## **Product data sheet**



SIPLUS S7-1500 PS 1505 25W 24VD -25 ... +70 DEGEES C WITH CONFORMAL COATING BASED ON 6ES7505-0KA00-0AB0 . SYSTEM POWER SUPPLY SUPPLIES THE OPERATING VOLTAGE THE S7-1500 VIA THE BACKPLANE B

General information		
Hardware product version	E01	
Firmware version	V1.0.0	
Engineering with		
STEP 7 TIA Portal can be configured/integrated as of version	V12 / V12	
STEP 7 can be configured/integrated as of version	V5.5 SP3 or higher	
FH technology		
Redundancy		
Redundancy capability	Yes	
for increased power	Yes	
Supply voltage		
Rated value (DC)	24 V ; SELV	
permissible range, lower limit (DC)	Static 19.2 V, dynamic 18.5 V	
permissible range, upper limit (DC)	Static 28.8 V, dynamic 30.2 V	
Reverse polarity protection	Yes	
Short-circuit protection	Yes	
Mains buffering		
Mains buffering time	20 ms	

## April Power   Infeed power to the backplane bus   25 W; > +60 °C max. power input 12.5 W	Output current	
Infeed power to the backplane bus  25 W; > +60 °C max, power input 12.5 W  Power losses  Power loss at nominal rating conditions  5.2 W  Interrupts/diagnostics/status information  Status indicator  Pes  Galvanic isolation  primary/secondary  Yes : Electrical isolation for max. 60 V AC/75 V DC (base isolation)  EMC  Surge immunity  on the supply lines acc. to IEC 61000-4-5  Pogree and class of protection  Degree and class of protection  Degree and class of protection  Degree and class of protection to EN 60529  Protection class  Relative to ambient temperature-atmospheric pressure-installation altitude  Relative to ambient temperature-atmospheric pressure-installation altitude  With condensation, tested in accordance with IEC 60068  -2-38, maximum  Resistance  to biologically active substances/conformity with EN 60721-3-3  to emechanically active substances/conformity with EN 60721-3-3  to mechanically active substances/conformity with EN 60721-3-3  Mechanical and climatic conditions during operation  Climatic conditions in operation  Temperature  Min.  -25 °C := Tmin  max.  70 °C := Tmax; for vertical mounting position Tmax = +40 °C		Yes
Power loss at nominal rating conditions  Status indicator  Yes  Galvanic isolation  primary/secondary  Yes; Electrical isolation for max. 80 V AC/75 V DC (base isolation)  EMC  Surge immunity  on the supply lines acc. to IEC 61000-4-5  Yes; +/-1 kV (acc. to IEC 61000-4-5; 1985; surge symm.), +/-2 kV (acc. to IEC 61000-4-5; 1985; surge symm.), +/-2 kV (acc. to IEC 61000-4-5; 1985; surge symm.), -/-2 kV (acc. to IEC 61000-4-5; surge symm.), -/-2 kV (acc. to IEC 61000-4-5; surge symm.		
Interrupts/diagnostics/status information	Infeed power to the backplane bus	25 W ; > +60 °C max. power input 12.5 W
Interrupts/diagnostics/status information   Yes	Power losses	
Status indicator  Galvanic isolation  primary/secondary  Yes ; Electrical isolation for max. 60 V AC/75 V DC (base isolation)  EMC  Surge immunity  on the supply lines acc. to IEC 61000-4-5  Obegree and class of protection  Degree and class of protection  Degree of protection to EN 60529  Protection class  Extended ambient conditions  Extended ambient conditions  Relative to ambient temperature-atmospheric pressure-installation altitude  Obegree and class of protection to EN 60529  Protection class  Relative to ambient temperature-atmospheric pressure-installation altitude  Timin (Tmax - 10K) at 795 hPa (-1000 m +2000 m) // Tmin ("Tmax - 10K) at 795 hPa 658 hPa (-2000 m +3500 m) // Tmin ("Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin ("Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin ("Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin ("Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin ("Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin ("Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin ("Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin ("Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin ("Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin ("Tmax - 50K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin ("Tmax - 50K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin ("Tmax - 50K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin ("Tmax - 50K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin ("Tmax - 50K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin ("Tmax - 50K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin ("Tmax - 50K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin ("Tmax - 50K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin ("Tmax - 50K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin ("Tmax - 50K) at 658 hPa 540 hPa (+3500 m	Power loss at nominal rating conditions	6.2 W
Primary/secondary	Interrupts/diagnostics/status information	
primary/secondary  Pes : Electrical isolation for max. 60 V AC/75 V DC (base isolation)  EMC  Surge immunity  on the supply lines acc. to IEC 61000-4-5  Pegree and class of protection  Degree and class of protection  Degree of protection to EN 60529  Protection class  Relative to ambient conditions  Extended ambient conditions  Extended ambient temperature-atmospheric pressure-installation altitude  With condensation, tested in accordance with IEC 60068 -2-38, maximum  Resistance  to biologically active substances/conformity with EN 60721-3-3  to chemically active substances/conformity with EN 60721-3-3  to mechanically active substances/conformity with EN 60721-3-3  Mechanical and climatic conditions during operation  Climatic conditions on the unused interfaces during operation  Climatic conditions in operation  Temperature  Min.  Max.  Pes : Class 384 incl. sand, dust. The supplied connector covers must remain on the unused interfaces during operation!  Climatic conditions in operation  Temperature  Min.  70 °C : = Tmax; for vertical mounting position Tmax = +40 °C	Status indicator	Yes
Surge immunity  on the supply lines acc. to IEC 61000-4-5  Ore the supply lines acc. to IEC 61000-4-5  Ore the supply lines acc. to IEC 61000-4-5  Ore the supply lines acc. to IEC 61000-4-5; 1995; surge symm.), +/- 2 kV (acc. to IEC 61000-4-5; 1995; surge symm.), no external protective circuit required  Degree and class of protection  Degree of protection to EN 60529  Protection class  Ambient conditions  Extended ambient conditions  Relative to ambient temperature-atmospheric pressure-installation altitude  Tmin Tmax at 1080 hPa 795 hPa (-1000 m +2000 m) // Tmin (Tmax - 10K) at 795 hPa 658 hPa (+2000 m +3500 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Separation for fauna). The supplied connector covers must remain on the unused interfaces during operation!  to chemically active substances/conformity with EN 60721-3-3  to chemically active substances/conformity with EN 60721-3-3  to mechanically active substances/conformity with EN 60721-3-3  To mecha	Galvanic isolation	
Surge immunity  on the supply lines acc. to IEC 61000-4-5  Yes; +/- 1 kV (acc. to IEC 61000-4-5; 1995; surge symm.), +/- 2 kV (acc. to IEC 61000-4-5; 1995; surge symm.), no external protective circuit required  Degree and class of protection  Degree of protection to EN 60529  IP20  Protection class  Ambient conditions  Extended ambient conditions  Relative to ambient temperature-atmospheric pressure-installation altitude  Tmin Tmax at 1080 hPa 795 hPa (-1000 m +2000 m) // Tmin (Tmax - 10K) at 795 hPa 568 hPa (+2000 m +3500 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m)  Relative humidity  With condensation, tested in accordance with IEC 60068 2-3-38, maximum  Resistance  to biologically active substances/conformity with EN 60721-3-3  to chemically active substances/conformity with EN 60721-3-3  To chemically active substances/conformity with EN 60721-3-3  To max - 10K) at 795 hPa (-1000 m +2000 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +2500 m) // Tmin (Tmax - 10K) hPa	primary/secondary	Yes ; Electrical isolation for max. 60 V AC/75 V DC (base isolation)
resistance  to biologically active substances/conformity with EN 60721-3-3  to mechanically active substances/conformity with EN 60721-3-3  Temperature  Min.  Min.  Degree and class of protection  Yes ; +/- 1 kV (acc. to IEC 61000-4-5; 1995; surge asymm.), no external protective circuit required  Yes ; +/- 1 kV (acc. to IEC 61000-4-5; 1995; surge asymm.), no external protective circuit required  Yes ; +/- 1 kV (acc. to IEC 61000-4-5; 1995; surge asymm.), no external protective circuit required  Yes ; +/- 1 kV (acc. to IEC 61000-4-5; 1995; surge asymm.), no external protective circuit required  Yes ; +/- 1 kV (acc. to IEC 61000-4-5; 1995; surge asymm.), no external protective circuit required  Yes ; 1995; surge asymm.), no external protective circuit required  Yes ; 1995; surge asymm.), no external protective circuit required  Yes ; 1995; surge asymm.), no external protective circuit required  Yes ; 1995; surge asymm.), no external protective circuit required  Yes ; 1995; surge asymm.), no external protective circuit required  Yes ; 1995; surge asymm.), no external protective circuit required  Yes ; 1995; surge asymm.), no external protective circuit required  Yes ; 1995; surge asymm.), no external protective circuit required  Yes ; 1995; surge asymm.), no external protective circuit required  Yes ; 1995; surge asymm.), no external protective circuit required  Yes ; 1995; surge asymm.), no external protective circuit required  Yes ; 1995; surge asymm.), no external protective conductor  Yes ; 1995; surge asymm.), no external protective conductor covers must remain on the unused interfaces during operation!  Yes ; 1995; surge asymm.), no external protective conductor covers must remain on the unused interfaces during operation!  Yes ; 1995; surge asymm.), no external protective conductor covers must remain on the unused interfaces during operation!  Yes ; 1995; surge asymm.), no external protective conductor.  Yes ; 1995; surge asymm.), no external protective conductor.  Yes ; 1995; surge asymm.), no external pro	EMC	
Cac. to IEC 61000-4-5; 1995; surge asymm.), no external protective circuit required	Surge immunity	
Protection class  Ambient conditions  Extended ambient conditions  Relative to ambient temperature-atmospheric pressure-installation altitude  Tmin Tmax at 1080 hPa 795 hPa (-1000 m +2000 m) // Tmin (Tmax - 10K) at 795 hPa 658 hPa (+2000 m +3500 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa .	on the supply lines acc. to IEC 61000-4-5	(acc. to IEC 61000-4-5; 1995; surge asymm.), no external protective
Protection class  Ambient conditions  Extended ambient conditions  Relative to ambient temperature-atmospheric pressure- installation altitude  Timin Tmax at 1080 hPa 795 hPa (-1000 m +2000 m) // Tmin (Tmax - 10K) at 795 hPa 658 hPa (+2000 m +3500 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m)  Relative humidity  With condensation, tested in accordance with IEC 60068 -2-38, maximum  Resistance  to biologically active substances/conformity with EN 60721-3-3  to chemically active substances/conformity with EN 60721-3-3  to chemically active substances/conformity with EN 60721-3-3  to mechanically active substances/conformity with EN 60721-3-3  To mechanically active substances/conformity with EN 60721-3-3  To mechanically active substances/conformity with EN 60721-3-3  To mechanical and climatic conditions during operation  Climatic conditions in operation  Temperature  Min.  -25 °C; = Tmin  70 °C; = Tmax; for vertical mounting position Tmax = +40 °C	Degree and class of protection	
Relative to ambient temperature-atmospheric pressure-installation altitude   Tmin Tmax at 1080 hPa 795 hPa (-1000 m +2000 m) // Tmin (Tmax - 10K) at 795 hPa 658 hPa (+2000 m +3500 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax - 10K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax - 10K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax - 10K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax - 10K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax - 10K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax - 10K) at 658 hPa 540 hPa (+3500 m +5000 m) // Tmin (Tmax	Degree of protection to EN 60529	IP20
Relative to ambient temperature-atmospheric pressure- installation altitude  Tmin Tmax at 1080 hPa 795 hPa (-1000 m +2000 m) // Tmin (Tmax - 10K) at 795 hPa 658 hPa (+2000 m +3500 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m)  Relative humidity  With condensation, tested in accordance with IEC 60068 -2-38, maximum  Resistance  to biologically active substances/conformity with EN 60721-3-3  to chemically active substances/conformity with EN 60721-3-3  to mechanically active substances/conformity with EN 60721-3-3  to mechanically active substances/conformity with EN 60721-3-3  we class 3S4 incl. sand, dust. The supplied connector covers must remain on the unused interfaces during operation!  Yes ; Class 3S4 incl. sand, dust. The supplied connector covers must remain on the unused interfaces during operation!  We chanical and climatic conditions during operation  Climatic conditions in operation  Temperature  Min.  -25 °C ; = Tmin 70 °C ; = Tmax; for vertical mounting position Tmax = +40 °C	Protection class	3 ; with protective conductor
Relative to ambient temperature-atmospheric pressure installation altitude  Tmin Tmax at 1080 hPa 795 hPa (-1000 m +2000 m) // Tmin (Tmax - 10K) at 795 hPa 658 hPa (+2000 m +3500 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m)  Relative humidity  With condensation, tested in accordance with IEC 60068 -2-38, maximum  Resistance  to biologically active substances/conformity with EN 60721-3-3  to chemically active substances/conformity with EN 60721-3-3  To compare the supplied connector covers must remain on the unused interfaces during operation!  Yes ; Class 3S4 incl. sand, dust. The supplied connector covers must remain on the unused interfaces during operation!  Mechanical and climatic conditions during operation  Climatic conditions in operation  Temperature  Min.  -25 °C ; = Tmin  max.  Tmin Tmax at 1080 hPa 795 hPa (-1000 m +2000 m) // Tmin (Tmax - 10K) at 795 hPa 658 hPa 658 hPa 658 hPa 658 hPa 540 hPa (+3500 m +3500 m) // Tmin (Tmax - 10K) at 795 hPa 658 hPa 658 hPa 658 hPa 658 hPa 658 hPa 540 hPa (+3500 m +3500 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +3500 m) // Tmin (Tmax - 20K) at 658 hPa .	Ambient conditions	
installation altitude  (Tmax - 10K) at 795 hPa 658 hPa 540 hPa (+2000 m +3500 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m)  Relative humidity  With condensation, tested in accordance with IEC 60068 -2-38, maximum  Resistance  to biologically active substances/conformity with EN 60721-3-3  of fauna). The supplied connector covers must remain on the unused interfaces during operation!  to chemically active substances/conformity with EN 60721-3-3  **Temain on the unused interfaces during operation!  To mechanically active substances/conformity with EN 60721-3-3  **Temain on the unused interfaces during operation!  Yes ; Class 3S4 incl. sand, dust. The supplied connector covers must remain on the unused interfaces during operation!  Mechanical and climatic conditions during operation  Climatic conditions in operation  Temperature  Min.  -25 °C ; = Tmin  max.  70 °C ; = Tmax; for vertical mounting position Tmax = +40 °C	Extended ambient conditions	
With condensation, tested in accordance with IEC 60068 -2-38, maximum  Resistance  to biologically active substances/conformity with EN 60721-3-3  to chemically active substances/conformity with EN 60721-3-3  to mechanically active substances/conformity with EN 60721-3-3  To mechanical and climatic conditions during operation  Climatic conditions in operation  Temperature  Min.  -25 °C ; = Tmin  max.  70 °C ; = Tmax; for vertical mounting position Tmax = +40 °C		(Tmax - 10K) at 795 hPa 658 hPa (+2000 m +3500 m) //
-2-38, maximum condensation conditions)  Resistance  to biologically active substances/conformity with EN 60721-3-3  to chemically active substances/conformity with EN 60721-3-3  to chemically active substances/conformity with EN 60721-3-3  to mechanically active substances/conformity with EN 60721-3-3  to mechanically active substances/conformity with EN 60721-3-3  To mechanically active substances/conformity with EN 60721-3-3  Temperature  Min.  -25 °C; = Tmin  max.  To °C; = Tmax; for vertical mounting position Tmax = +40 °C	Relative humidity	
to biologically active substances/conformity with EN 60721-3-3  to chemically active substances/conformity with EN 60721-3-3  to mechanically active substances/conformity with EN 60721-3-3  to mechanically active substances/conformity with EN 60721-3-3  Temperature  Min.  Temperature  Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna). The supplied connector covers must remain on the unused interfaces during operation!  Yes; Class 3C4 (RH < 75%) incl. salt spray according to EN 60068-2-52 (degree of severity 3). The supplied connector covers must remain on the unused interfaces during operation!  Yes; Class 3S4 incl. sand, dust. The supplied connector covers must remain on the unused interfaces during operation!  Temperature  Min.  -25 °C; = Tmin  70 °C; = Tmax; for vertical mounting position Tmax = +40 °C		· · · · · · · · · · · · · · · · · · ·
of fauna). The supplied connector covers must remain on the unused interfaces during operation!  to chemically active substances/conformity with EN 60721-3-3  Yes; Class 3C4 (RH < 75%) incl. salt spray according to EN 60068-2-52 (degree of severity 3). The supplied connector covers must remain on the unused interfaces during operation!  Yes; Class 3S4 incl. sand, dust. The supplied connector covers must remain on the unused interfaces during operation!  Mechanical and climatic conditions during operation  Climatic conditions in operation  Temperature  Min.  -25 °C; = Tmin  max.  70 °C; = Tmax; for vertical mounting position Tmax = +40 °C	Resistance	
2-52 (degree of severity 3). The supplied connector covers must remain on the unused interfaces during operation!  to mechanically active substances/conformity with EN 60721-3-3  Wechanical and climatic conditions during operation  Climatic conditions in operation  Temperature  Min.  -25 °C; = Tmin  70 °C; = Tmax; for vertical mounting position Tmax = +40 °C		of fauna). The supplied connector covers must remain on the unused
must remain on the unused interfaces during operation!  Mechanical and climatic conditions during operation  Climatic conditions in operation  Temperature  Min.  -25 °C ; = Tmin  max.  70 °C ; = Tmax; for vertical mounting position Tmax = +40 °C	•	2-52 (degree of severity 3). The supplied connector covers must
Climatic conditions in operation  Temperature  Min.  -25 °C ; = Tmin  max.  70 °C ; = Tmax; for vertical mounting position Tmax = +40 °C	· · · · · · · · · · · · · · · · · · ·	
Temperature  Min.  -25 °C; = Tmin  max.  70 °C; = Tmax; for vertical mounting position Tmax = +40 °C	Mechanical and climatic conditions during operation	
Min.  -25 °C; = Tmin  70 °C; = Tmax; for vertical mounting position Tmax = +40 °C	Climatic conditions in operation	
max. 70 °C ; = Tmax; for vertical mounting position Tmax = +40 °C	Temperature	
	Min.	-25 °C ; = Tmin
Dimensions	max.	70 °C ; = Tmax; for vertical mounting position Tmax = +40 °C
	Dimensions	

Width	35 mm
Height	147 mm
Depth	129 mm
Weights	
Weight, approx.	350 g
Status	May 23, 2014