SIEMENS

Data sheet

3RW4047-1BB04



SIRIUS soft starter S3 106 A, 55 kW/400 V, 40 $^\circ\text{C}$ 200-480 V AC, 24 V AC/DC Screw terminals

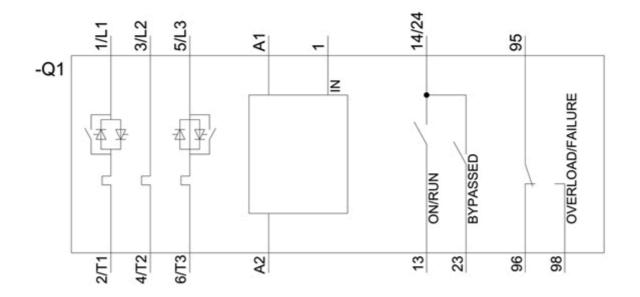
product brand name SIRIUS product feature • integrated bypass contact system Yes • intrinsic device protection Yes • intrinsic device protection Yes • evaluation of thermistor motor protection Yes • evaluation of thermistor motor protection Yes • adjustable current limitation Yes • inside-delta circuit No product component motor brake output No insulation voltage rated value V degree of pollution 3, acc. to IEC 60947-4-2 reference code acc. to DIN EN 61346-2 Q reference code acc. to DIN Na 01346-2 Q reference code acc. to DIN Na 01346-2 Q reference code acc. to DIN Na 01346-2 Q reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 60947-4-2 Q product designation Soft starter operational current A 106 • at 40 °C rated value A 90 yielded mechanical performance for 3-phase motors A 30 0000 • at 400 V -	General technical data		
 integrated bypass contact system thyristors thyristors thyristors thyristors thyristors thyristors thyristors inside-delta circuit eadjustable current limitation external reset adjustable current limitation testerated <litesterated< li=""> testerated <litesterate< li=""></litesterate<></litesterated<>	product brand name		SIRIUS
• thyristors Yes product function Yes • intrinsic device protection Yes • motor overload protection Yes • exaluation of themistor motor protection No • external reset Yes • adjustable current limitation Yes • inside-delta circuit No product component motor brake output No insulation voltage rated value V degree of pollution 3, acc. to IEC 60947-4-2 reference code acc. to DIN EN 61346-2 Q reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 G Power Electronics Portuct designation operational current A 106 • at 40 °C rated value A 90 • at 60 °C rated value A 90 • at 80 °C rated value A 90 • at 400 V - - - at standard circuit at 40 °C rated value W 30 000 • at 400 V - - - at standard circuit at 40 °C rated value W 55 000 ylelded mechanical performance [hp] for 3-phase AC motor at 2	product feature		
product function Yes • intrinsic device protection Yes • motor overload protection Yes • evaluation of thermistor motor protection No • external reset Yes • adjustable current limitation Yes • inside-delta circuit No product component motor brake output No insulation voltage rated value V degree of pollution 3, acc. to IEC 60947-4-2 reference code acc. to DIN EN 61346-2 Q reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 G Power Electronics G product designation Soft starter operational current A • at 40 °C rated value A • at 60 °C rated value A • at 60 °C rated value A • at 20 V - - at standard circuit at 40 °C rated value W • at 400 V - - at standard circuit at 40 °C rated value W value V0 yleided mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value hp	 integrated bypass contact system 		Yes
 intrinsic device protection intrinsic device protection intrinsic device protection intrinsic device protection intrinsic motor protection exatural reset adjustable current limitation inside-delta circuit inside-delta circuit at 40 "C rated value into rated value into rated value interset intere inter	thyristors		Yes
 motor overload protection evaluation of thermistor motor protection external reset adjustable current limitation inside-delta circuit product component motor brake output insulation voltage rated value V 600 degree of pollution 3, acc. to IEC 60947-4-2 reference code acc. to DIN EN 61346-2 reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 Power Electronics product designation Soft starter operational current at 40 °C rated value A 106 at 50 °C rated value A 98 at 60 °C rated value A 90 yielded mechanical performance for 3-phase motors at 230 V - at standard circuit at 40 °C rated value W 30 000 - at standard circuit at 40 °C rated value yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value operating frequency rated value Hz 50 60 relative negative tolerance of the operating frequency rol rol at standard circuit at 40 °C rated value V 	product function		
• evaluation of thermistor motor protection No • external reset Yes • adjustable current limitation Yes • inside-delta circuit No product component motor brake output No insulation voltage rated value V 600 degree of pollution 1nsulation voltage rated value V 600 degree of pollution 7eference code acc. to DIN EN 61346-2 Q reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 G Powor Electronics Powor Electronics product designation Soft starter operational current A • at 40 °C rated value A • at 60 °C rated value A • at 60 °C rated value A • at 40 °C rated value A • at 20 °U	 intrinsic device protection 		Yes
• external reset Yes • adjustable current limitation No • inside-delta circuit No product component motor brake output No insulation voltage rated value V degree of pollution 3, acc. to IEC 60947-4-2 reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 Q Power Electronics product designation operational current A • at 40 °C rated value A • at 230 V A - at standard circuit at 40 °C rated value W • at 230 V - - at standard circuit at 40 °C rated value W • at 200/208 V at standard circuit at 40 °C rated value W - at standard circuit at 40 °C rated value W • at 200/208 V at standard circuit at 50 °C rated value W - at standard circuit at 50 °C rated value W 90 yielded mechanical performance [hp] for 3-phase ACC motor at 200/208 V at standard circuit at 50 °C rated value Mp 30 - operating frequency rated value Hz 55 000 - yielded mechanical performance	 motor overload protection 		Yes
• adjustable current limitation Yes • inside-delta circuit No product component motor brake output No Insulation voltage rated value V degree of pollution 3, acc. to IEC 60947-4-2 reference code acc. to DIN EN 61346-2 Q reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 G Power Electronics product designation operational current 6 • at 40 °C rated value A • at 50 °C rated value A • at 230 V A - at standard circuit at 40 °C rated value W • at 400 V - - at standard circuit at 40 °C rated value W yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value Mp yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value Mp operating frequency rated value Hz 50 60 relative negative tolerance of the operating frequency % 10 operating voltage at standard circuit rated value V 200 480	 evaluation of thermistor motor protection 		No
• inside-delta circuit No product component motor brake output No insulation voltage rated value V 600 degree of pollution 3, acc. to IEC 60947-4-2 reference code acc. to DIN EN 61346-2 Q reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 G Power Electronics G product designation Soft starter operational current A • at 40 °C rated value A • at 60 °C rated value A • at 320 V - - at standard circuit at 40 °C rated value W • at 400 V - - at standard circuit at 40 °C rated value W • at 400 V - - at standard circuit at 40 °C rated value W • at 200/208 V at standard circuit at 50 °C rated value M vielue Hz 50 60 operating frequency rated value Hz 50 60 relative negative tolerance of the operating frequency % -10 relative negative tolerance of the operating frequency % 10 operating voltage at standard circuit rated valu	external reset		Yes
product component motor brake outputNoinsulation voltage rated valueV600degree of pollution3, acc. to IEC 60947-4-2reference code acc. to DIN EN 61346-2Qreference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750GPower Electronicsproduct designationoperational currentA• at 40 °C rated valueA• at 60 °C rated valueA• at 60 °C rated valueA• at 30 °C rated valueA• at 30 °C rated valueA• at 60 °C rated valueA• at 30 °C rated valueA• at 30 °C rated valueA• at 40 °C rated valueA• at 30 °CO- at standard circuit at 40 °C rated valueW• at 400 V at standard circuit at 40 °C rated valueW• at 200 VS- at standard circuit at 40 °C rated valueW• at 200 V at standard circuit at 40 °C rated valueW• at 200 V at standard circuit at 50 °C ratedhp30Ovalue-operating frequency rated valueHzfor the operating frequency%-10relative positive tolerance of the operating frequency%10operating voltage at standard circuit rated valueV200 480	 adjustable current limitation 		Yes
insulation voltage rated value V 600 degree of pollution 3, acc. to IEC 60947-4-2 reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 G Power Electronics g product designation Soft starter operational current A • at 40 °C rated value A • at 60 °C rated value A • at 60 °C rated value A • at 30 °C rated value A • at 60 °C rated value A • at 230 V - - at standard circuit at 40 °C rated value W • at 400 V 30 000 - at standard circuit at 40 °C rated value W • at 200 V - - at standard circuit at 40 °C rated value W • at 200 V - - at standard circuit at 40 °C rated value W yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value hp operating frequency rated value Hz 50 60 relative negative tolerance of the operating frequency % operating voltage at standard circuit rated value V 200	 inside-delta circuit 		No
degree of pollution 3, acc. to IEC 60947-4-2 reference code acc. to DIN EN 61346-2 Q reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 G Power Electronics G product designation Soft starter operational current A • at 40 °C rated value A • at 60 °C rated value A • at 230 V A - at standard circuit at 40 °C rated value W • at 400 V - - at standard circuit at 40 °C rated value W yielded mechanical performance for 3-phase motors 0 • at 400 V - - at standard circuit at 40 °C rated value W yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value hp operating frequency rated value Hz 50 60 relative negative tolerance of the operating frequency % relative positive tolerance of the operating frequency % operating voltage at standard circuit rated value V 200 480	product component motor brake output		No
reference code acc. to DIN EN 61346-2 Q reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 G Power Electronics G product designation Soft starter operational current A • at 40 °C rated value A • at 50 °C rated value A • at 60 °C rated value A • at 20 °C rated value Y • at 20 °C C rated value • at 20 °C Y - at standard circuit at 40 °C rated value W Yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value Mp yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value Mp operating frequency rated value Hz 50 60 relative negative tolerance of the operating frequency % -10 relative positive tolerance of the operati	insulation voltage rated value	V	600
reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 G Power Electronics Soft starter product designation Soft starter operational current A 106 • at 40 °C rated value A 98 • at 60 °C rated value A 90 yielded mechanical performance for 3-phase motors at 230 V 30 000 - at standard circuit at 40 °C rated value W 30 000 • at 400 V - at standard circuit at 40 °C rated value W 55 000 yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value W 55 000 operating frequency rated value Hz 50 60 60 relative negative tolerance of the operating frequency % -10 relative positive tolerance of the operating frequency % 10 0	degree of pollution	-	3, acc. to IEC 60947-4-2
to IEC 204-2 acc. to IEC 750 Power Electronics product designation Soft starter operational current A 106 • at 40 °C rated value A 98 • at 60 °C rated value A 90 yielded mechanical performance for 3-phase motors A 90 • at 230 V	reference code acc. to DIN EN 61346-2		Q
product designationSoft starteroperational currentA• at 40 °C rated valueA• at 50 °C rated valueA• at 60 °C rated valueA• at 60 °C rated valueA90yielded mechanical performance for 3-phase motors• at 230 V— at standard circuit at 40 °C rated valueW30 000• at 400 V— at standard circuit at 40 °C rated valueW55 000yielded mechanical performance [hp] for 3-phase ACmotor at 200/208 V at standard circuit at 50 °C ratedvalueHz50 60relative negative tolerance of the operating frequency%10operating voltage at standard circuit rated valueV200 480		-	G
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• at 40 °C rated valueA106• at 50 °C rated valueA98• at 60 °C rated valueA90yielded mechanical performance for 3-phase motorsA90• at 230 V at standard circuit at 40 °C rated valueW30 000• at 400 V at standard circuit at 40 °C rated valueW55 000yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated valueW55 000yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated valueHz50 60relative negative tolerance of the operating frequency%-10relative positive tolerance of the operating frequency%10operating voltage at standard circuit rated valueV200 480	product designation		Soft starter
• at 50 °C rated value A 98 • at 60 °C rated value A 90 yielded mechanical performance for 3-phase motors • at 230 V - at standard circuit at 40 °C rated value W 30 000 • at 400 V - at standard circuit at 40 °C rated value W 55 000 yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value W 55 000 yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value Hz 50 60 operating frequency rated value Hz 50 60 -10 relative negative tolerance of the operating frequency % 10 -10 operating voltage at standard circuit rated value V 200 480 200 480	operational current	-	
• at 60 °C rated value A 90 yielded mechanical performance for 3-phase motors • at 230 V at standard circuit at 40 °C rated value W 30 000 • at 400 V at standard circuit at 40 °C rated value W 55 000 yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value W 55 000 yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value Hz 50 60 operating frequency rated value Hz 50 60 -10 relative negative tolerance of the operating frequency % 10 operating voltage at standard circuit rated value V 200 480	 at 40 °C rated value 	А	106
yielded mechanical performance for 3-phase motors • at 230 V — at standard circuit at 40 °C rated value • at 400 V — at standard circuit at 40 °C rated valueW30 000• at 400 V — at standard circuit at 40 °C rated valueW55 000yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated valuehp30operating frequency rated valueHz50 60relative negative tolerance of the operating frequency relative positive tolerance of the operating frequency operating voltage at standard circuit rated valueV200 480	• at 50 °C rated value	А	98
 at 230 V at standard circuit at 40 °C rated value at 400 V 	 at 60 °C rated value 	А	90
• at 400 V W 55 000 — at standard circuit at 40 °C rated value W 55 000 yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value hp 30 operating frequency rated value Hz 50 60 relative negative tolerance of the operating frequency % -10 relative positive tolerance of the operating frequency % 10 operating voltage at standard circuit rated value V 200 480			
yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated valuehp30operating frequency rated valueHz50 60relative negative tolerance of the operating frequency%-10relative positive tolerance of the operating frequency%10operating voltage at standard circuit rated valueV200 480		W	30 000
motor at 200/208 V at standard circuit at 50 °C rated value Image: Constraint of the circuit at 50 °C rated value operating frequency rated value Hz 50 60 relative negative tolerance of the operating frequency % -10 relative positive tolerance of the operating frequency % 10 operating voltage at standard circuit rated value V 200 480	— at standard circuit at 40 °C rated value	W	55 000
relative negative tolerance of the operating frequency % -10 relative positive tolerance of the operating frequency % 10 operating voltage at standard circuit rated value V 200 480	motor at 200/208 V at standard circuit at 50 °C rated	hp	30
relative positive tolerance of the operating frequency%10operating voltage at standard circuit rated valueV200 480	operating frequency rated value	Hz	50 60
operating voltage at standard circuit rated value V 200 480	relative negative tolerance of the operating frequency	%	-10
	relative positive tolerance of the operating frequency	%	10
relative negative tolerance of the operating voltage at % -15	operating voltage at standard circuit rated value	V	200 480
standard circuit		%	-15
relative positive tolerance of the operating voltage at % 10	relative positive tolerance of the operating voltage at	%	10

	_	
standard circuit		
minimum load [%]	%	20
adjustable motor current for motor overload protection minimum rated value	A	46
continuous operating current [% of le] at 40 °C	%	115
power loss [W] at operational current at 40 °C during operation typical	W	21
Control circuit/ Control		
type of voltage of the control supply voltage		AC/DC
control supply voltage frequency 1 rated value	Hz	50
control supply voltage frequency 2 rated value	Hz	60
relative negative tolerance of the control supply voltage frequency	%	-10
relative positive tolerance of the control supply voltage frequency	%	10
control supply voltage 1 at AC		
at 50 Hz rated value	V	24
at 60 Hz rated value	V	24
relative negative tolerance of the control supply voltage at AC at 50 Hz	%	-20
relative positive tolerance of the control supply voltage at AC at 50 Hz	%	20
relative negative tolerance of the control supply voltage at AC at 60 Hz	%	-20
relative positive tolerance of the control supply voltage at AC at 60 Hz	%	20
control supply voltage 1 at DC rated value	V	24
relative negative tolerance of the control supply voltage at DC	%	-20
relative positive tolerance of the control supply voltage at DC	%	20
display version for fault signal		red
Mechanical data	_	
size of engine control device	_	S3
width	mm	70
height depth	mm	170 190
depth fastening method	mm	screw and snap-on mounting
mounting position		With additional fan: With vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back Without additional fan: With vertical mounting surface +/-10° rotatable, with vertical mounting surface +/- 10° t
required spacing with side-by-side mounting		
• upwards	mm	60
● at the side	mm	30
downwards	mm	40
wire length maximum	m	300
number of poles for main current circuit	_	3
Connections/ Terminals	_	
type of electrical connection		
for main current circuit		screw-type terminals
for auxiliary and control circuit		screw-type terminals
number of NC contacts for auxiliary contacts		0 2
number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts		1
type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point • solid		2x (2.5 16 mm²)
 finely stranded with core end processing 		2.5 35 mm ²
stranded with core end processing stranded		4 70 mm ²

	_				
type of connectable conductor cross-sections for main contacts for box terminal using the back					
clamping point					
• solid		2x (2	.5 16 mi	m²)	
 finely stranded with core end processing 		2.5	. 50 mm²	,	
• stranded		10	70 mm²		
type of connectable conductor cross-sections for main contacts for box terminal using both clamping points					
• solid		2x (2	.5 16 mi	m²)	
 finely stranded with core end processing 		2x (2	.5 35 mi	m²)	
• stranded		2x (1	0 50 mn	n²)	
type of connectable conductor cross-sections at AWG cables for main contacts for box terminal	_				
 using the back clamping point 		2x (1	0 1/0)		
 using the front clamping point 		2x (1	0 1/0)		
 using both clamping points 		10	2/0		
type of connectable conductor cross-sections for DIN cable lug for main contacts					
 finely stranded 			10 50 mi		
• stranded	_	2x (1	0 70 mn	n²)	
type of connectable conductor cross-sections for auxiliary contacts					
• solid			.5 2.5 m		
finely stranded with core end processing	-	2x (0	.5 1.5 m	im²)	
type of connectable conductor cross-sections at AWG cables					
 for main contacts 		2x (7	1/0)		
 for auxiliary contacts 			0 14)		
 for auxiliary contacts finely stranded with core end processing 		2x (2	0 16)		
Ambient conditions					
installation altitude at height above sea level	m	5 000)		
environmental category					
 during transport acc. to IEC 60721 		2K2,	2C1, 2S1,	2M2 (max. fall heig	nt 0.3 m)
 during storage acc. to IEC 60721 					, 1C2 (no salt mist),
• during operation acc. to IEC 60721		3K6 (no formati	t not get inside the d on of ice, no conder d must not get into ti	isation), 3C3 (no salt
ambient temperature	-	moty	, 002 (001)	a maor nor ger mo r	
during operation	°C	-25	+60		
during storage	°C				
derating temperature	°C	40			
protection class IP on the front acc. to IEC 60529	-	IP20			
touch protection on the front acc. to IEC 60529	-		r-safe, for	vertical contact from	the front
Certificates/ approvals					
General Product Approval				EMC	For use in hazard- ous locations
		C 0	г		ous locations
		СП	L	RCM	ATEX
Declaration of Conformity	2102			Marine / Shinairan	
Declaration of Conformity Test Certific	ates			Marine / Shipping	
Miscellaneous <u>Special Test C</u> ate	<u>Certific-</u>	<u>Type Test C</u> ates/Test F		Lloydis Register	
EG-Konf.				LRS	PRS

Marine / Shipping	other	Railway
DNV-GL	<u>Confirmation</u>	Vibration and Shock

UL/CSA ratings			
yielded mechanical performance [hp] for 3-phase AC			
motor			
• at 220/230 V			
— at standard circuit at 50 °C rated value	hp	30	
• at 460/480 V		75	
at standard circuit at 50 °C rated value	hp	75	
contact rating of auxiliary contacts according to UL		B300 / R300	
Further information			
Simulation Tool for Soft Starters (STS) https://support.industry.siemens.com/cs/ww/en/view/101494	917		
Information- and Downloadcenter (Catalogs, Brochures,			
https://www.siemens.com/ic10	,		
Industry Mall (Online ordering system)		17 10001	
https://mall.industry.siemens.com/mall/en/en/Catalog/produc Cax online generator	<u>t?mitb=3Rvv4u</u>	<u>J47-1BBU4</u>	
http://support.automation.siemens.com/WW/CAXorder/defau	llt.aspx?lang=e	en&mlfb=3RW4047-1BB04	
Service&Support (Manuals, Certificates, Characteristics,	FAQs,)		
https://support.industry.siemens.com/cs/ww/en/ps/3RW4047			
Image database (product images, 2D dimension drawing http://www.automation.siemens.com/bilddb/cax_de.aspx?ml	s, 3D models,	, device circuit diagrams, EPLAN macros,)	
http://www.adiomation.siemens.com/bildub/cax_de.aspx?min	182		
-	100		
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