

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, please 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) |
| Input & output power voltage | | | For I/O, DC24V 4 A For Limit, DC24V 100mA |
| Communication with external devices | | | USB1.1 (Mini-B type connector) RS422 (RJ-45 type connector) |
| Data saving | | | USB1.1 (A type connector) |
| Other major functions | | | 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

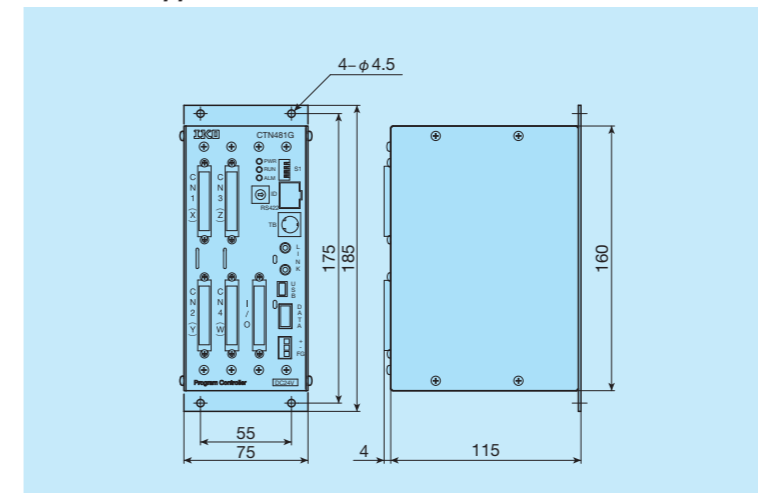


Table 3 List of CTN481G accessories

| Type | Model | Qty. | Remark |
|-------------------------|-----------------------------------|------|---|
| I/O connector | 10150-3000PE (plug) | 1 | 3M Japan 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 | KOA Corporation |
| 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) |