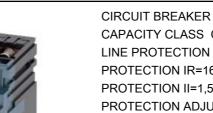
# **SIEMENS**

#### Data sheet



### 3VA2040-7HM42-0AA0

CIRCUIT BREAKER 3VA2 IEC FRAME 100 BREAKING CAPACITY CLASS C ICU=110KA @ 415 V 4POLE, LINE PROTECTION ETU330, LIG, IN=40A OVERLOAD PROTECTION IR=16A ...40A SHORT CIRCUIT PROTECTION II=1,5...12 X IN NEUTRAL PROTECTION ADJUSTABLE(OFF, 100%) GROUNDFAULTPROTECTION IG=0,2... 1 X IN, TG=0,1/0,3MS BUSBAR CONNECTION

Model		
product brand name		SENTRON
Product designation		Molded case circuit breaker
Design of the product	-	Line protection
Product variations	-	Selective Applications
Ground fault monitoring version	-	Summation current formation L + N conductor
Design of the auxiliary release		without auxiliaryrelease
Design of the auxiliary switch		Without
Design of the operating mechanism		toggle handle
Type of the driving mechanism / motor drive		No
Design of the overcurrent release	_	ETU330
General technical data		
Number of poles		4
Trip class / of the L-trip / with I2t characteristic / initial value	-	0.5
Trip class / of the L-trip / with I2t characteristic / Full- scale value		17
Electrical endurance (switching cycles)	-	
• at AC-1 / at 380/415 V / at 50/60 Hz		12 000
Total disconnection time / for G-tripping / with standard characteristic / initial value	S	0.1
Total disconnection time / for G-tripping / with standard characteristic / Full-scale value	S	0.3
circuit-breaker / Design		3VA
Mechanical service life (switching cycles) / typical		20 000

00000

Voltage		
Insulation voltage / Rated value	V	800
Protection class		
Protection class IP	_	IP40
Protection class IP / on the front	-	IP40
Protective function of the overcurrent release	-	LIG
Switching capacity		
Switching capacity class of the circuit breaker		С
Dissipation		
Active power loss		
• maximum	W	2.2
Electricity		
Continuous current / Rated value / maximum	A	100
Continuous current / Rated value	A	40
Adjustable response value current / of the	A	1.5
instantaneous short-circuit release / initial value		
Main circuit		
Operating voltage		
• with AC / at 50/60 Hz / Rated value	V	690
Operating current		
• at 40 °C / Rated value	А	40
● at 50 °C / Rated value	А	40
● at 60 °C / Rated value	A	40
• at 65 °C / Rated value	А	40
• at 70 °C / Rated value	А	40
Auxiliary circuit	_	
Number of NC contacts / for auxiliary contacts		0
Number of NO contacts / for auxiliary contacts		0
Suitability		
Suitability for use		system protection
Adjustable parameters		
Adjustable response value current		
• for G-tripping / with standard characteristic /	А	0.4
initial value		
<ul> <li>for G-tripping / with standard characteristic /</li> </ul>	А	1
Full-scale value		
<ul> <li>of I-trip / Full-scale value</li> </ul>	А	12
Adjustable response value current / of the current-	A	0.4
dependent overload release / initial value		

Product component     No       • display     No       • undervoltage release     No       Product property     • of the circuit breaker with tripping unit / Tripping characteristic adjustable     Yes       • for neutral conductors / upgradeable/retorfitable / Short-circuit and overload proof     No       Product function     Yes       Product function     Yes       Product function     Yes       Product function     Yes       • ontrunnication function     No       • onther measurement function     No       • other measurement function     No       • other measurement function     Strategradeable/retorfitable / Short-circuit and overload proof       Short circuit     Yes       Product function     No       • other measurement function     No       • other measurement function     No       • at 240 V / Rated value     KA     150       • at 240 V / Rated value     KA     110       • at 240 V / Rated value     KA     2       Maximum short-circuit current breaking capacity (tou)     Image: Short circuit       • at 240 V / Rated value     KA     150       • at 240 V / Rated value     KA     110       • at 240 V / Rated value     KA     2       Maximum short-circuit current breaking capacity (tou) <td< th=""><th>Product details</th><th></th><th></th></td<>	Product details		
• display • undervoltage releaseNo• undervoltage releaseNoProduct properly • of the circuit breaker with tripping unit / Tripping characteristic adjustableYes• for neutral conductors / upgradeable/retrofittable / Short-circuit and overload proofYesProduct expansion / optional / motor driveYesProduct functionYesProduct functionNo• Intrinsic device protectionYes• Intrinsic device protectionNo• ommunication functionNo• other measurement functionNo• other measurement functionNo• other measurement functionSVA2040-7HM42-0AA0• at 240 V / Rated valueKA• at 240 V / Rated val	Product component		
undervoltage releaseNoProduct property• of the circuit breaker with tripping unit / Tripping characteristic adjustableYes• of the circuit adjustable• No• or neutral conductors / upgradeable/retrofittable / Short-circuit and overload proofYesProduct functionYes• Droduct sampleYesProduct functionNo• Intrinsic device protectionYes• or neutral conductorsNo• or neutral conductorsNo• or neutral conductorsNo• Intrinsic device protectionYes• onther measurement functionNo• other measurement functionNo• other measurement functionNoShort circuitState valueYesState value• at 415 V / Rated valueKA• at 420 V / Rated valueKA• at 500 V / Rated valueKA• at 500 V / Rated valueKA• at 500 V / Rated valueKA• at 435 V / Rated valueKA• at 440 V / Rated value <t< td=""><td>Trip indicator</td><td></td><td>No</td></t<>	Trip indicator		No
Product progety       • of the circuit breaker with tripping unit / Tripping characteristic adjustable       Yes         • for neutral conductors / upgradeable/retrofittable / Short-circuit and overload proof       No         Product expansion / optional / motor drive       Yes         Product function       No         • intrinsic device protection       No         • other measurement function       No         • other measurement function       No         Accessories       StAz0240-7HM42-DAAO         Short circuit       Operational short-circuit current breaking capacity (ics)         • at 240 V / Rated value       KA       150         • at 415 V / Rated value       KA       110         • at 420 V / Rated value       KA       150         • at 690 V / Rated value       KA       150         • at 690 V / Rated value       KA       110         • at 440 V / Rated value       KA<	• display		No
• of the circuit breaker with tripping characteristic adjustableYes• for neutral conductors / upgradeable/intofittable / Short-circuit and overload proofNoProduct expansion / optional / motor driveYesProduct expansion / optional / motor driveYesProduct functionYes• Intrinsic device protectionYes• Intrinsic device protectionNo• Other measurement functionNo• other measurement functionNo• other measurement functionStort-circuit <b>Accessories</b> Stort-circuit current breaking capacity (rcs)• at 240 V / Rated valueKA• at 240 V / Rated valueKA• at 350 V / Rated valueKA• at 440 V / Rated valueKA• at 240 V /	<ul> <li>undervoltage release</li> </ul>		No
characteristic adjustable       intermediation and reprinting that it reprintit reprintit reprintit reprinting that it reprinting that it reprin	Product property	-	
InstructionImage: constraint of the second of t			Yes
Product function       Product function         Intrinsic device protection       No         icommunication function       No         Phase failure detection       No         other measurement function       No         Accessories       3VA2040-7HM42-0AA0         Short circuit       Operational short-circuit current breaking capacity (Ics)       3VA2040-7HM42-0AA0         • at 240 V / Rated value       kA       150         • at 240 V / Rated value       kA       110         • at 415 V / Rated value       kA       110         • at 440 V / Rated value       kA       150         • at 440 V / Rated value       kA       150         • at 690 V / Rated value       kA       150         • at 440 V / Rated value       kA       150         • at 690 V / Rated value       kA       150         • at 690 V / Rated value       kA       110         • at 400 V / Rated value       kA       120         • at 400 V / Rated value       kA       120         • at 690 V / Rated value       kA       120         • at 690 V / Rated value       kA       2         Short-circuit current making capacity (tem)       -       -         • at 240 V / Rated value <td>upgradeable/retrofittable / Short-circuit and</td> <td></td> <td>No</td>	upgradeable/retrofittable / Short-circuit and		No
Product function       Intrinsic device protection       Yes         • communication function       No         • Phase failure detection       No         • other measurement function       No         • other measurement function       No         Accessories       3VA2040-7HM42-0AA0         Short circuit       3VA2040-7HM42-0AA0         Operational short-circuit current breaking capacity (los)       4         • at 240 V / Rated value       KA       150         • at 415 V / Rated value       KA       110         • at 400 V / Rated value       KA       110         • at 400 V / Rated value       KA       110         • at 400 V / Rated value       KA       2         Maximum short-circuit current breaking capacity (low)       4         • at 690 V / Rated value       KA       150         • at 400 V / Rated value       KA       150         • at 400 V / Rated value       KA       2         Maximum short-circuit current breaking capacity (low)       4         • at 400 V / Rated value       KA       110         • at 400 V / Rated value       KA       110         • at 400 V / Rated value       KA       2         Short-circuit current making capacity (low)	Product expansion / optional / motor drive		Yes
Product function       Intrinsic device protection       Yes         • communication function       No         • Phase failure detection       No         • other measurement function       No         • other measurement function       No         Accessories       3VA2040-7HM42-0AA0         Short circuit       3VA2040-7HM42-0AA0         Operational short-circuit current breaking capacity (los)       4         • at 240 V / Rated value       KA       150         • at 415 V / Rated value       KA       110         • at 400 V / Rated value       KA       110         • at 400 V / Rated value       KA       110         • at 400 V / Rated value       KA       2         Maximum short-circuit current breaking capacity (low)       4         • at 690 V / Rated value       KA       150         • at 400 V / Rated value       KA       150         • at 400 V / Rated value       KA       2         Maximum short-circuit current breaking capacity (low)       4         • at 400 V / Rated value       KA       110         • at 400 V / Rated value       KA       110         • at 400 V / Rated value       KA       2         Short-circuit current making capacity (low)	Product function		
Phase failure detectionNo• other measurement functionNoAccessoriesManufacturer article number / of the supplied basic switch3VA2040-7HIM42-0AA0Operational short-circuit current breaking capacity (tcs)Image: Context of the supplied basic switchOperational short-circuit current breaking capacity (tcs)KA150• at 240 V / Rated valueKA150• at 415 V / Rated valueKA110• at 440 V / Rated valueKA110• at 450 V / Rated valueKA2• at 690 V / Rated valueKA150• at 690 V / Rated valueKA150• at 440 V / Rated valueKA150• at 440 V / Rated valueKA2• at 440 V / Rated valueKA150• at 440 V / Rated valueKA110• at 450 V / Rated valueKA2• at 400 V / Rated valueKA330• at 400 V / Rated valueKA330• at 440 V / Rated valueKA330• at 440 V / Rated valueKA242• at 440 V / Rated valueKA242• at 440 V / Rated valueKA242• at 440 V / Rated valueKA330• at 440 V / Rated valueKA342• at 440 V / Rated valueKA342<	<ul> <li>Intrinsic device protection</li> </ul>		Yes
• other measurement functionNoAccessoriesSVA2040-7HM42-0AA0Manufacturer article number / of the supplied basic switchSVA2040-7HM42-0AA0Short circuitSVA2040-7HM42-0AA0Operational short-circuit current breaking capacity (tcs)SVA2040-7HM42-0AA0• at 240 V / Rated valueKA150• at 240 V / Rated valueKA150• at 415 V / Rated valueKA110• at 440 V / Rated valueKA110• at 690 V / Rated valueKA85• at 690 V / Rated valueKA150• at 690 V / Rated valueKA150• at 690 V / Rated valueKA150• at 240 V / Rated valueKA150• at 690 V / Rated valueKA150• at 240 V / Rated valueKA150• at 415 V / Rated valueKA2• at 440 V / Rated valueKA2• at 690 V / Rated valueKA2• at 690 V / Rated valueKA2• at 690 V / Rated valueKA2• at 440 V / Rated valueKA2• at 440 V / Rated valueKA2• at 440 V / Rated valueKA330• at 440 V / Rated valueKA330• at 240 V / Rated valueKA242• at 440 V / Rated valueKA242• at 440 V / Rated valueKA<	<ul> <li>communication function</li> </ul>		No
Accessories         Manufacturer article number / of the supplied basic switch       3VA2040-7HM42-0AA0         Short circuit       Short circuit current breaking capacity (ics)       at 240 V / Rated value         • at 240 V / Rated value       kA       150         • at 240 V / Rated value       kA       110         • at 415 V / Rated value       kA       110         • at 440 V / Rated value       kA       110         • at 440 V / Rated value       kA       150         • at 690 V / Rated value       kA       150         • at 240 V / Rated value       kA       10         • at 400 V / Rated value       kA       10         • at 400 V / Rated value       kA       150         • at 690 V / Rated value       kA       150         • at 240 V / Rated value       kA       110         • at 240 V / Rated value       kA       110         • at 415 V / Rated value       kA       110         • at 400 V / Rated value       kA       2         Short-circuit current making capacity (Icm)       it 690 V / Rated value         • at 690 V / Rated value       kA       2         Short-circuit current making capacity (Icm)       it 3240 V / Rated value         • at 415 V / Rated value <td><ul> <li>Phase failure detection</li> </ul></td> <td></td> <td>No</td>	<ul> <li>Phase failure detection</li> </ul>		No
Manufacturer article number / of the supplied basic       3VA2040-7HM42:0AA0         switch       Short circuit         Operational short-circuit current breaking capacity (ics)       4         • at 240 V / Rated value       kA         • at 415 V / Rated value       kA         • at 440 V / Rated value       kA         • at 690 V / Rated value       kA         • at 690 V / Rated value       kA         • at 240 V / Rated value       kA         • at 690 V / Rated value       kA         • at 690 V / Rated value       kA         • at 240 V / Rated value       kA         • at 240 V / Rated value       kA         • at 440 V / Rated value       kA         • at 440 V / Rated value       kA         • at 440 V / Rated value       kA         • at 450 V / Rated value       kA         • at 690 V / Rated value       kA         • at 400 V / Rated val	<ul> <li>other measurement function</li> </ul>		No
Manufacturer article number / of the supplied basic       3VA2040-7HM42:0AA0         switch       Short circuit         Operational short-circuit current breaking capacity (ics)       4         • at 240 V / Rated value       kA         • at 415 V / Rated value       kA         • at 440 V / Rated value       kA         • at 690 V / Rated value       kA         • at 690 V / Rated value       kA         • at 240 V / Rated value       kA         • at 690 V / Rated value       kA         • at 690 V / Rated value       kA         • at 240 V / Rated value       kA         • at 240 V / Rated value       kA         • at 440 V / Rated value       kA         • at 440 V / Rated value       kA         • at 440 V / Rated value       kA         • at 450 V / Rated value       kA         • at 690 V / Rated value       kA         • at 400 V / Rated val	A 22222	_	
switchImage: Constraint of the set of the		_	3\/A2040.7HM42.0AA0
(ics)         Image: Constraint of the symbol of the s	Short circuit Operational short-circuit current breaking capacity		
• at 240 V / Rated valueKA150• at 415 V / Rated valueKA110• at 440 V / Rated valueKA110• at 450 V / Rated valueKA85• at 690 V / Rated valueKA2• at 690 V / Rated valueKA150• at 240 V / Rated valueKA150• at 240 V / Rated valueKA150• at 240 V / Rated valueKA110• at 415 V / Rated valueKA110• at 440 V / Rated valueKA110• at 690 V / Rated valueKA85• at 690 V / Rated valueKA30• at 690 V / Rated valueKA330• at 690 V / Rated valueKA330• at 690 V / Rated valueKA32• at 690 V / Rated valueKA330• at 415 V / Rated valueKA330• at 415 V / Rated valueKA324• at 415 V / Rated valueKA324• at 440 V / Rated valueKA324• at 440 V / Rated valueKA330• at 440 V / Rated valueKA342• at 440 V / Rated va			
<ul> <li>at 440 V / Rated value</li> <li>at 440 V / Rated value</li> <li>kA 110</li> <li>at 500 V / Rated value</li> <li>kA 85</li> <li>at 690 V / Rated value</li> <li>kA 2</li> </ul> Maximum short-circuit current breaking capacity (Icu) <ul> <li>at 240 V / Rated value</li> <li>kA 150</li> <li>at 415 V / Rated value</li> <li>kA 110</li> <li>at 440 V / Rated value</li> <li>kA 110</li> <li>at 690 V / Rated value</li> <li>kA 855</li> <li>at 690 V / Rated value</li> <li>kA 22</li> </ul> Short-circuit current making capacity (Icm) <ul> <li>at 240 V / Rated value</li> <li>kA 855</li> <li>at 690 V / Rated value</li> <li>kA 855</li> <li>at 690 V / Rated value</li> <li>kA 330</li> </ul> Short-circuit current making capacity (Icm) <ul> <li>at 240 V / Rated value</li> <li>kA 242</li> <li>at 415 V / Rated value</li> <li>kA 242</li> <li>at 440 V / Rated value</li> <li>kA 187</li> </ul>	• at 240 V / Rated value	kA	150
<ul> <li>at 100 V / Rated value</li> <li>kA 85</li> <li>at 500 V / Rated value</li> <li>kA 2</li> </ul> Maximum short-circuit current breaking capacity (Icu) <ul> <li>at 240 V / Rated value</li> <li>kA 150</li> <li>at 415 V / Rated value</li> <li>kA 110</li> <li>at 440 V / Rated value</li> <li>kA 110</li> <li>at 500 V / Rated value</li> <li>kA 85</li> <li>at 690 V / Rated value</li> <li>kA 22</li> </ul> Short-circuit current making capacity (Icm) <ul> <li>at 240 V / Rated value</li> <li>kA 22</li> </ul> Short-circuit current making capacity (Icm) <ul> <li>at 240 V / Rated value</li> <li>kA 22</li> </ul> Short-circuit current making capacity (Icm) <ul> <li>at 240 V / Rated value</li> <li>kA 330</li> <li>at 415 V / Rated value</li> <li>kA 242</li> <li>at 415 V / Rated value</li> <li>kA 242</li> <li>at 440 V / Rated value</li> <li>kA 242</li> <li>at 440 V / Rated value</li> <li>kA 242</li> </ul>	• at 415 V / Rated value	kA	110
eat 500 V / Rated valuekA85• at 690 V / Rated valuekA2Maximum short-circuit current breaking capacity (Icu)• at 240 V / Rated valuekA150• at 415 V / Rated valuekA110• at 440 V / Rated valuekA110• at 440 V / Rated valuekA85• at 690 V / Rated valuekA85• at 690 V / Rated valuekA2• at 690 V / Rated valuekA330• at 240 V / Rated valuekA324• at 240 V / Rated valuekA324• at 240 V / Rated valuekA330• at 415 V / Rated valuekA242• at 440 V / Rated valuekA242• at 440 V / Rated valuekA316	• at 440 V / Rated value	kA	110
Maximum short-circuit current breaking capacity (Icu)KA150• at 240 V / Rated valuekA110• at 415 V / Rated valuekA110• at 440 V / Rated valuekA110• at 500 V / Rated valuekA85• at 690 V / Rated valuekA2Short-circuit current making capacity (Icm)		kA	85
• at 240 V / Rated valuekA150• at 240 V / Rated valuekA110• at 440 V / Rated valuekA110• at 500 V / Rated valuekA85• at 690 V / Rated valuekA2Short-circuit current making capacity (Icm)	• at 690 V / Rated value	kA	2
• at 415 V / Rated valuekA110• at 440 V / Rated valuekA110• at 500 V / Rated valuekA85• at 690 V / Rated valuekA2Short-circuit current making capacity (Icm)	Maximum short-circuit current breaking capacity (Icu)	-	
• at 440 V / Rated valuekA110• at 500 V / Rated valuekA85• at 690 V / Rated valuekA2Short-circuit current making capacity (Icm)	• at 240 V / Rated value	kA	150
• at 500 V / Rated value       kA       85         • at 690 V / Rated value       kA       2         Short-circuit current making capacity (Icm)       -       -         • at 240 V / Rated value       kA       330         • at 415 V / Rated value       kA       242         • at 440 V / Rated value       kA       242         • at 450 V / Rated value       kA       242		kA	110
• at 500 V / Rated value       kA       85         • at 690 V / Rated value       kA       2         Short-circuit current making capacity (Icm)       -       -         • at 240 V / Rated value       kA       330         • at 415 V / Rated value       kA       242         • at 440 V / Rated value       kA       242         • at 500 V / Rated value       kA       310		kA	110
• at 690 V / Rated valuekA2Short-circuit current making capacity (Icm)-• at 240 V / Rated valuekA330• at 415 V / Rated valuekA242• at 440 V / Rated valuekA242• at 500 V / Rated valuekA187		kA	85
• at 240 V / Rated valuekA330• at 415 V / Rated valuekA242• at 440 V / Rated valuekA242• at 500 V / Rated valuekA187	• at 690 V / Rated value	kA	2
• at 240 V / Rated valuekA330• at 415 V / Rated valuekA242• at 440 V / Rated valuekA242• at 500 V / Rated valuekA187			
• at 415 V / Rated valuekA242• at 440 V / Rated valuekA242• at 500 V / Rated valuekA187		kA	330
• at 500 V / Rated value kA 187		kA	242
• at 500 V / Rated value kA 187	• at 440 V / Rated value	kA	242
		kA	187
		kA	3

<ul><li>Equipment marking</li><li>acc. to DIN EN 61346-2</li><li>acc. to DIN EN 81346-2</li></ul>		Q				
Certificates	-	_				
	U	00				
<ul> <li>during storage / minimum</li> <li>during storage / maximum</li> </ul>	°C		80			
during operation / maximum	°C °C	-40	70			
during operation / minimum	°C	-25				
Ambient temperature						
Environmental conditions	-					
Mounting type		fixed moun	fixed mounting			
Depth	mm	107				
Width	mm	140	140			
Height	mm	181				
Mechanical Design						
Type of electrical connection / for main current circuit		Lug termin	Lug terminal			
• for flat-bar terminal connection / maximum		25 x 8.5	25 x 8.5			
• for flat-bar terminal connection / minimum		13 x 1 mm	13 x 1 mm			
Type of connectable conductor cross-section	-					
current circuit		Front termi				

#### Further information

Information- and Downloadcenter (Catalogs, Brochures,...) http://www.siemens.com/lowvoltage/catalogs

Industry Mall (Online ordering system)

https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/3VA20407HM420AA0

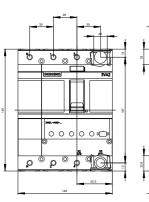
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA20407HM420AA0/all

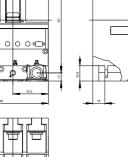
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA20407HM420AA0

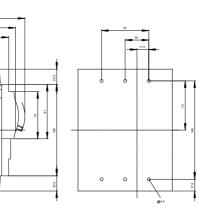
CAx-Online-Generator http://www.siemens.com/cax

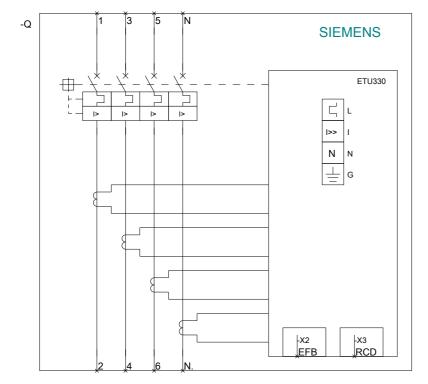
## Tender specifications

http://ausschreibungstexte.siemens.com/tiplv









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11.03.2015