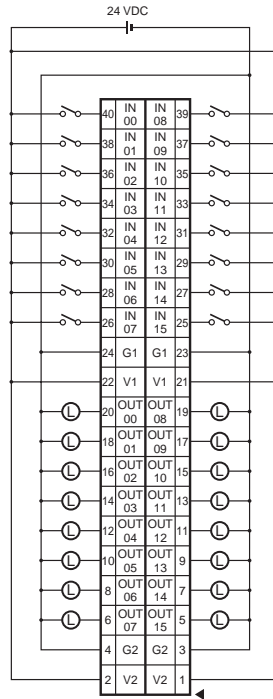
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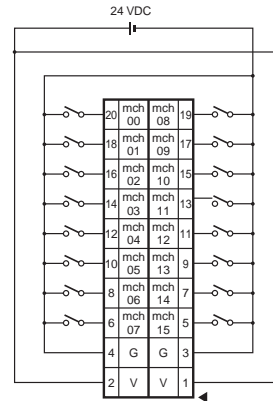
DRT2-MD32ML



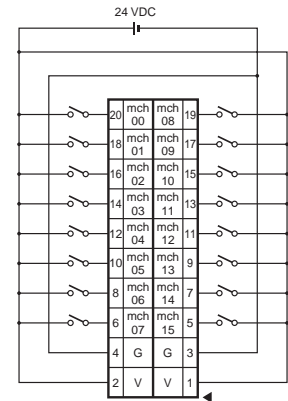
DRT2-MD32ML-1



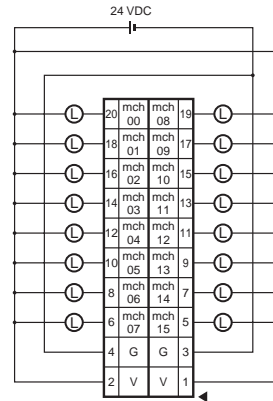
DRT2-ID16ML(X)  
(NPN)



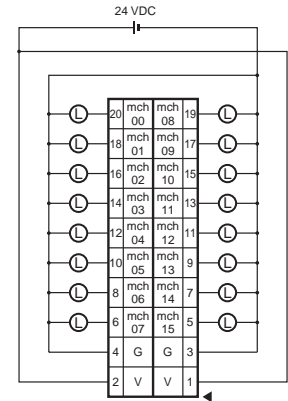
DRT2-ID16ML(X)-1  
(PNP)



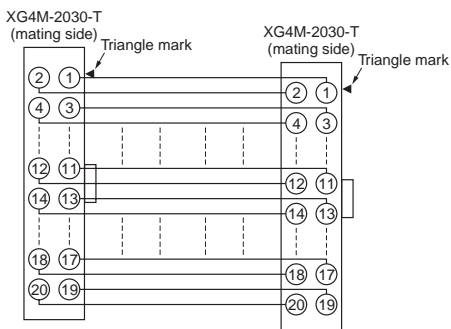
DRT2-OD16ML(X)  
(NPN)



DRT2-OD16ML(X)-1  
(PNP)



Wiring Diagram of Connector Cable Provided with the DRT2-ID16MLX(-1) and DRT2-OD16MLX(-1)



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