



ESTIC

ESTIC CORPORATION
1-2-16 Togodori, Moriguchi-city,
Osaka, 570-0041 Japan



JP : www.estic.co.jp
EN : www.estic-global.com
CN : www.cn.estic-global.com

 **YouTube** www.youtube.com/user/EsticCorporation
 **LinkedIn** www.linkedin.com/company/estic-corporation



2309 EN



Servo Press
MPU60

ESTIC

Smaller, More Powerful

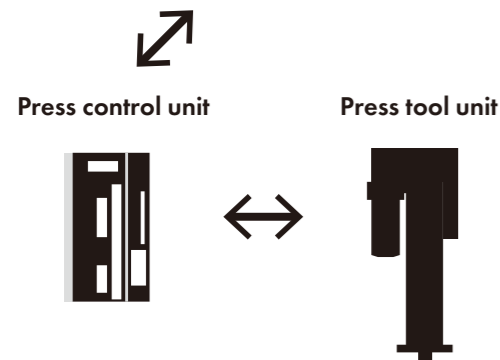
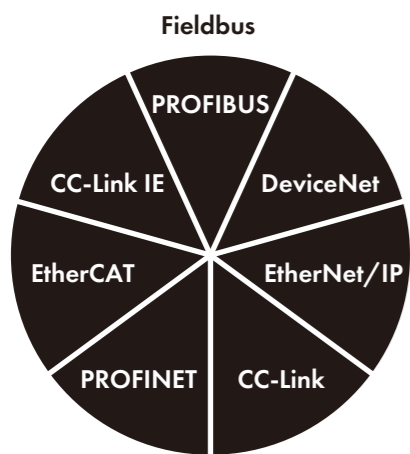
Servo Press Control Unit

MPU60



01

Change pressing parameters through Fieldbus

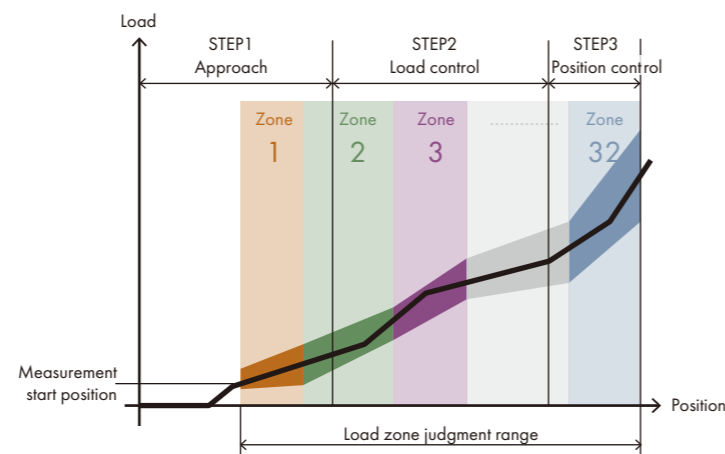


02

The 32-zone judgment function ensures error proof operation

Load zone judgment
Upper & lower limit load monitoring in any zone

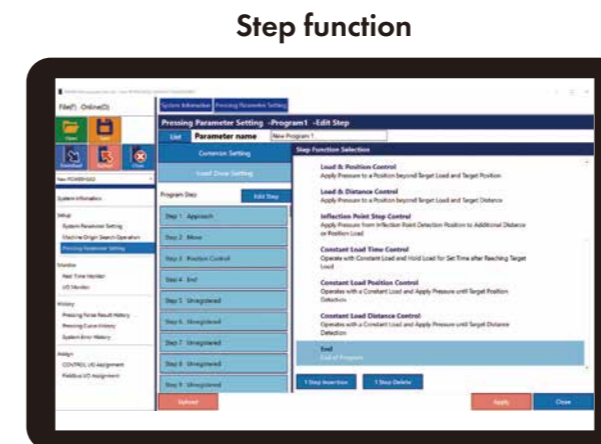
- Stops when a load outside the range is detected to prevent damage to the workpiece
- Selectable zone monitoring method from position/distance
- Up to 32-zone per program
- Can be set from the curve display screen
- Zones can be set for program operation regardless of step



03

Improved operability with intuitive user interface

(Available in English, Japanese & Chinese)



Real time monitor
Visualize load and position information in real time



04

New MU & SPU integration reduces size by 50%

※ ESTIC comparison based on press control unit volume

MPU60 Servo Press Control Unit

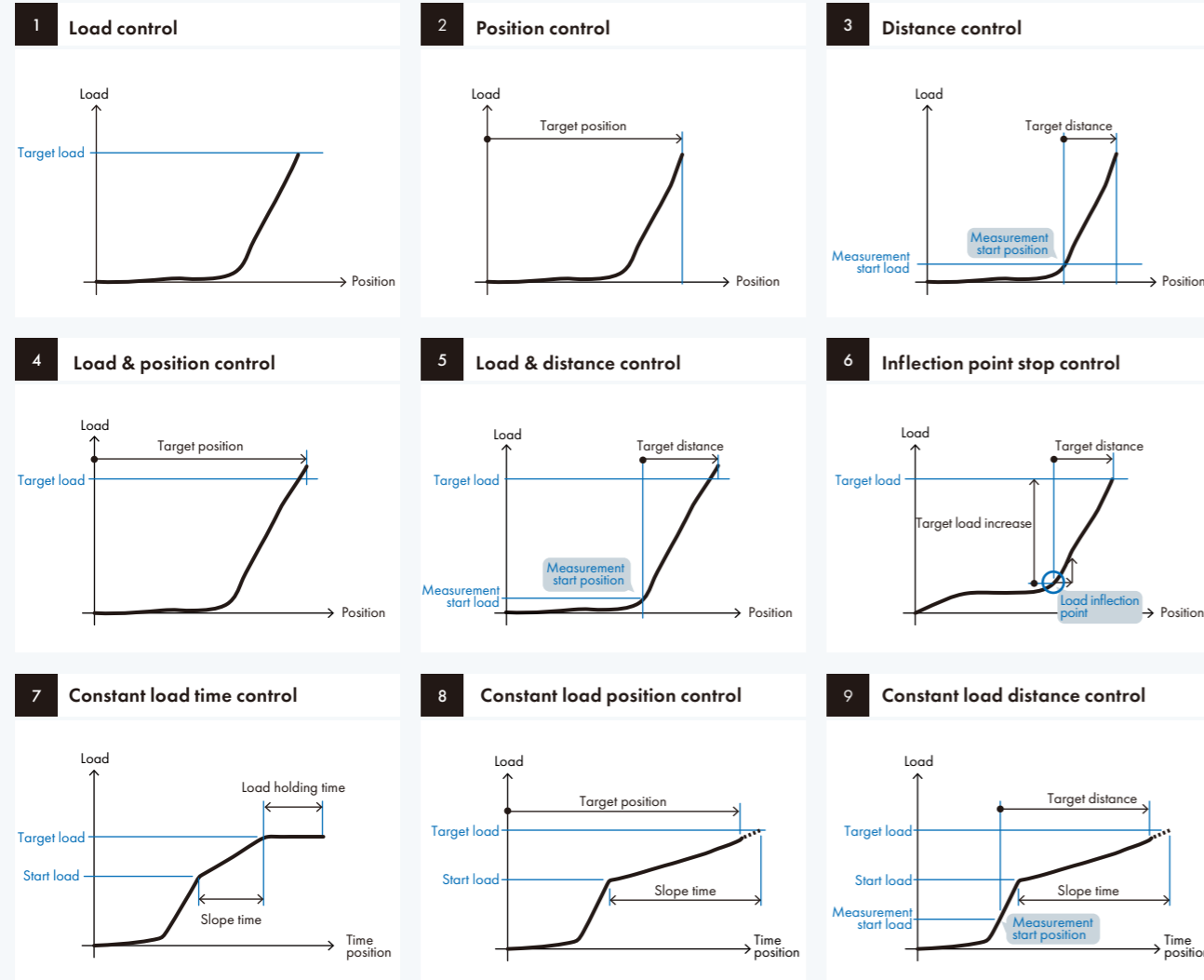
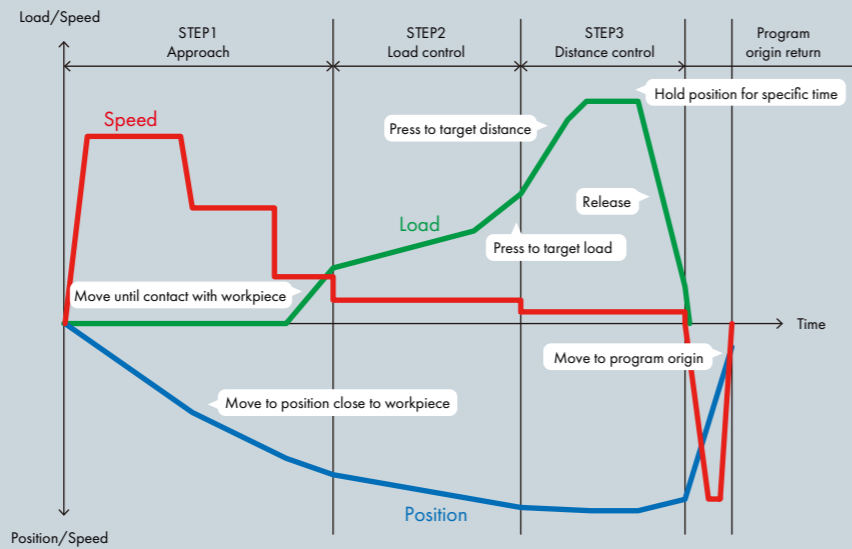


Improve quality with various pressing control and judgment functions

Pressing control

Pressing sequence control

- Up to 255 programs
- Pressing sequence control up to 127 steps per program
- Easy building of complex pressing sequence without external control
- Stop between steps can be set freely for seamless pressing



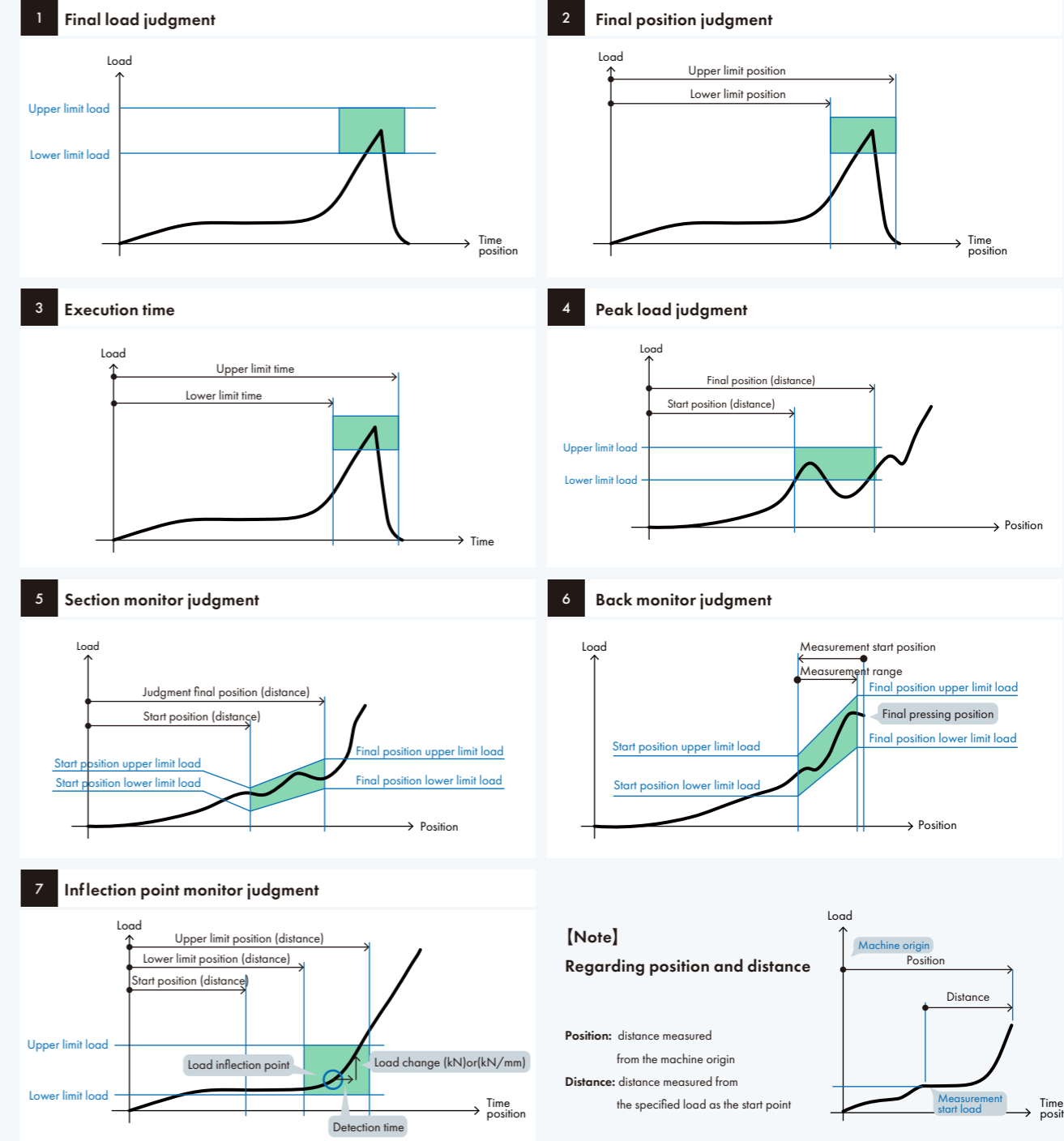
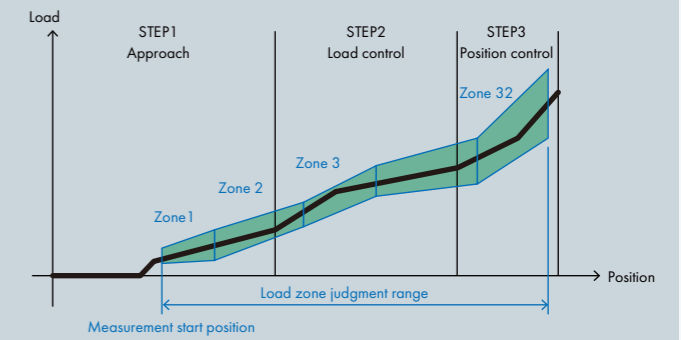
Judgment function

Compatible with all pressing controls

Load zone judgment

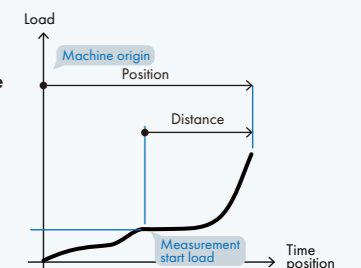
Upper & lower load limit monitoring in any position range (zone)

- Stops when a load outside the range is detected to prevent damage to the workpiece
- Selectable zone monitoring method from position / distance
- Up to 32 zones per program
- Can be set from the curve display screen
- Zones can be set for program operation regardless of step



[Note]
Regarding position and distance

Position: distance measured from the machine origin
Distance: distance measured from the specified load as the start point



Press tool unit applicable range

Specification Table



06 / Press tool unit applicable range

07 / Press tool unit

08 / Press control unit

09 / System layout

10 / Accessory list

| Type | Model | Press range Press continuous rating | Press range | | | | | | | | | | | | | | | | | | | |
|---|---------------|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--|--|--|--|--|--|--|--|--|--|
| | | | 10 kN | 20 kN | 30 kN | 40 kN | 50 kN | 60 kN | 70 kN | 80 kN | 90 kN | 100 kN | | | | | | | | | | |
| SPT model Low friction standard model with ball spline as a ram guide  | SPT005-20 | 0.5~5.0 kN | | | | | | | | | | | | | | | | | | | | |
| | | 0.5~2.1 kN | | | | | | | | | | | | | | | | | | | | |
| | SPT010-25 | 1.0~10.0 kN | | | | | | | | | | | | | | | | | | | | |
| | | 1.0~4.2 kN | | | | | | | | | | | | | | | | | | | | |
| | SPT020-25 | 2.0~20.0 kN | | | | | | | | | | | | | | | | | | | | |
| | | 2.0~5.6 kN | | | | | | | | | | | | | | | | | | | | |
| | SPT030-25 | 3.0~30.0 kN | | | | | | | | | | | | | | | | | | | | |
| | | 3.0~6.9 kN | | | | | | | | | | | | | | | | | | | | |
| | SPT050-30 | 5.0~50.0 kN | | | | | | | | | | | | | | | | | | | | |
| | | 5.0~10.2 kN | | | | | | | | | | | | | | | | | | | | |
| SPT100-30 | 10.0~100.0 kN | | | | | | | | | | | | | | | | | | | | | |
| | 10.0~52.4 kN | | | | | | | | | | | | | | | | | | | | | |
| SPH model SPT100-30 continuous rated high force model | SPH100-30 | 10.0~100.0 kN | | | | | | | | | | | | | | | | | | | | |
| | | 10.0~100.0 kN | | | | | | | | | | | | | | | | | | | | |
| SPC model Compact model for narrow parts using a guide key and bush as a ram guide  | SPC010-20-F | 1.0~10.0 kN | | | | | | | | | | | | | | | | | | | | |
| | | 1.0~4.1 kN | | | | | | | | | | | | | | | | | | | | |
| | SPC020-20-F | 2.0~20.0 kN | | | | | | | | | | | | | | | | | | | | |
| | | 2.0~7.5 kN | | | | | | | | | | | | | | | | | | | | |
| | SPC030-20-F | 3.0~30.0 kN | | | | | | | | | | | | | | | | | | | | |
| | | 3.0~10.4 kN | | | | | | | | | | | | | | | | | | | | |
| | SPC050-20-F | 5.0~50.0 kN | | | | | | | | | | | | | | | | | | | | |
| | | 5.0~25.1 kN | | | | | | | | | | | | | | | | | | | | |
| | SPC100-20-F | 10.0~100.0 kN | | | | | | | | | | | | | | | | | | | | |
| | | 10.0~42.5 kN | | | | | | | | | | | | | | | | | | | | |

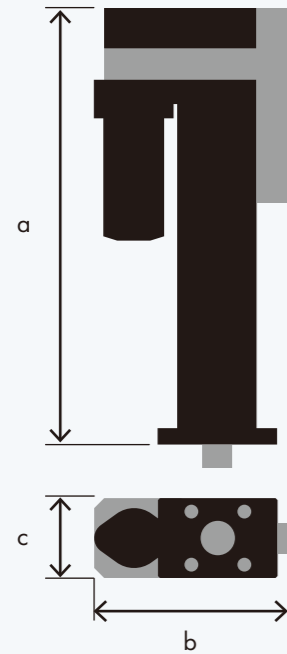
Press range Press continuous rating

Press tool unit

Press tool unit specifications

| Model | Motor type | Control unit model | Press force (kN) | Press continuous rating (kN) | Maximum stroke (mm) | Maximum feed rate (mm/sec) | Maximum pressing speed (mm/sec) | Brake holding load (N) |
|-------------|------------|--------------------|------------------|------------------------------|---------------------|----------------------------|---------------------------------|------------------------|
| SPT005-20 | A | MPU60-40-* | 5 | 2.1 | 200 | 345.0 | 80.0 | 147 (15kg) |
| SPT010-25 | B | | 10 | 4.2 | 250 | 310.0 | 76.0 | 196 (20kg) |
| SPT020-25 | | | 20 | 5.6 | 250 | 225.0 | 60.0 | 294 (30kg) |
| SPT030-25 | | | 30 | 6.9 | 250 | 200.0 | 46.0 | 490 (50kg) |
| SPT050-30 | | | 50 | 10.2 | 300 | 121.2 | 27.0 | 588 (60kg) |
| SPT100-30 | D | MPU60-5K-* | 100 | 52.4 | 300 | 114.3 | 85.7 | 980 (100kg) |
| SPH100-30 | D | MPU60-5K-* | 100 | 100.0 | 300 | 44.4 | 33.3 | 980 (100kg) |
| SPC010-20-F | B | MPU60-40-* | 10 | 4.1 | 200 | 200.0 | 120.0 | 196 (20kg) |
| SPC020-20-F | C | MPU60-5K-* | 20 | 7.5 | 200 | 310.0 | 220.0 | 294 (30kg) |
| SPC030-20-F | | | 30 | 10.4 | 200 | 235.0 | 155.0 | 490 (50kg) |
| SPC050-20-F | D | | 50 | 25.1 | 200 | 255.0 | 170.0 | 980 (100kg) |
| SPC100-20-F | 100 | | 42.5 | 200 | 151.0 | 100.0 | 1960 (200kg) | |

Dimension table



| Type | Model | External dimensions (mm) | | | Weight (kg) |
|-----------|-------------|--------------------------|-----|-----|-------------|
| | | a | b | c | |
| SPT | SPT005-20 | 541 | 199 | 80 | 16 |
| | SPT010-25 | 676 | 228 | 100 | 35 |
| | SPT020-25 | 724 | 245 | 110 | 44 |
| | SPT030-25 | 778 | 265 | 130 | 63 |
| | SPT050-30 | 924 | 305 | 160 | 110 |
| SPT100-30 | 1175 | 503 | 250 | 400 | |
| SPH | SPH100-30 | 1175 | 503 | 250 | 400 |
| SPC | SPC010-20-F | 520 | 178 | 65 | 14 |
| | SPC020-20-F | 625 | 280 | 100 | 33 |
| | SPC030-20-F | 720 | 308 | 100 | 47 |
| | SPC050-20-F | 837 | 407 | 135 | 112 |
| | SPC100-20-F | 945 | 410 | 135 | 153 |



CAD data can be downloaded from our website.

<https://www.estic-global.com/member/login>

Press control unit

General specifications

| Model | MPU60-40-* | | | MPU60-5K-* | |
|--|---|---------|---------|------------|--|
| Motor type | A | B | C | D | |
| Control power supply voltage | Single-phase AC200~230V AC 50/60 Hz | | | | |
| Main power supply | Three-phase AC200~230V AC 50/60 Hz | | | | |
| Control power capacity | 50 VA | | | | |
| Main power capacity (during rated operation) | 0.4 kVA | 0.7 kVA | 3.4 kVA | 8.0 kVA | |
| Inrush current value when control power is turned on | Approximately 26 Ao-p (convergence time: 5ms) | | | | |
| Inrush current value when main power is turned on | About 6 Ao-p (convergence time: 400ms) | | | | |

Common specifications

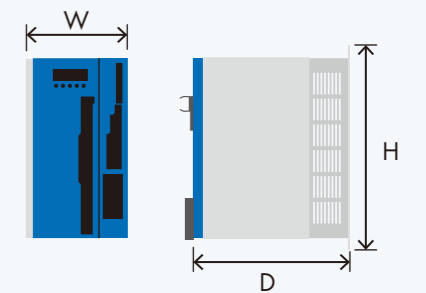
| | | |
|-------------------------------------|--|---|
| Display/Operation unit | 5 characters x 1 digit 7-segment LED display, 5 function keys Indicator lamp (OK/ALM/NG) | |
| Control input (PIN) | Photocoupler isolation { 16 points } (24VDC, draw-in current 6 mA/point) Both sink (-common) and source (+ common) connections can be made | |
| Control output (POUT) | Photo MOS output: 16 points (24VDC, max. 50 mA/point) Both sink (-common) and source (+ common) connections can be made | |
| Maximum number of pressing programs | 255 programs x 127 steps Number of step execution programs: 1280 (maximum number of programs x 5 steps) | |
| SS function | SS (safe stop) function (Motor power source is cut off without disconnecting power supply or motor cable.) | |
| External communication port | RS-232C | RS-232C x 1 port (switchable from 9600bps to 115.2kbps) |
| | Ethernet | Ethernet connection port x2port 10/100BASE-T |
| | PC-USB | Port for management software connection USB connector (mini-B type) |
| | Fieldbus (Option) | DeviceNet/PROFIBUS/CC-Link/EtherNet/IP/EtherCAT/CC-Link IE/PROFINET |
| Number of data memory items | Pressing result history: up to 100,000 Pressing curve history: up to 1,000 cases + 100 NG curves (varies depending on the sampling size setting) System error history: Up to 200 | |
| Other | Free assignment function (control input/output signal) | |
| Load display resolution(kN) | 20kN or less: 0.001/30kN or more: 0.01 | |
| Position display resolution(mm) | 0.001 | |
| Repeat position accuracy(mm) | ± 0.01 (under the same conditions) | |
| Repeat load accuracy | 3σ/√n ≤ 1.5% (full scale) | |
| Non-linearity | ±2% R.O | |

Model & options

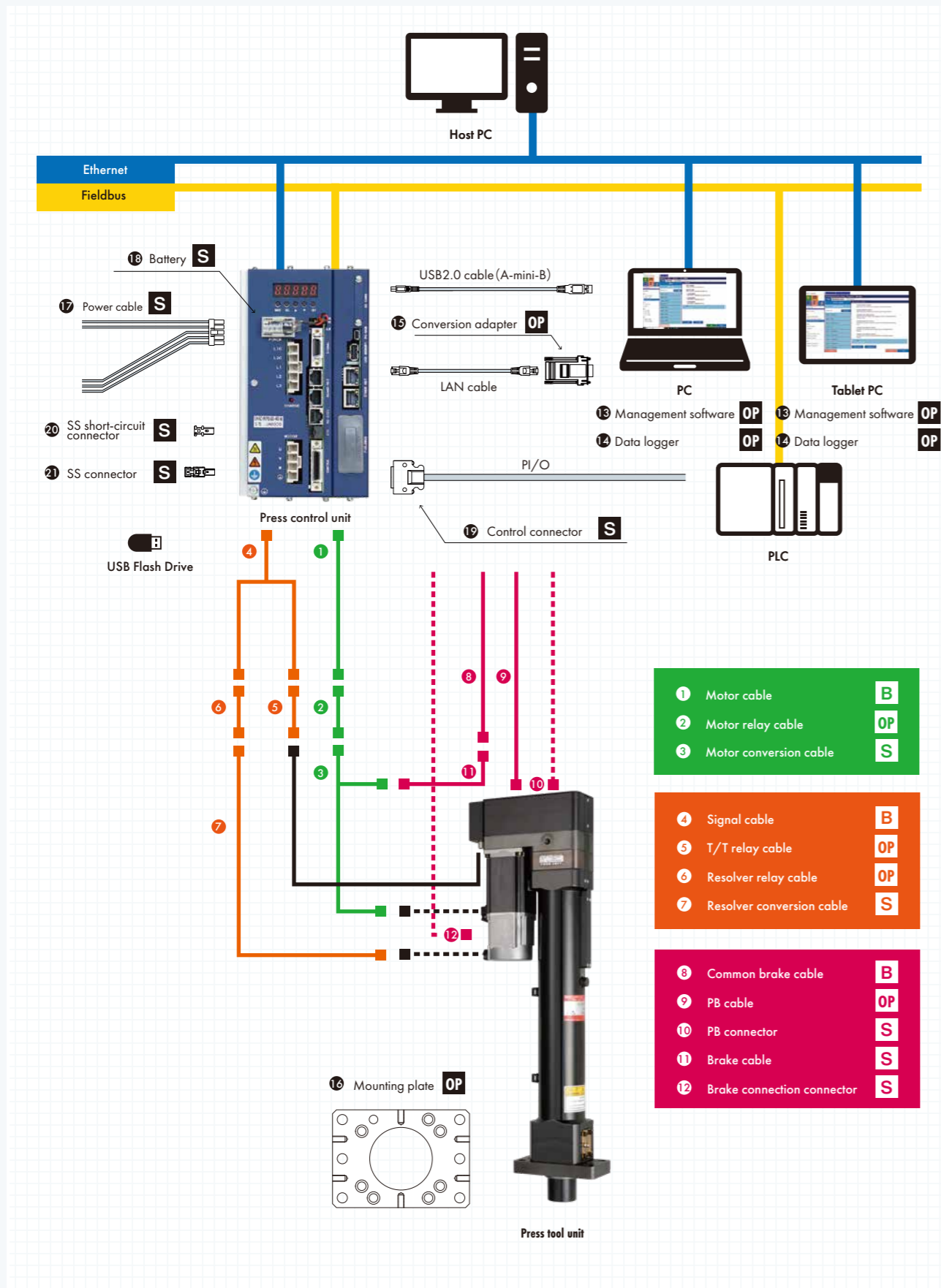
| | PI/O (16 points each) | DeviceNet (D) | PROFIBUS (P) | CC-Link (C) | EtherNet/IP (W) | EtherCAT (B) | CC-Link IE (I) | PROFINET (S) | Motor type (A & B) | Motor type (C & D) |
|-------------------------|--------------------------|------------------|-----------------|----------------|--------------------|-----------------|-------------------|-----------------|-----------------------|-----------------------|
| Standard specifications | ✓ | | | | | | | | MPU60-40-N | MPU60-5K-N |
| | ✓ | ✓ | | | | | | | MPU60-40-D | MPU60-5K-D |
| Optional specifications | ✓ | | ✓ | | | | | | MPU60-40-P | MPU60-5K-P |
| | ✓ | | | ✓ | | | | | MPU60-40-C | MPU60-5K-C |
| | ✓ | | | | ✓ | | | | MPU60-40-W | MPU60-5K-W |
| | ✓ | | | | | ✓ | | | MPU60-40-B | MPU60-5K-B |
| | ✓ | | | | | | ✓ | | MPU60-40-I | MPU60-5K-I |
| | ✓ | | | | | | | ✓ | MPU60-40-S | MPU60-5K-S |

Dimension table

| Model | External dimensions(mm) | | | Weight (kg) |
|------------|-------------------------|-------|-----|-------------|
| | W | D | H | |
| MPU60-40-* | 109.8 | 170.4 | 222 | Approx. 3.2 |
| MPU60-5K-* | 132.8 | 191.4 | 245 | Approx. 4.5 |



System layout



Accessory list

How to read the cable model: ENRZ-CV00-050
 Cable length 050 = 5m
 150 = 15m

B Basic selection

| Model | 1 Motor cable | | | | 4 Signal cable | 8 Common brake cable |
|-------------|----------------|----------------|----------------|----------------|--|---|
| SPT005-20 | | | | | ENRZ-CVTR-050 ENRZ-CVTR-100 ENRZ-CVTR-150 ENRZ-CVTR-200 | N/A |
| SPT010-25 | | | | | | |
| SPT020-25 | ENRZ-CVMN2-050 | ENRZ-CVMN2-100 | ENRZ-CVMN2-150 | ENRZ-CVMN2-200 | | |
| SPT030-25 | | | | | | |
| SPT050-30 | | | | | | |
| SPT100-30 | ENRZ-CVMN6-050 | ENRZ-CVMN6-100 | ENRZ-CVMN6-150 | ENRZ-CVMN6-200 | | |
| SPH100-30 | | | | | | |
| SPC010-20-F | ENRZ-CVMN2-050 | ENRZ-CVMN2-100 | ENRZ-CVMN2-150 | ENRZ-CVMN2-200 | | ENRZ-CVBN-050 ENRZ-CVBN-100 ENRZ-CVBN-200 |
| SPC020-20-F | ENRZ-CVMN8-050 | ENRZ-CVMN8-100 | ENRZ-CVMN8-150 | ENRZ-CVMN8-200 | | |
| SPC030-20-F | | | | | | |
| SPC050-20-F | ENRZ-CVMN5-050 | ENRZ-CVMN5-100 | ENRZ-CVMN5-150 | ENRZ-CVMN5-200 | | |
| SPC100-20-F | | | | | | N/A |

OP Optional accessories

| Model | 2 Motor relay cable | 5 T/T relay cable | 6 Resolver relay cable | 9 PB cable | 13 Management software |
|-------------|---------------------|-------------------|------------------------|---------------|---|
| SPT005-20 | | | | | MPU60-PC |
| SPT010-25 | ENRZ-CVMP-030 | ENRZ-CVMP-060 | | | |
| SPT020-25 | ENRZ-CVMP-100 | ENRZ-CVMP-150 | | | |
| SPT030-25 | | | | | |
| SPT050-30 | | | | | ESW-DL-M |
| SPT100-30 | ENRZ-CVMPS-030 | ENRZ-CVMPS-060 | ENRZ-CVTN-030 | ENRZ-CVTP-030 | ENRZ-CVPB-050 ENRZ-CVPB-100 ENRZ-CVPB-200 |
| SPH100-30 | ENRZ-CVMPS-090 | | ENRZ-CVTN-060 | ENRZ-CVTP-060 | |
| SPC010-20-F | | | ENRZ-CVTN-100 | ENRZ-CVTP-100 | |
| SPC020-20-F | ENRZ-CVMP-030 | ENRZ-CVMP-060 | ENRZ-CVTN-150 | ENRZ-CVTP-150 | |
| SPC030-20-F | ENRZ-CVMP-100 | ENRZ-CVMP-150 | | | |
| SPC050-20-F | ENRZ-CVMP5-030 | ENRZ-CVMP5-060 | | | |
| SPC100-20-F | ENRZ-CVMP5-100 | ENRZ-CVMP5-150 | | | |

14 Data logger (ESW-DL-M)

15 Conversion adapter (Dsub↔RJ-45) (ENRZ-RJS)

16 Mounting plate (for SPT100 & SPH100 only) (SPT100-MP)

S Standard accessories

| Model | 3 Motor conversion cable | 7 Resolver conversion cable | 10 PB connector | 11 Brake cable | 12 Brake connection connector | 17 Power cable |
|-------------|--------------------------|-----------------------------|-----------------|-----------------|-------------------------------|----------------|
| SPT005-20 | | | | | | ENRZ-CVDC2-030 |
| SPT010-25 | | | | | | ENRZ-BATT2 |
| SPT020-25 | | | | | | ENRZ-CNAU |
| SPT030-25 | | | | | | ENRZ-STO01 |
| SPT050-30 | | | | | | ENRZ-STO02 |
| SPT100-30 | | | | | | |
| SPH100-30 | | | | | | |
| SPC010-20-F | ENRZ-CVMN40-005 | ENRZ-CVRN40-005 | SPCNPB | ENRZ-CVBN40-005 | | |
| SPC020-20-F | ENRZ-CVMN5K-010 | ENRZ-CVRN5K-010 | | | | |
| SPC030-20-F | | | | | | |
| SPC050-20-F | | | | | | |
| SPC100-20-F | | | | | | |