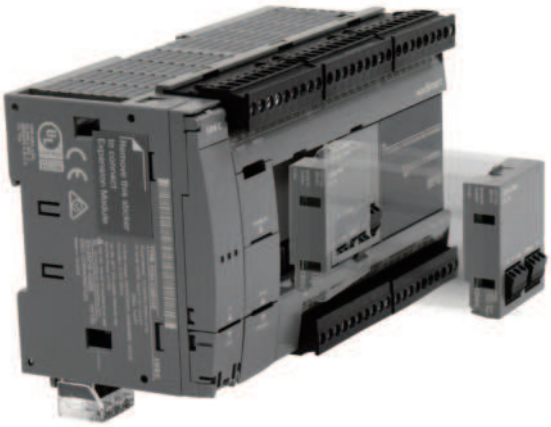
FC6A and FT1A Series
Digital I/O Cartridge





SPECIFICATIONS/RATINGS

Type	I/O Points	Part No.
Digital Input	4-point digital input (4/1 common)	FC6A-PN4
Transistor Output	4-point transistor sink output (4/1 common)	FC6A-PTK4
	4-point transistor source output (4/1 common)	FC6A-PTS4

Input Cartridge Specifications

Part No.		FC6A-PN4
Input Points		4 (4/1 common)
Rated Input Voltage		12/24V DC sink/source input signal
Input Voltage Range		0 to 28.8V DC
Rated Input Current		2.5mA/point (12V DC) 5mA/point (24V DC)
Input Impedance		4.4kΩ
ON/OFF Level	**OFF Voltage**	5V maximum
	ON Voltage	8.5V minimum
	OFF Current	0.9mA maximum
	ON Current	1.7mA minimum (at 8.5V DC)
Input Delay Time (24V DC)		Turn ON: 0.5ms Turn OFF: 0.5ms
Isolation		Between input terminals: Not isolated Internal circuit: Photocoupler-isolated
External Load for I/O Interconnection		Not needed
Signal Determination Method		Static
Effect of Improper Input Connection		Both sink and source input signals can be connected. If input exceeding the rated value is applied, permanent damage may be caused.
Cable Length		3m in compliance with electromagnetic immunity
Applicable Ferrule		1-wire: AI 0.5-6 (Phoenix Contact)
Internal Current Draw	**All Inputs ON**	30mA (3.3V DC) 0mA (5V DC)
	All Inputs OFF	25mA (3.3V DC) 0mA (5V DC)
Internal Power Consumption (at 24V DC while all inputs ON)		0.10W
Weight (approx.)		15g

PRODUCT DESCRIPTION

The FC6A digital I/O cartridge can easily be installed in the SmartAXIS Touch FT1A-*14 and FC6A base units, providing a space-saving, wire-saving, quick and simple solution. With three types of cartridges available, these cost effective digital I/O cartridges can be added to suit the needs of many applications.

KEY FEATURES

- Space-saving solution
- Three types of cartridges available
- Up to 2 cartridges can be added to SmartAXIS Touch FT1A-*14 or FC6A base units
- Supported by FC6A firmware version 1.30 or later, included in Automation Organizer Ver. 3.60 or later, and FT1A Touch system software Ver. 4.05 or later included in Automation Organizer Ver. 3.50 or later

SPECIFICATIONS (CON'T)

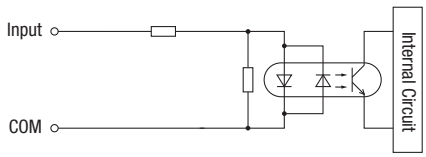
Output Cartridge Specifications

Part No.		FC6A-PTK4	FC6A-PTS4
Output Points		4 transistor sink output (4/1 common)	4 transistor source output (4/1 common)
Rated Load Voltage		12/24V DC	
Operating Load Voltage Range		10.2 to 28.8V DC	
Maximum Load Current	1 point	0.1A per point	
	1 common	0.4A per common	
Voltage Drop (ON Voltage)		1V maximum (voltage between COM and output terminals when output is on)	
Inrush Current		1A maximum	
Leakage Current		0.1mA maximum	
Clamping Voltage		Approx. 50V	
Maximum Lamp Load		2.4W	
Inductive Load		L/R = 10ms (28.8V DC 1Hz)	
External Current Draw		100 mA maximum, 24V DC (power voltage at the +V terminal)	100 mA maximum, 24V DC (power voltage at the -V terminal)
Overcurrent Protection		No	
Output Delay		Turn ON Time 450 µs maximum Turn OFF Time 450 µs maximum	
Isolation		Between output terminals: Not isolated Between output terminal and internal circuit: Photocoupler-isolated	
Applicable Ferrule		1-wire: AI 0.5-6 (Phoenix Contact)	
Internal Current Draw	All Outputs ON	35mA (3.3V DC) 0mA (5V DC)	
	All Outputs OFF	30mA (3.3V DC) 0mA (5V DC)	
Internal Power Consumption (at 24V DC while all outputs ON)		0.10W	
Weight (approx.)		15g	

CIRCUIT DIAGRAMS

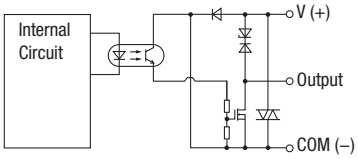
Input Internal Circuit

FC6A-PN4

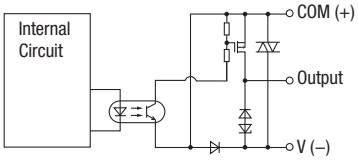


Output Internal Circuit

FC6A-PTK4



FC6A-PTS4



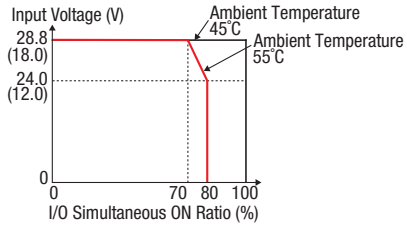
TEMPERATURE DERATING CURVES

Temperature derating curves when a digital I/O cartridge is installed

All-in-One FC6A CPU Modules

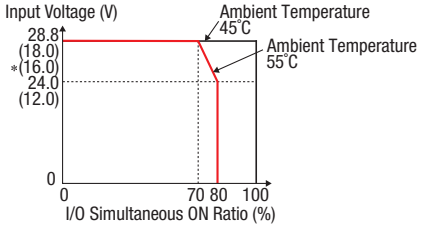
Input (with cartridge)

FC6A-C16K1CE
FC6A-C24K1CE
FC6A-C40K1CE
FC6A-C40K1DE
FC6A-C40K1CEJ
FC6A-C40K1DEJ



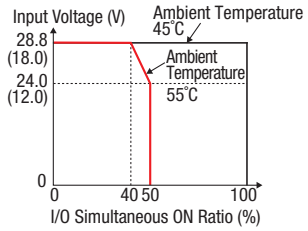
Output (with cartridge)

FC6A-C16K1CE
FC6A-C24K1CE
FC6A-C40K1CE
FC6A-C40K1DE
FC6A-C40K1CEJ
FC6A-C40K1DEJ



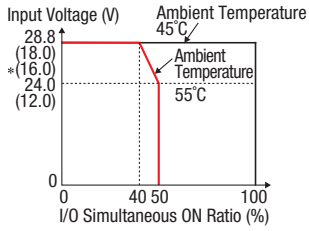
Input (with cartridge)

FC6A-C24P1CE
FC6A-C40P1CE
FC6A-C40P1DE
FC6A-C40P1CEJ
FC6A-C40P1DEJ



Output (with cartridge)

FC6A-C24P1CE
FC6A-C40P1CE
FC6A-C40P1DE
FC6A-C40P1CEJ
FC6A-C40P1DEJ

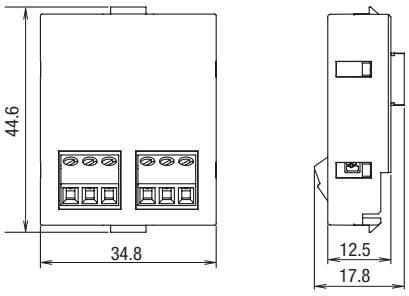


- Values in ( ) are for 12V DC model.
- Values shown in *( ) are for CAN J1939 all-in-one model.

FT1A Touch (FT1A-*14KA/FT1A-*14SA)

Temperature derating curve is the same with or without digital I/O cartridge.

DIMENSIONS



All dimensions in mm.

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