

## SELECTION GUIDE

# UTS600



## CATALOG NUMBERING [PRODUCT SELECTION]

| UTS600                      |     |      |     | NT                                       | ATU | 600A    | 3P | LL                      | UL |
|-----------------------------|-----|------|-----|------------------------------------------|-----|---------|----|-------------------------|----|
| SERIES & FRAME: Susol 600AF |     |      |     |                                          |     |         |    |                         |    |
| PERFORMANCE                 |     |      |     |                                          |     |         |    |                         |    |
| Rating                      | 80% | 100% | kA  |                                          |     |         |    |                         |    |
| 240Vac                      | N   | NT   | 65  |                                          |     |         |    |                         |    |
|                             | H   | HT   | 100 |                                          |     |         |    |                         |    |
|                             | L   | LT   | 150 |                                          |     |         |    |                         |    |
| 480Vac                      | N   | NT   | 35  |                                          |     |         |    |                         |    |
|                             | H   | HT   | 65  |                                          |     |         |    |                         |    |
|                             | L   | LT   | 100 |                                          |     |         |    |                         |    |
| 600Vac                      | N   | NT   | 18  |                                          |     |         |    |                         |    |
|                             | H   | HT   | 35  |                                          |     |         |    |                         |    |
|                             | L   | LT   | 50  |                                          |     |         |    |                         |    |
|                             |     |      |     | TRIP UNIT                                |     | AMPERES |    | POLES                   |    |
|                             |     |      |     | FTU: Fixed Thermal, Fixed Magnet         |     | 500     |    | 2: Two                  |    |
|                             |     |      |     | FMU: Adj. Thermal, Fixed Magnet          |     | 600     |    | 3: Three                |    |
|                             |     |      |     | ATU: Adj Thermal & Magnet                |     |         |    |                         |    |
|                             |     |      |     | ETS: Electronic trip unit standard       |     |         |    |                         |    |
|                             |     |      |     | ETM: Electronic trip unit multi function |     |         |    |                         |    |
|                             |     |      |     | MCP: Motor Circuit Protector             |     |         |    |                         |    |
|                             |     |      |     | MCS: Molded Case Switch                  |     |         |    |                         |    |
|                             |     |      |     |                                          |     |         |    | TERMINALS               |    |
|                             |     |      |     |                                          |     |         |    | LL: Lugs Line/Load Side |    |
|                             |     |      |     |                                          |     |         |    | L : Lugs Line Side      |    |
|                             |     |      |     |                                          |     |         |    | LO: Lugs Load Side      |    |
|                             |     |      |     |                                          |     |         |    | - : Bolt-on             |    |
|                             |     |      |     |                                          |     |         |    | SUFFIX                  |    |
|                             |     |      |     |                                          |     |         |    | UL : UL                 |    |

## UTS600 FRAME

UTS600 breaker is HACR rated

### UL489 RATINGS

| BREAKER TYPE | NUMBER OF POLES | INTERRUPTING CAPACITY (kA rms) AC 50/60Hz |         |         | INTERRUPTING CAPACITY (kA) DC |            |
|--------------|-----------------|-------------------------------------------|---------|---------|-------------------------------|------------|
|              |                 | 240V ac                                   | 480V ac | 600V ac | 250V DC-2P                    | 600V DC-3P |
| UTS600N      | 2, 3            | 65                                        | 35      | 18      | 35                            | 35         |
| UTS600H      | 2, 3            | 100                                       | 65      | 35      | 50                            | 50         |
| UTS600L      | 2, 3            | 150                                       | 100     | 50      | 65                            | 65         |

### IEC60947-2 RATINGS

| BREAKER TYPE                          | NUMBER OF POLES | INTERRUPTING CAPACITY(kA rms) AC 50/60Hz, Icu |          |          |
|---------------------------------------|-----------------|-----------------------------------------------|----------|----------|
|                                       |                 | 220/240V                                      | 380/415V | 480/500V |
| UTS600N                               | 2, 3            | 65                                            | 35       | 18       |
| UTS600H                               | 2, 3            | 100                                           | 65       | 35       |
| UTS600L                               | 2, 3            | 150                                           | 100      | 50       |
| Service breaking capacity, Ics (%Icu) |                 | 100%                                          |          |          |
| Insulation Voltage, Ui                |                 | 750 VAC                                       |          |          |
| Impulse Withstand Voltage, Uimp       |                 | 8 KVAC                                        |          |          |
| Utilization Category                  |                 | A                                             |          |          |

### DIMENSIONS

| POLE   | DIMENSIONS inch (mm) |             |            |
|--------|----------------------|-------------|------------|
|        | W                    | H           | D          |
| 2-Pole | 5.51 (140)           | 13.39 (340) | 4.33 (110) |
| 3-Pole |                      |             |            |

### TRIP UNIT TYPES

|     | THERMAL                | MAGNETIC                | REMARKS       |
|-----|------------------------|-------------------------|---------------|
| FTU | Fixed                  | Fixed                   |               |
| FMU | Adjustable, 0.8~1 x In | Fixed                   |               |
| ATU | Adjustable, 0.8~1 x In | Adjustable, 5~10 x In   |               |
| ETS | Adjustable, 80~600 A   | Adjustable, 1.5~11 x In | Electronic    |
| ETM | Adjustable, 80~600 A   | Adjustable, 1.5~11 x In | Electronic    |
| MCS | N.A.                   | Fixed, 10 x In          | Magnetic only |
| MCP | N.A.                   | Adjustable, 6~12 x In   | Magnetic only |

### CIRCUIT BREAKER

| WITH FTU TRIP UNIT (FIXED THERMAL, FIXED MAGNETIC) |                                            |                    |                                           |                    |
|----------------------------------------------------|--------------------------------------------|--------------------|-------------------------------------------|--------------------|
| Ampere Rating, In                                  | 65kA at 240V, 35kA at 480V, 18kA at 600V   |                    | 100kA at 240V, 65kA at 480V, 35kA at 600V |                    |
|                                                    | 2-Pole                                     | 3-Pole             | 2-Pole                                    | 3-Pole             |
| 500A                                               | UTS600-N-FTU-500-2                         | UTS600-N-FTU-500-3 | UTS600-H-FTU-500-2                        | UTS600-H-FTU-500-3 |
| 600A                                               | UTS600-N-FTU-600-2                         | UTS600-N-FTU-600-3 | UTS600-H-FTU-600-2                        | UTS600-H-FTU-600-3 |
| Ampere Rating, In                                  | 150kA at 240V, 100kA at 480V, 50kA at 600V |                    |                                           |                    |
|                                                    | 2-Pole                                     | 3-Pole             |                                           |                    |
| 500A                                               | UTS600-L-FTU-500-2                         |                    | UTS600-L-FTU-500-3                        |                    |
| 600A                                               | UTS600-L-FTU-600-2                         |                    | UTS600-L-FTU-600-3                        |                    |

## UTS600 FRAME

### CIRCUIT BREAKER

| WITH FMU TRIP UNIT (ADJUSTABLE THERMAL, FIXED MAGNETIC)      |                                            |                    |                                           |                                      |                                                  |
|--------------------------------------------------------------|--------------------------------------------|--------------------|-------------------------------------------|--------------------------------------|--------------------------------------------------|
| Ampere Rating, In                                            | 65kA at 240V, 35kA at 480V, 18kA at 600V   |                    | 100kA at 240V, 65kA at 480V, 35kA at 600V |                                      |                                                  |
|                                                              | 2-Pole                                     | 3-Pole             | 2-Pole                                    | 3-Pole                               |                                                  |
| 500A                                                         | UTS600-N-FMU-500-2                         | UTS600-N-FMU-500-3 | UTS600-H-FMU-500-2                        | UTS600-H-FMU-500-3                   |                                                  |
| 600A                                                         | UTS600-N-FMU-600-2                         | UTS600-N-FMU-600-3 | UTS600-H-FMU-600-2                        | UTS600-H-FMU-600-3                   |                                                  |
| Ampere Rating, In                                            | 150kA at 240V, 100kA at 480V, 50kA at 600V |                    |                                           | Thermal Range                        |                                                  |
|                                                              | 2-Pole                                     |                    | 3-Pole                                    |                                      |                                                  |
| 500A                                                         | UTS600-L-FMU-500-2                         |                    | UTS600-L-FMU-500-3                        | 400-500A                             |                                                  |
| 600A                                                         | UTS600-L-FMU-600-2                         |                    | UTS600-L-FMU-600-3                        | 480-600A                             |                                                  |
| WITH ATU TRIP UNIT (ADJUSTABLE THERMAL, ADJUSTABLE MAGNETIC) |                                            |                    |                                           |                                      |                                                  |
| Ampere Rating, In                                            | 65kA at 240V, 35kA at 480V, 18kA at 600V   |                    | 100kA at 240V, 65kA at 480V, 35kA at 600V |                                      |                                                  |
|                                                              | 2-Pole                                     | 3-Pole             | 2-Pole                                    | 3-Pole                               |                                                  |
| 500A                                                         | UTS600-N-ATU-500-2                         | UTS600-N-ATU-500-3 | UTS600-H-ATU-500-2                        | UTS600-H-ATU-500-3                   |                                                  |
| 600A                                                         | UTS600-N-ATU-600-2                         | UTS600-N-ATU-600-3 | UTS600-H-ATU-600-2                        | UTS600-H-ATU-600-3                   |                                                  |
| Ampere Rating, In                                            | 150kA at 240V, 100kA at 480V, 50kA at 600V |                    | Adjustable range                          |                                      |                                                  |
|                                                              | 2-Pole                                     | 3-Pole             | Thermal                                   | Magnetic                             |                                                  |
| 500A                                                         | UTS600-L-ATU-500-2                         | UTS600-L-ATU-500-3 | 400-500A                                  | 2500-5000A                           |                                                  |
| 600A                                                         | UTS600-L-ATU-600-2                         | UTS600-L-ATU-600-3 | 480-600A                                  | 3000-6000A                           |                                                  |
| WITH ETS33 LI TRIP UNIT (ELECTRONIC)                         |                                            |                    |                                           |                                      |                                                  |
| Ampere Rating, In                                            | 65kA at 240V, 35kA at 480V, 18kA at 600V   |                    | 100kA at 240V, 65kA at 480V, 35kA at 600V |                                      |                                                  |
|                                                              | 3-Pole                                     |                    | 3-Pole                                    |                                      |                                                  |
| 400A                                                         | UTS600-N-ETS33-400-3                       |                    | UTS600-H-ETS33-400-3                      |                                      |                                                  |
| 600A                                                         | UTS600-N-ETS33-600-3                       |                    | UTS600-H-ETS33-600-3                      |                                      |                                                  |
| Ampere Rating, In                                            | 150kA at 240V, 100kA at 480V, 50kA at 600V |                    | Setting value                             |                                      |                                                  |
|                                                              | 3-Pole                                     |                    | Ir (A)                                    | Ii (A)                               | Tr (s)                                           |
| 400A                                                         | UTS600-L-ETS33-400-3                       |                    | 150~400A                                  | (1.5, 2, 3, 4, 5, 6, 8, 10, 11) x In | 0.5, 1, 2, 4, 8, 16, Accuracy ±20%               |
| 600A                                                         | UTS600-L-ETS33-600-3                       |                    | 225~600A                                  |                                      |                                                  |
| WITH ETS33 LSI TRIP UNIT (ELECTRONIC)                        |                                            |                    |                                           |                                      |                                                  |
| Ampere Rating, In                                            | 65kA at 240V, 35kA at 480V, 18kA at 600V   |                    | 100kA at 240V, 65kA at 480V, 35kA at 600V |                                      |                                                  |
|                                                              | 3-Pole                                     |                    | 3-Pole                                    |                                      |                                                  |
| 400A                                                         | UTS600-N-ETS33-400-3                       |                    | UTS600-H-ETS33-400-3                      |                                      |                                                  |
| 600A                                                         | UTS600-N-ETS33-600-3                       |                    | UTS600-H-ETS33-600-3                      |                                      |                                                  |
| Ampere Rating, In                                            | 150kA at 240V, 100kA at 480V, 50kA at 600V |                    | Setting value                             |                                      |                                                  |
|                                                              | 3-Pole                                     |                    | Ir (A)                                    | Ii (A)                               | Isd (A)                                          |
| 400A                                                         | UTS600-L-ETS33-400-3                       |                    | 150~400A                                  | (1.5, 2, 3, 4, 5, 6, 8, 10, 11) x In | (1.5, 2, 3, 4, 5, 6, 7, 8, 10) x Ir Accuracy±15% |
| 600A                                                         | UTS600-L-ETS33-600-3                       |                    | 225~600A                                  |                                      |                                                  |

\* Time delay at 6 x I<sub>r</sub>: fixed 16s, accuracy ±20%

\* Time delay: non-tripping time 20ms / maximum break time 80ms

\* Tripping time: ≤50ms

## CIRCUIT BREAKER

| WITH ETM33 TRIP UNIT (ELECTRONIC) |                                          |  |                                           |  |                                            |  |  |
|-----------------------------------|------------------------------------------|--|-------------------------------------------|--|--------------------------------------------|--|--|
| Ampere Rating, In                 | 65kA at 240V, 35kA at 480V, 18kA at 600V |  | 100kA at 240V, 65kA at 480V, 35kA at 600V |  | 150kA at 240V, 100kA at 480V, 50kA at 600V |  |  |
|                                   | 3-Pole                                   |  | 3-Pole                                    |  | 3-Pole                                     |  |  |
| 400A                              | UTS600-N-ETM33-400-3                     |  | UTS600-H-ETM33-400-3                      |  | UTS600-L-ETM33-400-3                       |  |  |
| 600A                              | UTS600-N-ETM33-600-3                     |  | UTS600-H-ETM33-600-3                      |  | UTS600-L-ETM33-600-3                       |  |  |

| Ampere Rating, In | Setting value                   |                                    |                                                               |                        |                                                  |                        |                    |
|-------------------|---------------------------------|------------------------------------|---------------------------------------------------------------|------------------------|--------------------------------------------------|------------------------|--------------------|
|                   | Overload protection (long time) |                                    | Short-circuit protection (short time)                         |                        | Instantaneous                                    | Option                 |                    |
|                   | Ir (A)                          | Tr (s)                             | I <sub>sd</sub> (A)                                           | t <sub>sd</sub> (ms)   | I <sub>i</sub> (A)                               | I <sub>g</sub> (A)     | t <sub>g</sub> (A) |
| 400A              | 150~400A                        | 0.5, 1, 2, 4, 8, 16, Accuracy ±20% | (1.5, 2, 3, 4, 5, 6, 7, 8, 10) x I <sub>r</sub> Accuracy ±15% | 50, 100, 200, 300, 400 | (1.5, 2, 3, 4, 5, 6, 8, 10, 11) x I <sub>n</sub> | 0.2~1 x I <sub>n</sub> | 100, 200, 300, 400 |
| 600A              | 225~600A                        |                                    |                                                               |                        |                                                  |                        |                    |

## MOLDED CASE SWITCH

| WITH MCS TRIP UNIT (FIXED MAGNETIC ONLY) |                                          |                    |                                           |                    |
|------------------------------------------|------------------------------------------|--------------------|-------------------------------------------|--------------------|
| Ampere Rating, In                        | 65kA at 240V, 35kA at 480V, 18kA at 600V |                    | 100kA at 240V, 65kA at 480V, 35kA at 600V |                    |
|                                          | 2-Pole                                   | 3-Pole             | 2-Pole                                    | 3-Pole             |
| 600A                                     | UTS600-N-MCS-600-2                       | UTS600-N-MCS-600-3 | UTS600-H-MCS-600-2                        | UTS600-H-MCS-600-3 |

| Ampere Rating, In | 150kA at 240V, 100kA at 480V, 50kA at 600V |                    |
|-------------------|--------------------------------------------|--------------------|
|                   | 2-Pole                                     | 3-Pole             |
| 600A              | UTS600-L-MCS-600-2                         | UTS600-L-MCS-600-3 |

## MOTOR CIRCUIT PROTECTOR

| WITH MCP TRIP UNIT (ADJUSTABLE MAGNETIC ONLY) |                    |                    |
|-----------------------------------------------|--------------------|--------------------|
| Ampere Rating, In                             | 3-Pole             | 3-Pole             |
| 500A                                          | UTS600-N-MCP-500-3 | UTS600-H-MCP-500-3 |

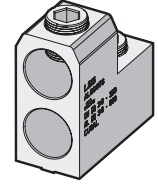
| Ampere Rating, In | 3-Pole             | Magnetic Range |
|-------------------|--------------------|----------------|
| 500A              | UTS600-L-MCP-500-3 | 3000-6000A     |

## ACCESSORIES FOR UTS600

### MECHANICAL LUGS

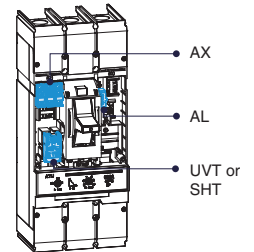
| MAXIMUM BREAKER AMPERES | TERMINAL BODY MATERIAL | WIRE TYPE | ORDERING TYPE |
|-------------------------|------------------------|-----------|---------------|
| 600A                    | Aluminum               | Cu/Al     | AL600TS       |

AL600TS 500~600A Lug



### INNER ACCESSORIES

| DESCRIPTION             | CONTROL VOLTAGE   | ORDERING TYPE |
|-------------------------|-------------------|---------------|
| Auxiliary Switch, AX    |                   |               |
| Alarm Switch, AL        |                   |               |
| Fault alarm switch, FAL |                   |               |
| Shunt Trip, SHT         | DC 12V            |               |
|                         | AC/DC 24V         |               |
|                         | AC/DC 48V         |               |
|                         | AC/DC 110~130V    |               |
|                         | AC220~240V/DC250V |               |
| Undervoltage Trip, UVT  | AC 380~500V       |               |
|                         | AC/DC 24V         |               |
|                         | AC/DC 48V         |               |
|                         | AC/DC 110~130V    |               |
|                         | AC220~240V/DC250V |               |
|                         | AC 380~440V       |               |
|                         | AC 440~480V       |               |



| Type | Left(R) | Right(T) |
|------|---------|----------|
| AX   | 3       | -        |
| AL   | -       | 1        |
| FAL  | -       | 1**      |
| SHT  | 1*      | -        |
| UVT  | 1*      | -        |

\* Applicable in indicated pole position-not synchronous

\*\* FAL can be applied to only MCCB with electronic trip release.

### PADLOCKING DEVICE

| DESCRIPTION            | ORDERING TYPE |
|------------------------|---------------|
| Lock in "OFF" position | PL3           |



&lt;Pad Lock&gt;

### PLATE HANDLE LOCKING DEVICE

| DESCRIPTION                    | ORDERING TYPE |
|--------------------------------|---------------|
| Lock in "OFF" or "ON" position | PHL3          |



&lt;Plate Handle Lock&gt;

### MECHANICAL INTERLOCKING DEVICE

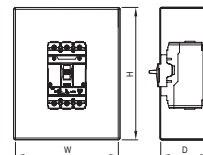
| DESCRIPTION        | ORDERING TYPE |
|--------------------|---------------|
| For 3-Pole breaker | MIT33         |



&lt;Mechanical Interlock&gt;

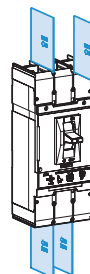
## ENCLOSURE

| ENCLOSURE DIMENSION(W X H X D) inch(mm)           | ORDERING TYPE |
|---------------------------------------------------|---------------|
| 13.78(350) x 40.16(1020) x 5.98(152) : 80% rated  | -             |
| 14.17(360) x 41.34(1050) x 7.17(182) : 100% rated | -             |



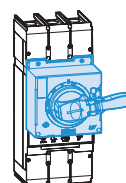
## INSULATION BARRIERS

| DESCRIPTION        | QTY PER KIT | ORDERING TYPE |
|--------------------|-------------|---------------|
| For 3-Pole breaker | 4           | B33           |

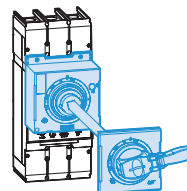


## ROTARY OPERATING HANDLES

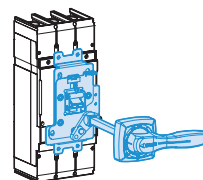
| DESCRIPTION                      | TYPE               | ORDERING TYPE |
|----------------------------------|--------------------|---------------|
| Directly Mounted                 | NEMA Type 1        | DH-3          |
| Directly Mounted (with Key lock) | NEMA Type 1        | DHK-3         |
| Extended (Door-Mounted)          | NEMA Type 1        | REH-3         |
|                                  | NEMA Type 1, 12    | EHU-3         |
| NEMA Door-Mounted                | NEMA Type 3, 3R, 4 | EHV-3         |
|                                  | NEMA Type 3, 4, 4X | EHX-3         |



<DH-3>



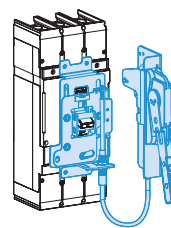
<REH-3>



<EHU-3>

## FLANGE HANDLES WITH SLIDING OPERATING MECHANISM

| DESCRIPTION                                      | TYPE                      | ORDERING TYPE |
|--------------------------------------------------|---------------------------|---------------|
| Handle(with sliding mechanism and without cable) | NEMA Type 1, 12, 3, 3R, 4 | FHU-3         |
|                                                  | NEMA Type 4, 4X           | FHX-3         |
|                                                  | 36 inch                   | FH3-36        |
|                                                  | 48 inch                   | FH3-48        |
| Cable                                            | 60 inch                   | FH3-60        |
|                                                  | 72 inch                   | FH3-72        |
|                                                  | 128 inch                  | FH3-128       |

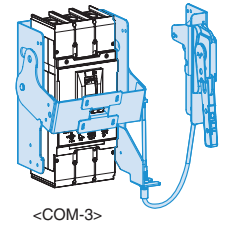


<FHU-3>

## ACCESSORIES FOR UTS600

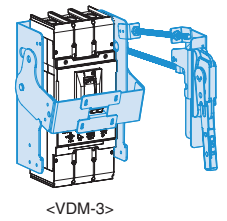
### FLANGE HANDLES WITH CABLE OPERATING MECHANISM

| DESCRIPTION                                    | TYPE                      | ORDERING TYPE   |
|------------------------------------------------|---------------------------|-----------------|
| Cable operating mechanism<br>(without cable)   |                           | COM-3           |
| Long type handle<br>(with operating mechanism) | NEMA Type 1, 12, 3, 3R, 4 | [COM-3]+[FHU-L] |
|                                                | NEMA Type 4, 4X           | [COM-3]+[FHX-L] |
| Cable                                          | 36 inch                   | FH3-36          |
|                                                | 48 inch                   | FH3-48          |
|                                                | 60 inch                   | FH3-60          |
|                                                | 72 inch                   | FH3-72          |
|                                                | 128 inch                  | FH3-128         |



### FLANGE HANDLES WITH VARIABLE-DEPTH OPERATING MECHANISM

| DESCRIPTION                                                     | TYPE                      | ORDERING TYPE   |
|-----------------------------------------------------------------|---------------------------|-----------------|
| Variable depth operating mechanism with threaded-rod and handle |                           | VDM-3           |
| Long type handle with operating mechanism                       | NEMA Type 1, 12, 3, 3R, 4 | [VDM-3]+[FHU-L] |
|                                                                 | NEMA Type 4, 4X           | [VDM-3]+[FHX-L] |



| TYPE                          | DIRECTLY MOUNTED | DOOR MOUNTED | FLANGE HANDLE WITH CABLE OPERATION MECHANISM | FLANGE HANDLE WITH VARIABLE DEPTH MECHANISM |
|-------------------------------|------------------|--------------|----------------------------------------------|---------------------------------------------|
| NEMA Type 1                   |                  |              | -                                            | -                                           |
| NEMA Type 1, 12, 3, 3R, 4, 4X | -                |              |                                              |                                             |

### MOTOR OPERATOR

| DESCRIPTION                     | CONTROL VOLTAGE | ORDERING TYPE |
|---------------------------------|-----------------|---------------|
| Standard type<br>(Not lockable) | DC 24V          | MOP3U         |
|                                 | AC 110V/DC 110V | MOP3U         |
|                                 | AC 230V/DC 220V | MOP3U         |
| Lockable type                   | DC 24V          | MOP3U-L       |
|                                 | AC 110V/DC 110V | MOP3U-L       |
|                                 | AC 230V/DC 220V | MOP3U-L       |

