

Three-phase, primary switched mode power supply **PC 3AC**



General Data

Nominal input voltage: 3 x 400 - 500 Vac
Nominal output voltage: 24 Vdc, 48 Vdc, 60 Vdc
Nominal output current: 10 - 40 A
Ambient temperature -25 °C to +70 °C
Protection index IP 20

Advantages

Stabilised and adjustable output voltage
Fast tripping of conventional circuit breakers
DC OK signalling
Parallel operation
Push-in terminals
Robust DIN rail mounting
Resistant to transient overvoltages up to 4 kV
Optional with 50 % Power Boost (PC-03xx-xxx-2)

Applications

The economic power supplies in the Power Compact series set new standards in their class. Above-average robustness against transients and energetic surge pulses at their input and equipped with essential additional aspects for a worldwide high plant availability. The output voltage can be set easily using the rotary potentiometer on the front of the housing. The robust DIN rail fastening method and push-in connection terminals enable fast and secure mounting. All versions are available as option with 50% power reserves for high inrush current applications.

Standards

Primary switched mode power supply
to UL 60950, UL 508

Safety:
EN 61558-2-16, EN 60950-1

EMC:
EN 61204-3

Approvals



UL 60950, UL 508, GL (prepared)



Three-phase, primary switched mode power supply **PC 3AC**

Typ	PC-0324-100-0	PC-0324-100-2	PC-0324-200-0	PC-0324-200-2
Electrical data				
Input				
Input rated voltage	400 - 500 Vac	400 - 500 Vac	400 - 500 Vac	400 - 500 Vac
Input voltage range	320 - 575 Vac	320 - 575 Vac	320 - 575 Vac	320 - 575 Vac
Input voltage derating	-	-	-	-
Rated frequency range	44 Hz - 66 Hz / 0 Hz	44 Hz - 66 Hz / 0 Hz	44 Hz - 66 Hz / 0 Hz	44 Hz - 66 Hz / 0 Hz
Input rated current (rated load)	3 x 0.73 A (400 Vac) / 0.66 A (500 Vac)	3 x 0.73 A (400 Vac) / 0.66 A (500 Vac)	3 x 1.21 A (400 Vac) / 1.03 A (500 Vac)	3 x 1.21 A (400 Vac) / 1.03 A (500 Vac)
Starting current limiter	< 30 A, NTC	< 30 A, NTC	< 30 A, NTC	< 30 A, NTC
Input fuse internal	-	-	-	-
Recommended back-up fuse (circuit breaker)	6 A, 10 A, 16 A, characteristic B, C	6 A, 10 A, 16 A, characteristic B, C	6 A, 10 A, 16 A, characteristic B, C	6 A, 10 A, 16 A, characteristic B, C
Transient surge voltage protection	Varistor	Varistor	Varistor	Varistor
Output				
Output rated voltage	24 Vdc	24 Vdc	24 Vdc	24 Vdc
Output voltage range	23 - 28.5 Vdc	23 - 28.5 Vdc	23 - 28.5 Vdc	23 - 28.5 Vdc
Output rated current	10 A	10 A	20 A	20 A
Output limited current	typ. 11 A (constant current)	typ. 11 A (constant current)	typ. 22 A (constant current)	typ. 22 A (constant current)
Power Boost	-	15 A / 5 s	-	30 A / 5 s
Tripping of LS circuit breakers	max. B6/C2 @ 2.5mm ² /20m	max. B6/C2 @ 2.5mm ² /20m	max. B6/C4/K4 @ 6mm ² /20m	max. B6/C6/K4 @ 6mm ² /20m
Parallel connection	Yes	Yes	Yes	Yes
Serial operation	Yes	Yes	Yes	Yes
Power dissipation, no load/rated load	2.7 W / 27.6 W (400 Vac)	2.7 W / 27.6 W (400 Vac)	4.03 W / 42.53 W (400 Vac)	4.03 W / 42.53 W (400 Vac)
Ripple factor	typ. 30 mVss	typ. 30 mVss	typ. 30 mVss	typ. 30 mVss
Efficiency	typ. 90 %	typ. 90 %	typ. 92 %	typ. 92 %
Resistance to reverse feed max.	35 Vdc	35 Vdc	35 Vdc	35 Vdc
Over-voltage-protection	max. 40 Vdc	max. 40 Vdc	max. 40 Vdc	max. 40 Vdc
Signaling				
Status indicator	LED green	LED green	LED green	LED green
Signal output	Relay contact	Relay contact	Relay contact	Relay contact
Approvals				
Approvals	cURus, cULus, GL (in preparation)	cURus, cULus, GL (in preparation)	cURus, cULus, GL (in preparation)	cURus, cULus, GL (in preparation)
Environment				
Type of cooling	natural convection	natural convection	natural convection	natural convection
Ambient temperature	-25 °C to +70 °C	-25 °C to +70 °C	-25 °C to +70 °C	-25 °C to +70 °C
Storage temperature	-25 °C to +85 °C	-25 °C to +85 °C	-25 °C to +85 °C	-25 °C to +85 °C
Derating	-2.5 %/K > +55 °C	-2.5 %/K > +55 °C	-2.5 %/K > +55 °C	-2.5 %/K > +55 °C
Required minimum spacing (left/right)	0 mm	0 mm	0 mm	0 mm
Required minimum spacing (over/under)	50 mm	50 mm	50 mm	50 mm
Safety and protection				
Protection index	IP 20	IP 20	IP 20	IP 20
Safety class	I, with PE connection	I, with PE connection	I, with PE connection	I, with PE connection
Order numbers				
Order Number	PC-0324-100-0	PC-0324-100-2	PC-0324-200-0	PC-0324-200-2

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Three-phase, primary switched mode power supply **PC 3AC**

Typ		PC-0324-400-0	PC-0324-400-2	PC-0348-200-0	PC-0348-200-2
Electrical data	Input				
	Input rated voltage	400 - 500 Vac	400 - 500 Vac	400 - 500 Vac	400 - 500 Vac
	Input voltage range	320 - 575 Vac	320 - 575 Vac	320 - 575 Vac (450 - 800 Vdc)	320 - 575 Vac (450 - 800 Vdc)
	Input voltage derating	-	-	-	-
	Rated frequency range	44 Hz - 66 Hz / 0 Hz	44 Hz - 66 Hz / 0 Hz	44 Hz - 66 Hz / 0 Hz	44 Hz - 66 Hz / 0 Hz
	Input rated current (rated load)	3 x 2.15 A (400 Vac) / 1.82 A (500 Vac)	3 x 2.15 A (400 Vac) / 1.82 A (500 Vac)	3 x 2,01 A (400 Vac)/ 1,63 A (520 Vac)	3 x 2,01 A (400 Vac)/ 1,63 A (520 Vac)
	Starting current limiter	< 30 A, NTC	< 30 A, NTC	< 30 A, NTC	< 30 A, NTC
	Input fuse internal	-	-	6,3 AT	6,3 AT
	Recommended back-up fuse (circuit breaker)	6 A, 10 A, 16 A, characteristic B, C	6 A, 10 A, 16 A, characteristic B, C	6 A, 10 A, 16 A, characteristic B, C	6 A, 10 A, 16 A, characteristic B, C
	Transient surge voltage protection	Varistor	Varistor	Varistor	Varistor
Output					
Output rated voltage	24 Vdc	24 Vdc	48 Vdc	48 Vdc	
Output voltage range	23 - 28.5 Vdc	23 - 28.5 Vdc	40 - 56 Vdc	40 - 56 Vdc	
Output rated current	40 A	40 A	20 A	20 A	
Output limited current	typ. 44 A (constant current)	typ. 44 A (constant current)	typ. 22 A (constant current)	typ. 22 A (constant current)	
Power Boost	-	60 A / 5 s	-	30 A / 5 s	
Tripping of LS circuit breakers	max. B10/C6/K4 @ 6/10mm ² /40m	max. B10/C6/K4 @ 6/10mm ² /40m	max. B10/C6/K6	max. B10/C6/K6	
Parallel connection	Yes	Yes	Yes	Yes	
Serial operation	Yes	Yes	Yes	Yes	
Power dissipation, no load/rated load	2.78 W / 83.91 W (400 Vac)	2.78 W / 83.91 W (400 Vac)	5 W / 71,14 W (400 Vac)	5 W / 71,14 W (400 Vac)	
Ripple factor	typ. 30 mVss	typ. 30 mVss	typ. 25 mVss	typ. 25 mVss	
Efficiency	typ. 92.5 %	typ. 92.5 %	typ. 93%	typ. 93%	
Resistance to reverse feed max.	35 Vdc	35 Vdc	63 Vdc	63 Vdc	
Over-voltage-protection	max. 40 Vdc	max. 40 Vdc	typ. 60 Vdc	typ. 60 Vdc	
Signaling					
Status indicator	LED green	LED green	LED green	LED green	
Signal output	Relay contact	Relay contact	Relay contact	Relay contact	
Approvals					
Approvals	cURus, cULus, GL (in preparation)	cURus, cULus, GL (in preparation)	cURus, cULus, GL (in preparation)	cURus, cULus, GL (in preparation)	
Environment					
Type of cooling	natural convection	natural convection	natural convection	natural convection	
Ambient temperature	-25 °C to +70 °C	-25 °C to +70 °C	-25 °C to +70 °C	-25 °C to +70 °C	
Storage temperature	-25 °C to +85 °C	-25 °C to +85 °C	-25 °C to +85 °C	-25 °C to +85 °C	
Derating	-2.5 %/K > +55 °C	-2.5 %/K > +55 °C	-2.5 %/K > +55 °C	-2.5 %/K > +55 °C	
Required minimum spacing (left/right)	0 mm	0 mm	0 mm	0 mm	
Required minimum spacing (over/under)	50 mm	50 mm	50 mm	50 mm	
Safety and protection					
Protection index	IP 20	IP 20	IP 20	IP 20	
Safety class	I, with PE connection	I, with PE connection	I, with PE connection	I, with PE connection	
Order numbers					
Order Number	PC-0324-400-0	PC-0324-400-2	PC-0348-200-0	PC-0348-200-2	



Three-phase, primary switched mode power supply **PC 3AC**

Typ		PC-0360-160-0
Electrical data	Input	
	Input rated voltage	400 - 500 Vac
	Input voltage range	390 - 575 Vac (550 - 800 Vdc)
	Input voltage derating	-
	Rated frequency range	44 Hz - 66 Hz / 0 Hz
	Input rated current (rated load)	3 x 2,02 A (400 Vac) / 1,6 A (520 Vac)
	Starting current limiter	< 30 A, NTC
	Input fuse internal	6,3 AT
	Recommended back-up fuse (circuit breaker)	6 A, 10 A, 16 A, characteristic B, C
	Transient surge voltage protection	Varistor
	Output	
	Output rated voltage	60 Vdc
	Output voltage range	40 - 61 Vdc
	Output rated current	16 A
	Output limited current	typ. 11 A (constant current)
	Power Boost	-
Tripping of LS circuit breakers	max. B10/C6/K6	
Parallel connection	Yes	
Serial operation	Yes	
Power dissipation, no load/rated load	7,5 W / 68,93 W (400 Vac)	
Ripple factor	typ. 25 mVss	
Efficiency	typ. 93%	
Resistance to reverse feed max.	63 Vdc	
Over-voltage-protection	typ. 63 Vdc	
Signaling		
Status indicator	LED green	
Signal output	Relay contact	
Approvals		
Approvals	cURus, cULus, GL (in preparation)	
Environment		
Type of cooling	natural convection	
Ambient temperature	-25 °C to +70 °C	
Storage temperature	-25 °C to +85 °C	
Derating	-2,5 %/K > +55 °C	
Required minimum spacing (left/right)	0 mm	
Required minimum spacing (over/under)	50 mm	
Safety and protection		
Protection index	IP 20	
Safety class	I, with PE connection	
Order numbers		
Order Number	PC-0360-160-0	

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Typ	Mounting position	Terminals signalling (direct plug-in technology Push-in)	Terminals output (direct plug-in technology Push-in)	Terminals input (direct plug-in technology Push-in)	Weight	Dimension (W x H x D)	Dimension picture (in mm)					
							A	B	C	D	E	F
PC-0324-100-0	horizontal for standard rail DIN TS35	max 2,5 mm ²	max 2,5 mm ²	max 2,5 mm ²	1.02 kg	55 x 127 x 152 mm	127	63.5	3	55	152.5	160
PC-0324-100-2	horizontal for standard rail DIN TS35	max 2,5 mm ²	max 2,5 mm ²	max 2,5 mm ²	1.02 kg	55 x 127 x 152 mm	127	63.5	3	55	152.5	160
PC-0324-200-0	horizontal for standard rail DIN TS35	max 2,5 mm ²	max 6 mm ²	max 2,5 mm ²	1.51 kg	80 x 127 x 152 mm	127	63.5	3	80	152.5	160
PC-0324-200-2	horizontal for standard rail DIN TS35	max 2,5 mm ²	max 6 mm ²	max 2,5 mm ²	1.51 kg	80 x 127 x 152 mm	127	63.5	3	80	152.5	160
PC-0324-400-0	horizontal for standard rail DIN TS35	max 2,5 mm ²	max 16 mm ²	max 2,5 mm ²	2.71 kg	126 x 127 x 170 mm	127	63.5	3	126	170.5	178
PC-0324-400-2	horizontal for standard rail DIN TS35	max 2,5 mm ²	max 16 mm ²	max 2,5 mm ²	2.71 kg	126 x 127 x 170 mm	127	63.5	3	126	170.5	178
PC-0348-200-0	horizontal for standard rail DIN TS35	max 2,5 mm ²	max 16 mm ²	max 2,5 mm ²	2.76 kg	126 x 127 x 170 mm	127	63.5	3	126	170.5	178
PC-0348-200-2	horizontal for standard rail DIN TS35	max 2,5 mm ²	max 16 mm ²	max 2,5 mm ²	2.77 kg	126 x 127 x 170 mm	127	63.5	3	126	170.5	178
PC-0360-160-0	horizontal for standard rail DIN TS35	max 2,5 mm ²	max 16 mm ²	max 2,5 mm ²	2.76 kg	126 x 127 x 170 mm	127	63.5	3	126	170.5	178

Dimension pictures

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