## SIEMENS

## Data sheet

## 3RA2120-0HA23-0AK6



Fuseless motor starter Direct start 600VAC Size S0 0.55-0.8A 110/120VAC 50/60HZ screw connection For screw mounting Or 35 mm rail-mounting Type of coordination 2 IQ = 150 KA Also full fills type Of coordination 1 1NO+1NC (contactor)

product variantime     Sinto3       product variantime     Sinto3       product variantime     of the supplied contactor       • of the supplied contactor     Sinto3       • of the supplied link module     Sinto3       • of the supplied link module     Sinto3       • of the supplied link module     Sinto3       • supplied link module     Sinto3       • supplied link module     Sinto3       • supplied link module     Sinto4       • supplied link module </th <th>product brand name</th> <th></th>	product brand name			
design of the product     direct starter       manufacturer's article number     SRT2023-1AK60       • of the supplied circuit-breakers     SRV2011-0HA10       • of the supplied circuit-breakers     SRV2011-0HA10       • of the supplied circuit-breaker     S00       size of the circuit-breaker     S00       size of the circuit-breaker     S00       general technical data     General technical data       degree of pollution     3 a       surge voltage resistance rated value     6kV       degree of pollution     3       surge voltage resistance rated value     6kV       shock resistance according to IEC 60068-2-27     6g /11 ms       mechanical service life (switching cycles) of contactor     10 000 00       type of assignment     2       Ambient conditions     -20 +60 °C       ambient temperature     -50 +80 °C       • during storage     -50 +80 °C       • during transport     -55 0.8 A       circuit     3       design of the switching contact     electromechanical       adjustable current dercuit     3       eisted value     690 V       • during transport     -55 0.8 A       operating voltage     690 V       • at do V rated value     690 V       • at do V rated value     600	•	SIRIUS		
manufacturor's article number          9 aft supplied contactor         9 aft 2023-1AK60         9 aft 2023-1AK				
<ul> <li>of the supplied contactor</li> <li>SRT2023-1AK60</li> <li>of the supplied ink module</li> <li>SR22011-0rA10</li> <li>SR22011-0rA110</li> <li>SR2201-0rA110</li> <li>SR2201-0rA110</li> <li>S</li></ul>				
<ul> <li>of the supplied circuit-breakers</li> <li>of the supplied link module</li> <li>SRX2921-1AA00</li> <li>General technical data</li> <li>size of the circuit-breaker</li> <li>S00</li> <li>size of the circuit-breaker</li> <li>S00</li> <li>size of load feeder</li> <li>S0</li> <li>product extension auxiliary switch</li> <li>Yes</li> <li>insulation voltage with degree of pollution 3 at AC rated</li> <li>surge voltage resistance rated value</li> <li>6 kV</li> <li>shock resistance according to IEC 60068-2-27</li> <li>6g / 11 ms</li> <li>mechanical service life (switching cycles) of contactor</li> <li>typical</li> <li>type of assignment</li> <li>2</li> <li>Ambient temperature</li> <li>of uning operation</li> <li>-20 +60 °C</li> <li>of uning storage</li> <li>-50 +80 °C</li> <li>Mein circuit</li> <li>adjustable current response value current of the</li> <li>current-dependent overload release</li> <li>operating rollage</li> <li>of the switching cortact</li> <li>electromechanical</li> <li>adjustable current response value current of the</li> <li>current-dependent overload release</li> <li>operating rollage</li> <li>of at 400 V rated value</li> <li>of AA</li> <li>operating power at AC-3</li> <li>of at 500 V vated value</li> <li>at 500 V rated value</li></ul>		2072022 44/20		
• of the supplied link module     3RA2921-1AA00       General technical data     S00       size of the circuit-breaker     S00       size of toal feeder     S0       product extension auxiliary switch     Yes       insulation voltage with degree of pollution 3 at AC rated value     890 V       degree of pollution     3       surge voltage resistance rated value     6 kV       shock resistance according to IEC 60068-2-27     6g /11 ms       mechanical service life (switching cycles) of contactor     10 000 000       typical     20       Ambient conditions     2       ambient temperature     -20 +60 °C       • during storage     -50 +80 °C       • during storage     -50 +80 °C       • during transport     -55480 °C       • during transport     -55480 °C       • during transport     -55480 °C       • during transport     -5580 °C       • during transport     -550.8 A       corrent-dependent overload release     000 V       • at devalue     690 V       • at AC-3 rated value     690 V       • at AC-3 at 400 V rated value     0.6				
General technical data         size of the circuit-breaker       S00         size of load feeder       S0         product extension auxiliary switch       Yes         insulation voltage with degree of pollution 3 at AC rated value       690 V         degree of pollution       3         surge voltage resistance rated value       6 kV         shock resistance according to IEC 60068-2-27       6g / 11 ms         mechanical service life (switching cycles) of contactor       10 000 000         typical       2         Ambient conditions       -20 +60 °C         aduing storage       -50 +80 °C         • during peration       -25 +80 °C         • during transport       2         Main circuit				
size of the circuit-breaker     S00       size of load feeder     S0       product extension auxiliary switch     Yes       insulation voltage with degree of pollution 3 at AC rated     980 V       value     680 V       degree of pollution     3       surge voltage resistance rated value     6 kV       shock resistance according to IEC 60068-2-27     6g / 11 ms       mechanical service life (switching cycles) of contactor     10 000 000       type of assignment     2       Ambient conditions     -20 +60 °C       • during operation     -20 +60 °C       • during transport     -55 +80 °C       Main circuit     3       number of poles for main current circuit     3       design of the switching contact     electromechanical       adjustable current response value current of the current-dependent overload release     0.55 0.8 A       operating frequency rated value     690 V       • at AC-3 rated value     600 L       operating frequency rated value     50 60 Hz       operating onw rat AC-3     180 W       • at 400 V rated value     250 W       • at 400 V rated value     250 W       • at 400 V rated value     370 W		<u>3KAZ9Z1-1AAUU</u>		
size of load feeder     S0       product extension auxiliary switch     Yes       insulation voltage with degree of pollution 3 at AC rated     690 V       degree of pollution     3       surge voltage resistance rated value     6 kV       shock resistance according to IEC 60068-2-27     6g / 11 ms       mechanical service life (switching cycles) of contactor     10 000 000       typical     2       Ambient conditions     10 000 000       ambient temperature     -20 +60 °C       • during operation     -20 +60 °C       • during storage     -55 +80 °C       Main circuit     3       number of poles for main current circuit     3       design of the switching contact     electromechanical       adjustable current response value current of the current-dependent overload release     0.55 0.8 A       operating voltage     690 V       • at AC-3 rated value     690 V       • at AC-3 rated value     50 60 Hz       operating power at AC-3     180 W       • at 400 V rated value     180 W       • at 600 V rated value     370 W				
Insulation voltage with degree of pollution 3 at AC rated       690 V         value       690 V         degree of pollution       3         surge voltage resistance rated value       6 kV         shock resistance according to IEC 60068-2-27       6g / 11 ms         mechanical service life (switching cycles) of contactor       10 000 000         type of assignment       2         Ambient conditions       -20 +60 °C         ambient temperature       -50 +80 °C         • during storage       -55 +80 °C         • during transport       0.55 0.8 A         operating voltage       690 V         • at AC-3 rated value       690 V         • at AC-3 rated value maximum       690 V         • operating power at AC-3       180 W         • at 400 V rated value       180 W <td< th=""><td></td><td></td></td<>				
insulation voltage with degree of pollution 3 at AC rated value       690 V         degree of pollution       3         surge voltage resistance rated value       6 kV         shock resistance according to IEC 60068-2-27       6g / 11 ms         mechanical service life (switching cycles) of contactor typical       10 000 000         type of assignment       2         Ambient conditions       -20 +60 °C         ambient temperature       -20 +60 °C         • during torage       -56 +80 °C         • during transport       -55 +80 °C         Main circuit       3         number of poles for main current circuit       3         adjustable current response value current of the current-dependent overload release       0.55 0.8 A         operating rollage       690 V         • at AC-3 rated value       50 60 Hz         operating power at AC-3       180 W         • at 400 V rated value       180 W         • at 600 V rated value       370 W				
value     total       degree of pollution     3       surge voltage resistance according to IEC 60068-2-27     6g / 11 ms       mechanical service life (switching cycles) of contactor     10 000 000       type of assignment     2       Ambient conditions     -20 +60 °C       ambient temperature     -20 +60 °C       • during operation     -20 +60 °C       • during transport     -55 +80 °C       Main circuit     3       number of poles for main current circuit     3       design of the switching contact     electromechanical       adjustable current response value current of the current-dependent overload release     0.55 0.8 A       operating requency rated value     690 V       • at AC-3 rated value maximum     690 V       • operating frequency rated value     50 60 Hz       operating prover at AC-3     180 W       • at 400 V rated value     180 W       • at 600 V rated value     370 W				
surge voltage resistance rated value       6 kV         shock resistance according to IEC 60068-2-27       6g / 11 ms         mechanical service life (switching cycles) of contactor       10 000 000         type of assignment       2         Ambient conditions       2         amblent temperature       -20 +60 °C         • during operation       -20 +60 °C         • during storage       -55 +80 °C         • during transport       -55 +80 °C         Main circuit       3         number of poles for main current circuit       3         design of the switching contact       electromechanical         operating voltage       690 V         • at AC-3 rated value       690 V         • at AC-3 rated value       50 60 Hz         operating frequency rated value       50 60 Hz         operating power at AC-3       400 V rated value         • at 400 V rated value       180 W         • at 400 V rated value       250 W         • at 600 V rated value       370 W				
shock resistance according to IEC 60068-2-27       6g / 11 ms         mechanical service life (switching cycles) of contactor       10 000 000         type of assignment       2         Ambient conditions       3         ambient temperature       -50 +60 °C         • during operation       -55 +80 °C         Main circuit       3         number of poles for main current circuit       3         design of the switching contact       electromechanical         adjustable current response value current of the current-dependent overload release       0.55 0.8 A         operating frequency rated value       690 V         • at AC-3 rated value       50 60 Hz         operating power at AC-3       4400 V rated value         • at 400 V rated value       180 W         • at 400 V rated value       370 W         Control circuit/ Control       370 W	degree of pollution			
mechanical service life (switching cycles) of contactor typical       10 000 000         type of assignment       2         Ambient conditions       ambient temperature <ul> <li>during operation</li> <li>-20 +60 °C</li> <li>during storage</li> <li>-50 +80 °C</li> </ul> aduing transport       -55 +80 °C         Main circuit       3         number of poles for main current circuit       3         design of the switching contact       electromechanical         oljustable current response value current of the current-dependent overload release       0.55 0.8 A         operating voltage       690 V         • at AC-3 rated value maximum       690 V         operating frequency rated value       50 60 Hz         operating power at AC-3       400 V rated value         • at 400 V rated value       180 W         • at 400 V rated value       250 W         • at 400 V rated value       370 W         Control circuit/ Control       570 W		6 kV		
typical     2       Ambient conditions     ambient temperature       • during operation     -20 +60 °C       • during storage     -50 +80 °C       • during transport     -55 +80 °C       Main circuit     3       number of poles for main current circuit     3       design of the switching contact     electromechanical       adjustable current response value current of the current-dependent overload release     0.55 0.8 A       operating voltage     690 V       • at AC-3 rated value maximum     690 V       • at 400 V rated value     50 60 Hz       operating power at AC-3     180 W       • at 400 V rated value     180 W       • at 690 V rated value     370 W	shock resistance according to IEC 60068-2-27	6g / 11 ms		
Ambient conditions         ambient temperature         • during operation         • during storage         • during storage         • during transport         -50 +80 °C         Main circuit         number of poles for main current circuit         3         design of the switching contact         adjustable current response value current of the current-dependent overload release         operating voltage         • at AC-3 rated value         operating frequency rated value         operating power at AC-3         • at 400 V rated value         • at 400 V rated value         • at 400 V rated value         • at 690 V rated value         • at 690 V rated value         • at 690 V rated value         • at 400 V rated value         • at 690 V rated value		10 000 000		
ambient temperature       -20 +60 °C         • during storage       -50 +80 °C         • during transport       -55 +80 °C         Main circuit       3         number of poles for main current circuit       3         design of the switching contact       electromechanical         adjustable current response value current of the current-dependent overload release       0.55 0.8 A         operating voltage       690 V         • at AC-3 rated value       690 V         • operating frequency rated value       50 60 Hz         operating power at AC-3       0.6 A         operating power at AC-3       180 W         • at 400 V rated value       250 W         • at 690 V rated value       30 W         • at 690 V rated value       30 W         • at 400 V rated value       30 W         • at 400 V rated value       30 W         • at 690 V rated value       30 W	type of assignment	2		
• during operation-20 +60 °C• during storage-50 +80 °C• during transport-55 +80 °CMain circuit3number of poles for main current circuit3design of the switching contactelectromechanicaladjustable current response value current of the current-dependent overload release0.55 0.8 Aoperating voltage690 V• rated value690 V• at AC-3 rated value maximum690 Voperating frequency rated value50 60 Hzoperating power at AC-3180 W• at 400 V rated value180 W• at 690 V rated value370 WControl circuit/ Control	Ambient conditions			
• during storage       -50 +80 °C         • during transport       -55 +80 °C         Main circuit       3         number of poles for main current circuit       3         design of the switching contact       electromechanical         adjustable current response value current of the current-dependent overload release       0.55 0.8 A         operating voltage       690 V         • rated value       690 V         • at AC-3 rated value maximum       690 V         operating frequency rated value       50 60 Hz         operating power at AC-3       180 W         • at 400 V rated value       250 W         • at 690 V rated value       370 W	ambient temperature			
• during transport       -55 +80 °C         Main circuit       3         number of poles for main current circuit       3         design of the switching contact       electromechanical         adjustable current response value current of the current-dependent overload release       0.55 0.8 A         operating voltage       690 V         • rated value       690 V         • at AC-3 rated value maximum       690 V         operating frequency rated value       50 60 Hz         operating power at AC-3       60 Hz         operating power at AC-3       180 W         • at 500 V rated value       250 W         • at 690 V rated value       370 W	<ul> <li>during operation</li> </ul>	-20 +60 °C		
Main circuit       3         number of poles for main current circuit       3         design of the switching contact       electromechanical         adjustable current response value current of the current-dependent overload release       0.55 0.8 A         operating voltage       690 V         • rated value       690 V         • at AC-3 rated value maximum       690 V         operating frequency rated value       50 60 Hz         operating power at AC-3       0.6 A         operating power at AC-3       180 W         • at 400 V rated value       250 W         • at 690 V rated value       370 W	<ul> <li>during storage</li> </ul>	-50 +80 °C		
number of poles for main current circuit3design of the switching contactelectromechanicaladjustable current response value current of the current-dependent overload release0.55 0.8 Aoperating voltage690 V• rated value690 V• at AC-3 rated value maximum690 Voperating frequency rated value50 60 Hzoperating power at AC-3 at 400 V rated value0.6 Aoperating power at AC-3180 W• at 500 V rated value370 WControl circuit/ Control100 V	<ul> <li>during transport</li> </ul>	-55 +80 °C		
design of the switching contactelectromechanicaladjustable current response value current of the current-dependent overload release0.55 0.8 Aoperating voltage690 V• rated value690 V• at AC-3 rated value maximum690 Voperating frequency rated value50 60 Hzoperating power at AC-3 at 400 V rated value0.6 Aoperating power at AC-3180 W• at 400 V rated value250 W• at 690 V rated value370 WControl circuit/ Control	Main circuit			
adjustable current response value current of the current-dependent overload release0.55 0.8 Aoperating voltage • rated value690 V• at AC-3 rated value maximum690 Voperating frequency rated value50 60 Hzoperating power at AC-3 • at 400 V rated value0.6 Aoperating power at AC-3 • at 400 V rated value180 W• at 500 V rated value250 W• at 690 V rated value370 WControl circuit/ Control	number of poles for main current circuit	3		
current-dependent overload releaseoperating voltage• rated value690 V• at AC-3 rated value maximum690 Voperating frequency rated value50 60 Hzoperational current at AC-3 at 400 V rated value0.6 Aoperating power at AC-3180 W• at 400 V rated value250 W• at 690 V rated value370 WControl circuit/ Control	design of the switching contact	electromechanical		
• rated value690 V• at AC-3 rated value maximum690 Voperating frequency rated value50 60 Hzoperational current at AC-3 at 400 V rated value0.6 Aoperating power at AC-3180 W• at 400 V rated value250 W• at 500 V rated value370 WControl circuit/ Control	, ,	0.55 0.8 A		
• at AC-3 rated value maximum       690 V         operating frequency rated value       50 60 Hz         operational current at AC-3 at 400 V rated value       0.6 A         operating power at AC-3       0.6 A         • at 400 V rated value       180 W         • at 500 V rated value       250 W         • at 690 V rated value       370 W	operating voltage			
operating frequency rated value50 60 Hzoperational current at AC-3 at 400 V rated value0.6 Aoperating power at AC-3180 W• at 400 V rated value180 W• at 500 V rated value250 W• at 690 V rated value370 WControl circuit/ Control	<ul> <li>rated value</li> </ul>	690 V		
operational current at AC-3 at 400 V rated value     0.6 A       operating power at AC-3	<ul> <li>at AC-3 rated value maximum</li> </ul>	690 V		
operating power at AC-3     180 W       • at 400 V rated value     180 W       • at 500 V rated value     250 W       • at 690 V rated value     370 W	operating frequency rated value	50 60 Hz		
at 400 V rated value     at 500 V rated value     at 690 V rated value     370 W Control circuit/ Control	operational current at AC-3 at 400 V rated value	0.6 A		
at 500 V rated value 250 W     at 690 V rated value 370 W Control circuit/ Control	operating power at AC-3			
at 690 V rated value 370 W Control circuit/ Control	• at 400 V rated value	180 W		
Control circuit/ Control		250 W		
	<ul> <li>at 500 V rated value</li> </ul>			
control supply voltage at AC		370 W		
	• at 690 V rated value	370 W		

		4401	1		
• at 50 Hz rated value		110 \			
• at 50 Hz rated value		88 121 V			
• at 60 Hz rated value		120 V			
at 60 Hz rated value		96 132 V			
apparent holding power of magnet coil at A		7.2 V	A		
inductive power factor with the holding po coil	wer of the	0.28			
Auxiliary circuit					
number of NC contacts for auxiliary conta	cts	1			
number of NO contacts for auxiliary conta	cts	1			
Protective and monitoring functions					
trip class		CLAS	S 10		
design of the overload release		therm	al (bimetallic)		
response value current of instantaneous shor unit	t-circuit trip	10.4	4		
Short-circuit protection					
product function short circuit protection		Yes			
design of the short-circuit trip		magn	etic		
conditional short-circuit current (Iq)					
• at 400 V according to IEC 60947-4-1 ra	ted value	153 0	00 A		
Installation/ mounting/ dimensions					
mounting position		vertic	al		
fastening method		Snap-mounted to DIN rail or screw-mounted with additional push-in lug			
height		193.1 mm			
width		45 mi	n		
depth		97.1 ı	nm		
required spacing					
<ul> <li>for grounded parts</li> </ul>					
— forwards		10 m	n		
— backwards		0 mm			
— upwards		30 mi	n		
— at the side		9 mm			
— downwards		10 m	n		
<ul> <li>for live parts</li> </ul>					
— forwards		10 mi	10 mm		
— backwards		0 mm			
— upwards		30 mm			
— downwards		10 mm			
— at the side		9 mm			
Connections/ Terminals					
type of electrical connection for main current circuit		screw	screw-type terminals		
type of connectable conductor cross-sect	ons				
<ul> <li>for main contacts stranded</li> </ul>		1 1	0 mm², 2x (2.5 6 mm	n²)	
at AWG cables for main contacts		2x (1	2x (16 12), 2x (14 8)		
connectable conductor cross-section for main finely stranded with core end processing					
Safety related data					
B10 value with high demand rate according to SN 31920		1 000	1 000 000		
proportion of dangerous failures with high demand rate according to SN 31920		73 %			
protection class IP on the front according 60529		IP20			
touch protection on the front according to	IEC 60529	finger	-safe, for vertical conta	act from the front	
Certificates/ approvals					
General Product Approval	For use in ha		Declaration of Conformity	other	









**Confirmation** 

## **Further information**

Information- and Downloadcenter (Catalogs, Brochures,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RA2120-0HA23-0AK6

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2120-0HA23-0AK6

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-0HA23-0AK6

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RA2120-0HA23-0AK6&lang=en

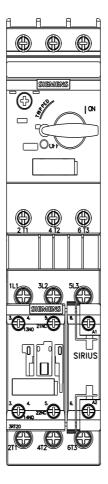
nitp://www.automation.siemens.com/bildub/cax\_de.aspx?milb=3RA2120-0HA2

Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-0HA23-0AK6/char

Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2120-0HA23-0AK6&objecttype=14&gridview=view1



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