DP3000G
GRAPHIC PROGRAM SETTER

PERFORMANCE SPECIFICATION
CHINO

DP3000G series is a graphic program setter employed high visibility 5.6" TFT color LCD display. Maximum 200 types of program pattern (Maximum 4000 steps) are stored and performance pattern is selectable. Setting output can be selected from high accuracy analog output (DC current/ voltage) and digital output with no setting errors using communications.

FEATURES

●Employing clear 5.6" TFT color LCD display

Graphic screen of pattern progress status, display of PV value/SV value/pattern/step/time and various monitor functions such as enlarged data display and external input/output status display are prepared.

●Easy program pattern settings on graphic screen

Maximum 200 patterns /Maximum 4000 steps settings, pattern repeat, linking between patterns and endless program setting are available.

●Time signal settings per step

Time signal 30 types are selectable. Maximum 28 points external output assignment is available.

●Storing settings in CF card

Setting management is easy as all settings including setting program pattern and each parameter are stored in C F card and readout from it.

PC software allows you to edit program pattern and parameter.

●Abundant external input / output functions

Remote contact, pattern selection, time signal and status signal output are available by digital input/output function.

Unit with external input 16 points and external output 28 points enables function assignment setting.

MODELS

DP3－□0G□00－□□□

Setting output signal
- 1 : Digital output (RS422A)
- 2 : Analog output (4 to 20mA)
- 4 : Analog output (0 to 10V)
- 5 : Analog output (0 to 1V)
- 7 : Digital output (RS485)

Communications interface *1
- 0 : None
- R: RS232C (COM1) * 2 *OP*
- S: RS485 (COM1)* 2 *OP*
- A: RS422A (COM1) *2 *OP*
- B: RS232C (COM1) + RS232C (COM2) *2 *OP*
- C: RS485 (COM1) + RS232C (COM2) *3 *OP*
- D: RS422A (COM1) + RS232C (COM2) *4 *OP*
- E: RS232C (COM1) + RS485 (COM2) *2 *OP*
- F : RS485 (COM1) + RS485 (COM2) *3 *OP*
- G: RS422A (COM1) + RS485 (COM2) *4 *OP*

Case color
- G: Gray
- B: Black *OP*

External input / output signal
- 0 : None *OP*
- 1 : Digital input/ output (non voltage contact input)
- 2 : Digital input/ output (External power supply spec for only input) *OP*

Transmitter power supply
- 0 : None
- 1 : Transmitter power supply *OP*

OP : Option

*1 Rear port exclusive use for COM1, front and rear port switchable for COM2.
*2 Option cannot be selected when setting output is 1 or 7 (digital output).
*3 COM1 is setting output when setting output is 7 (RS485).
Option cannot be selected when setting output is 1 (RS422A).
*4 COM1 is setting output when setting output is 1 (RS422A).
Option cannot be selected when setting output is 7 (RS485).

OPERATION SCREEN

●Running status display at once

Running status display of pattern progress, SV, time and time signal.

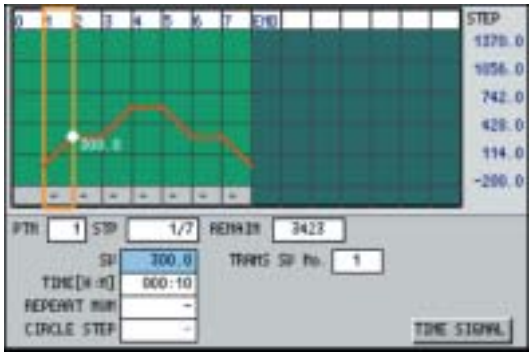
●Enlarged data screen

Enlarged display of SV and elapsed time (or remaining time).

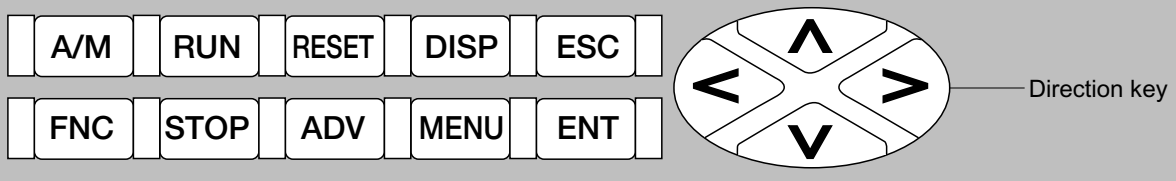
●External input status display screen

●External output status display screen

●Program pattern setting screen



KEY ARRANGEMENT



PROGRAMMING SPECIFICATIONS

Pattern set type: Target temp(SV)/Time or Ramp rate/Time
Time setting − Hour/Minute or Minute/Second
Ramp rate setting − Temperature/Minute or Temperature/Second
Number of steps: Up to 199 steps per pattern
Number of patterns: Up to 200 patterns
Total number of steps: Up to 4000 steps
Repeat: Pattern --- Up to 9999 times, Step --- up to 99 times
Step setup range: Target value --- Scale range
Time --- 0 to 999 hours 59 minutes or 0 to 999 minutes 59 seconds
Start temperature: Arbitrary set value start
Target value (SV) correction:
−99999 to 99999, decimal point linked with scaling
Fast-forward: (FAST) Program fast-forward function provided (Approx 10 times or 60 times)
Sequence setting: Registration per step
・SV NO. 0,1 to 8
・Time signal 30 types, all ON, all OFF, antiphase, step repetition
Progressing settings change:
Target value, time, ramp rate, SV correction
Additional function: Pattern link, circle step function, pattern edit (copy, delete)

OUTPUT SIGNAL SPECIFICATION

Output renewal period: 0.1 sec
Output accuracy ratings: ±0.1% of output span
Output resolution: Approx 1/50000
Output types: Analog output --- 4 to 20mA DC, 0 to 1VDC, 0 to 10VDC
Digital output --- RS422A, RS485
*Thermoelectromotive equivalent output is not prepared

EXTERNAL OUTPUT SIGNAL SPECIFICATION

Number of output: 28 points (function assignable per point)
Output type: Open collector output (24V DC, up to 50mA)
Time signal output: Default assignment --- 18 points
Output type --- ALL-ON/ ALL-OFF/ maximum of 30 types per step
Status output: Default assignment --- 10 points
Output type --- RUN/STOP, ADV, RESET, WAIT, FAST, END, ERR, SV-UP, SV-DOWN
Selective assignment --- Pattern/ step No.-BCD output

EXTERNAL INPUT SIGNAL SPECIFICATION

Number of inputs: 16 points (function assignable per point except external drive input)
Input type: Non voltage contact (contact capacity 12V DC, 2mA or more)
External power supply specification 12/24V DC ON when power is applied (up to 12mA/point)
External drive input: Default assignment --- 5 points
Input type --- RUN/STOP, ADV, RESET, WAIT, FAST
Selective assignment --- SV hold
Pattern select input: Default assignment --- 10 points
Input type --- 10 types of 1, 2, 4, 8, 10, 20, 40, 80, 100, 200
Selection method --- Select the number from 1 to 200 using BCD code

DISPLAY SPECIFICATION

Screen: 5.6" TFT color LCD
Display content: Operation screen
Home screen --- Pattern progress, pattern/step No., target value, status, elapsed time or remaining time, time signal
Enlarged data screen, DO display, DI display
Setting screen
Pattern/sequence setting, time signal, memory card management, maintenance, communications, setting change during operation
LCD backlight: 4 brightness adjustment levels

SETTING AND OPERATION SPECIFICATION

Operation key type: MENU, DISP, DIRECTION key, ENT, ESC, FNC, RUN, STOP, ADV, RESET
Setting and operation method:
Setting --- Menu calling/ cursor selection method
Operation --- Direct key operation (combined with FNC)
Menu setting: Mode 0 (Execution steps setting)
Mode 1 (Operation status selection)
Mode 2 (Pattern and sequence)
Mode 5 (Setting output)
Mode 6 (Time signal)
Mode 8 (Communications setup)
Mode 9 (Memory card management)
Mode 10 (Enhanced setup)
Mode 11 (Maintenance)
Mode 12 (Help)
Operation: Operation start/stop (RUN/STOP), operation reset (RESET), stepping operation (ADV), fast-forwarding (FAST)
Display operation: Switching between operation screens
HOME screen (registered operation screen) automatic display
Engineering port: Serial port on the front panel (Custom cable connection)

MEMORY CARD SPECIFICATION (Card is optional)

Memory media: Compact flash (CF) card
Memory size: Up to 2 GB
Saved data: Setup parameters, program patterns, all data (for auto loading)
Function: Save/read/delete/verify
For program patterns, individual or all pattern save/delete selectable
Card format (simple format)

GENERAL SPECIFICATION

Rated power voltage: 100 to 240V AC 50/60Hz (universal power supply)
Maximum power consumption: 30VA
Reference operation condition:
Ambient temperature humidity range --- 21 to 25℃, 50 to 60%RH
Power voltage --- 100V AC ±1.0%
Power frequency --- 50/60Hz ±0.5%
Attitude --- Left / right ±3°, forward/backward ±3°
Warm-up time --- 30 minutes or more
Normal operation condition:
Ambient temperature humidity range --- −10 to 50℃, 10 to 90%RH
Power voltage --- 90 to 264V AC
Power frequency --- 50/60Hz ±2%
Attitude --- Left / right ±10°, forward/ backward ±10°
Transportation condition:
At the packed condition on shipment from our factory
Ambient temperature humidity range --- −20 to 60℃, 5 to 90%RH
Vibration --- 10 to 60Hz 0.5G (4.9m/s²) or less
Impact --- 40G (352m/s²) or less
Storage condition: Ambient temperature humidity range --- −20 to 60℃, 5 to 90%RH (No dew condensation)
Power failure protection:
The settings are kept using EEPROM and lithium battery backed up RAM
Insulation resistance: Between secondary terminal and protection conductor terminal --- 500V DC 20Ω or more
Between primary terminal and protection conductor terminal --- 500V DC 20Ω or more
Between primary terminal and secondary terminal --- 500V DC 20Ω or more
Withstand voltage: Between secondary terminal and protection conductor terminal --- 500V AC for 1minute
Between primary terminal and protection conductor terminal --- 1500V AC for 1minute
Between primary terminal and secondary terminal --- 2300V AC for 1minute
Protection: Conformed to IP54
Case assembly material:
Case, Front bezel, --- Fire-retardant polycarbonate resin
External input/output and communications terminal board --- PBT
Color: Front bezel, case --- Gray or black
Terminal cover: Standard provision
Weight: Approx 1.6kg
Mounting: Panel mounting
Terminal screw: M3.5 (M3 for external input/output, setting output, communications terminal board)

OPTION SPECIFICATION

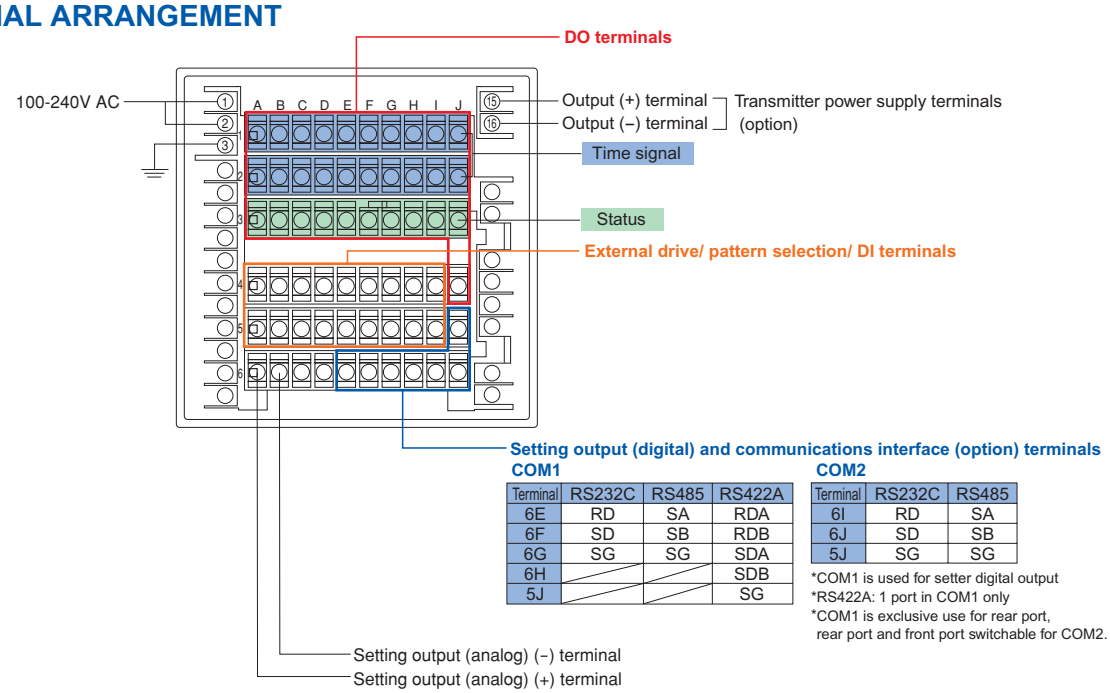
Transmitter power supply (Insulation type)
Power voltage: 24V DC
Current capacity: Up to 30mA

Communications interface
Number of communications points: Up to 2 points
Communications type: RS232C, RS422A, RS485
*COM1 is setting output for digital output
*COM2 for front and rear port switching
Protocol: MODBUS/PRIVATE

SOFTWARE

DP-G parameter editing software
・Program pattern editing / file management / printing
・Setting parameter editing / file management / printing
・CF card reading / storing for DP-G

TERMINAL ARRANGEMENT



COM1

Terminal	RS232C	RS485	RS422A
6E	RD	SA	RDA
6F	SD	SB	RDB
6G	SG	SG	SDA
6H			SDB
5J			SG

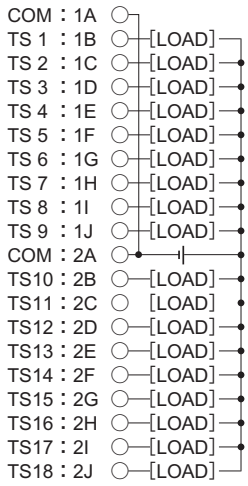
COM2

Terminal	RS232C	RS485
6I	RD	SA
6J	SD	SB
5J	SG	SG

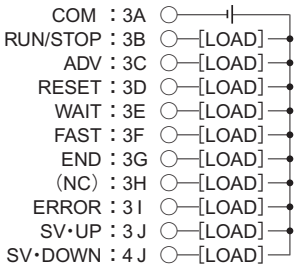
*COM1 is used for setter digital output
*RS422A: 1 port in COM1 only
*COM1 is exclusive use for rear port, rear port and front port switchable for COM2.

EXTERMINAL INPUT/OUTPUT TERMINALS

Time signal output terminals



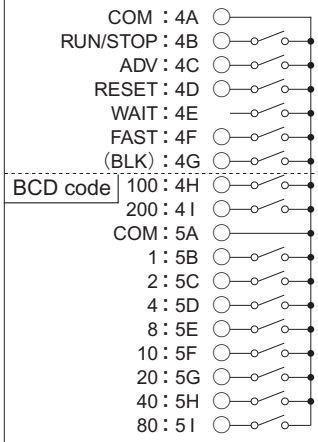
Status output terminals



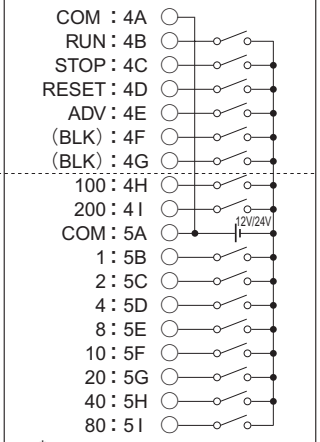
*COM: Common to time signal output

External drive input terminals and pattern selection input (BCD code) terminals

External drive signal

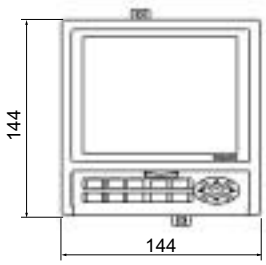


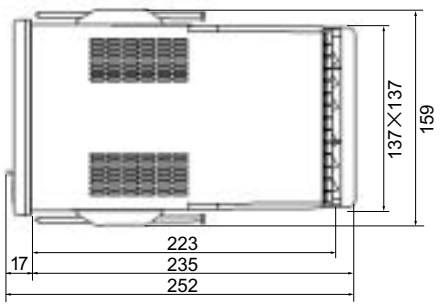
BCD code



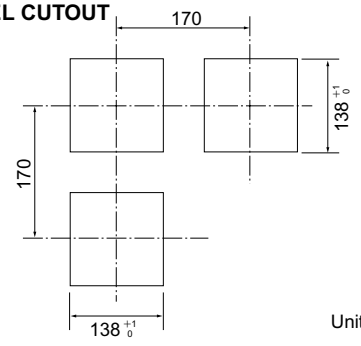
*External power supply spec
Applicable to equivalent of DP-I spec

DIMENSIONS





PANEL CUTOUT



Unit: mm

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