DU500 SERIES ON-OFF SERVO UNIT
DU600 SERIES MANUAL UNIT

**DU500 Vertical Type**
DU500 series convert current output signal from the controller to on-off servo signal to drive the actuator such as control motor.

**DU600 Horizontal Type**
DU600 series receive 4 to 20mADC current output signal from the controller and output that signal isolated (AUTO) or manually output the arbitrary value (MAN).

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**MODEL**

**Output**
- 1 : Relay output (Heavy load, load current 0.2A or more)
- 2 : Relay output (Light load, load current less than 0.2A)
- 4 : Open collector output

**Type**
- T : Vertical type
- Y : Horizontal type

**Event output 2 points, Auto/Manual External Switching**
- 0 : None
- 1 : Event output 2 points [EV1, EV2], A/M external switching

**Serial Communication**
- 0 : None
- A : RS422A
- S : RS485

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- Open loop method standard equipped.
  (Control by full opened time ↔ full closed time instead of feedback input).
  Manual output value is selectable from either output value at switching or preset manual. A/M switching can be also done by exterior signal (option).

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PSE-815
Best for motor drive actuator control!

**On-Off Servo Unit**

**DU500**

**FEATURES**
- Auto / Manual switchable.
- Remote operation by communication interface (option).

**USAGE**
- Combustion furnace control by control motor.
- Air conditioning duct damper control.

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Manual control freely in your hands!

**Manual unit**

**DU600**

**FEATURES**
- Easy adjustment of 4 to 20mADC control signal.
- Auto/Manual switching without operating main controller.

**USAGE**
- Fasten the processing temp. time
- Conserve the energy at the rest time by temporary limiting the output.
- Manual operate to adjust the furnace internal temp. due to the processing volume.

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**SPECIFICATIONS**

**Measuring input**
- No. of input point: 1 point
- Input signal: 4 to 20mA DC
- Measuring accuracy: ±0.2% of FS ±1digit
- Sampling rate: Approx. 100ms
- Input resistance: Approx. 35Ω

**General specifications**
- Rated power voltage: 100 to 240VAC, 50/60Hz
- Max. power consumption: 7VA (100VAC), 10VA (240VAC)
- Mounting: Panel mounting
- Weight: Approx. 160g (DU500), 140g (DU600)
- Terminal screw: M3.0
- CE marking: EMC directive
  - EN61326-1 Class A
  - Low voltage directive
    - EN61010-1, EN61010-2-030
  - RoHS directive

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**DU500 APPLICATION EXAMPLES**

- **Feedback control of combustion**
  - Control motor
  - On-Off Servo Unit DU500
  - Controller, PLC,DCS
  - DC 4 to 20mA
  - Fuel
  - Air
  - Burner

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**DU600 APPLICATION EXAMPLES**

- **Correspond to urgent project**
  - Controller DB1000
  - Manual unit DU600
  - Thyristor regulator

**Display / Setting specifications**

- **Display**: Segment type LCD (LED backlight)
- **Display content**:
  - Upper display, 5 digits 11 segments (green) **1**
  - --- Input value, Output value, Feedback value
  - Lower display, 5 digits 11 segments (green)
  - --- Setting value

- **Bar graph** **1**:
  - 10 segments (resolution 10%SEG) (white)
  - --- Input value, Output value, Feedback value

**1**: DU600 displays output value only.
### DU500 OUTPUT / FEEDBACK INPUT SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>DU511</th>
<th>DU512</th>
<th>DU514</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Output</strong></td>
<td>Relay output (heavy load)</td>
<td>Relay output (light load)</td>
<td>Open collector output</td>
</tr>
<tr>
<td><strong>Contact type</strong></td>
<td>N.O. 2 points</td>
<td>N.O. 2 points</td>
<td>Transistor open collector</td>
</tr>
<tr>
<td><strong>Contact capacity</strong></td>
<td>Resistance load 240VAC 3.0A, 30VDC 3.0A Inductive load 240VAC 1.0A, 30VDC 1.0A Min. load 5VDC 100mA or more</td>
<td>Resistance load 240VAC 1.0A, 30VDC 1.0A Inductive load 240VAC 0.5A, 30VDC 0.5A Min. load 5VDC 1mA or more</td>
<td>24VDC (allowable current 50mA or less)</td>
</tr>
<tr>
<td><strong>Applicable load</strong></td>
<td>Motor load current is 0.2mA or more</td>
<td>Motor load current is less than 0.2A, or buffer relay</td>
<td>Connect to buffer relay (DC relay) or PLC and drive the actuator</td>
</tr>
</tbody>
</table>


### Feedback input
- Allowable resistance rate: 100 to 2,000Ω
- Deadband: 1.0 to 20.0%

### DU600 OUTPUT SPECIFICATIONS
- Output type: 4 to 20mADC
- Allowable load resistance: 600Ω
- Output accuracy: ±0.3%
- Input/Output insulation: Insulated between input and output
**TERMINAL ARRANGEMENT**

**DU500**

Output terminal

- On-Off servo output

Exterior signal input terminal

External signal input terminal

External signal input 1 point

Communication interface

RS422A, RS485

Input terminal

Output terminal

4 to 20 mA DC

Event output

Event 1 & 2 output

Power terminal

**DU600**

External signal input terminal

External signal input 1 point

Communication interface

RS422A, RS485

Input terminal output terminal

Current mA

Current mA

Event output

Event 1 output

Power terminal

100 to 240 VDC

**OPTIONS**

- **Status output**
  - Type: DU500 manual output condition, FB (feedback) abnormal detection, 2points
  - DU600 manual output condition, 1point
  - Output type: Mechanical relay, Normally open
  - Contact capacity: 240VAC/30VDC 3A (resistance load)
  - 5VDC 10mA (min. load)

- **Exterior signal input**
  - Type: Auto/Manual switching
  - Input type: Digital input or open collector
  - Exterior contact capacity: 5VDC 2mA

- **Communication interface**
  - Communication type: RS422A, RS485
  - Protocol: MODBUS (RTU/ASCII)
  - Communication speed: 4800/9600/19200/38400bps
  - Communication function: Upper communication / digital transmission
  - Transmission type*: Feedback value, input value, output value

*1: DU600 displays output value only.

**EXTERNAL DIMENSIONS**

- **Vertical Type**

  Vertical type: Terminal no. and function are same.

- **Horizontal type**

  Vertical type: Terminal no. and function are same.

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