



Figure similar

*** spare part *** SIPLUS D455-2 DP/PN based on 6AU1455-2AD00-0AA0 with conformal coating, 0...+55 °C, SIPLUS drive-based Control Unit D455-2 DP/PN; programmable motion control system; ultra-high performance; interfaces: 12 DI, 16 DI/DO, 6 DRIVE-CLiQ, 3 PROFIBUS, 3 PROFINET ports, 3 Ethernet, 2 USB, 2 option slots; including double fan/battery module and battery

product brand name	SIPLUS
product type designation	D455-2 DP/PN SIPLUS
Performance class for motion control system	ULTRA-HIGH Performance
Version of the motion control system	Multiple-axis system
PLC and motion control performance	
number of axes / maximum	128
Minimum PROFIBUS cycle clock	1 ms
Minimum PROFINET send cycle clock	0.25 ms
Minimum interpolator cycle clock	0.25 ms
Minimum servo cycle clock	0.25 ms
<ul style="list-style-type: none"> note 	0.125 ms (only with ET 200SP, SCOUT TIA V4.5 or higher and SERVO-FAST)
Integrated drive control / header	
Maximum number of axes for integrated drive control	
<ul style="list-style-type: none"> servo 	6
<ul style="list-style-type: none"> vector 	6
<ul style="list-style-type: none"> V/f 	12
<ul style="list-style-type: none"> note 	Alternative control modes; drive control based on SINAMICS S120 CU320-2, firmware version V4.x/V5.x
Memory	
RAM (work memory)	388 Mbyte
Additional RAM work memory for Java applications	20 Mbyte
RAM disk (load memory)	90 Mbyte
Retentive memory	512 kbyte
Persistent memory (user data on CF)	1.5 Gbyte
Communication	
Interfaces	
<ul style="list-style-type: none"> DRIVE-CLiQ 	6
<ul style="list-style-type: none"> USB 	2
<ul style="list-style-type: none"> Industrial Ethernet 	2
<ul style="list-style-type: none"> PROFIBUS 	2
<ul style="list-style-type: none"> — note 	Equidistant and isochronous; Can be configured as master or slave
<ul style="list-style-type: none"> PROFINET 	1
<ul style="list-style-type: none"> — note 	1 interface with 3 ports onboard; 1 interface with 4 ports optional via CBE30-2; functionality: supports PROFINET IO with IRT and RT; configurable as PROFINET IO Controller and/or Device; supports media redundancy (MRP and MRPD)
General technical data	
Fan	Wert fehlt
DC supply voltage	

<ul style="list-style-type: none"> • rated value • minimum • maximum 	<p>24 V</p> <p>20.4 V</p> <p>28.8 V</p>
<p>consumed current / typical</p> <ul style="list-style-type: none"> • note 	<p>1 900 mA</p> <p>with no load on inputs/outputs, no 24 V supply via DRIVE-CLiQ and PROFIBUS interface</p>
<p>Making current, typ.</p>	<p>5 A</p>
<p>Power loss, typ.</p>	<p>46 W</p>
<p>Ambient temperature, during</p> <ul style="list-style-type: none"> • long-term storage • transport • operation — note 	<p>-25 ... +55 °C</p> <p>-40 ... +70 °C</p> <p>0 ... 55 °C</p> <p>Maximum installation altitude 4000 m (13124 ft) above sea level. Above an altitude of 2000 m (6562 ft), the maximum ambient temperature decreases by 7 °C (12.6 °F) per 1000 m (3281 ft).</p>
<p>Relative humidity</p> <ul style="list-style-type: none"> • during operation • without condensation, tested acc. to IEC 60068-2-38 	<p>0 ... 100 %</p> <p>condensation/frost permitted (no commissioning in bedewed state)</p>
<p>Product property / Conformal coating</p>	<p>Yes</p>
<p>Resistance</p> <ul style="list-style-type: none"> • to biologically active substances, / conformity acc. to EN 60721-3-3 — Note • to chemically active substances, / conformity acc. to EN 60721-3-3 — Note 	<p>Yes</p> <p>Class 3B2 mold and fungal spores (except fauna); For operation, the plug covers included in delivery must be left on the unused interfaces!</p> <p>Yes</p> <p>Class 3C4 incl. salt spray in accordance with EN 60068-2-52 (severity 3); the supplied plug covers must remain in place on the unused interfaces during operation.</p>
<p>Air pressure</p>	<p>620 ... 1 060 hPa</p>
<p>Degree of protection</p>	<p>IP20 / UL open type</p>
<p>height</p>	<p>380 mm</p>
<p>width</p>	<p>50 mm</p>
<ul style="list-style-type: none"> • depth • Depth / Note 	<p>270 mm</p> <p>When the spacer is removed 230 mm (9.05 in) deep</p>
<p>net weight</p>	<p>4 300 g</p>
<p>Digital inputs / header</p>	
<p>number of digital inputs</p>	<p>12</p>
<p>DC input voltage</p> <ul style="list-style-type: none"> • rated value • for signal "1" • for signal "0" 	<p>24 V</p> <p>15 ... 30 V</p> <p>-3 ... +5 V</p>
<p>Electrical isolation</p> <ul style="list-style-type: none"> • note 	<p>Yes</p> <p>Yes, in groups of 6</p>
<p>Current consumption for "1" signal level, typ.</p>	<p>9 mA</p>
<p>Input delay time for</p> <ul style="list-style-type: none"> • signal "0" → "1", typ. • signal "1" → "0", typ. 	<p>50 µs</p> <p>150 µs</p>
<p>Digital inputs/outputs / header</p>	
<p>Number of digital I/Os</p>	<p>16</p>
<p>Parameterization possibility of the digital I/Os</p>	<p>can be parameterized - as DI - as DO - as probe input (max. 16) - as cam output (max. 8)</p>
<p>If used as an input / header</p>	
<p>DC input voltage</p> <ul style="list-style-type: none"> • rated value • for signal "1" • for signal "0" 	<p>24 V</p> <p>15 ... 30 V</p> <p>-3 ... +5 V</p>
<p>Electrical isolation</p>	<p>No</p>
<p>Current consumption for "1" signal level, typ.</p>	<p>9 mA</p>
<p>Input delay time for</p>	

<ul style="list-style-type: none"> • signal "0" → "1", typ. 	5 μs
<ul style="list-style-type: none"> • signal "1" → "0", typ. 	50 μs
Measuring input / reproducibility	5 μs
Measuring input / resolution	1 μs
If used as an output / header	
Load voltage	
<ul style="list-style-type: none"> • rated value 	24 V
<ul style="list-style-type: none"> • minimum 	20.4 V
<ul style="list-style-type: none"> • maximum 	28.8 V
Electrical isolation	No
Current carrying capacity for each output, max.	500 mA
Leakage current, max.	2 mA
Output delay for	
<ul style="list-style-type: none"> • signal "0" → "1", typ. 	150 μs
<ul style="list-style-type: none"> • signal "0" → "1", max. 	400 μs
<ul style="list-style-type: none"> • signal "1" → "0", typ. 	75 μs
<ul style="list-style-type: none"> • signal "1" → "0", max. 	150 μs
— note	Data for V _{cc} = 24 V; load 48 Ohm; "1" = 90 % V _{Out} , "0" = 10 % V _{Out}
Cam output	
<ul style="list-style-type: none"> • reproducibility 	10 μs
<ul style="list-style-type: none"> • resolution 	1 μs
Switching frequency of the outputs for	
<ul style="list-style-type: none"> • resistive load, max. 	4 kHz
<ul style="list-style-type: none"> • inductive load, max. 	2 Hz
<ul style="list-style-type: none"> • lamp load, max. 	11 Hz
Short-circuit protection	Yes
Additional technical data	
Back-up of non-volatile data	
<ul style="list-style-type: none"> • of retentive data 	unlimited buffer duration
<ul style="list-style-type: none"> • of real-time clock, min. 	4 d
<ul style="list-style-type: none"> • note 	longer buffer duration of the real-time clock using a battery inserted in the double fan/battery module
Approvals	
<ul style="list-style-type: none"> • USA 	cULus
<ul style="list-style-type: none"> • Canada 	cULus
<ul style="list-style-type: none"> • Australia 	RCM (formerly C-Tick)
<ul style="list-style-type: none"> • Korea 	No
<ul style="list-style-type: none"> • Russia, Belarus and Kazakhstan 	EAC

