



circuit breaker 3VA2 IEC frame 100 breaking capacity class H Icu=85kA @ 415V 4-pole, line protection ETU860, LSiG, In=40A overload protection Ir=16A...40A short-circuit protection Isd=0.6...10x In, li=1.5...12x In N conductor protection adjustable (OFF, up to 160%) gr.-fault prot., can be sw. off Ig=0.4...1 x In= tg=0.05-0.8s nut keeper kit

Model

product brand name	SENTRON
product designation	Molded case circuit breaker
Product version	Line protection
design of the overcurrent release	ETU860
protection function of the overcurrent release	LSiG
number of poles	4

General technical data

insulation voltage / rated value	800 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	2.2 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	0.73 W
mechanical service life (switching cycles) / typical	25 000
Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz	15 000
Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz	10 500
Neutral conductors / upgradeable/retrofitable	No
ground-fault monitoring version	Summation current formation L + N conductor
product function	
• communication function	Yes
• other measurement function	Yes
Net Weight	3.2 kg

Current

continuous current / rated value / maximum	100 A
Courant permanent assigné Iu	40 A
operational current	
• at 40 °C	40 A
• at 45 °C	40 A
• at 50 °C	40 A
• at 55 °C	40 A
• at 60 °C	40 A
• at 65 °C	40 A
• at 70 °C	40 A

Switching capacity according to IEC 60947

switching capacity class of the circuit breaker	H
breaking capacity maximum short-circuit current (Icu)	
• at 240 V	110 kA
• at 415 V	85 kA
• at 440 V	85 kA
• at 500 V	55 kA

• at 690 V	2 kA
breaking capacity operating short-circuit current (Ics)	
• at 240 V	110 kA
• at 415 V	85 kA
• at 440 V	85 kA
• at 500 V	55 kA
• at 690 V	2 kA
short-circuit current making capacity (Icm)	
• at 240 V	242 kA
• at 415 V	187 kA
• at 440 V	187 kA
• at 500 V	121 kA
• at 690 V	3 kA

Adjustable parameters

product feature / for L-tripping / can be switched on/off	No
product feature / for L-tripping / adjustable	Yes
product feature / for L-tripping / selectable characteristic function	No
type of value list setting current (I _r) / for L-tripping / with I _{2t} characteristic	St
reference value setting current (I _r) / for L-tripping / with I _{2t} characteristic	x I _n
set values setting current (I _r) / for L-tripping / with I _{2t} characteristic	0.4-1;0
adjustable response factor setting current (I _r) / for L-tripping / with I _{2t} characteristic / minimum	0.4
adjustable response factor setting current (I _r) / for L-tripping / with I _{2t} characteristic / maximum	1
adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic / minimum	16 A
adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic / maximum	40 A
type of value list delay time (t _r) / for L-tripping / with I _{2t} characteristic	Einstelltabelle
reference value delay time (t _r) / for L-tripping / with I _{2t} characteristic	s
set values delay time (t _r) / for L-tripping / with I _{2t} characteristic	0.5-25;0.1
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic / minimum	0.5 s
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic / maximum	25 s
product feature / for S-tripping / independent of direction / can be switched on/off	No
product feature / for S-tripping / independent of direction / selectable characteristic function	Yes
type of value list setting current (I _{sd}) / for S-tripping / with I _{0t} characteristic	St
reference value setting current (I _{sd}) / for S-tripping / with I _{0t} characteristic	x I _n
set values setting current (I _{sd}) / for S-tripping / with I _{0t} characteristic	0.6-10;0
adjustable response factor setting current (I _{sd}) / for S-tripping / with I _{0t} characteristic / minimum	0.6
adjustable response factor setting current (I _{sd}) / for S-tripping / with I _{0t} characteristic / maximum	10
adjustable response value setting current (I _{sd}) / of S-trip / with I _{0t} characteristic / minimum	24 A
adjustable response value setting current (I _{sd}) / of S-trip / with I _{0t} characteristic / maximum	400 A
type of value list setting current (I _{sd}) / for S-tripping / with I _{2t} characteristic	St
reference value setting current (I _{sd}) / for S-tripping / with I _{2t} characteristic	x I _n
set values setting current (I _{sd}) / for S-tripping / with I _{2t} characteristic	0.6-10;0
adjustable response factor setting current (I _{sd}) / for S-tripping / with I _{2t} characteristic / minimum	0.6
adjustable response factor setting current (I _{sd}) / for S-	10

tripping / with I2t characteristic / maximum adjustable response value setting current (I _{sd}) / of S-trip / with I2t characteristic / minimum	24 A
adjustable response value setting current (I _{sd}) / of S-trip / with I2t characteristic / maximum	400 A
type of value list delay time (tsd) / for S-tripping / with I0t characteristic	Einstelltabelle
reference value delay time (tsd) / for S-tripping / with I0t characteristic	s
set values delay time (tsd) / for S-tripping / with I0t characteristic	0.05-0.5;0.01
adjustable response value delay time (tsd) / for S-tripping / with I0t characteristic / minimum	0.05 s
adjustable response value delay time (tsd) / for S-tripping / with I0t characteristic / maximum	0.5 s
type of value list delay time (tsd) / for S-tripping / with I2t characteristic	Einstelltabelle
reference value delay time (tsd) / for S-tripping / with I2t characteristic	s
set values delay time (tsd) / for S-tripping / with I2t characteristic	0.05-0.5;0.01
adjustable response value delay time (tsd) / for S-tripping / with I2t characteristic / minimum	0.05 s
adjustable response value delay time (tsd) / for S-tripping / with I2t characteristic / maximum	0.5 s
product feature / for I-tripping / can be switched on/off	No
design of I-trip / adjustable	Yes
reference value setting current (I _i) / for I-tripping	x I _n
set values setting current (I _i) / for I-tripping	1.5-12;0
adjustable response factor setting current (I _i) / for I-tripping / minimum	1.5
adjustable response factor setting current (I _i) / for I-tripping / maximum	12
adjustable response value setting current (I _i) / for I-tripping / minimum	60 A
adjustable response value setting current (I _i) / for I-tripping / maximum	480 A
product feature / for G-tripping / can be switched on/off	Yes
product feature / for G-tripping / adjustable	Yes
product feature / for G-tripping / selectable characteristic function	Yes
type of value list setting current (I _g) / for G-tripping / with I0t characteristic	St
reference value setting current (I _g) / for G-tripping / with I0t characteristic	x I _n
set values setting current (I _g) / for G-tripping / with I0t characteristic	0.4-1;0
adjustable response factor setting current (I _g) / for G-tripping / with I0t characteristic / minimum	0.4
adjustable response factor setting current (I _g) / for G-tripping / with I0t characteristic / maximum	1
Adjustable response value current / I _g min.	16 A
Adjustable response value current / I _g max.	40 A
type of value list delay time (tg) / for G-tripping / with I0t characteristic	Einstelltabelle
reference value delay time (tg) / for G-tripping / with I0t characteristic	s
set values delay time (tg) / for G-tripping / with I0t characteristic	0.05-0.8;0.01
adjustable response value delay time (tg) / for G-tripping / with I0t characteristic / minimum	0.05 s
adjustable response value delay time (tg) / for G-tripping / with I0t characteristic / maximum	0.8 s
type of value list setting current (I _g) / for G-tripping / with I2t characteristic	St
reference value setting current (I _g) / for G-tripping / with I2t characteristic	x I _n
set values setting current (I _g) / for G-tripping / with I2t characteristic	0.4-1;0
adjustable response factor setting current (I _g) / for G-	0.4

tripping / with I2t characteristic / minimum adjustable response factor setting current (I _g) / for G-tripping / with I2t characteristic / maximum	1
adjustable response value setting current (I _g) / for G-tripping / with I2t characteristic / minimum	16 A
adjustable response value setting current (I _g) / for G-tripping / with I2t characteristic / maximum	40 A
type of value list delay time (t _g) / for G-tripping / with I2t characteristic	Einstelltabelle
reference value delay time (t _g) / for G-tripping / with I2t characteristic	s
set values delay time (t _g) / for G-tripping / with I2t characteristic	0.05-0.8;0.01
adjustable response value delay time (t _g) / for G-tripping / with I2t characteristic / minimum	0.05 s
adjustable response value delay time (t _g) / for G-tripping / with I2t characteristic / maximum	0.8 s
product feature / with neutral conductor protection / can be switched on/off	Yes
product feature / with neutral conductor protection / adjustable	Yes
type of value list setting current (I _N) / for N-tripping	St
reference value setting current (I _N) / for N-tripping	x I _N
setting values setting current (I _N) / for N-tripping	0.4-1.6;0
adjustable response factor setting current (I _N) / for N-tripping / minimum	0.4
adjustable response factor setting current (I _N) / for N-tripping / maximum	1.6
adjustable absolute value setting current (I _N) / for N-tripping / minimum	16 A
adjustable absolute value setting current (I _N) / for N-tripping / maximum	64 A
tripping characteristic / of the lower tolerance band	AK_3VA2_0u1_40A_ETU5u8_MuHuCuLuE_uT
tripping characteristic / of the upper tolerance band	AK_3VA2_0u1_40A_ETU5u8_MuHuCuLuE_oT
let-through energy characteristic / at 240 V	DE_3VA2_0_40A_ETU_line_3u4p_240V
let-through energy characteristic / at 415 V	DE_3VA2_0_40A_ETU_line_3u4p_415V
let-through energy characteristic / at 440 V	DE_3VA2_0_40A_ETU_line_3u4p_440V
let-through energy characteristic / at 500 V	DE_3VA2_0_40A_ETU_line_3u4p_500V
let-through energy characteristic / at 690 V	DE_3VA2_0_40A_ETU_line_3u4p_690V
type of value list setting current (I _i) / for I-tripping	St
tripping characteristic / of the let-through current characteristic / at 240 V	DS_3VA2_0_40A_ETU_line_3u4p_240V
tripping characteristic / of the let-through current characteristic / at 415 V	DS_3VA2_0_40A_ETU_line_3u4p_415V
tripping characteristic / of the let-through current characteristic / at 440 V	DS_3VA2_0_40A_ETU_line_3u4p_440V
tripping characteristic / of the let-through current characteristic / at 500 V	DS_3VA2_0_40A_ETU_line_3u4p_500V
tripping characteristic / of the let-through current characteristic / at 690 V	DS_3VA2_0_40A_ETU_line_3u4p_690V
adjustable current response value current / of instantaneous short-circuit trip unit / minimum	60 A
Adjustable response value current / I _i max.	480 A
design of the N-conductor protection	adjustable OFF; 40% to 160%
Ground fault protection / tripping switchable / I2t=ON/OFF	Yes

Mechanical Design

product component	
• undervoltage release	No
• voltage trigger	No
• trip indicator	No
height [in]	7.13 in
Height	181 mm
width [in]	5.51 in
Width	140 mm
depth [in]	3.39 in
depth	86 mm

Connections

arrangement of electrical connectors / for main current circuit
 type of electrical connection / for main current circuit
 Type of connectable conductor cross-section, connection screw, width x thickness, min.
 Type of connectable conductor cross-section, connection screw, width x thickness, max.
 design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)
 design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)

Front terminal
 on both sides nut keeper kit
 13 x 1 mm
 25 x 8 mm
 tin
 tin

Auxiliary circuit

number of CO contacts / for auxiliary contacts 0

Accessories

product extension / optional / motor drive Yes

Environmental conditions

protection class IP / on the front IP40
 ambient temperature
 • during operation / minimum -25 °C
 • during operation / maximum 70 °C
 • during storage / minimum -40 °C
 • during storage / maximum 80 °C

Certificates

reference code / according to IEC 81346-2 Q

General Product Approval

[Confirmation](#)



[Miscellaneous](#)



EMC

Declaration of Conformity

Test Certificates



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

[Miscellaneous](#)

Marine / Shipping

other



[CCS / China Classification Society](#)

[Environmental Confirmations](#)

other

[Miscellaneous](#)

[Miscellaneous](#)

Further information

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?mfb=3VA2040-6KQ42-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA2040-6KQ42-0AA0>



