

CIRCUIT BREAKER 3VA2 IEC FRAME 160 BREAKING CAPACITY CLASS C ICU=110KA @ 415 V 4POLE, LINE PROTECTION ETU860, LSIG, IN=25A OVERLOAD PROTECTION IR=10A ...25A SHORT CIRCUIT PROTECTION ISD=0,6..10X IN, II=1,5..12X IN NEUTRAL PROTECTION ADJUSTABLE (OFF, UPTO 160%) GROUNDFAULT, SWITCHABLE IG=0,2... 1 X IN, TG=0,050,8MS CABLE 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	ETU860

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		25		
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	0.05		
Total disconnection time / for G-tripping / with standard characteristic / Full-scale value	S	0.8		
circuit-breaker / Design		3VA		
Mechanical service life (switching cycles) / typical		20 000		

Insulation voltage / Rated value  Protection class Protection class IP Protection class IP / on the front Protection class IP / on the front Protection class IP / on the front Protective function of the overcurrent release  Switching capacity Switching capacity Switching capacity Switching capacity Switching capacity class of the circuit breaker  C  Dissipation  Active power loss  • maximum  W  0.6  Electricity Confinuous current / Rated value / maximum A 160 Continuous current / Rated value / A 25 Adjustable response value current / of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage • with AC / at 50/60 Hz / Rated value • at 40 °C / Rated value A 25 • at 60 °C / Rated value A 25 • at 60 °C / Rated value A 25 • at 60 °C / Rated value A 25 • at 70 °C / Rated value A 25 • at 70 °C / Rated value A 25 • at 70 °C / Rated value A 25 • at 70 °C / Rated value A 25  Auxiliary circuit  Number of NC contacts / for auxiliary contacts  Number of NC contacts / for auxiliary contacts  Number of NC contacts / for auxiliary contacts  O  Sultability Sultability for use  **For G-tripping / with 12t characteristic / initial value • for G-tripping / with 12t characteristic / initial value • for G-tripping / with standard characteristic / initial value • for G-tripping / with standard characteristic / initial value • for G-tripping / with standard characteristic / initial value • for G-tripping / with standard characteristic / initial value • for G-tripping / with standard characteristic / initial value • for G-tripping / with standard characteristic / initial value • for G-tripping / with standard characteristic / initial value • for G-tripping / with standard characteristic / initial value • for G-tripping / with standard characteristic / initial value	Voltage				
Protection class IP / on the front IP40 Protective function of the overcurrent release LSIG  Switching capacity Switching capacity class of the circuit breaker C  Dissipation Active power loss  • maximum W 0.6  Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value / maximum A 1,5 instantaneous short-circuit release / initial value  Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value A 25 • at 40 °C / Rated value A 25 • at 60 °C / Rated value A 25 • at 60 °C / Rated value A 25 • at 60 °C / Rated value A 25 • at 60 °C / Rated value A 25 • at 60 °C / Rated value A 25 • at 60 °C / Rated value A 25 • at 60 °C / Rated value A 25 • at 60 °C / Rated value A 25 • at 70 °C / Rated value A 25 • at 70 °C / Rated value A 25 • at 70 °C / Rated value A 25  Auxiliary circuit  Number of NO contacts / for auxiliary contacts 0  Sultability Sultability for use  Adjustable parameters		V	800		
Protection class IP / on the front IP40 Protective function of the overcurrent release LSIG  Switching capacity Switching capacity class of the circuit breaker C  Dissipation Active power loss  • maximum W 0.6  Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value / maximum A 1,5 instantaneous short-circuit release / initial value  Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value A 25 • at 40 °C / Rated value A 25 • at 60 °C / Rated value A 25 • at 60 °C / Rated value A 25 • at 60 °C / Rated value A 25 • at 60 °C / Rated value A 25 • at 60 °C / Rated value A 25 • at 60 °C / Rated value A 25 • at 60 °C / Rated value A 25 • at 60 °C / Rated value A 25 • at 70 °C / Rated value A 25 • at 70 °C / Rated value A 25 • at 70 °C / Rated value A 25  Auxiliary circuit  Number of NO contacts / for auxiliary contacts 0  Sultability Sultability for use  Adjustable parameters	Protection class				
Protective function of the overcurrent release  Switching capacity Switching capacity class of the circuit breaker  C  Dissipation  Active power loss  • maximum  W  0.6  Electricity Continuous current / Rated value / maximum  A 160 Continuous current / Rated value A 25 Adjustable response value current / of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage  • with AC / at 50:60 Hz / Rated value  • at 40 °C / Rated value  • at 40 °C / Rated value  • at 60 °C / Rated value  • at 70 °C - Rated val			IP40		
Switching capacity  Switching capacity dass of the circuit breaker  C  Dissipation  Active power loss  • maximum  W  0.6  Electricity  Continuous current / Rated value / maximum  A  160  Continuous current / Rated value / A  A  A  A  A  A  A  A  A  A  A  A  A					
Switching capacity class of the circuit breaker  C  Dissipation  Active power loss  • maximum  W  0.6  Electricity  Continuous current / Rated value / maximum  A 160  Continuous current / Rated value / A 25  Adjustable response value current / of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  • at 40 °C / Rated value  • at 40 °C / Rated value  • at 40 °C / Rated value  • at 60 °C / Rated value  • at 65 °C / Rated value  • at 65 °C / Rated value  • at 70 °C / Rated value  • at 7			LSIG		
Switching capacity class of the circuit breaker  C  Dissipation  Active power loss  • maximum  W  0.6  Electricity  Continuous current / Rated value / maximum  A 160  Continuous current / Rated value / A 25  Adjustable response value current / of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  • at 40 °C / Rated value  • at 40 °C / Rated value  • at 40 °C / Rated value  • at 60 °C / Rated value  • at 65 °C / Rated value  • at 65 °C / Rated value  • at 70 °C / Rated value  • at 7					
Dissipation  Active power loss  • maximum  W 0.6  Electricity  Continuous current / Rated value / maximum A 160  Continuous current / Rated value A 25  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 A 25  • at 50 °C / Rated value A 25  • at 65 °C / Rated value A 25  • at 65 °C / Rated value A 25  • at 67 °C / Rated value A 25  • at 70 °C / Rated value A 25  Suitability Coronates / for auxiliary contacts  Number of NC contacts / for auxiliary contacts  Number of NC contacts / for auxiliary contacts  O Suitability  Suitabile parameters  Adjustable parameters  Adjustable parameters  Adjustable response value current  • for G-tripping / with 12t characteristic / Full-scale value  • for G-tripping / with 12t characteristic / Full-scale value  • for G-tripping / with standard characteristic / A 0.6  initial value			C		
Active power loss	Switching capacity class of the circuit breaker		C		
• maximum W 0.6  Electricity  Continuous current / Rated value / maximum A 160  Continuous current / Rated value A 25  Adjustable response value current / of the 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 A 25  • at 50 °C / Rated value A 25  • at 60 °C / Rated value A 25  • at 60 °C / Rated value A 25  • at 60 °C / Rated value A 25  • at 70 °C / Rated value A 25  Auxiliary circuit  Number of NC contacts / for auxiliary contacts 0  Number of NC contacts / for auxiliary contacts 0  Suitability  Suitability for use system protection  Adjustable parameters  Adjustable response value current  • for G-tripping / with 12t characteristic / initial value  • for G-tripping / with 12t characteristic / Full-scale value  • for G-tripping / with standard characteristic / initial value  • for G-tripping / with standard characteristic / initial value					
Electricity  Continuous current / Rated value / maximum  A 160  Continuous current / Rated value  A 25  Adjustable response value current / of the 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  • at 50 °C / Rated value  • at 65 °C / Rated value  • at 65 °C / Rated value  • at 65 °C / Rated value  • at 70 °C / Rated value  • at 7	Active power loss				
Continuous current / Rated value / maximum	• maximum	W	0.6		
Continuous current / Rated value  Adjustable response value current / of the 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  • at 50 °C / Rated value  • at 60 °C / Rated value  • at 65 °C / Rated value  • at 65 °C / Rated value  • at 70 °C / Rated value  • for G-tripping / with 12t characteristic / initial value  • for G-tripping / with standard characteristic / initial value  • for G-tripping / with standard characteristic / initial value	Electricity				
Adjustable response value current / of the instantaneous short-circuit release / initial value    Main circuit		A	160		
instantaneous short-circuit release / initial value    Main circuit	Continuous current / Rated value	Α	25		
Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  V 690  Operating current  • at 40 °C / Rated value  • at 50 °C / Rated value  A 25  • at 60 °C / Rated value  A 25  • at 65 °C / Rated value  A 25  • at 70 °C / Rated value  A 25  • at 70 °C / Rated value  A 25  • at 70 °C / Rated value  A 25   Auxiliary circuit  Number of NC contacts / for auxiliary contacts  Number of NO contacts / for auxiliary contacts  0  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  • for G-tripping / with 12t characteristic / initial value  • for G-tripping / with 12t characteristic / Full-scale value  • for G-tripping / with standard characteristic / A 0.6  initial value		Α	1.5		
Operating voltage  • with AC / at 50/60 Hz / Rated value  Operating current  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 50 °C / Rated value  • at 60 °C / Rated value  • at 65 °C / Rated value  • at 65 °C / Rated value  • at 70 °C / Rated value  • for G-tripping / with 12t characteristic / initial value  • for G-tripping / with 12t characteristic / Full-scale value  • for G-tripping / with standard characteristic / initial value  • for G-tripping / with standard characteristic / initial value	instantaneous short-circuit release / initial value				
with AC / at 50/60 Hz / Rated value  Operating current      at 40 °C / Rated value     at 50 °C / Rated value     at 60 °C / Rated value     at 60 °C / Rated value     at 65 °C / Rated value     at 65 °C / Rated value     at 70 °C / Rated value     at 70 °C / Rated value     A 25  Auxiliary circuit  Number of NC contacts / for auxiliary contacts  Number of NO contacts / for auxiliary contacts  O  Suitability  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current      of ro G-tripping / with 12t characteristic / initial value  for G-tripping / with standard characteristic / initial value  for G-tripping / with standard characteristic / initial value  for G-tripping / with standard characteristic / initial value  0 0.6	Main circuit				
Operating current  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 60 °C / Rated value  • at 60 °C / Rated value  • at 65 °C / Rated value  • at 70 °C / Rated value  • at 70 °C / Rated value  • at 70 °C / Rated value  A 25  Auxiliary circuit  Number of NC contacts / for auxiliary contacts  Number of NO contacts / for auxiliary contacts  0  Suitability  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  • for G-tripping / with 12t characteristic / initial value  • for G-tripping / with standard characteristic / and initial value  • for G-tripping / with standard characteristic / initial value  • for G-tripping / with standard characteristic / initial value	Operating voltage				
at 40 °C / Rated value at 50 °C / Rated value A 25 at 60 °C / Rated value A 25 at 65 °C / Rated value A 25 at 65 °C / Rated value A 25 at 70 °C / Rated value A 25  A 25  Auxiliary circuit  Number of NC contacts / for auxiliary contacts  Number of NO contacts / for auxiliary contacts  0  Suitability  Suitability  Suitability or use  Adjustable parameters  Adjustable response value current  of or G-tripping / with 12t characteristic / initial value  of or G-tripping / with standard characteristic / initial value  of or G-tripping / with standard characteristic / initial value  of or G-tripping / with standard characteristic / initial value  of or G-tripping / with standard characteristic / initial value  of or G-tripping / with standard characteristic / initial value  of or G-tripping / with standard characteristic / initial value  of or G-tripping / with standard characteristic / initial value	• with AC / at 50/60 Hz / Rated value	V	690		
at 50 °C / Rated value  at 60 °C / Rated value  at 60 °C / Rated value  at 65 °C / Rated value  at 65 °C / Rated value  at 70 °C / Rated value  At 25  Auxiliary circuit  Number of NC contacts / for auxiliary contacts  Number of NO contacts / for auxiliary contacts  Suitability  Suitability  Suitability or use  Adjustable parameters  Adjustable response value current  for G-tripping / with 12t characteristic / initial value  for G-tripping / with standard characteristic / Auxiliary contacts  A 0.6  at 70 °C / Rated value  A 25  A 30	Operating current				
at 60 °C / Rated value at 65 °C / Rated value A 25 at 70 °C / Rated value A 25  Auxiliary circuit  Number of NC contacts / for auxiliary contacts  Number of NO contacts / for auxiliary contacts  0  Suitability  Suitability  Suitabile parameters  Adjustable parameters  Adjustable response value current  • for G-tripping / with 12t characteristic / initial value • for G-tripping / with standard characteristic / initial value  • for G-tripping / with standard characteristic / initial value  • for G-tripping / with standard characteristic / initial value  • for G-tripping / with standard characteristic / initial value	● at 40 °C / Rated value	Α	25		
at 65 °C / Rated value  at 65 °C / Rated value  A 25  Auxiliary circuit  Number of NC contacts / for auxiliary contacts  Number of NO contacts / for auxiliary contacts  0  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  of or G-tripping / with 12t characteristic / initial value  for G-tripping / with standard characteristic / initial value  of or G-tripping / with standard characteristic / initial value  of or G-tripping / with standard characteristic / initial value  of or G-tripping / with standard characteristic / initial value  of or G-tripping / with standard characteristic / initial value  of or G-tripping / with standard characteristic / initial value	● at 50 °C / Rated value	Α	25		
A 25  Auxiliary circuit  Number of NC contacts / for auxiliary contacts  Number of NO contacts / for auxiliary contacts  0  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  • for G-tripping / with I2t characteristic / initial value  • for G-tripping / with standard characteristic / initial value  • for G-tripping / with standard characteristic / initial value  • for G-tripping / with standard characteristic / initial value	• at 60 °C / Rated value	Α	25		
Auxiliary circuit  Number of NC contacts / for auxiliary contacts  0  Number of NO contacts / for auxiliary contacts  0  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  • for G-tripping / with I2t characteristic / initial value  • for G-tripping / with standard characteristic / A  initial value	● at 65 °C / Rated value	Α	25		
Number of NC contacts / for auxiliary contacts  Number of NO contacts / for auxiliary contacts  O  Suitability  Suitability for use system protection  Adjustable parameters  Adjustable response value current  • for G-tripping / with I2t characteristic / initial value  • for G-tripping / with I2t characteristic / Full-scale value  • for G-tripping / with standard characteristic / A  initial value	● at 70 °C / Rated value	Α	25		
Number of NC contacts / for auxiliary contacts  Number of NO contacts / for auxiliary contacts  O  Suitability  Suitability for use system protection  Adjustable parameters  Adjustable response value current  • for G-tripping / with I2t characteristic / initial value  • for G-tripping / with I2t characteristic / Full-scale value  • for G-tripping / with standard characteristic / A  initial value	Auxiliary circuit				
Suitability Suitability for use  Adjustable parameters  Adjustable response value current  • for G-tripping / with I2t characteristic / initial value  • for G-tripping / with I2t characteristic / Full-scale A 1  value  • for G-tripping / with standard characteristic / A 0.6  initial value			0		
Suitability for use  Adjustable parameters  Adjustable response value current  • for G-tripping / with I2t characteristic / initial value  • for G-tripping / with I2t characteristic / Full-scale value  • for G-tripping / with standard characteristic / A  initial value	Number of NO contacts / for auxiliary contacts		0		
Suitability for use  Adjustable parameters  Adjustable response value current  • for G-tripping / with I2t characteristic / initial value  • for G-tripping / with I2t characteristic / Full-scale value  • for G-tripping / with standard characteristic / A  initial value	Suitability				
Adjustable parameters  Adjustable response value current  • for G-tripping / with I2t characteristic / initial A 0.6  value  • for G-tripping / with I2t characteristic / Full-scale A 1  value  • for G-tripping / with standard characteristic / A 0.6  initial value			system protection		
Adjustable response value current  • for G-tripping / with I2t characteristic / initial value  • for G-tripping / with I2t characteristic / Full-scale value  • for G-tripping / with standard characteristic / initial value  • for G-tripping / with standard characteristic / initial value	·				
<ul> <li>for G-tripping / with I2t characteristic / initial value</li> <li>for G-tripping / with I2t characteristic / Full-scale value</li> <li>for G-tripping / with standard characteristic / initial value</li> <li>A 0.6</li> <li>A 0.6</li> </ul>					
value  • for G-tripping / with I2t characteristic / Full-scale A 1  value  • for G-tripping / with standard characteristic / A 0.6  initial value		۸	0.6		
value  ● for G-tripping / with standard characteristic / A 0.6 initial value		A	0.0		
initial value		Α	1		
		Α	0.6		
Full-scale value	• for G-tripping / with standard characteristic /	Α	1		

• of I-trip / Full-scale value	Α	12
<ul> <li>of the short-time delayed short-circuit release / initial value</li> </ul>	Α	0.6
<ul> <li>of the short-time delayed short-circuit release / Full-scale value</li> </ul>	Α	10
<ul> <li>of S-trip / with standard characteristic / initial value</li> </ul>	Α	0.6
<ul> <li>of S-trip / with standard characteristic / Full- scale value</li> </ul>	Α	10
Adjustable delay time		
<ul> <li>for G-tripping / with I2t characteristic / initial value</li> </ul>	S	0.05
<ul> <li>for G-tripping / with l2t characteristic / Full-scale value</li> </ul>	S	0.8
• of S-trip / with I2t characteristic / initial value	S	0.05
<ul> <li>of S-trip / with I2t characteristic / Full-scale value</li> </ul>	S	0.5
<ul> <li>of S-trip / with standard characteristic / initial value</li> </ul>	S	0.05
• of S-trip / with standard characteristic / Full-scale value	S	0.5
Adjustable response value current / of the current- dependent overload release / initial value	А	0.4
Product details		
Product component		
Trip indicator		No
• display		Yes
undervoltage release		No
Product property		
<ul> <li>of the circuit breaker with tripping unit / Tripping characteristic adjustable</li> </ul>		Yes
<ul> <li>for neutral conductors / upgradeable/retrofittable / Short-circuit and overload proof</li> </ul>		No
Product expansion / optional / motor drive		Yes
Product function		
Product function		
<ul> <li>Intrinsic device protection</li> </ul>		Yes
• communication function		Yes

Accessories

• Phase failure detection

• other measurement function

No Yes

Manufacturer article number / of the supplied basic switch		3VA2125-7KQ46-0AA0
Short circuit		
Operational short-circuit current breaking capacity		
(Ics)		
• at 240 V / Rated value	kA	150
• at 415 V / Rated value	kA	110
• at 440 V / Rated value	kA	110
• at 500 V / Rated value	kA	85
● at 690 V / Rated value	kA	2.5
Maximum short-circuit current breaking capacity (Icu)		
● at 240 V / Rated value	kA	150
● at 415 V / Rated value	kA	110
● at 440 V / Rated value	kA	110
• at 500 V / Rated value	kA	85
• at 690 V / Rated value	kA	2.5
Short-circuit current making capacity (lcm)		
• 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	187
• at 690 V / Rated value	kA	3.75
Connections		
Arrangement of electrical connectors / for main current circuit		Front terminal
Type of connectable conductor cross-section	_	
<ul> <li>of the round conductor terminal / stranded</li> </ul>		1 x (6-120 mm²)
Type of electrical connection / for main current circuit		Box terminal
Mechanical Design		
Height	mm	181
Width	mm	140
Depth	mm	107
Mounting type		fixed mounting
Environmental conditions		
Ambient temperature	°C	QE.
during operation / minimum	°C	-25
during operation / maximum	°C	70
<ul><li>during storage / minimum</li></ul>	°C	-40
during storage / maximum	°C	80
Certificates		
Equipment marking		

• acc. to DIN EN 61346-2

• acc. to DIN EN 81346-2

Q Q

**EMC** 

**General Product Approval** 

**Declaration of** Conformity

**Shipping Approval** 







other





**Shipping** other **Approval** 

other



GL

## 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/3VA21257KQ460AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA21257KQ460AA0/all

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

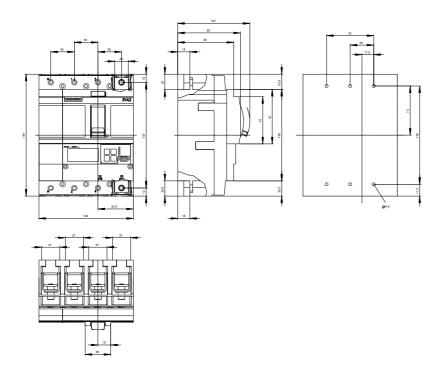
http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA21257KQ460AA0

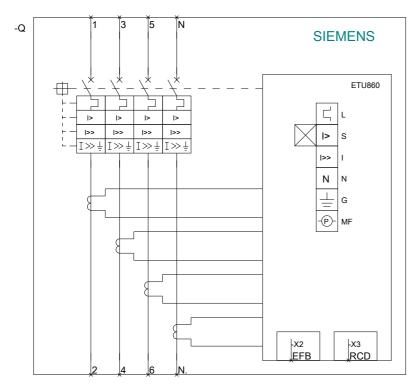
**CAx-Online-Generator** 

http://www.siemens.com/cax

**Tender specifications** 

http://ausschreibungstexte.siemens.com/tiplv





last modified: 11.03.2015