

ESTIC
Press Solutions



Servo Press
MPU60



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JP: www.estic.co.jp
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ESTIC

Smaller, More Powerful

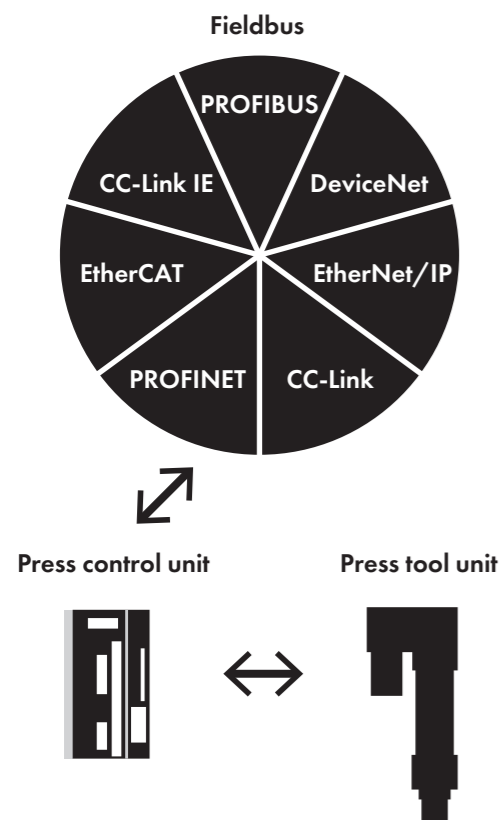
Servo Press Controller

MPU60



01

Change pressing parameters through Fieldbus

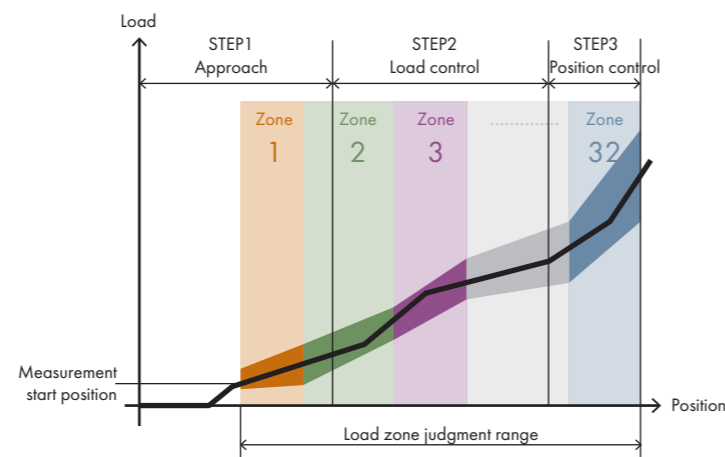


02

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

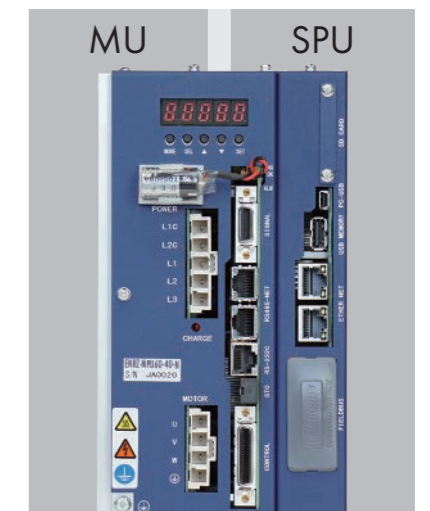


04

New MU & SPU integration reduces size by 50%

※ ESTIC comparison based on press control unit volume

MPU60 Servo Press Controller

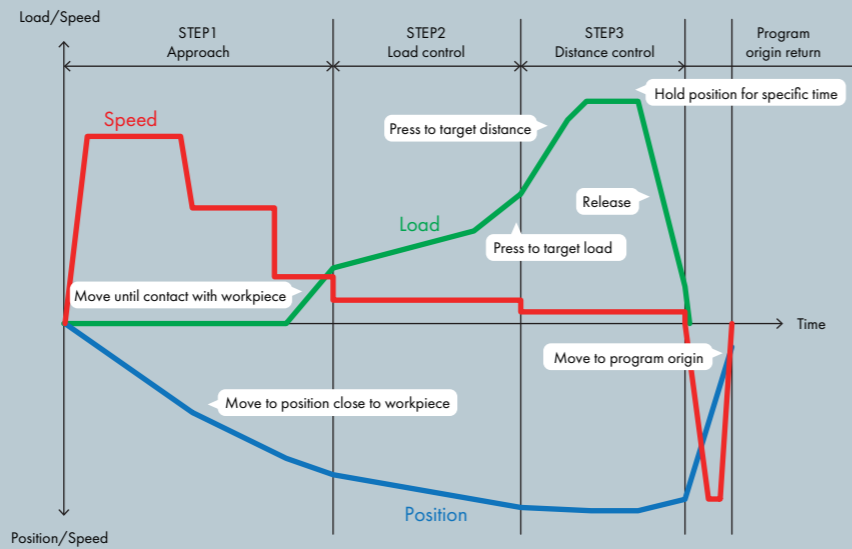


Improve quality with various pressing control and judgment functions

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

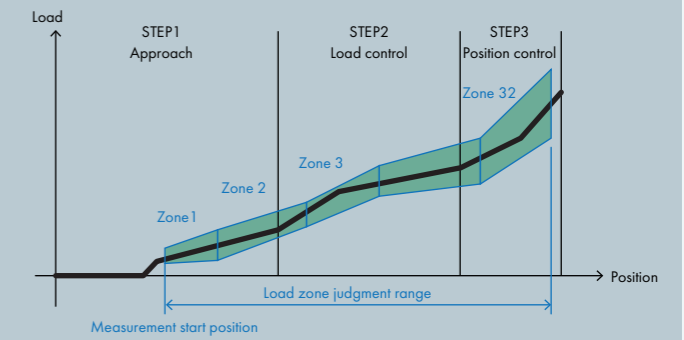
Judgment function

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>

Specification Table

06 / Press tool unit applicable range




07 / Press tool unit

08 / Press control unit

09 / System layout

10 / Accessory list

Press tool unit applicable range

Type	Model	Press range Press continuous rating	Press range																		
			10kN	20kN	30kN	40kN	50kN	60kN	70kN	80kN	90kN	100kN									
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	10.0~100.0kN																				
	10.0~52.4 kN																				
SPH model SPT100-30 continuous rated high force model 	SPH100-30	10.0~100.0kN																			
		10.0~100.0kN																			
SPC model Compact model for narrow parts using a guide key and bush as a ram guide 	SPC010-20 SPC010-20-F	1.0~10.0 kN																			
		1.0~4.1 kN																			
	SPC020-20 SPC020-20-F	2.0~20.0 kN																			
		2.0~7.5 kN																			
	SPC030-20 SPC030-20-F	3.0~30.0 kN																			
		3.0~10.4 kN																			
	SPC050-20 SPC050-20-F	5.0~50.0 kN																			
		5.0~25.1 kN																			
	SPC100-20 SPC100-20-F	10.0~100.0kN																			
		10.0~42.5 kN																			

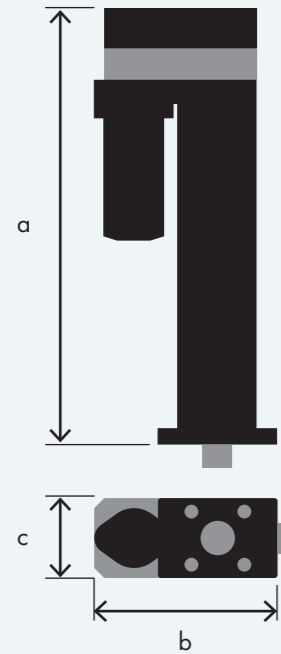
Press range Press continuous rating

Press tool unit

Press tool unit specifications

Model	Motor type	Controller 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)	With/without flange		
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	B	MPU60-40-*	100	100.0	300	44.4	33.3	980 (100kg)	✓		
SPC010-20			10	4.1	200	200.0	120.0	196 (20kg)			
SPC010-20-F			10	4.1	200	200.0	120.0	196 (20kg)	✓		
SPC020-20			C	20	7.5	200	310.0	220.0	294 (30kg)		
SPC020-20-F				20	7.5	200	310.0	220.0	294 (30kg)	✓	
SPC030-20				30	10.4	200	235.0	155.0	490 (50kg)		
SPC030-20-F				30	10.4	200	235.0	155.0	490 (50kg)	✓	
SPC050-20			D	MPU60-5K-*	50	25.1	200	255.0	170.0	980 (100kg)	
SPC050-20-F					50	25.1	200	255.0	170.0	980 (100kg)	✓
SPC100-20					100	42.5	200	151.0	100.0	1960 (200kg)	
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	39
	SPT020-25	724	245	110	44
	SPT030-25	778	265	130	70
	SPT050-30	924	305	160	115
	SPT100-30	1175	503	250	350
SPH	SPH100-30	1175	503	250	352
SPC	SPC010-20	503	155	65	13
	SPC010-20-F	520	178	65	14
	SPC020-20	605	255	80	35
	SPC020-20-F	625	280	80	36
	SPC030-20	695	283	90	49
	SPC030-20-F	720	308	90	51
	SPC050-20	809	354	135	110
	SPC050-20-F	837	407	135	117
	SPC100-20	910	355	135	145
	SPC100-20-F	945	410	135	153



CAD data can be downloaded from our website.

<https://www.estic2.com/caddata/>

Press control unit

General specifications

Model	MPU60-40-*		MPU60-5K-*	
	A	B	C	D
Motor type	Single-phase AC200~230V AC 50/60 Hz			
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

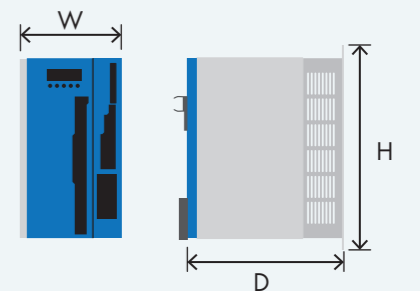
Display/Operation unit	5 characters x 1 digit 7-segment LED display, 5 function keys Indicator lamp (OK/ALM/NG)	
Control input (PIN)	Photocoupler isolation { 16 points } (24VDC, draw-in current 6mA/point) Both sink (-common) and source (+ common) connections can be made	
Control output (POUT)	Photo MOS 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	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

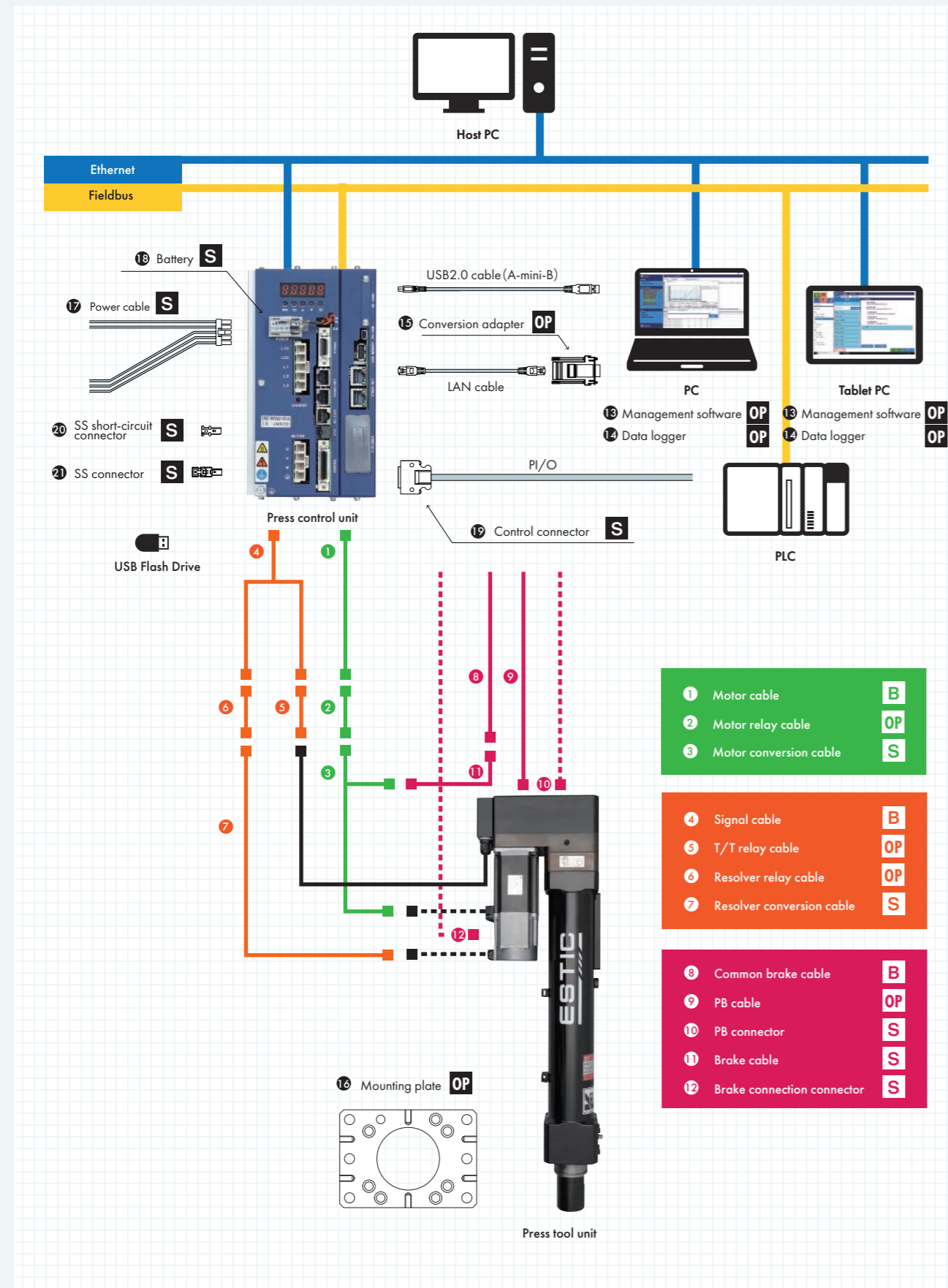
	PI/O (16 points each)	DeviceNet (D)	PROFIBUS (P)	CC-Link (C)	EtherNet/IP (W)	EtherCAT (B)	CC-Link IE (I)	PROFINET (S)	Motor type (A & B)	Motor type (C & D)
Standard specifications	✓								MPU60-40-N	MPU60-5K-N
Optional specifications	✓	✓							MPU60-40-D	MPU60-5K-D
	✓		✓						MPU60-40-P	MPU60-5K-P
	✓			✓					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-CVMN2-050 ENRZ-CVMN2-100 ENRZ-CVMN2-150 ENRZ-CVMN2-200	ENRZ-CVTR-050 ENRZ-CVTR-100 ENRZ-CVTR-150 ENRZ-CVTR-200	N/A
SPT010-25			
SPT020-25			
SPT030-25			
SPT050-30			
SPT100-30	ENRZ-CVMN6-050	ENRZ-CVMN6-100	ENRZ-CVBN-050 ENRZ-CVBN-100 ENRZ-CVBN-200
SPH100-30	ENRZ-CVMN6-150	ENRZ-CVMN6-200	
SPC010-20	ENRZ-CVMN2-050	ENRZ-CVMN2-100	
SPC010-20-F	ENRZ-CVMN2-150	ENRZ-CVMN2-200	
SPC020-20	ENRZ-CVMN8-050	ENRZ-CVMN8-100	
SPC020-20-F	ENRZ-CVMN8-100	ENRZ-CVMN8-150	N/A
SPC030-20	ENRZ-CVMN8-150	ENRZ-CVMN8-200	
SPC030-20-F	ENRZ-CVMN8-200		
SPC050-20	ENRZ-CVMN5-050	ENRZ-CVMN5-100	
SPC050-20-F	ENRZ-CVMN5-150	ENRZ-CVMN5-200	
SPC100-20			
SPC100-20-F			

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	ENRZ-CVMP-030 ENRZ-CVMP-060 ENRZ-CVMP-100 ENRZ-CVMP-150	ENRZ-CVTN-030 ENRZ-CVTN-060 ENRZ-CVTN-100 ENRZ-CVTN-150	ENRZ-CVRP-030 ENRZ-CVRP-060 ENRZ-CVRP-100 ENRZ-CVRP-150	ENRZ-CVPB-050 ENRZ-CVPB-100 ENRZ-CVPB-150 ENRZ-CVPB-200	MPU60-PC
SPT010-25					Data logger
SPT020-25					Release scheduled
SPT030-25					Conversion adapter (Dsub↔RJ-45)
SPT050-30					ENRZ-RJS
SPT100-30	ENRZ-CVMPS-030	ENRZ-CVMPS-060	ENRZ-CVMPS-090	ENRZ-CVMP-150	Mounting plate (for SPT100 & SPH100 only)
SPH100-30					SPT100-MP
SPC010-20	ENRZ-CVMP-030 ENRZ-CVMP-060 ENRZ-CVMP-100 ENRZ-CVMP-150	ENRZ-CVTN-030 ENRZ-CVTN-060 ENRZ-CVTN-100 ENRZ-CVTN-150	ENRZ-CVRP-030 ENRZ-CVRP-060 ENRZ-CVRP-100 ENRZ-CVRP-150	ENRZ-CVPB-050 ENRZ-CVPB-100 ENRZ-CVPB-150 ENRZ-CVPB-200	
SPC010-20-F					
SPC020-20					
SPC020-20-F					
SPC030-20					
SPC030-20-F					
SPC050-20	ENRZ-CVMPS-030	ENRZ-CVMPS-060	ENRZ-CVMPS-100	ENRZ-CVMPS-150	
SPC050-20-F					
SPC100-20					
SPC100-20-F					

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	N/A	N/A	SPCNPB	N/A	N/A	ENRZ-CVDC2-030
SPT010-25						Battery
SPT020-25						ENRZ-BATT2
SPT030-25						ENRZ-CVBN40-005
SPT050-30						ENRZ-CVBN40-005
SPT100-30	ENRZ-CVREX-010	SPCNBO	ENRZ-CNAU			
SPH100-30						
SPC010-20	ENRZ-CVMN 40-005	ENRZ-CVRN40-005				
SPC010-20-F						
SPC020-20	ENRZ-CVMN5K-010	ENRZ-CVRN5K-010				
SPC020-20-F						
SPC030-20						
SPC030-20-F						
SPC050-20				N/A	N/A	
SPC050-20-F	N/A	ENRZ-CVREX-010				
SPC100-20						
SPC100-20-F						

18	19	20	21
Control connector	ENRZ-CNAU	SS short-circuit connector	ENRZ-STO01
		SS connector	ENRZ-STO02