

**CTN481G**

## CTN481G (RoHS Compliant)

IKO Programmable controller is a controller for positioning control with high functionality and operability, and CTN481G is a high-end model with additional functions and compatibility with conventional CTN480G products. As the external appearance dimensions, mounting dimensions and connector specifications are the same as those of conventional CTN480G products, this may simply replace CTN480G.

Drivers and connection cords of conventional CTN480G products can be used. For details of dimensions, contact **IKO**.

- ① Super high function type that enables to program input up to 10000 steps
- ② Both high speed and high resolution controls are realized with high speed pulse output up to 8 MHz.
- ③ Four-axis linear interpolation and two-axis circular interpolation functions are available as standard functions.
- ④ Position correction control by linear encoder is supported.
- ⑤ Data can be stored and transferred via USB memory available on the market.
- ⑥ By using integrated I/O sequence function, timer, counter and calculation function, a system can be configured easily without any sequencer.
- ⑦ As the USB 1.1 interface is equipped as standard equipment, data editing, controller operations and direct execution from PC are allowed using dedicated commands.
- ⑧ As absolute encoders of YASKAWA ELECTRIC CORPORATION, Panasonic Corporation, and Mitsubishi Electric Corporation are supported, return to origin operation at the startup is not required.
- ⑨ The synchronization control function allows for simultaneous execution and shutdown of 2 axes possible (gantry mechanism control is possible).
- ⑩ Multi-tasking function allows for simultaneous execution of up to 5 programs.
- ⑪ You can correct the positioning accuracy control by entering positioning correction data in advance.
- ⑫ Axis-dedicated input / output function makes wiring with driver easy.
- ⑬ Up to 4 controllers (sixteen-axis control) can be connected through RS485 connection.
- ⑭ Thanks to RS422 interface as standard equipment, LAN cable available on the market can be used and streamlined wiring by touch panel or sequencer data communication is possible.



## Functions and Performance

Table 1 Functions and performance

Item	Model	CTN481G	
Command pulse output specification	Number of control axis	Four-axis (executable simultaneously)	
	Max. command level	±2147483647 pulses (signed 32-bit length)	
	Max. output frequency	8MHz	
	Acceleration / deceleration time	0 to 65.533 sec (linear / cycloid / S acceleration/deceleration)	
Program specification	Output type	CW/CCW direction pulse, direction command / forward and backward pulse, and pulse with 90-degree difference	
	Entry method	MDI, teaching, and PC input via USB	
	Command input type	Absolute command or incremental command	
Input/Output specification	Program capacity	10 000steps	
	Function	Jump, call, repeat, four arithmetic, logic operation, speed setting, acceleration/deceleration setting, timer control, I/O control, input condition branching, and various editing functions (creating, erasing, deleting, inserting and copying, etc.)	
Input/Output specification	Input	No. of input points	LS input 16 points Specific input 16 points Universal input 20 points (can be extended to 80 points)
		Input method	Start, stop, emergency stop, forward / backward manual running, return to origin, present position resetting, interrupt, positioning complete, and driver arm input, etc. (selected and assigned by universal input parameters)
		Input method	Photo coupler input (non voltage contact or open collector supported)
	Output	No. of output points	Specific output 28 points Universal output 20 points (can be extended to 80 points)
		Operational output	Automatic running, limit sensor detection, emergency stop, pulse outputting, return to origin completed servo on, driver alarm resetting, proportional control, and deviation counter clear (selected and assigned by universal output parameters)
		Output type	Open collector output (DC30V; 100mA; MAX)
Communication with external devices	Input & output power voltage	For I/O, DC24V 4 A For Limit, DC24V 100mA	
	Data saving	USB1.1 (Mini-B type connector) RS422 (RJ-45 type connector)	
Other major functions	USB1.1 (A type connector)	USB serial communication (data reading, writing and direct execution, etc.), storage and transfer of programs via a USB memory available on the market, position correction by linear scale, backlash correction, software limit, changing limit sensor signal logic, four-axis linear interpolation, two-axis circular interpolation and check functions (I/O monitor, limit sensor monitor and shutdown conditions monitor), etc.	

Table 2 General specification

Item	Model	CTN481G
Power supply voltage		DC24V ±10%
Max. current consumption		4.5A
Ambient temperature		0~50°C storage -10~60°C
Ambient humidity		20~85% RH (keep dewdrop free)
Measure against power outage		Flash memory
Mass (Ref.)		Main body : 1.2kg
		Teaching box : 0.5kg
		I/O add-in unit : 0.4kg

Remark: Model number of the dedicated teaching box (separately sold) is TAE10M5-TB.

## External appearance dimensions for CTN481G

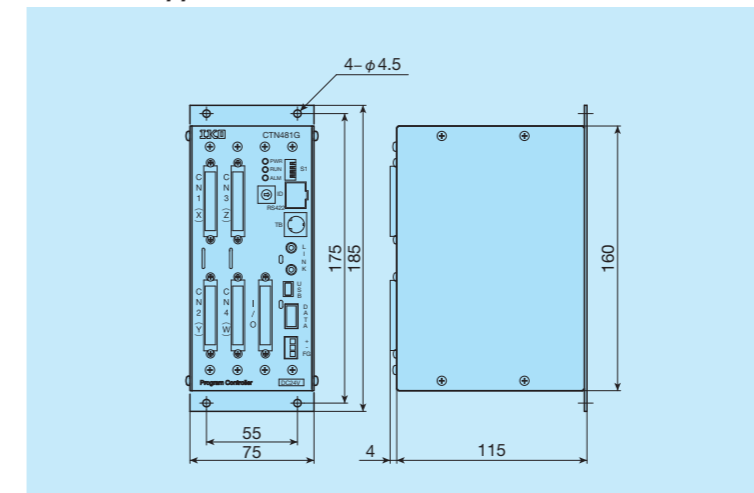


Table 3 List of CTN481G accessories

Type	Model	Qty.	Remark
I/O connector	10150-3000PE (plug)	1	Sumitomo 3M Limited
	10350-52Y0-008 (cover)	1	
Power supply connector	XW4B-03B1-H1	1	OMRON Corporation
Link connector	4832.1310	2	Schurter AG
	CFS1/4C101J (terminal resistance)	1	
DIN rail mounting parts	DRT-1	1	TAKACHI ELECTRONICS ENCLOSURE CO., LTD.
	Bind M3×4 (attachment screw)	4	

Table 4 Optional items

Type	Model	Remark
Teaching box	TAE10M5-TB	
I/O add-in unit	TAE10M6-KB	Add-in of 40 input points and 40 output points (up to two units can be added)