

*** SPARE PART*** SIMATIC C7-634 DP, COMP.STATION WITH INTEGRATED COMPONENTS: S7-300 CPU 315-2DP, SIMATIC OP17 AND IM 360, WITH INTEGRATED PROFIBUS DP INTERFACE

Operator control and monitoring	
Password protection	Yes
Password levels	9
Graphics object	
• Character graphics	Yes; 99
• Pixel graphics	Yes; 8
Process images	
• Number of process images	99
• Number of variables in message text, max.	8
• Entries per process image	99
Operating-/fault messages	
• Number of operating messages, max.	999
• Scroll operating messages, max.	256
• Number of entries in operational log, max.	256
• Number of fault message, max.	999
• Number of entries in fault message buffer, max.	256
• Number of symbol/character sets	1
Recipes	
• Number of recipes, max.	99
• Data records per recipe, max.	99
• Entries per data record, max.	99
• Recipe data memory, max.	20 kbyte
Display	
Design of display	LCD backlit
Line display	
• Number of lines	8; 4 x 20 / 8 x 40
• Number of characters per line	40; 4 x 20 / 8 x 40
• Character size	6 mm; 11/6 mm
dynamic objects	Input, output, input/output fields, date/time fields, symbolic input/output fields
Backlighting	
• MTBF backlighting (at 20 °C)	100 000 h; about 11 years
Control elements	

Keyboard fonts	
<ul style="list-style-type: none"> Function keys <ul style="list-style-type: none"> Number of function keys Number of softkeys 	 16 8
Supply voltage	
Rated value (DC) <ul style="list-style-type: none"> 24 V DC 	Yes
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	30.2 V
Input current	
Current consumption, typ.	550 mA
Current consumption, max.	1 A
Power loss	
Power loss, typ.	12 W
Memory	
Work memory	
<ul style="list-style-type: none"> integrated 	64 kbyte; 20 K instructions RAM
Load memory	
<ul style="list-style-type: none"> expandable FEPROM expandable FEPROM, max. integrated RAM, max. 	 Yes 512 kbyte 96 kbyte; for data
Backup	
<ul style="list-style-type: none"> with battery without battery 	 Yes; all data Yes; 4736 Byte: parameterizable for memory bits, times, counters, data
CPU processing times	
for bit operations, typ.	0.3 μ s
for bit operations, max.	0.6 μ s
for word operations, typ.	1 μ s
for fixed point arithmetic, typ.	2 μ s
for floating point arithmetic, typ.	50 μ s
for timer/counter operations, typ.	12 μ s
CPU-blocks	
DB	
<ul style="list-style-type: none"> Number, max. 	255; DB 0 reserved
FB	
<ul style="list-style-type: none"> Number, max. 	192; see instruction list
FC	
<ul style="list-style-type: none"> Number, max. 	192; see instruction list
OB	

- Number, max. see instruction list
- Number of free cycle OBs 1; OB 1
- Number of time alarm OBs 1; OB 10
- Number of cyclic interrupt OBs 1; OB 35
- Number of process alarm OBs 1; OB 40
- Number of startup OBs 1; OB 100
- Number of asynchronous error OBs 8; OB 80, 81, 82, 85, 86, 87, 121, 122

Nesting depth

- per priority class 8

Counters, timers and their retentivity

S7 counter

- Number 64

of which retentive with battery

- can be set Yes
- lower limit 0
- upper limit 63

of which retentive without battery

- can be set Yes
- lower limit 0
- upper limit 63

Counting range

- lower limit 0
- upper limit 999

S7 times

- Number 128

of which retentive with battery

- can be set Yes
- lower limit 0
- upper limit 127

of which retentive without battery

- adjustable Yes
- lower limit 0
- upper limit 127

Time range

- lower limit 10 ms
- upper limit 9 990 s

Data areas and their retentivity

Flag

- Number, max. 256 byte
- Retentivity available Yes

- of which retentive with battery 0 to 2047
- of which retentive without battery 0 to 2047

Address area

I/O address area	
• Inputs	1 kbyte
• Outputs	1 kbyte
Process image	
• Inputs	128 byte
• Outputs	128 byte

Hardware configuration

Number of modules per system, max.	8
Number of modules per DP slave interface, max.	32; 122 byte address space per DP station
connectable programming devices/PCs	SIMATIC PG/PC, standard PC
Interface modules	
• Interface module IM 360 integrated	Yes
Number of DP masters	
• integrated	1
• via CP	1; CP 342-5
Number of operable FMs and CPs (recommended)	
• FM	8
• CP, point-to-point	4
• CP, LAN	2
Expansion modules	
• Analog inputs/outputs, max.	192
• Digital inputs/outputs, max.	768
• Number of expansion modules, max.	24
Rack	
• Rack, number of rows, max.	3

Time of day

Clock	
• Hardware clock (real-time clock)	Yes

Interfaces

Number of printer interfaces	1; RS 232
MPI	
• Cable length, max.	9 100 m; without repeaters 50 m; with 2 repeaters: 1100 m; with 10 repeaters in series: 9100 m; via fiber optic cable: 23.8 km (with star hubs or OLMs)

1. Interface

Functionality	
• MPI	Yes; occupies 2 nodes per device (1 x CPU, 1 x OP)

MPI	
• Number of nodes, max.	32; PG/PC, OP, C7, S7-300/400, M7
• Transmission rate, max.	187.5 kbit/s
2. Interface	
Functionality	
• DP master	Yes
• DP slave	Yes
DP master	
• Transmission rate, max.	12 Mbit/s
• Number of DP slaves, max.	64
User data per DP slave	
— User data per DP slave, max.	122 byte
Communication functions	
PG/OP communication	Yes
Global data communication	
• supported	Yes
S7 basic communication	
• supported	Yes
S7 communication	
• S7 extended communication	Yes; Server
S5 compatible communication	
• supported	Yes
Standard communication (FMS)	
• supported	Yes
Number of connections	
• overall	
— of which dynamic	8
— of which static	4
Interrupts/diagnostics/status information	
Diagnostic messages	
• Diagnostic functions	Yes; C7-CPU
Isolation	
Isolation tested with	500 V DC
EMC	
EMC interference immunity	Noise immunity: IEC 1000-4-2, IEC 1000-4-3, IEC 1000-4-4, IEC 1000-4-6, EN 50140
Emission of radio interference acc. to EN 55 022	
• Interference emission acc. to EN 55022, class A	Yes; Noise emission: Class A / EN 55022; conducted interference: IEC 1000-4-4, IEC 1000-4-5
Degree and class of protection	

Degree of protection acc. to EN 60529	
<ul style="list-style-type: none"> • IP20 • IP65 	Yes; Housing Yes; Front

Standards, approvals, certificates

DIN/ISO 9001	Yes
CSA approval	Yes; to Standard C22.2 number 142
UL approval	Yes; UL 508
FM approval	Yes; FM-Standards No. 3611, 3600, 3810 Class I, Division 2, Group A, B, C, D
developed in accordance with IEC 61131	Yes; EN 61131-2 (IEC 1131-2)

Ambient conditions

Ambient temperature during operation	
<ul style="list-style-type: none"> • 45 degree installation, min. • 45 degree installation, max. • vertical installation, min. • vertical installation, max. 	0 °C 45 °C 0 °C 50 °C

Air pressure acc. to IEC 60068-2-13	
<ul style="list-style-type: none"> • permissible range, lower limit • permissible range, upper limit 	795 hPa 1 080 hPa

Relative humidity	
<ul style="list-style-type: none"> • Operation, min. • Operation, max. 	5 % 95 %; at 25 °C (no condensation), tested to DIN IEC 60068-2-3

Vibrations	
<ul style="list-style-type: none"> • Operation, tested according to IEC 60068-2-6 	Yes; IEC 60068-2-6; 10 Hz to 58 Hz; (constant amplitude 0.075 mm); 58 Hz to 500 Hz; (constant acceleration 9.8 m/s ²)

Shock test	
<ul style="list-style-type: none"> • tested according to IEC 60068-2-29 	Yes; IEC 68, Part 2-29 half-sine: 100 m/s ² (10 g), 16 ms, 100 shocks

Configuration

Configuration software	
<ul style="list-style-type: none"> • STEP 7 • STEP 7 Lite • ProTool • ProTool/Lite • ProTool/Pro 	Yes Yes Yes Yes Yes

Programming	
<ul style="list-style-type: none"> • Command set • Nesting levels • Program organization • System functions (SFC) 	see instruction list 8 Linear, structured see instruction list

Programming language	
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— LAD	Yes
— FBD	Yes
— STL	Yes
— SCL	Yes
— CFC	Yes
— GRAPH	Yes
— HiGraph®	Yes
Software libraries	
— Process diagnostics	Yes; C7-CPU
— Software controller	Yes; 16 circles
Know-how protection	
• User program protection/password protection	Yes
Cycle time monitoring	
• lower limit	1 ms
• upper limit	6 000 ms
• can be set	Yes
• preset	150 ms
Languages	
Online languages	
• Number of online/runtime languages	3
Dimensions	
Width	240 mm
Height	203.5 mm
Depth	74.4 mm
Mounting cutout, width	231 mm
Mounting cutout, height	159 mm
Weights	
Weight, approx.	1 700 g
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