

ESTIC



Servo Press
MPU60



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Smaller, More Powerful

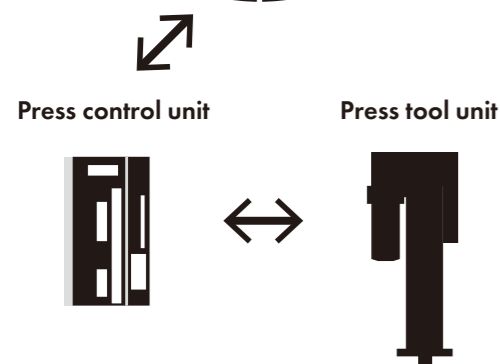
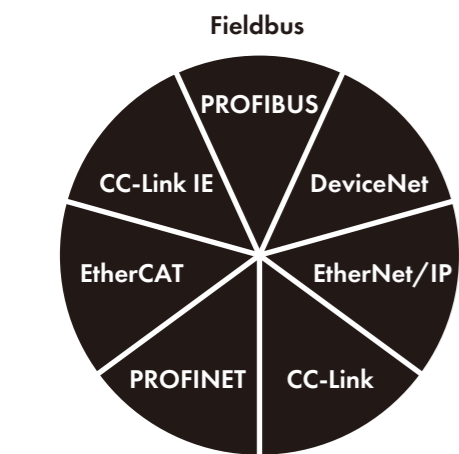
Servo Press Control Unit

MPU60



01

Change pressing parameters through Fieldbus

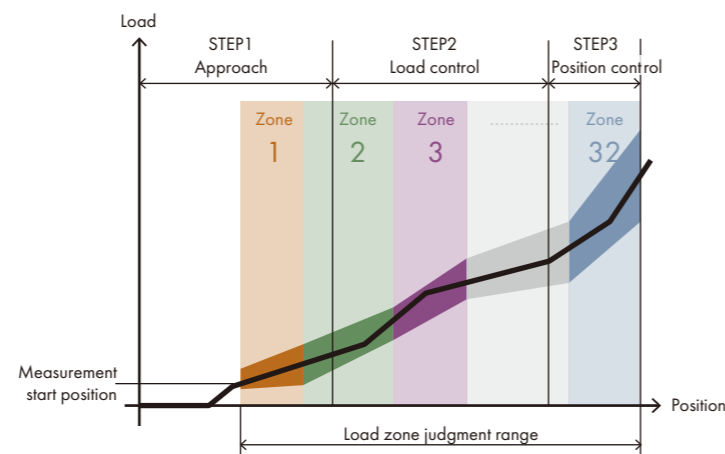


02

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)

Step function

A screenshot of the Step function user interface, showing a table of step functions and their descriptions.

Step Function Selection	Description
Load & Position Control	Applies Pressure to a Position beyond Target Load and Target Position
Load & Distance Control	Applies Pressure to a Position beyond Target Load and Target Distance
Influence Point Stop Control	Applies Pressure from Influence Point Detection Position to Additional Distance or Position Load
Constant Load Time Control	Operates with Constant Load and Hold Load for Set Time after Reaching Target Load
Constant Load Position Control	Operates with a Constant Load and Apply Pressure until Target Position Detection
Constant Load Distance Control	Operates with a Constant Load and Apply Pressure until Target Distance Detection

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

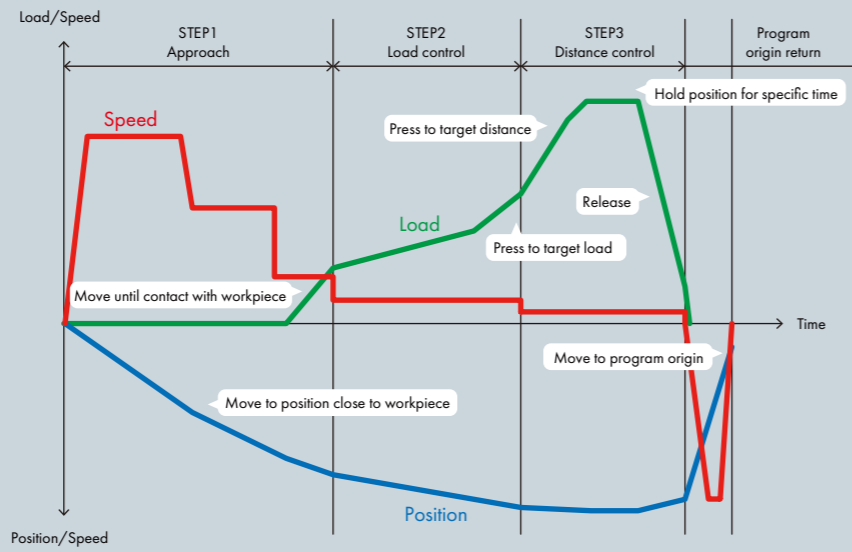


Improve quality with various pressing control and judgment functions

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

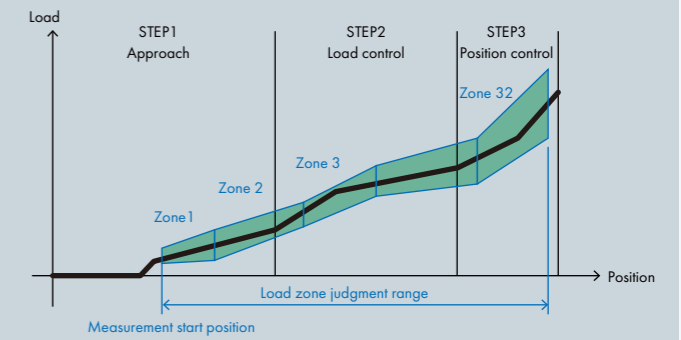


1 Load control 	2 Position control 	3 Distance control
4 Load & position control 	5 Load & distance control 	6 Inflection point stop control
7 Constant load time control 	8 Constant load position control 	9 Constant load distance control

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



1 Final load judgment 	2 Final position judgment
3 Execution time 	4 Peak load judgment
5 Section monitor judgment 	6 Back monitor judgment
7 Inflection point monitor judgment 	[Note] Regarding position and distance <p>Position: distance measured from the machine origin</p> <p>Distance: distance measured from the specified load as the start point</p>

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																			

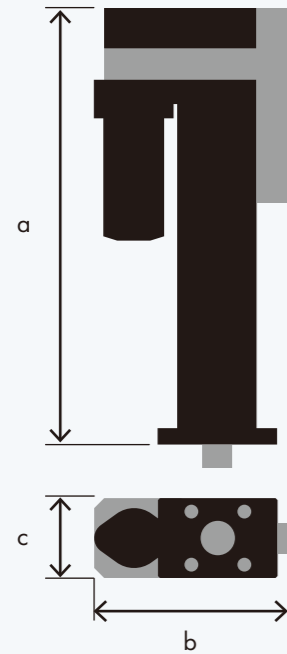
Press range Press continuous rating

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

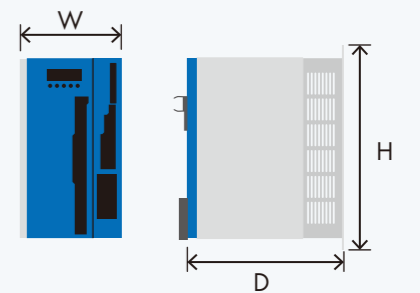
Display/Operation unit	5 characters x 1 digit 7-segment LED display, 5 function keys Indicator lamp (OK/ALM/NG)	
Control input (PIN)	Photocoupler isolation { 16 points } (24VDC, draw-in current 6 mA/point) Both sink (-common) and source (+ common) connections can be made	
Control output (POUT)	Photo 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/√3 ≤ 1.5% (full scale)	
Non-linearity	±2% R.O	

Model & options

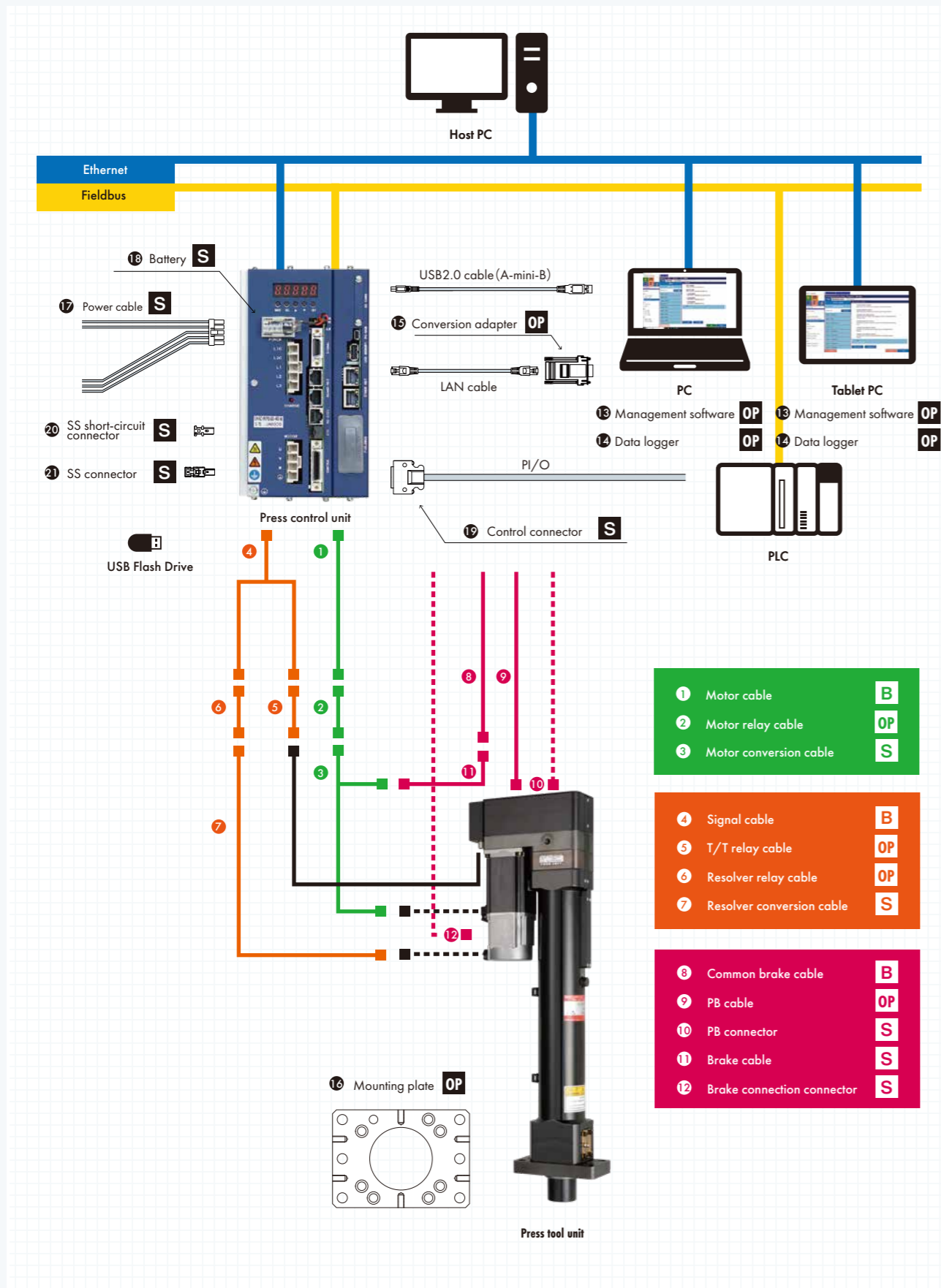
	PI/O (16 points each)	DeviceNet (D)	PROFIBUS (P)	CC-Link (C)	EtherNet/IP (W)	EtherCAT (B)	CC-Link IE (I)	PROFINET (S)	Motor type (A & B)	Motor type (C & D)
Standard specifications	✓								MPU60-40-N	MPU60-5K-N
	✓	✓							MPU60-40-D	MPU60-5K-D
Optional specifications	✓		✓						MPU60-40-P	MPU60-5K-P
	✓			✓					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				Data logger
SPT020-25	ENRZ-CVMP-100 ENRZ-CVMP-150				ESW-DL-M
SPT030-25					Conversion adapter (Dsub↔RJ-45)
SPT050-30					ENRZ-RJS
SPT100-30	ENRZ-CVMPS-030 ENRZ-CVMPS-060	ENRZ-CVTN-030 ENRZ-CVTN-060	ENRZ-CVRP-030 ENRZ-CVRP-060	ENRZ-CVPB-050 ENRZ-CVPB-100 ENRZ-CVPB-200	Mounting plate (for SPT100 & SPH100 only)
SPH100-30	ENRZ-CVMPS-090	ENRZ-CVTN-100 ENRZ-CVTN-150	ENRZ-CVRP-100 ENRZ-CVRP-150		SPT100-MP
SPC010-20-F	ENRZ-CVMP-030 ENRZ-CVMP-060				
SPC020-20-F	ENRZ-CVMP-100 ENRZ-CVMP-150				
SPC030-20-F					
SPC050-20-F	ENRZ-CVMP5-030 ENRZ-CVMP5-060				
SPC100-20-F	ENRZ-CVMP5-100 ENRZ-CVMP5-150				

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						Battery
SPT020-25						ENRZ-BATT2
SPT030-25	N/A	N/A		N/A		Control connector
SPT050-30						ENRZ-CNAU
SPT100-30						SS short-circuit connector
SPH100-30		ENRZ-CVRN5K-010	SPCNPB		SPCNBO	ENRZ-STO01
SPC010-20-F	ENRZ-CVMN40-005	ENRZ-CVRN40-005		ENRZ-CVBN40-005		SS connector
SPC020-20-F	ENRZ-CVMN5K-010					ENRZ-STO02
SPC030-20-F		ENRZ-CVRN5K-010				
SPC050-20-F	N/A			N/A		
SPC100-20-F						