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CIRCUIT-BREAKER VL 160N STANDARD BREAKING CAPACITY ICU=55KA / 415 V AC 3 POLE, LINE PROTECTION OVERCURRENT RELEASE TM, LI IN=160A, RATED CURRENT IR=125-160A, OVERLOAD II=800-1600A, SHORT CIRCUIT WITH SCREW CONNECTION

General technical data:			
Number of poles		3	
Design of the overcurrent release		TM	
Acceptability for application		system protection	
Electrical operating cycles as operating time / typical		10,000	
Mechanical operating cycles as operating time / typical		20,000	
Active power loss / maximum	W	48	
Product component			
auxiliary switch		No	
Voltage trigger		No	
undervoltage release mechanism		No	
undervoltage release with leading contact		No	
Product function			
of the thermal overload release		adjustable	
ground-fault protection		No	
• for zero conductors / short-circuit and overload protection		No	
overload protection		Yes	
Operating cycles / maximum	1/s	120	
Protection class IP		IP20	

Mapleise voltage resistance / rated value	Protective function of the overcurrent release		и
• during operating • minimum °C -25 • maximum °C 70 • during storage • minimum °C 40 • maximum °C 50 Main circuit: Insulation voltage / for AC / rated value V 800 • Poperating frequency • Itz 50 • 1 / rated value Hz 50 • 1 / rated value Hz 60 • Item designation • 80 • 80 • according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 Q • 90 • according to DIN EN 61346-2 Q Q Operating voltage • 690 • 690 • for maximum V 690 • at 80 Hz / for AC • 90 • maximum V 690 • for DC • 800 • maximum V 500 Operating current • 40 °C / rated value A 160 • at 50 °C / rated value A 160 • at 50 °C / rated value	Impulse voltage resistance / rated value	kV	8
• minimum °C 25 • during storage - rinimum °C 40 • maximum °C 50 Main circuit: Insulation voltage / for AC / rated value V 800 Operating frequency • 1/ rated value Hz 50 • 2 / rated value Hz 60 Item designation • according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 Q • box 750 For AC Q • maximum or IEC 750 Q • according to DIN EN 61346-2 Q Operating voltage V 690 • for maximum V 690 • at 60 Hz / for AC • maximum V 690 • for DC • maximum V 690 • for DC • maximum V 500 • for DC • maximum A 160 • at 60 °C / rated value A 160 • at 60 °C / rated value A 160 • at 7	Ambient temperature		
• maximum °C 70 • during storage ************************************	during operating		
- during storage - minimum - maximum **C 40 **C 50 **Main circuit: **Insulation voltage / for AC / rated value **Operating frequency - 1 / rated value - 1 / rated value - 2 / rated value - 1 / rated value - 2 / rated value - 3 / rated value - 4 / 60 **Item designation - according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 - according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 - according to DIN 810 61346-2 **Operating voltage - for main current circuit - at 50 Hz / for AC - maximum - at 60 Hz / for AC - maximum - for DC - maximum - for DC - maximum - at 40 °C / rated value - at 40 °C / rated value - at 60 °C / rated value - at 70 °C / rated	• minimum	°C	-25
• minimum °C -40 • maximum °C 50 Main circuit: Insulation voltage / for AC / rated value V 800 Operating frequency • 1 / rated value Hz 50 • 2 / rated value Hz 60 Item designation • according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 Q • according to DIN EN 61346-2 Q Operating voltage • for main current circuit at 50 Hz / for AC • maximum V 690 • to Store / for AC For maximum V 690 • for DC For maximum V 500 Operating current • at 40 °C / rated value A 160 • at 50 °C / rated value A 160 • at 50 °C / rated value A 148.8 • at 70 °C / rated value A 148.8 • at 70 °C / rated value A 160 • at 70 °C / rated value A	• maximum	°C	70
• maximum °C 50 Main circuit: Insulation voltage / for AC / rated value V 800 Operating frequency + 50 • 1/ rated value Hz 50 • 2 / rated value Hz 60 Item designation • 60 Coording to DIN 40719 extendable after IEC 204-2 / according to IEC 750 Q • according to DIN EN 61346-2 Q Q Operating voltage • for main current circuit • at 50 Hz / for AC • maximum V 690 • at 80 Hz / for AC • maximum V 690 • 690	during storage		
Insulation voltage / for AC / rated value Operating frequency - 1 / rated value - 2 / rated value - 2 / rated value - 3 / rated value - 4 / rated value - 4 / rated value - 5 / rated value - 6 / rated value - 6 / rated value - 7 / rated value - 6 / rated value - 7 / rated value - 8 / rated value - 9 / rated value - 1 / rated value - 2 / rated value - 3 / rated value - 4 / rated value - 5 / rated value - 6 / rated value - 7 / rated value - 8 / rated value - 9 / rated value - 1 / rated value - 2 / rated value - 3 / rated value - 4 / rated value - 5 / rated value - 6 / rated value - 7 / rated value - 8 / rated value - 9 / rated value - 1 / rated value -	• minimum	°C	-40
Insulation voltage / for AC / rated value	• maximum	°C	50
Operating frequency 1 / rated value 2 / rated value Hz 50 Hz 60 Item designation according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 according to DIN EN 61346-2 Operating voltage for main current circuit at 50 Hz / for AC maximum V 690 for DC maximum V 500 Operating current at 40 °C / rated value at 50 °C / rated value at 50 °C / rated value at 70 °C / rated value A 160 Continuous current / rated value Continuous current / rated value Derating temperature / for the rated value of the continuous current Auxiliary circuit: Number of NC contacts / for auxiliary contacts 0 Number of NC contacts / for auxiliary contacts 0	Main circuit:		
* 1 / rated value * 2 / rated value * 2 / rated value * 2 / rated value * 4 / 8 / 8 / 8 / 8 / 8 / 8 / 8 / 8 / 8 /	Insulation voltage / for AC / rated value	V	800
tem designation according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 according to DIN EN 61346-2 Operating voltage for main current circuit at 50 Hz / for AC maximum at 60 Hz / for AC maximum bfor DC maximum cfor DC maximum at 40 °C / rated value at 60 °C / rated value at 60 °C / rated value at 60 °C / rated value at 70 °C / rated value Continuous current / for the rated value of the continuous current Auxillary circuit: Number of NC contacts / for auxillary contacts Number of NO contacts / for auxillary contacts O	Operating frequency	_	
tem designation • according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 • according to DIN EN 61346-2 Operating voltage • for main current circuit • at 50 Hz / for AC • maximum • at 60 Hz / for AC • maximum • for DC • maximum • tat 0 °C / rated value • at 40 °C / rated value • at 60 °C / rated value • at 60 °C / rated value • at 70 °C / rated value Derating temperature / for the rated value of the continuous current Auxiliary circuit: Number of NC contacts / for auxiliary contacts 0	• 1 / rated value	Hz	50
according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 according to DIN EN 61346-2 Operating voltage for main current circuit at 50 Hz / for AC maximum at 60 Hz / for AC maximum for DC maximum of to DC maximum of at 40 °C / rated value at 60 °C / rated value at 70 °C / rated value at 70 °C / rated value current Continuous current / rated value Derating temperature / for the rated value of the continuous current Auxiliary circuit: Number of NC contacts / for auxiliary contacts O Q Q Q Q A A B A B B B A B B A B B	• 2 / rated value	Hz	60
to IEC 750 • according to DIN EN 61346-2 Operating voltage • for main current circuit • at 50 Hz / for AC • maximum • at 60 Hz / for AC • maximum • for DC • maximum • for DC • maximum • at 40 °C / rated value • at 50 °C / rated value • at 70 °C / rated value Operating current / for the rated value of the continuous current Continuous current / for the rated value of the continuous current Auxiliary circuit: Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts O Operating temperature / for auxiliary contacts Number of NO contacts / for auxiliary contacts O O O O O O O O O O O O	Item designation	_	
Operating voltage • for main current circuit • at 50 Hz / for AC • maximum • at 60 Hz / for AC • maximum • for DC • maximum • at 40 °C / rated value • at 50 °C / rated value • at 70 °C / rat			Q
• for main current circuit • at 50 Hz / for AC • maximum • at 60 Hz / for AC • maximum • for DC • maximum • tor DC • maximum • at 40 °C / rated value • at 50 °C / rated value • at 60 °C / rated value • at 70 °C / rated value	according to DIN EN 61346-2		Q
• at 50 Hz / for AC • maximum • at 60 Hz / for AC • maximum • for DC • maximum • at 40 °C / rated value • at 50 °C / rated value • at 70 °C	Operating voltage		
* maximum * at 60 Hz / for AC * maximum * for DC * maximum * or operating current * at 40 °C / rated value * at 50 °C / rated value * at 60 °C / rated value * at 60 °C / rated value * at 70 °C / rated va	• for main current circuit		
* at 60 Hz / for AC * maximum * for DC * maximum * V * 500 Operating current * at 40 °C / rated value * at 50 °C / rated value * at 60 °C / rated value * at 70 °C / rated value * at 70 °C / rated value * A 160 Continuous current / rated value A 137.6 Continuous current / rated value A 160 A 160 A 160 A 160 Continuous current / rated value A 500 A 160 Continuous current / rated value A 160 Derating temperature / for the rated value of the continuous current Auxiliary circuit: Number of NC contacts / for auxiliary contacts 0 Number of NO contacts / for auxiliary contacts 0	• at 50 Hz / for AC		
• maximum • for DC • maximum V 500 Operating current • at 40 °C / rated value • at 50 °C / rated value • at 60 °C / rated value • at 70 °C / rated value A 160 Continuous current / rated value A 160 Derating temperature / for the rated value of the continuous current Auxiliary circuit: Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts 0	• maximum	V	690
• for DC • maximum V 500 Operating current • at 40 °C / rated value • at 50 °C / rated value • at 60 °C / rated value • at 70 °C / rated value A 180 Continuous current / rated value A 160 Derating temperature / for the rated value of the continuous current Auxiliary circuit: Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts 0	• at 60 Hz / for AC		
• maximum Operating current • at 40 °C / rated value • at 50 °C / rated value • at 60 °C / rated value • at 70 °C / rated value • A 148.8 Continuous current / rated value A 160 Derating temperature / for the rated value of the continuous current Auxiliary circuit: Number of NC contacts / for auxiliary contacts O Number of NO contacts / for auxiliary contacts 0	• maximum	V	690
Operating current • at 40 °C / rated value • at 50 °C / rated value • at 60 °C / rated value • at 70 °C / rated value A 148.8 • at 70 °C / rated value A 137.6 Continuous current / rated value A 160 Derating temperature / for the rated value of the continuous current Auxiliary circuit: Number of NC contacts / for auxiliary contacts O Number of NO contacts / for auxiliary contacts 0	• for DC		
at 40 °C / rated value at 50 °C / rated value at 60 °C / rated value at 70 °C / rated value At 148.8 at 70 °C / rated value At 160 At 148.8 At 160 Continuous current / rated value At 160 Derating temperature / for the rated value of the continuous current Auxiliary circuit: Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts O Number of NO contacts / for auxiliary contacts	• maximum	V	500
at 50 °C / rated value at 60 °C / rated value A 148.8 at 70 °C / rated value A 137.6 Continuous current / rated value A 160 Derating temperature / for the rated value of the continuous current Auxiliary circuit: Number of NC contacts / for auxiliary contacts O Number of NO contacts / for auxiliary contacts 0	Operating current		
at 60 °C / rated value at 70 °C / rated value A 137.6 Continuous current / rated value A 160 Derating temperature / for the rated value of the continuous current Auxiliary circuit: Number of NC contacts / for auxiliary contacts O Number of NO contacts / for auxiliary contacts 0	• at 40 °C / rated value	Α	160
• at 70 °C / rated value Continuous current / rated value A 160 Derating temperature / for the rated value of the continuous current C 50 Auxiliary circuit: Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts 0 Number of NO contacts / for auxiliary contacts 0	• at 50 °C / rated value	Α	160
Continuous current / rated value Derating temperature / for the rated value of the continuous current **C 50 Auxiliary circuit: Number of NC contacts / for auxiliary contacts 0 Number of NO contacts / for auxiliary contacts 0	• at 60 °C / rated value	Α	148.8
Derating temperature / for the rated value of the continuous current Auxiliary circuit: Number of NC contacts / for auxiliary contacts 0 Number of NO contacts / for auxiliary contacts 0	• at 70 °C / rated value	Α	137.6
Auxiliary circuit: Number of NC contacts / for auxiliary contacts 0 Number of NO contacts / for auxiliary contacts 0	Continuous current / rated value	Α	160
Number of NC contacts / for auxiliary contacts 0 Number of NO contacts / for auxiliary contacts 0		°C	50
Number of NO contacts / for auxiliary contacts 0	Auxiliary circuit:		
	Number of NC contacts / for auxiliary contacts		0
Short-circuit:	Number of NO contacts / for auxiliary contacts		0
	Short-circuit:		
Adjustable response current			

• of the current-dependent overload release		
• initial value	Α	128
• final value	Α	160
of the non-delayed short-circuit release		
• initial value	Α	800
• final value	Α	1,600
Breaking capacity limit short-circuit current (lcu) / at 415 V / rated value	kA	55

Installation/mounting/dimensions:		
Type of mounting		fixed mounting
Height	mm	174.5
Width	mm	104.5
Depth	mm	106.5

Connections:	
Arrangement of electrical connectors / for main current circuit	front side
Design of the electrical connection / for main current circuit	screw-type terminals
Type of the connectable conductor cross-section	
• for main contacts	
with flexible busbar	12 x 10 mm
• solid	2,5 95 mm²
• finely stranded / with conductor end processing	2,5 50 mm²
• stranded	2,5 95 mm²
for auxiliary contacts	
• solid	0,75 1.5 mm ²
• finely stranded / with conductor end processing	0.75 1.0 mm ²

Certificates/approvals:

Further information:

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

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

Industry Mall (Online ordering system)

 $\underline{\text{http://www.siemens.com/lowvoltage/mall}}$

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

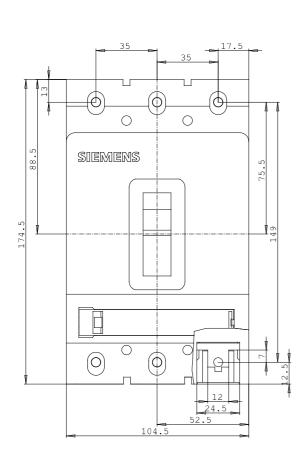
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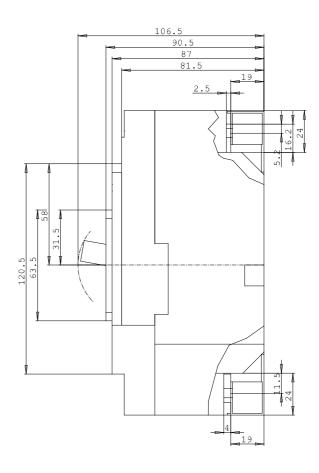
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last change: Nov 6, 2012