

Technical data: Compact CPUs N = Product innovations

NEW

CPU	CPU 312C ¹⁾	CPU 313C ¹⁾	CPU 313C-2 PtP	CPU 313C-2 DP ¹⁾	CPU 314C-2 PtP ¹⁾	CPU 314C-2 DP ¹⁾	CPU 314C-2 PN/DP
Dimensions (mm)	80 x 125 x 130	120 x 125 x 130	80 x 125 x 130 N	80 x 125 x 130 N	120 x 125 x 130		
Required front connector	1 x 40-pin	2 x 40-pin	1 x 40-pin		2 x 40-pin		
Order No. group: 6ES7	312-5BF.	313-5BG.	313-6BG.	313-6CG.	314-6BH.	314-6CH.	314-6EH.
Firmware N	V3.3	V3.3	V3.3	V3.3	V3.3	V3.3	V3.3
Memory							
Work memory N	64 KB	128 KB			192 KB		
Instructions N	21 K	42 K			64 K		
Processing times							
Bit operation N	0.1 µs	0.07 µs			0.06 µs		
Word operations N	0.24 µs	0.15 µs			0.12 µs		
Fixed-point operations N	0.32 µs	0.2 µs			0.16 µs		
Floating-point operations N	1.1 µs	0.72 µs			0.59 µs		
Bit memories/timers/counters							
Bit memory	256 bytes						
S7 timers/counters	256 / 256						
IEC timers/counters	● *)						
Address ranges							
Number of I/Os (bytes)	1 024 / 1 024			2 048 / 2 048	1 024 / 1 024	2 048 / 2 048	
I/O process image	1 024 / 1 024			2 048 / 2 048	1 024 / 1 024	2 048 / 2 048	
Digital channels (central)	266	1 016	1 008		1 016		
Analog channels (central)	64	253	248		253		
Integrated functions							
Counter (incremental enc.)	2, 24 V/10 kHz	3, 24 V/30 kHz			4, 24 V/60 kHz		
Pulse outputs (PCM)	2 channels, max. 2.5 kHz	3 channels, max. 2.5 kHz			4 channels, max. 2.5 kHz		
Frequency measurement	2 channels max. 10 kHz	3 channels, max. 30 kHz			4 channels max. 60 kHz		
Controlled positioning					SFB for positioning, 1 axis via 2 DO, AO		
Integrated "Control" FB		PID controllers					
Integrated inputs/outputs							
Digital inputs	10 x 24 V DC; all channels can be used for process interrupts	24 x 24 V DC; all channels can be used for process interrupts	16 x 24 V DC; all channels can be used for process interrupts		24 x 24 V DC; all channels can be used for process interrupts		
Digital outputs	6 x 24 V DC, 0.5 A						
Analog inputs		4 : ± 10 V, 0 ... 10 V, ± 20 mA, 0 / 4 ... 20 mA; 1 : 0 ... 600 Ω, PT100			4 : ± 10 V, 0 ... 10 V, ± 20 mA, 0 / 4 ... 20 mA; 1 : 0 ... 600 Ω, PT100		
Analog outputs		2 : ± 10 V, 0 ... 10 V, ± 20 mA, 0 / 4 ... 20 mA			2 : ± 10 V, 0 ... 10 V, ± 20 mA, 0 / 4 ... 20 mA		
DP interface							
DP master systems int./ CP 342-5	○ / ●			● / ●	○ / ●	● / ●	● / ●
DP slave			●		●		●
Data set gateway ²⁾			●		●		●
PROFINET interface							
PROFINET CBA							●
PROFINET IO							●
PROFINET with IRT							●
Open User Communication (OUC)							
• TCP/IP							●
• UDP							●
• ISO-on-TCP (RFC 1006)							●
Web server							●
PtP interface							
Physics			RS485/422		RS485/422		
Protocol driver			3964 (R), RK512, ASCII		3964 (R), RK512, ASCII		

¹⁾ As SIPLUS extreme component also for extended temperature range -25 ... +60/+70 °C and corrosive atmosphere/condensation (for further details, see page 98 or www.siemens.com/siplus-extreme)
²⁾ For explanation, see page 56 bottom right *) Via SFB, number unlimited or limited by main memory