SIEMENS

Data sheet 3VA6140-5KQ31-0AA0



circuit breaker 3VA6 UL frame 150 breaking capacity class M 35kA @ 480V 3-pole, line protection ETU860, LSIG, In=40A overload protection Ir=16A...40A short-circuit protection Isd=0.6..10x In, Ii=1.5..12x In N conductor protection optionally with external current transformer, up to 160% ground-fault protection Ig=0.375...1 x In, tg=0.05-0.8s without connection

Model	
Product brand name	SENTRON
Product designation	Molded-case circuit breaker
Product designation / according to UL file	MDAE
Product version	System protection
Design of the load switch / acc. to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type)	Yes
Design of the overcurrent release	ETU860
protection function of the overcurrent release	LSIG
Number of poles	3

General technical data	
Rated insulation voltage Ui	600 V
Max. rated operational voltage Ue with AC 50/60Hz	600 V
Power loss [W] / maximum	2.4 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	0.8 W
Mechanical service life (switching cycles) / typical	20 000

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Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz	9 000
Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz	5 000
Electrical endurance (switching cycles) / at 480 V / at 50/60 Hz	9 000
Electrical endurance (switching cycles) / at 600 V / at 50/60 Hz	9 000
Neutral conductors / upgradeable/retrofittable	Yes
Ground fault monitoring version	Summation current formation L-conductor
Product function	
• communication function	Yes
• other measurement function	Yes

Current	
Marking / acc. to UL 489 / 100%-rated breaker	No
Max. rated operational current of the frame size	150 A
Rated continuous current Iu	40 A
Operating 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	M
Maximum short-circuit current breaking capacity (Icu)	
• at 240 V	85 kA
• at 415 V	55 kA
• at 690 V	2.5 kA
Operational short-circuit current breaking capacity (Ics)	
• at 240 V	85 kA
• at 415 V	55 kA
• at 690 V	2.5 kA
Short-circuit current making capacity (Icm)	
• at 240 V	187 kA
• at 415 V	121 kA
• at 690 V	3.8 kA

Switching capacity according to UL 489	
Breaking capacity current	

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• at 240 V	100 kA
• at 480 V	35 kA
• at 600 V	18 kA

Adjustable parameters	
Adjustable response value current / Ig min.	16 A
Adjustable response value current / Ig min.	40 A
Adjustable response value time / tr min.	0.5
Adjustable response value time / tr max.	25
Adjustable response value current / Ig min.	24 A
Adjustable response value current / Ig min.	400 A
Adjustable response value time / tsd min.	0.05 s
Adjustable response value time / tsd max.	0.5 s
Adjustable response value time / tsd min.	0.05 s
Adjustable response value time / tsd max.	0.5 s
Adjustable response value current / Ii min.	60 A
Adjustable response value current / Ii max.	480 A
Ground fault protection can be switched ON/OFF	Yes
Ground fault protection / tripping switchable / I2t=ON/OFF	Yes
Adjustable response value current / Ig min.	15 A
Adjustable response value current / Ig max.	40 A
Adjustable response value current / tg min.	0.05 s
Adjustable response value current / tg max.	0.8 s

Mechanical Design	
Height [in]	7.8 in
Height	198 mm
Width [in]	4.1 in
Width	105 mm
Depth [in]	3.4 in
Depth	86 mm

Connections	
Arrangement of electrical connectors / for main current circuit	Without connection
Type of electrical connection / for main current circuit	Without

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	

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• during operation / minimum	-25 °C
• during operation / maximum	70 °C
• during storage / minimum	-40 °C
• during storage / maximum	80 °C

Certificates

Reference code / acc. to DIN EN 81346-2	Q
Certificate of suitability / as approval for NAVAL (no combat vessels) / Supplement SB	Yes

General Product Approval

CCC CSA UL UL VDE CB

General Product Approval	EMC	Declaration of Conformity	Shipping Approval		other
EAC	RCM	EG-Konf.	ABS	LRS	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?mlfb=3VA6140-5KQ31-0AA0

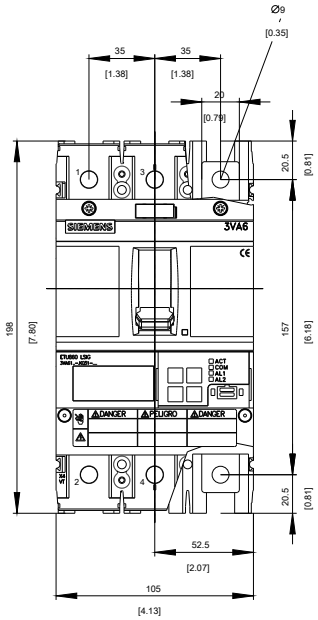
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3VA6140-5KQ31-0AA0

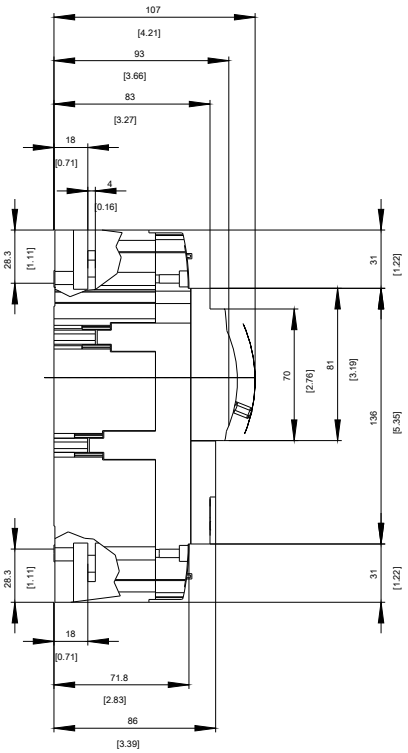
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6140-5KQ31-0AA0

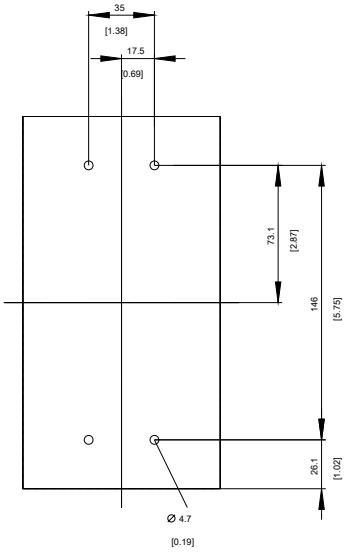
CAx-Online-Generator
http://www.siemens.com/cax

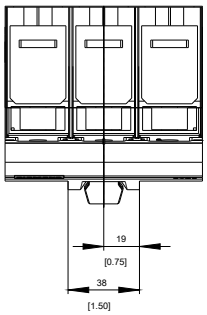
Tender specifications
http://www.siemens.com/specifications

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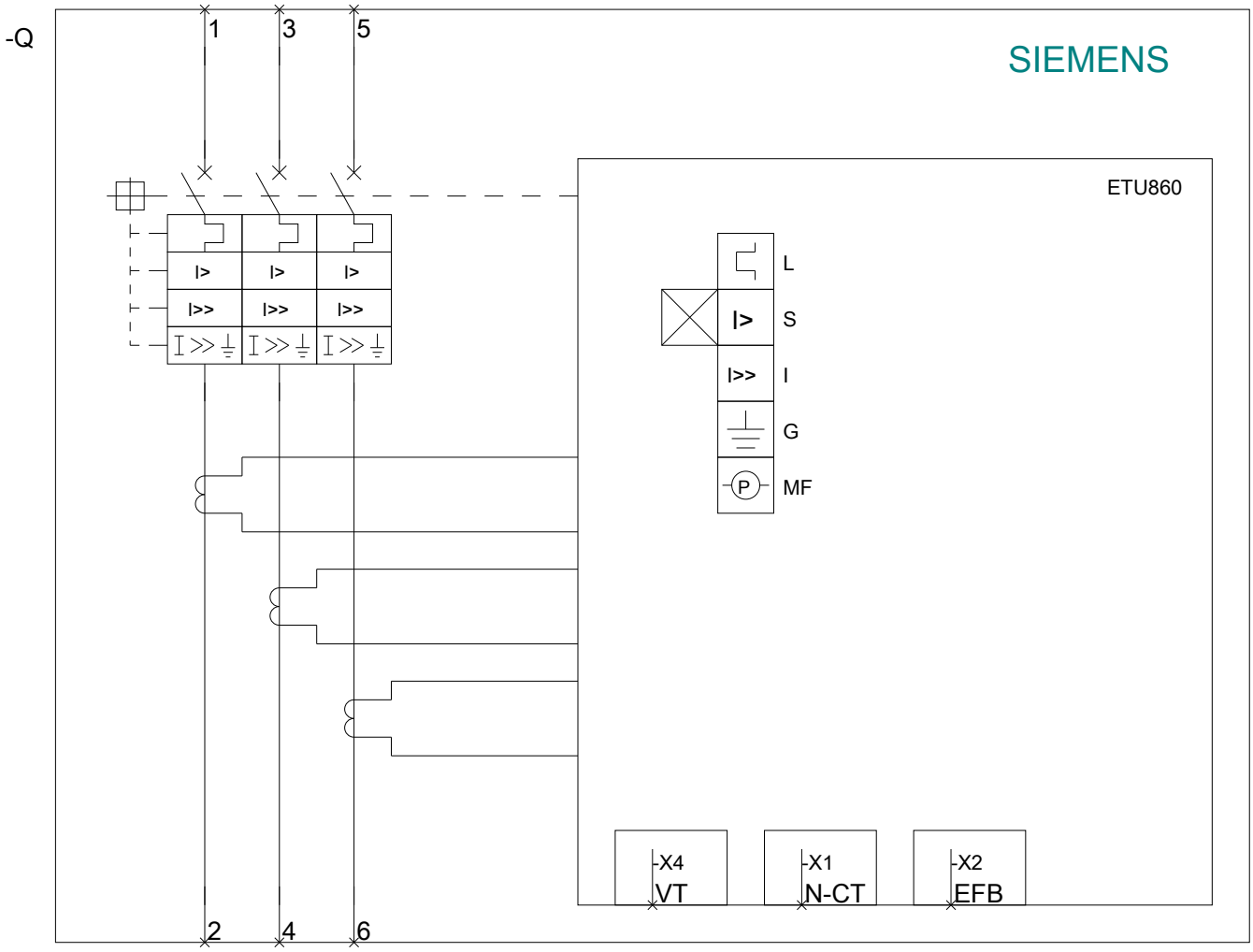




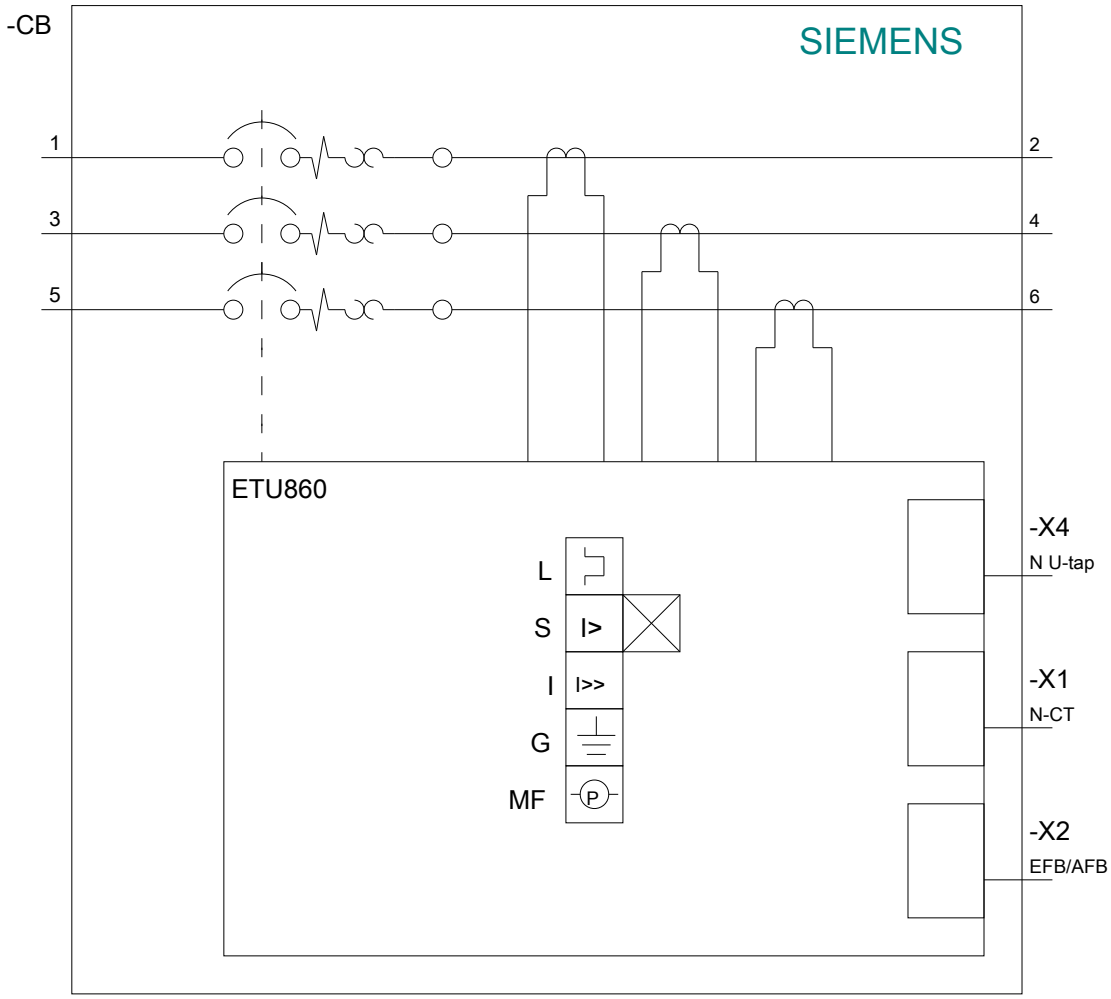




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