SIEMENS

Data sheet

3VL1702-1DD33-0AA0

circuit breaker VL160X N standard breaking capacity Icu=55kA, 415V AC 3-pole, line protection Trip Unit TM, LI In=20A, rated current Ir=16...20A, overload prot. II=300A, short-circuit prot. without auxiliary release without auxiliary/alarm switch

Model	II-SUOA, Short-Circuit prot. without auxiliary release without auxiliary/alarm switch
type of the driving mechanism motor drive	No
design of the overcurrent release	TM
General technical data	
number of poles	3
size of the circuit-breaker	3VL1
mechanical service life (operating cycles) typical	20 000
electrical endurance (operating cycles) typical	10 000
utilization category	A
performance class for circuit breaker	N
reference code according to DIN 40719 extended according to IEC 204-2 according to IEC 750	Q
operating frequency maximum	120 1/s
Voltage	
Rated operational voltage Ue max.	690 V
 insulation voltage rated value 	800 V
 insulation voltage (Ui) at AC rated value 	800 V
surge voltage resistance rated value	8 kV
operating voltage	
rated value maximum	690 V
 for main current circuit at AC at 50 Hz maximum 	690 V
 for main current circuit at AC at 60 Hz maximum 	690 V
 for main current circuit at DC maximum 	500 V
Protection class	
protection class IP	IP20
protection function of the overcurrent release	
Main circuit	
operating frequency	
• 1 rated value	50 Hz
2 rated value	60 Hz
Auxiliary circuit	
number of CO contacts for auxiliary contacts	0
number of NC contacts for auxiliary contacts	0
number of NO contacts for auxiliary contacts	0
Suitability	
suitability for use	system protection
Adjustable parameters	System protection
adjustable current response value current of the current- dependent overload release initial value	16 A
Product details	
product component	
trip indicator	No
auxiliary switch	No
voltage trigger	No
undervoltage release	No
undervoltage release undervoltage release with leading contact	No
product extension optional motor drive	Yes
Product extension optional motor drive	
product function	
production	

• of themal overload tip unit • grounding protection • overload • overload protection • overload protection • overload protection • overload protection • overload		
 for neutral conductors short-circuit and overload proof verehoad protection Yes Yes	 of thermal overload trip unit 	adjustable
• overload protection Yes Short circuit	 grounding protection 	No
Short circuit operating short-circuit current breaking capacity (Ics) 65 kA • at 260 V rated value 55 kA • at 300 V rated value 14 kA • at 300 V rated value 4 kA maximum short-circuit current breaking capacity (Icu) 65 kA • at 400 V rated value 65 kA • at 415 V rated value 55 kA • at 415 V rated value 55 kA • at 410 V rated value 55 kA • at 410 V rated value 25 kA • at 400 V rated value 18 kA • at 600 V according to NEMA rated value 3 kA • at 600 V according to NEMA rated value 8 kA • at 600 V according to NEMA rated value 8 kA • at 600 V according to NEMA rated value 8 kA • at 600 V rated value 8 kA • at 600 V rated value 8 kA • at 600 V according to NEMA rated value 8 kA • at 600 V according to NEMA rated value 8 kA • at 600 V according to NEMA rated value 8 kA • at 600 V according to NEMA rated value 8 kA • at 600 V according to NEMA rated value 25 95 mm² • wolin flexible busbar 25 9	 for neutral conductors short-circuit and overload proof 	No
operating shot-circuit current breaking capacity (ics) 65 kA • at 240 V rated value 65 kA • at 415 V rated value 55 kA • at 500 V rated value 14 kA • at 600 V rated value 4 kA maximum short-circuit current breaking capacity (icu) 65 kA • at 240 V rated value 65 kA • at 450 V rated value 65 kA • at 430 V rated value 25 kA • at 430 V rated value 8 kA • at 600 V rated value 2 k 10 mm • at 600 V rated value 2 5 95 mm² • bye of connectable conductor cross-sections for auxiliary contacts 2 5 95 mm² • solid 0.75 1.5 mm² • fiely thanded with co	 overload protection 	Yes
• at 240 V rated value 65 kÅ • at 415 V rated value 55 kÅ • at 450 V rated value 4 kÅ • at 800 V rated value 4 kÅ • at 800 V rated value 65 kÅ • at 415 V rated value 65 kÅ • at 420 V rated value 65 kÅ • at 420 V rated value 65 kÅ • at 420 V rated value 55 kÅ • at 420 V rated value 55 kÅ • at 420 V rated value 55 kÅ • at 800 V rated value 25 kÅ • at 800 V rated value 25 kÅ • at 800 V rated value 8 kÅ • at 800 V rated value 2 s \0 mm • at 800 V rated value 2 s \0 mm ² • at 800 V rated value 2 s \0 mm ² • sidi 0.75 15 mm ² • forly stranded 0.75 10 mm ²	Short circuit	
• at 415 V rated value 55 kÅ • at 500 V rated value 14 kÅ • at 690 V rated value 65 kÅ • at 415 V rated value 65 kÅ • at 416 V rated value 55 kÅ • at 416 V rated value 25 kÅ • at 400 V according to NEMA rated value 25 kÅ • at 600 V rated value 8 kÅ • at 600 V rated value 25 95 mm² • with flexible busbar 0,75 15 mm² • standed 0,75 15 mm²	operating short-circuit current breaking capacity (lcs)	
• at 500 V rated value 14 kA • at 500 V rated value 4 kA maximum short-dicuit current breaking capacity (Icu) 5 kA • at 240 V rated value 65 kA • at 415 V rated value 55 kA • at 440 V rated value 25 kA • at 440 V according to NEMA rated value 25 kA • at 600 V according to NEMA rated value 8 kA • at 600 V rated value 25 95 mm ³ • stranded 25 95 mm ³ Vpe of	• at 240 V rated value	65 kA
• at 690 V rated value 4 kA maximum short-circuit current breaking capacity (Icu) 55 kA • at 240 V rated value 55 kA • at 415 V rated value 25 kA • at 480 V raced value 25 kA • at 480 V rated value 25 kA • at 480 V rated value 25 kA • at 600 V rated value 8 kA • at 600 V according to NEMA rated value 8 kA • at 600 V rated value 7 kA • at 600 V rated value 12 x 10 mn • solid 2.5 95 mm ³ • solid 0.75 1.5 mm ³ • solid 0.75 1.5 mm ³ • finely stranded with core end processing 0.75 1.0 mm ² • finely strande with core end processing 0.75 1.0 mm ² <	• at 415 V rated value	55 kA
maximum short-circuit current breaking capacity (icu)	• at 500 V rated value	14 kA
• at 240 V rated value 65 kA • at 415 V rated value 55 kA • at 440 V rated value 25 kA • at 440 V rated value 25 kA • at 480 V coording to NEMA rated value 25 kA • at 600 V according to NEMA rated value 8 kA • at 600 V rated value 9 kA • solid 2.5 95 mm ³ • solid 0.75 1.5 mm ³ • solid 0.75 1.0 mm ² • beight 104.5 mm restriction connectable conductor cross-sections for auxillary contacts intervinonmetal conditions endight 104.5 mm intervinonmetal conditi	• at 690 V rated value	4 kA
• at 415 V rated value 55 kÅ • at 440 V rated value 25 kÅ • at 480 V according to NEMA rated value 25 kÅ • at 600 V rated value 8 kÅ • solid 2.5 95 mm ³ • standed 2.5 95 mm ³ • solid 0.75 1.5 mm ³ • solid 0.75 1.5 mm ³ • solid 0.75 1.5 mm ³ • solid 164.5 mm • depth 164.5 mm fastening method <td>maximum short-circuit current breaking capacity (Icu)</td> <td></td>	maximum short-circuit current breaking capacity (Icu)	
• at 440 V rated value 25 kA • at 480 V according to NEMA rated value 25 kA • at 600 V rated value 18 kA • at 600 V rated value 8 kA • at 600 V rated value 6 not side • with flexible busbar 12 x 10 mm • solid 2.5 95 mm² • solid 2.5 95 mm² • solid 0.75 15 mm² • solid 0.75 15 mm² • solid 0.75 10 mm² • finely stranded with core end processing 0.75 10 mm² • solid 0.75 10 mm² • solid 0.75 10 mm² • finely stranded with core end processing 0.75 10 m² • solid 0.75 10 m² • solid 0.75 10 m² • finely stranded with core end processing 0.75 10 m² • solid 0.75 10 m² • solid 10.75 mm width	at 240 V rated value	65 kA
• at 480 V according to NEMA rated value 25 kA • at 500 V rated value 18 kA • at 600 V rated value 8 kA • at 600 V rated value 12 k 10 mm • solid 2.5 50 mm ³ • solid 2.5 50 mm ³ • solid 0.75 1.5 mm ³ • solid 0.75 1.0 mm ³ • pe of electrical connection for main current circuit box terminal Mechanical Design 104.5 mm fastening method fixed mounting Environmetal conditions recervice kan	• at 415 V rated value	55 kA
• at 500 V rated value 18 kA • at 600 V according to NEMA rated value 8 kA • at 690 V rated value 8 kA • stonectable conductor cross-sections for main current circuit front side • solid 0.75 15 mm² • solid 0.75 1.5 mm² • solid 0.75 10 mm² • solid 0.75 10 mm² • beight 167.5 mm width 104.5 mm depth 106.5 mm fastening method fixed mounting Environmental conditions - • maximum 70 °C • maximum 70 °C • maximum 60 °C • maximum 60 °C	• at 440 V rated value	25 kA
• at 500 V rated value 18 kA • at 600 V according to NEMA rated value 8 kA • at 600 V rated value 8 kA • solid 6 fort side • with flexible bushar 12 x 10 mm • solid 2.5 50 mm² • finely stranded with core end processing 2.5 50 mm² • solid 0.75 1.5 mm² • solid 0.75 1.5 mm² • solid 0.75 1.5 mm² • solid 0.75 1.0 mm² • solid 0.75 1.0 mm² • attrade to end processing 0.75 1.0 m² • solid 0.75 1.5 mm² • attrade to end processing 0.75 1.5 mm² • attrade to end force 6.5 mm • attrade to end force 6.5 mm • attrade to end force force	 at 480 V according to NEMA rated value 	25 kA
• at 690 V rated value 8 kA Connections arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections for main contacts • with flexible busbar • solid 2.5 95 mm ³ 2.5 95	-	18 kA
• at 690 V rated value 8 kA Connections arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections for main contacts • with flexible busbar • solid 2.5 95 mm ³ 2.5 95	 at 600 V according to NEMA rated value 	8 kA
arrangement of electrical connectors for main current circuit front side type of connectable conductor cross-sections for main contacts 12 x 10 mm • solid 2.5 95 mm² • solid 2.5 95 mm² • stranded 2.5 95 mm² type of connectable conductor cross-sections for auxiliary contacts 2.5 95 mm² • solid 0.75 1.5 mm² • solid 0.75 1.5 mm² • finely stranded with core end processing 0.75 1.0 mm² • per of electrical connection for main current circuit box terminal Mechanical Design 157.5 mm height 166.5 mm fastening method fixed mounting Environmental conditions ambient temperature during operation • minimum 0 °C • maximum 40 °C • maximum 80 °C Approvals Certificates Food, Pharmaceutical, Medical	0	8 kA
type of connectable conductor cross-sections for main contacts with flexible busbar solid C.595 mm² c.590 mm² c.590 mm² c.590 mm² c.590 mm² c.590 mm² c.590 mm² connectable conductor cross-sections for auxiliary contacts solid c.590 mm² c.590 mm² connectable conductor cross-sections for auxiliary contacts solid c.590 mm² contacts contact contacts conta	Connections	
 with flexible busbar solid 2.5 95 mm² stranded with core end processing stranded 2.5 95 mm² 2.5 10 mm² 2.5 mm² 2	arrangement of electrical connectors for main current circuit	front side
 with fiexible busbar solid 2.5 95 mm² 5.5 mm²	-	
 finely stranded with core end processing stranded stranded stranded stranded 2.5 95 mm³ 		12 x 10 mm
• standed 2.5 95 mm² type of connectable conductor cross-sections for auxiliary contacts 0.75 1.5 mm² • solid 0.75 1.5 mm² • finely stranded with core end processing 0,75 1.0 mm² type of electrical connection for main current circuit box terminal Mechanical Design 0.75 1.0 mm² height 157.5 mm width 104.5 mm depth 106.5 mm fastening method fixed mounting Environmental conditions Image: Contact of	• solid	2.5 95 mm²
• stranded 2.5 95 mm ² type of connectable conductor cross-sections for auxiliary contacts 0.75 1.5 mm ² • solid 0.75 1.5 mm ² • finely stranded with core end processing 0,75 1.0 mm ² type of electrical connection for main current circuit box terminal Mechanical Design 0.75 1.0 mm ² height 157.5 mm width 104.5 mm depth 106.5 mm fastening method fixed mounting Environmental conditions ambient temperature during operation • maximum 70 °C ambient temperature during storage -40 °C • minimum -40 °C • maximum 80 °C	 finely stranded with core end processing 	2.5 50 mm²
contacts 0.75 1.5 mm² • solid 0.75 1.0 mm² • finely stranded with core end processing 0,75 1.0 mm² type of electrical connection for main current circuit box terminal Mechanical Design 100.5 mm height 157.5 mm width 104.5 mm depth 106.5 mm fastening method fixed mounting Environmental conditions 100 °C ambient temperature during operation 0 °C • minimum 0 °C • maximum 70 °C ambient temperature during storage -40 °C • maximum 80 °C Approvals Certificates Food, Pharmaceutical, Medical		2.5 95 mm²
• finely stranded with core end processing 0,75 1.0 mm² type of electrical connection for main current circuit box terminal Mechanical Design 157.5 mm height 157.5 mm width 104.5 mm depth 106.5 mm fastening method fixed mounting Environmental conditions if width ambient temperature during operation 0 °C • maximum 0 °C ambient temperature during storage		
type of electrical connection for main current circuit box terminal Mechanical Design 157.5 mm height 157.5 mm width 104.5 mm depth 106.5 mm fastening method fixed mounting Environmental conditions ambient temperature during operation maximum 0 °C maximum 70 °C ambient temperature during storage maximum 40 °C maximum 80 °C Approvals Certificates General Product Approval 	• solid	0.75 1.5 mm²
Mechanical Design height 157.5 mm width 104.5 mm depth 106.5 mm fastening method fixed mounting Environmental conditions Image: Condition state in the state state in the state in the state in the state in the s	 finely stranded with core end processing 	0,75 1.0 mm²
height 157.5 mm width 104.5 mm depth 106.5 mm fastening method fixed mounting Environmental conditions Image: Constraint of the second sec	type of electrical connection for main current circuit	box terminal
width 104.5 mm depth 106.5 mm fastening method fixed mounting Environmental conditions intervention ambient temperature during operation 0 °C • minimum 0 °C • maximum 70 °C ambient temperature during storage - • minimum -40 °C • maximum 80 °C	Mechanical Design	
depth 106.5 mm fastening method fixed mounting Environmental conditions intervention ambient temperature during operation 0 °C • maximum 0 °C • maximum 70 °C ambient temperature during storage -40 °C • minimum -40 °C • maximum 80 °C Approvals Certificates Food, Pharmaceutical, Medical	height	157.5 mm
fastening method fixed mounting Environmental conditions Image: Conditions ambient temperature during operation 0 °C • maximum 70 °C ambient temperature during storage -40 °C • maximum 80 °C Approvals Certificates Food, Pharmaceutical, Medical	width	- 104.5 mm
Environmental conditions ambient temperature during operation • minimum 0 °C • maximum 70 °C ambient temperature during storage • minimum -40 °C • maximum 80 °C Approvals Certificates Food, Pharmaceutical, Medical	depth	- 106.5 mm
Environmental conditions ambient temperature during operation • minimum 0 °C • maximum 70 °C ambient temperature during storage • minimum -40 °C • maximum 80 °C Approvals Certificates Food, Pharmaceutical, Medical	fastening method	- fixed mounting
	ambient temperature during operation	
		0 °C
ambient temperature during storage		70 °C
maximum 80 °C Approvals Certificates General Product Approval Food, Pharmaceutical, Medical Manufacturer Declaration of Conc. Special Test Certificates		-40 °C
Approvals Certificates General Product Approval Food, Pharmaceutical, Medical Manufacturer Declaration of Cont Special Test Certification		
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 Further information

 Information on the packaging

 https://support.industry.siemens.com/cs/ww/en/view/109813875

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

 http://www.siemens.com/lowvoltage/catalogs

 Industry Mall (Online ordering system)

 https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VL1702-1DD33-0AA0

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

 https://support.industry.siemens.com/cs/ww/en/ps/3VL1702-1DD33-0AA0

 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

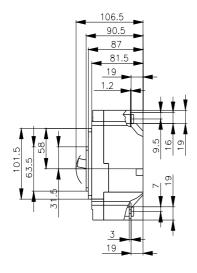
 http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VL1702-1DD33-0AA0

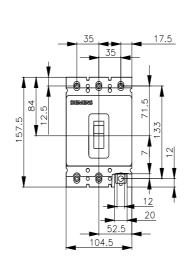
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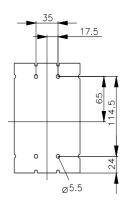
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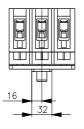
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