## What's New?

Siemens Energy \& Automation is proud to announce several new products. These new concepts serve the OEM and power distribution markets.

## WL Power Circuit Breakers



It's the Circuit Breaker that changes everything! And it's armed with a full array of competitive advantages:

- Reliable - increased operations and better than 1\% metering accuracy
- Compact - smallest switchgear footprint in the industry
- Easy to Use - straightforward catalog numbers \& selection tools
- Modular - drop-in, front-mounted accessories \& field changeable main contacts
. System Solution - Internet/Ethernet, Modbus and Profibus communications
- Safety - customized interlocking and unique status indicators


## Specifications and Applications:

. Standards: UL489, UL1066 and ANSI C37

- Frame Ratings: 800A to 5000A
- Rated Nominal Voltages: 240, 480 and 600VAC
- Interrupting Ratings: from 50KA to 150KA un-fused and 200KA fused
- Assemblies: Fixed mounted, draw-out Circuit Breaker or Non-automatic Switch
- Applicable for all ICCB or RL Breaker applications

The WL Circuit Breaker may be new to North America, but it has already been proven in the field - with two years of flawless performance in Europe. No other product on the market today offers more flexibility or greater reliability.

## Sentron Distribution Lug



Distribution lugs are now available for use with Siemens Sentron E, F, J and L-frame circuit breakers. These lugs are UL 486-B recognized and are ideal for UL 508 control panel applications to replace a distribution block. Using the Sentron distribution lugs can reduce the need for extra wire stripping. They also reduce the use of extra crimp connectors going between the circuit breaker and distribution block.

## CE Marking

A wide range of Sentron ${ }^{\circledR}$ thermal magnetic circuit breakers has been fully tested for compliance with the European community's Low Voltage Directive, and carry the CE mark, indicating their compliance with that directive. These are noted in the Speedfax with the stylized CE in watermark behind the catalog numbers. Declarations of conformity are available for these products. A point of misunderstanding lies in the area of handle operators. A handle operator alone, such as that for the Max-flex, since there is no applicable European Directive, may not carry the CE mark. The mark is affixed to the finished equipment that incorporates the handle, but not to this component device.

## PLC Level Auxiliary Switches

A new family of gold flashed auxiliary switches for the FD through ND breakers allows sensing at very low voltage and currents for interface directly to programmable logic controllers and other electronic devices. Standard contacts, built to switch 120 Volts and higher currents can be unreliable when the sensing current is in the milliamp range, and the sensing voltage is 12 Volts or lower. These very reliable low level switches overcome that limitation. Standard switch contacts should, of course, continue to be used in standard current and voltage applications.

DIN Rail mounted 120/240 V Breaker


The Siemens BQ breakers are now available in 1- and 2-pole construction, from 15 to 60 Amps in lug in - lug out DIN rail mounted configuration. These breakers, rated 120/240 Volts, are ideal for applications in control panels and HVAC, and with their available finger safe terminal shields can qualify as service disconnects.

NGG Type 125A Frame Circuit Breaker


The new NGG Circuit Breaker is a compact, industrial design with true value-added features such as Global Ratings (UL/CSA/IEC/CE/NOM), flexible DIN or base mounting without the need for adapters and UL Listed for field install-able accessories. This NGG125 has a 25 KAIC interrupting rating at 480VAC and features a Quick Make/Quick Break Trip-free Mechanism. All this in a 3.0W $\times 5.4 \mathrm{H} \times 2.8 \mathrm{D}$ package. Please consult your sales office for availability.

## HID Lighting Breakers

Siemens BQD and CQD circuit breakers have been tested and approved for use in switching HID lighting. One, two and three pole breakers from 15A to 50A are now approved and marked for use in these high energy lighting systems where the breakers is used to directly control the lighting in 120VAC, 240VAC, 277AC or 480/277VAC circuits.

Thermal-M agnetic Trip Breakers

| ermal-M agnetic Tnip Breakers |  |  |  |  |  | General Purpose Breakers |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | NEG | HEG | ED2 | ED4 | ED6 | HED4 | CED6 |
| Page |  |  |  |  |  | 17/18 | 17/18 | 17/20 | 17/20 | 17/20 | 17/21 | 17/21 |
| Poles |  |  |  |  |  | 1,2,3,4 | 1, 2, 3, 4 | 1, 2, 3 | 1, 2, 3 | $1^{\oplus}, 2,3$ | 1, 2, 3 | 2, 3 |
| Ratings | AC | Amperes, Continuous |  |  |  | 15-125 | 15-125 | 15-100 | 15-125 | 15-125 | 15-125 | 15-125 |
|  |  | Volts 50/60HZ |  |  | 1-Pole | $347{ }^{\text {® }}$ | $347{ }^{\text {® }}$ | 120 | 277 | 347 | 277 | - |
|  |  |  |  |  | 2-Pole <br> 3-Pole | 600/347 | 600/347 | 240 | 480 | 600 | 480 | 600 |
|  |  | Interrupt Rating Symmetrical RMS Amperes | UL |  | 120 V | - | - | 10,000 | - | - | 100,000 | - |
|  |  |  |  |  | 240 V | 85,000 | 100,000 | 10,000 | 65,000 | 65,000 | 100,000 ${ }^{(6)}$ | 200,000 |
|  |  |  |  |  | 277V | - | - | - | 22,000 ${ }^{\text {® }}$ | - | 65,000 ${ }^{\text {2 }}$ | - |
|  |  |  |  |  | 347 V | - | - | - | - | 30,000 | - | - |
|  |  |  |  |  | 480 V | 35,000 | 65,000 | - | 18,000 | 25,000 | 42,000 | 200,000 |
|  |  |  |  |  | 600 V | 22,000 ${ }^{\text {® }}$ | 25,000 ${ }^{\text {® }}$ | - | - | 18,000 | - | 100,000 |
|  |  |  | $\begin{aligned} & \text { IEC 947-2 } \\ & 50 / 60 \mathrm{HZ} \end{aligned}$ | 220/240V | Icu | 85,000 | 100,000 | - |  | 65,000 | - | 200,000 ${ }^{(2)}$ |
|  |  |  |  | 220/240V | ICs | 43,000 | 50,000 | - | - | 17,000 | - | - |
|  |  |  |  | 380/415V | Icu | 40,000 | 70,000 | - |  | 35,000 | - | 200,000 ${ }^{\text {2 }}$ |
|  |  |  |  | $380 / 415 \mathrm{~V}$ | Ics | 20,000 | 35,000 | - | - | 9,000 | - | - |
|  |  |  |  | 500 V | Icu | - | - | - | - | 18,000 | - | - |
|  |  |  |  | 500 | ICs | - | - | - | - | 5,000 | - | - |
|  | DC | 2-Pole, 250V DC Interrupting Ratings |  |  |  | - | - | 5,000 | 30,000 | 30,000 | 30,000 | 30,000 |
|  |  | 3-Pole, 500V DC Interrupting Ratings ${ }^{(3)}$ |  |  |  | - | - | - | - | 18,000 | - | 50,000 |
| Dimensions in inches |  | Height |  |  |  | 5.5 | 5.5 | 6.34 | 6.34 | 6.34 | 6.34 | 9.26 |
|  |  | Width |  |  | 1-Pole | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | - |
|  |  | $\begin{aligned} & \hline \text { 2-Pole } \\ & \text { 3-Pole } \end{aligned}$ | $\begin{aligned} & 2.00 \\ & 3.00 \end{aligned}$ | $\begin{aligned} & 2.00 \\ & 3.00 \end{aligned}$ | $\begin{aligned} & 2.00 \\ & 3.00 \end{aligned}$ | $\begin{aligned} & 2.00 \\ & 3.00 \end{aligned}$ | $\begin{aligned} & 2.00 \\ & 3.00 \end{aligned}$ | $\begin{aligned} & 2.00 \\ & 3.00 \end{aligned}$ | $\begin{aligned} & 2.00 \\ & 3.00 \end{aligned}$ |
|  |  | 4-Pole | 4.00 | 4.00 | - | - | - | - | - |
|  |  | Depth | 3.00 | 3.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| Overcurrent Devices |  |  |  |  | Thermal and Fixed Magnetic Trip |  |  |  | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  |  |  |  |  | Thermal and Adjustable Magnetic Trip |  |  |  | - | - | - | - | - | - | - |
|  |  | Adjustable Magnetic Trip only Motor Circuit Protector |  |  |  | $\checkmark$ | $\checkmark$ | - | - | $\checkmark$ | - | $\checkmark$ |
|  |  | Molded Case Switch |  |  |  | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | - | $\checkmark$ |
| Accessories \& Modifications |  | Undervoltage Trip |  |  |  | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  |  | Shunt Trip |  |  |  | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  |  | Auxiliary Switch |  |  |  | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  |  | Alarm Switch |  |  |  | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  |  | Mechanical Interlock |  |  |  | - | - | - | - | - | - | - |
|  |  | Rear Connection Studs |  |  |  | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  |  | Electric Motor Operator |  |  |  | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  |  | Plug-In Mounting Assembly |  |  |  | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  |  | Fungus Proofing (ref. page 17/70) |  |  |  | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Individual Enclosures |  | Type 1 - Indoor Surface |  |  |  | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  |  | Type 1 - Indoor, Flush |  |  |  | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  |  | Type 3R - Outdoor-Rainproof |  |  |  | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  |  | Type 7 - Flammable Gas Atmosphere |  |  |  | - | - | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | - |
|  |  | Type 9 - Combustion Dusttight |  |  |  | - | - | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | - |
|  |  | Type 5, 12 - Lint, Fine Dust, Oils, Coolants |  |  |  | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  |  | Type 12K - Semi-Dusttight |  |  |  | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |

## For inches / millimeters conversion, see Application Data section.

(1) 1-pole only.
(2) 35-100A: 25,000 AIR at 277 V AC/15-30A: 65,000 AIR at 277 V AC .
(3) For DC UPS system application.
© NEG and HEG breakers are rated at 600/347V.
(4) Single pole ED6 ( $15-30 \mathrm{~A}$ ) 30kA, (35-100A) 18 kA . CSA Only.
© Single pole HED4, 15-30A: 65,000 AIR at 240 V AC ; single pole
HED4, 35-100A: 25,000 AIR at 240 V AC .

## Selection

Type NEG (Cable In - Cable Out)

|  | 1-Pole |  | 2-Pole |  | 3-Pole |  | 4-Pole |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Continuous <br> Ampere Rating <br> @ $40^{\circ} \mathrm{C}$ | Catalog Number | List <br> Price <br> \$ | Catalog Number | List Price \$ | Catalog <br> Number | List <br> Price \$ | Catalog Number | List <br> Price \$ |
| $\begin{aligned} & 15 \\ & 20 \\ & 25 \\ & 30 \end{aligned}$ | NEG1B015L (1) (2) NEG1B020 NEG1B025L ${ }^{\text {(2) }}$ NEG1B030L |  | NEG2B015L <br> NEG2B020L <br> NEG2B025L <br> NEG2B030L |  | NEG3B015L <br> NEG3B020L <br> NEG3B025L <br> NEG3B030L |  | NEG4B015L <br> NEG4B020L <br> NEG4B025L <br> NEG4B030L |  |
| $\begin{aligned} & 35 \\ & 40 \\ & 45 \\ & 50 \\ & 60 \end{aligned}$ | NEG1B035L NEG1B040L NEG1B045L NEG1B050L NEG1B060L |  | NEG2B035L <br> NEG2B040L <br> NEG2B045L <br> NEG2B050L <br> NEG2B060L |  | NEG3B035L <br> NEG3B040L <br> NEG3B045L <br> NEG3B050L <br> NEG3B060L |  | NEG4B035L <br> NEG4B040L <br> NEG4B045L <br> NEG4B050L <br> NEG4B060L |  |
| $\begin{array}{r} 70 \\ 80 \\ 90 \\ 100 \end{array}$ | NEG1B070L <br> NEG1B080L <br> NEG1B090L <br> NEG1B100L |  | NEG2B070L <br> NEG2B080L <br> NEG2B090L <br> NEG2B100L |  | NEG3B070L <br> NEG3B080L <br> NEG3B090L <br> NEG3B100L |  | NEG4B070L <br> NEG4B080L <br> NEG4B090L <br> NEG4B100L |  |
| $\begin{aligned} & 110 \\ & 125 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { NEG1B110L } \\ & \text { NEG1B125L } \end{aligned}$ |  | $\begin{aligned} & \text { NEG2B110L } \\ & \text { NEG2B125L } \end{aligned}$ |  | $\begin{aligned} & \text { NEG3B110L } \\ & \text { NEG3B125L } \end{aligned}$ |  | $\begin{aligned} & \text { NEG4B110L } \\ & \text { NEG4B125L } \end{aligned}$ |  |

## Type HEG (Cable In - Cable Out)

|  | 1-Pole |  | 2-Pole |  | 3-Pole |  | 4-Pole |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Continuous Ampere Rating @ $40^{\circ} \mathrm{C}$ | Catalog Number | List Price \$ | Catalog Number | List Price \$ | Catalog Number | List <br> Price \$ | Catalog <br> Number | List Price \$ |
| $\begin{aligned} & 15 \\ & 20 \\ & 25 \\ & 30 \end{aligned}$ | HEG1B015L (1) (2) HEG1B020L HEG1B025L ${ }^{\text {(2) }}$ HEG1B030L |  | HEG2B015L <br> HEG2B020L <br> HEG2B025L <br> HEG2B030L |  | HEG3B015L <br> HEG3B020L <br> HEG3B025L <br> HEG3B030L |  | HEG4B015L <br> HEG4B020L <br> HEG4B025L <br> HEG4B030L |  |
| $\begin{aligned} & 35 \\ & 40 \\ & 45 \\ & 50 \\ & 60 \end{aligned}$ | HEG1B035L HEG1B040L HEG1B045L HEG1B050L HEG1B060L |  | HEG2B035L <br> HEG2B040L <br> HEG2B045L <br> HEG2B050L <br> HEG2B060L |  | HEG3B035L HEG3B040L HEG3B045L HEG3B050L HEG3B060L |  | HEG4B035L HEG4B040L HEG4B045L HEG4B050L HEG4B060L |  |
| $\begin{array}{r} 70 \\ 80 \\ 90 \\ 100 \end{array}$ | HEG1B070L <br> HEG1B080L <br> HEG1B090L <br> HEG1B100L |  | HEG2B070L <br> HEG2B080L <br> HEG2B090L <br> HEG2B100L |  | HEG3B070L <br> HEG3B080L <br> HEG3B090L <br> HEG3B100L |  | $\begin{aligned} & \text { HEG4B070L } \\ & \text { HEG4B080L } \\ & \text { HEG4B090L } \\ & \text { HEG4B100L } \end{aligned}$ |  |
| $\begin{array}{r} 110 \\ 125 \\ \hline \end{array}$ | $\begin{aligned} & \text { HEG1B110L } \\ & \text { HEG1B125L } \end{aligned}$ |  | $\begin{aligned} & \text { HEG2B110L } \\ & \text { HEG2B125L } \end{aligned}$ |  | $\begin{aligned} & \text { HEG3B110L } \\ & \text { HEG3B125L } \end{aligned}$ |  | $\begin{aligned} & \text { HEG4B110L } \\ & \text { HEG4B125L } \end{aligned}$ |  |



Line and load lugs are included as standard.
HACR rated.
Suitable for screw mounting.

## Lugs For $60 / 75^{\circ} \mathrm{C}$ Wire

## Shipping Weights

| Number of <br> Poles | Number per <br> Carton | Shipping <br> Weight Ibs. (kg) |
| :--- | :--- | :--- |
| 1 | 1 | $1.1(0.5)$ |
| 2 | 1 | $2.0(0.9)$ |
| 3 | 1 | $3.1(1.4)$ |
| 4 | 1 | $3.9(1.8)$ |


| NEG/HEG |  |  |  |
| :--- | :--- | :--- | :--- |
| Ampere Rating | Wire Size | Catalog Number | List Price \$ |
| $15-125 \mathrm{~A}$ | $\# 14-3 / 0$ AWG Cu (steel lugs) | 3TW1EG30 (qty. 3) |  |
| $15-125 \mathrm{~A}^{\oplus}$ | $\# 14-1 / 0$ AWG Cu <br> $\# 14-1 / 0$ AWG AI | 3TA1EG10 (qty. 3) |  |
| $15-125 A^{\oplus}$ | \#6-3/0 AWG Cu <br> $\# 6-3 / 0$ AWG AI | 3TA1EG30 (qty. 3) |  |
| $15-125 \mathrm{~A}$ | Nut Keeper plate w/ screw <br> (for crimp terminals) | TNKE3 (qty. 3) |  |

Interrupting Ratings

| Breaker Type | Number of Poles | UL 489 AIR |  |  |  |  |  |  |  | IEC 60947-2 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | RMS Symmetrical Amperes (KA) |  |  |  |  |  |  |  | Volts AC ( $50 / 60 \mathrm{~Hz}$ ) |  |  |  |  |
|  |  | Volts AC( $50 / 60 \mathrm{~Hz}$ ) |  |  |  |  |  | Volts DC |  | 220/240 |  | 380/415 |  | Volts DC |
|  |  | 120 | 240 | 277 | 347 | 480 | 600/347 | 125 | 125/250 | Icu | Ics | Icu | Ics | 125/250 |
|  | 1 | - | 85 | 35 | 22 | - | 22 | 35 | - | 85 | 43 | - | - | - |
| NEG | 2, 3, 4 | - | 85 | - | - | 35 | $22^{\text {® }}$ | - | 35 | 85 | 43 | 40 | 20 | 35 |
|  | 1 | - | 100 | 65 | 25 | - | 25 | 42 | - | 100 | 50 | - | - | - |
| HEG | 2, 3, 4 | - | 100 | - | - | 65 | $25^{3}$ | - | 42 | 100 | 50 | 70 | 35 | 42 |

[^0]
## Molded Case Circuit Breakers

Catalog Numbering System


## Accessories

## Auxiliary and Alarm Switch Combinations

## Suffix Description

A1 - 1 Alarm (includes 1 NO \& 1NC switch with a 2 Aux./1 Alarm Base, for frames EG to JG)
A2 - 2 Aux (1NO \& 1NC switch with a 3 Aux. Base, for frames EG to JG)
A3 - 2 Aux +1 Alarm ( 2 NO \& 2NC switches with a 2 Aux./1 Alarm Base, for frames EG to JG)
A3 - 2 Aux + 2 Alarm (2NO \& 2NC switches with a 2 Aux./2 Alarm Base, for frames LG to PG)
A4 - 4 Aux (2NO \& 2NC switches with a 4 Aux. Base, for frames LG to PG)
Shunt Trips
RB - 24 VDC $\quad$ RM $-48-60$ VAC
RC - 48-60 VDC RN - 110-127 VAC
RD - 110-127 VDC RS - 208-277 VAC
RE -250 VDC $\quad$ RV $-380-600$ VAC

## Under Voltage Releases

UA - 12 VDC UN - 110-127 VAC
UB - 24 VDC UP - 208 VAC
UC - 48 VDC UR $-220-250$ VAC
UD - 110-127 VDC US - 277 VAC
UE - 220-250 VDC UT - 380-415 VAC
UG - 60 VDC UU $-440-480$ VAC
UV - 600 VAC

Note: A1 and A3 include 1NO and 1NC switch for alarm purposes, only one of these switches may be used as there is only one space for an alarm.

LCD = Liquid Crystal Display
LS = Long Delay \& Short Delay trip functions
LSI = Long Delay, Short Delay, \& Instantaneous trip functions
LSIG = Long Delay, Short Delay, Instantaneous, \& Ground Fault trip functions GF = Ground Fault
$3 \mathrm{P}=3$-pole
$4 \mathrm{~W}=4$ wire


[^0]:    For inches / millimeters conversion, see Application Data section.

