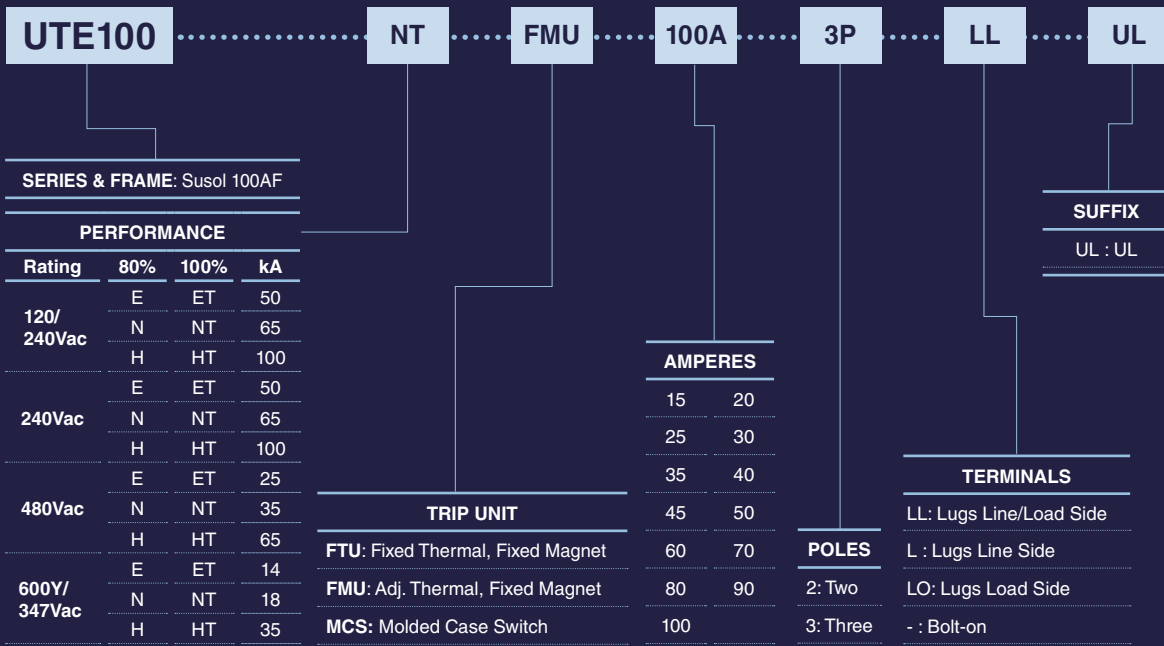


SELECTION GUIDE

UTE100



CATALOG NUMBERING [PRODUCT SELECTION]



UTE100 FRAME

- UTE100 breaker is HACR rated
- SWD switch duty rating
(applied only to 15 and 20A /347Vac or less)
- HID high intensity discharge lighting rating
(15~50A /480Vac or less)

UL489 RATINGS

BREAKER TYPE	NUMBER OF POLES	INTERRUPTING CAPACITY (kA rms) AC 50/60Hz				INTERRUPTING CAPACITY (kA) DC	
		120/240V	240V	480V	600Y 347V	250V DC-2P	500V DC-3P
UTE100E	2, 3	50	50	25	14	16	25
UTE100N	2, 3	65	65	35	18	25	35
UTE100H	2, 3	100	100	65	35	-	-

IEC60947-2 RATINGS

BREAKER TYPE	NUMBER OF POLES	INTERRUPTING CAPACITY(kA rms) AC 50/60Hz, Icu	
		220/240V	380/415V
UTE100E	2, 3	50	25
UTE100N	2, 3	65	35
UTE100H	2, 3	65	35
Service breaking capacity, Ics (%Icu)		100%	
Insulation Voltage, Ui		750 Vac	
Impulse Withstand Voltage, Uimp		8 kVac	
Utilization Category		A	

DIMENSIONS

POLES	DIMENSIONS inch (mm)		
	W	H	D
2-Pole	2.01 (51)	5.12 (130)	3.44 (87.5)
3-Pole	2.99 (76)	5.12 (130)	3.44 (87.5)

TRIP UNIT TYPES

	THERMAL	MAGNETIC	REMARKS
FTU	Fixed	Fixed	
FMU	Adjustable, 0.8~1 x In	Fixed	
MCS	N.A	Fixed, 10 x In	Magnetic only

CIRCUIT BREAKER

Ampere Rating, In	WITH FTU TRIP UNIT (FIXED THERMAL, FIXED MAGNETIC)					
	50kA at 120/240V, 50kA at 240Vac		65kA at 120/240V, 65kA at 240Vac		100kA at 120/240V, 100kA at 240Vac	
	2-Pole	3-Pole	2-Pole	3-Pole	2-Pole	3-Pole
15A	UTE100-E-FTU-15-2	UTE100-E-FTU-15-3	UTE100-N-FTU-15-2	UTE100-N-FTU-15-3	UTE100-H-FTU-15-2	UTE100-H-FTU-15-3
20A	UTE100-E-FTU-20-2	UTE100-E-FTU-20-3	UTE100-N-FTU-20-2	UTE100-N-FTU-20-3	UTE100-H-FTU-20-2	UTE100-H-FTU-20-3
25A	UTE100-E-FTU-25-2	UTE100-E-FTU-25-3	UTE100-N-FTU-25-2	UTE100-N-FTU-25-3	UTE100-H-FTU-25-2	UTE100-H-FTU-25-3
30A	UTE100-E-FTU-30-2	UTE100-E-FTU-30-3	UTE100-N-FTU-30-2	UTE100-N-FTU-30-3	UTE100-H-FTU-30-2	UTE100-H-FTU-30-3
35A	UTE100-E-FTU-35-2	UTE100-E-FTU-35-3	UTE100-N-FTU-35-2	UTE100-N-FTU-35-3	-	-
40A	UTE100-E-FTU-40-2	UTE100-E-FTU-40-3	UTE100-N-FTU-40-2	UTE100-N-FTU-40-3	-	-
45A	UTE100-E-FTU-45-2	UTE100-E-FTU-45-3	UTE100-N-FTU-45-2	UTE100-N-FTU-45-3	-	-
50A	UTE100-E-FTU-50-2	UTE100-E-FTU-50-3	UTE100-N-FTU-50-2	UTE100-N-FTU-50-3	-	-
60A	UTE100-E-FTU-60-2	UTE100-E-FTU-60-3	UTE100-N-FTU-60-2	UTE100-N-FTU-60-3	-	-
70A	UTE100-E-FTU-70-2	UTE100-E-FTU-70-3	UTE100-N-FTU-70-2	UTE100-N-FTU-70-3	-	-
80A	UTE100-E-FTU-80-2	UTE100-E-FTU-80-3	UTE100-N-FTU-80-2	UTE100-N-FTU-80-3	-	-
90A	UTE100-E-FTU-90-2	UTE100-E-FTU-90-3	UTE100-N-FTU-90-2	UTE100-N-FTU-90-3	-	-
100A	UTE100-E-FTU-100-2	UTE100-E-FTU-100-3	UTE100-N-FTU-100-2	UTE100-N-FTU-100-3	-	-

UTE100 FRAME

CIRCUIT BREAKER

WITH FTU TRIP UNIT (FIXED THERMAL, FIXED MAGNETIC)						
Ampere Rating, In	25kA at 480V, 14kA at 600Y 347Vac		35kA at 480V, 18kA at 600Y 347Vac		65kA at 480V, 35kA at 600Y/347Vac	
	2-Pole	3-Pole	2-Pole	3-Pole	2-Pole	3-Pole
15A	UTE100-E-FTU-15-2	UTE100-E-FTU-15-3	UTE100-N-FTU-15-2	UTE100-N-FTU-15-3	UTE100-H-FTU-15-2	UTE100-H-FTU-15-3
20A	UTE100-E-FTU-20-2	UTE100-E-FTU-20-3	UTE100-N-FTU-20-2	UTE100-N-FTU-20-3	UTE100-H-FTU-20-2	UTE100-H-FTU-20-3
25A	UTE100-E-FTU-25-2	UTE100-E-FTU-25-3	UTE100-N-FTU-25-2	UTE100-N-FTU-25-3	UTE100-H-FTU-25-2	UTE100-H-FTU-25-3
30A	UTE100-E-FTU-30-2	UTE100-E-FTU-30-3	UTE100-N-FTU-30-2	UTE100-N-FTU-30-3	UTE100-H-FTU-30-2	UTE100-H-FTU-30-3
35A	UTE100-E-FTU-35-2	UTE100-E-FTU-35-3	UTE100-N-FTU-35-2	UTE100-N-FTU-35-3	-	-
40A	UTE100-E-FTU-40-2	UTE100-E-FTU-40-3	UTE100-N-FTU-40-2	UTE100-N-FTU-40-3	-	-
45A	UTE100-E-FTU-45-2	UTE100-E-FTU-45-3	UTE100-N-FTU-45-2	UTE100-N-FTU-45-3	-	-
50A	UTE100-E-FTU-50-2	UTE100-E-FTU-50-3	UTE100-N-FTU-50-2	UTE100-N-FTU-50-3	-	-
60A	UTE100-E-FTU-60-2	UTE100-E-FTU-60-3	UTE100-N-FTU-60-2	UTE100-N-FTU-60-3	-	-
70A	UTE100-E-FTU-70-2	UTE100-E-FTU-70-3	UTE100-N-FTU-70-2	UTE100-N-FTU-70-3	-	-
80A	UTE100-E-FTU-80-2	UTE100-E-FTU-80-3	UTE100-N-FTU-80-2	UTE100-N-FTU-80-3	-	-
90A	UTE100-E-FTU-90-2	UTE100-E-FTU-90-3	UTE100-N-FTU-90-2	UTE100-N-FTU-90-3	-	-
100A	UTE100-E-FTU-100-2	UTE100-E-FTU-100-3	UTE100-N-FTU-100-2	UTE100-N-FTU-100-3	-	-

WITH FMU TRIP UNIT (ADJUSTABLE THERMAL, FIXED MAGNETIC)					
Ampere Rating, In	50kA at 120/240V, 50kA at 240Vac		65kA at 120/240V, 65kA at 240Vac		Thermal range
	3-Pole		3-Pole		
25A	UTE100-E-FMU-25-3		UTE100-N-FMU-25-3		20-25A
40A	UTE100-E-FMU-40-3		UTE100-N-FMU-40-3		32-40A
60A	UTE100-E-FMU-60-3		UTE100-N-FMU-60-3		48-60A
80A	UTE100-E-FMU-80-3		UTE100-N-FMU-80-3		64-80A
100A	UTE100-E-FMU-100-3		UTE100-N-FMU-100-3		80-100A

WITH FMU TRIP UNIT (ADJUSTABLE THERMAL, FIXED MAGNETIC)					
Ampere Rating, In	25kA at 480V, 14kA at 600Y 347Vac		35kA at 480V, 18kA at 600Y 347Vac		Thermal range
	3-Pole		3-Pole		
25A	UTE100-E-FMU-25-3		UTE100-N-FMU-25-3		20-25A
40A	UTE100-E-FMU-40-3		UTE100-N-FMU-40-3		32-40A
60A	UTE100-E-FMU-60-3		UTE100-N-FMU-60-3		48-60A
80A	UTE100-E-FMU-80-3		UTE100-N-FMU-80-3		64-80A
100A	UTE100-E-FMU-100-3		UTE100-N-FMU-100-3		80-100A

MOLDED CASE SWITCH

WITH MCS TRIP UNIT				
Ampere Rating, In	50kA at 120/240V, 50kA at 240Vac		65kA at 120/240V, 65kA at 240Vac	
	2-Pole	3-Pole	2-Pole	3-Pole
100A	UTE100-E-MCS-100-2	UTE100-E-MCS-100-3	UTE100-N-MCS-100-2	UTE100-N-MCS-100-3

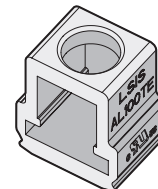
Ampere Rating, In	25kA at 480V, 14kA at 600Y 347Vac		35kA at 480V, 18kA at 600Y 347Vac	
	2-Pole	3-Pole	2-Pole	3-Pole
100A	UTE100-E-MCS-100-2	UTE100-E-MCS-100-3	UTE100-N-MCS-100-2	UTE100-N-MCS-100-3

ACCESSORIES FOR UTE100

MECHANICAL LUGS

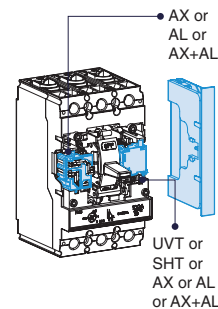
MAXIMUM BREAKER AMPERES	TERMINAL BODY MATERIAL	WIRE TYPE	ORDERING TYPE
100A	Aluminum	Cu/Al	AL100TE

AL100TE 15-100A Lug



INNER ACCESSORIES

DESCRIPTION	CONTROL VOLTAGE	ORDERING TYPE *
Auxiliary Switch, AX		
Alarm Switch, AL		
AX + AL		
Shunt Trip, SHT	AC/DC 12V	TBT
	DC 12V	LWT
	AC/DC 24V	TBT
	AC/DC 24~30V	LWT
	AC/DC 48V	TBT
	AC/DC 60V	TBT
	AC/DC 48~60V	LWT
	AC/DC 100~130V	TBT, LWT
	AC/DC 200~250V	TBT, LWT
	AC 380~450V	TBT, LWT
Undervoltage Trip, UVT	AC 440~500V	TBT, LWT
	AC/DC 24V	
	AC/DC 48V	
	AC/DC 100~110V	
	AC/DC 200~220V	
	AC 380~440V	
	AC 440~480V	



Type	Left(R)	Right(T)
AX	1	1
AL	1	1
AX+AL	1	1
SHT		1
UVT		1

- Applicable in indicated pole position-not synchronous
- 2P : Right only

* TBT(Terminal Block Type), LWT(Lead Wire Type)

PADLOCKING DEVICE

DESCRIPTION	ORDERING TYPE
Lock in "OFF" position	PL0



<Pad Lock>

PLATE HANDLE LOCKING DEVICE

DESCRIPTION	ORDERING TYPE
Lock in "OFF" or "ON" position	PHL0



<Plate Handle Lock>

MECHANICAL INTERLOCKING DEVICE

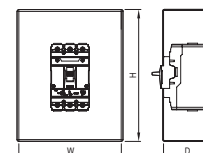
DESCRIPTION	ORDERING TYPE
For 3-Pole breaker	MIT03



<Mechanical Interlock>

ENCLOSURE

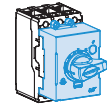
ENCLOSURE DIMENSION (W X H X D) inch(mm)	ORDERING TYPE
8.27(210) x 17.3(439.4) x 4.0(101.6)	-



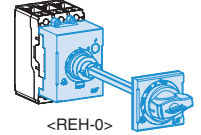
ACCESSORIES FOR UTE100

ROTARY OPERATING HANDLES

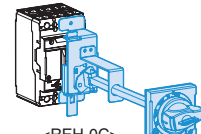
DESCRIPTION	TYPE	ORDERING TYPE
Directly Mounted	NEMA Type 1	DH-0
Extended (Door-Mounted)	NEMA Type 1	REH-0
	NEMA Type 1	REH-0C
NEMA Door-Mounted	NEMA Type 1, 12	EHU-0
	NEMA Type 3, 3R, 4	EHV-0
	NEMA Type 3, 4, 4X	EHX-0
	NEMA Type 1, 12	EHU-0C
	NEMA Type 3, 3R, 4	EHV-0C
	NEMA Type 3, 4, 4X	EHX-0C



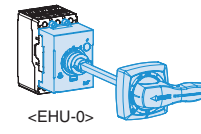
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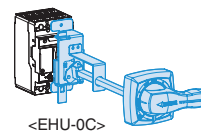
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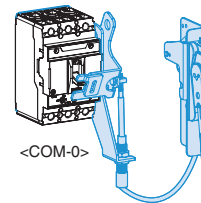
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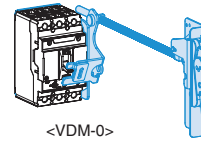
<EHU-0>



<EHU-0C>



<VDM-0>



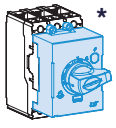
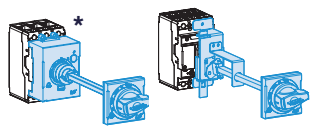
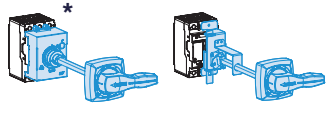
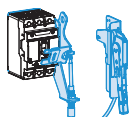
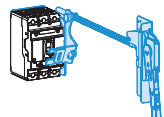
<VDM-0>

FLANGE HANDLES WITH CABLE OPERATING MECHANISM

DESCRIPTION	TYPE	ORDERING TYPE
Cable operating mechanism (without cable)		COM-0
Standard type handle (with operating mechanism)	NEMA Type 1, 12, 3, 3R, 4	[COM-0]+[FHU-S]
	NEMA Type 4, 4X	[COM-0]+[FHX-S]
Cable	36 inch	FH2-36
	48 inch	FH2-48
	60 inch	FH2-60
	72 inch	FH2-72

FLANGE HANDLES WITH VARIABLE-DEPTH OPERATING MECHANISM

DESCRIPTION	TYPE	ORDERING TYPE
Variable depth operating mechanism with threaded-rod and handle		VDM-0
Standard type handle with operating mechanism	NEMA Type 1, 12, 3, 3R, 4	[VDM-0]+[FHU-S]
	NEMA Type 4, 4X	[VDM-0]+[FHX-S]

Description	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	-	 *		

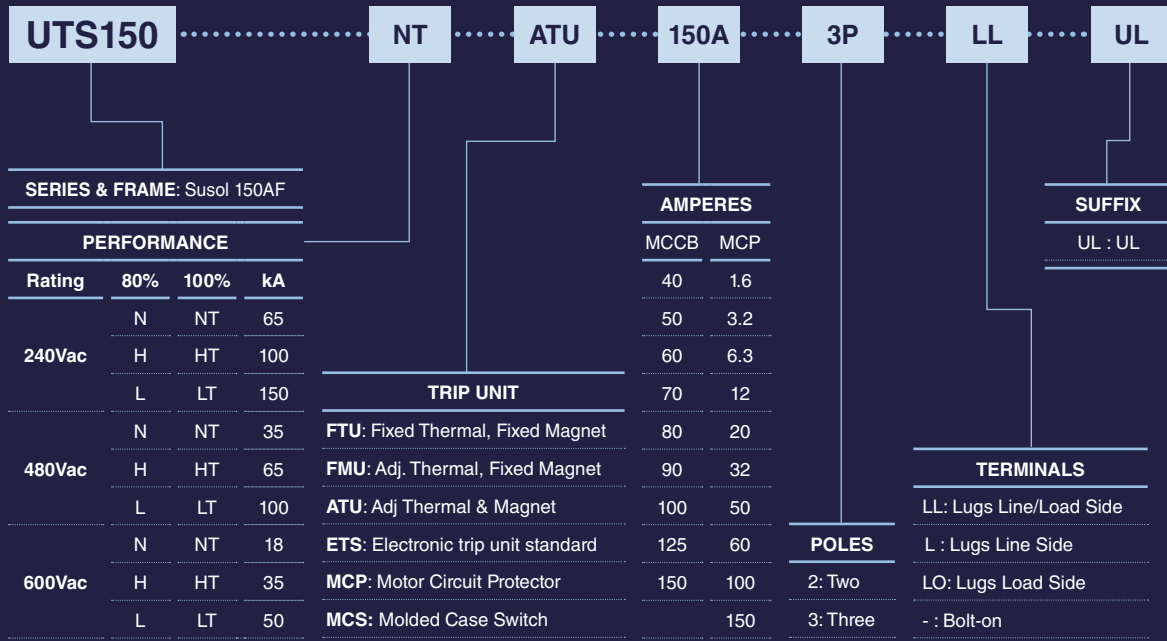
* Only 3 Pole

SELECTION GUIDE

UTS150



CATALOG NUMBERING [PRODUCT SELECTION]



UTS150 FRAME

- UTS150 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
UTS150N	2, 3	65	35	18	35	35
UTS150H	2, 3	100	65	35	50	50
UTS150L	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
UTS150N	2, 3	65	35	18
UTS150H	2, 3	100	65	35
UTS150L	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

POLES	DIMENSIONS inch (mm)		
	W	H	D
2-Pole	4.13 (105)	6.50 (165)	3.44 (87.5)
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, 15~150A	Adjustable, 1.5~11 x In / Fixed, 11 x In(LIG only)	Electronic
MCS	N.A.	Fixed, 10xIn	Magnetic only
MCP	N.A.	Adjustable, 6~12 x In	Magnetic only

* MCP 60A: 6.7 ~ 13.3 x In

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		150kA at 240V, 100kA at 480V, 50kA at 600V	
	2-Pole	3-Pole	2-Pole	3-Pole	2-Pole	3-Pole
40A	UTS150-N-FTU-40-2	UTS150-N-FTU-40-3	UTS150-H-FTU-40-2	UTS150-H-FTU-40-3	UTS150-L-FTU-40-2	UTS150-L-FTU-40-3
50A	UTS150-N-FTU-50-2	UTS150-N-FTU-50-3	UTS150-H-FTU-50-2	UTS150-H-FTU-50-3	UTS150-L-FTU-50-2	UTS150-L-FTU-50-3
60A	UTS150-N-FTU-60-2	UTS150-N-FTU-60-3	UTS150-H-FTU-60-2	UTS150-H-FTU-60-3	UTS150-L-FTU-60-2	UTS150-L-FTU-60-3
70A	UTS150-N-FTU-70-2	UTS150-N-FTU-70-3	UTS150-H-FTU-70-2	UTS150-H-FTU-70-3	UTS150-L-FTU-70-2	UTS150-L-FTU-70-3
80A	UTS150-N-FTU-80-2	UTS150-N-FTU-80-3	UTS150-H-FTU-80-2	UTS150-H-FTU-80-3	UTS150-L-FTU-80-2	UTS150-L-FTU-80-3
90A	UTS150-N-FTU-90-2	UTS150-N-FTU-90-3	UTS150-H-FTU-90-2	UTS150-H-FTU-90-3	UTS150-L-FTU-90-2	UTS150-L-FTU-90-3
100A	UTS150-N-FTU-100-2	UTS150-N-FTU-100-3	UTS150-H-FTU-100-2	UTS150-H-FTU-100-3	UTS150-L-FTU-100-2	UTS150-L-FTU-100-3
125A	UTS150-N-FTU-125-2	UTS150-N-FTU-125-3	UTS150-H-FTU-125-2	UTS150-H-FTU-125-3	UTS150-L-FTU-125-2	UTS150-L-FTU-125-3
150A	UTS150-N-FTU-150-2	UTS150-N-FTU-150-3	UTS150-H-FTU-150-2	UTS150-H-FTU-150-3	UTS150-L-FTU-150-2	UTS150-L-FTU-150-3

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
40A	UTS150-N-FMU-40-2	UTS150-N-FMU-40-3	UTS150-H-FMU-40-2	UTS150-H-FMU-40-3
60A	UTS150-N-FMU-60-2	UTS150-N-FMU-60-3	UTS150-H-FMU-60-2	UTS150-H-FMU-60-3
80A	UTS150-N-FMU-80-2	UTS150-N-FMU-80-3	UTS150-H-FMU-80-2	UTS150-H-FMU-80-3
100A	UTS150-N-FMU-100-2	UTS150-N-FMU-100-3	UTS150-H-FMU-100-2	UTS150-H-FMU-100-3
125A	UTS150-N-FMU-125-2	UTS150-N-FMU-125-3	UTS150-H-FMU-125-2	UTS150-H-FMU-125-3
150A	UTS150-N-FMU-150-2	UTS150-N-FMU-150-3	UTS150-H-FMU-150-2	UTS150-H-FMU-150-3

Ampere Rating, In	150kA at 240V, 100kA at 480V, 50kA at 600V		Thermal range
	2-Pole	3-Pole	
40A	UTS150-L-FMU-40-2	UTS150-L-FMU-40-3	32-40A
60A	UTS150-L-FMU-60-2	UTS150-L-FMU-60-3	48-60A
80A	UTS150-L-FMU-80-2	UTS150-L-FMU-80-3	64-80A
100A	UTS150-L-FMU-100-2	UTS150-L-FMU-100-3	80-100A
125A	UTS150-L-FMU-125-2	UTS150-L-FMU-125-3	100~125A
150A	UTS150-L-FMU-150-2	UTS150-L-FMU-150-3	120-150A

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
100A	UTS150-N-ATU-100-2	UTS150-N-ATU-100-3	UTS150-H-ATU-100-2	UTS150-H-ATU-100-3
125A	UTS150-N-ATU-125-2	UTS150-N-ATU-125-3	UTS150-H-ATU-125-2	UTS150-H-ATU-125-3
150A	UTS150-N-ATU-150-2	UTS150-N-ATU-150-3	UTS150-H-ATU-150-2	UTS150-H-ATU-150-3

Ampere Rating, In	150kA at 240V, 100kA at 480V, 50kA at 600V		Adjustable range	
	2-Pole	3-Pole	Thermal	Magnetic
100A	UTS150-L-ATU-100-2	UTS150-L-ATU-100-3	80-100A	500-1000A
125A	UTS150-L-ATU-125-2	UTS150-L-ATU-125-3	100~125A	625~1250A
150A	UTS150-L-ATU-150-2	UTS150-L-ATU-150-3	120-150A	750-1500A

WITH ETS23 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	
60A	UTS150-N-ETS23-60-3		UTS150-H-ETS23-60-3	
100A	UTS150-N-ETS23-100-3		UTS150-H-ETS23-100-3	
150A	UTS150-N-ETS23-150-3		UTS150-H-ETS23-150-3	

Ampere Rating, In	150kA at 240V, 100kA at 480V, 50kA at 600V		Setting value		
	3-Pole		I _r (A)	I _i (A)	T _r (s)
60A	UTS150-L-ETS23-60-3		15~60A	(1.5, 2, 3, 4, 5, 6, 8, 10, 11) x I _n	0.5, 1, 2, 4, 8, 16, Accuracy ±20%
100A	UTS150-L-ETS23-100-3		40~100A		
150A	UTS150-L-ETS23-150-3		60~150A		

UTS150 FRAME

CIRCUIT BREAKER

WWITH ETS23 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		
60A	UTS150-N-ETS23-60-3		UTS150-H-ETS23-60-3		
100A	UTS150-N-ETS23-100-3		UTS150-H-ETS23-100-3		
150A	UTS150-N-ETS23-150-3		UTS150-H-ETS23-150-3		

Ampere Rating, In	150kA at 240V, 100kA at 480V, 50kA at 600V		Setting value		
	3-Pole		Ir (A)	Isd (A)	Ii (A)
60A	UTS150-L-ETS23-60-3		15~60A	(1.5, 2, 3, 4, 5, 6, 7, 8, 10) x Ir	(1.5, 2, 3, 4, 5, 6, 8, 10, 11) x In
100A	UTS150-L-ETS23-100-3		40~100A	Accuracy ±15%	
150A	UTS150-L-ETS23-150-3		60~150A		

WITH ETS23 LIG 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		
60A	UTS150-N-ETS23-60-3		UTS150-H-ETS23-60-3		
100A	UTS150-N-ETS23-100-3		UTS150-H-ETS23-100-3		
150A	UTS150-N-ETS23-150-3		UTS150-H-ETS23-150-3		

Ampere Rating, In	150kA at 240V, 100kA at 480V, 50kA at 600V		Setting value			
	3-Pole		Ir (A)	Ii (A)	Ig (A)	tg (ms)
60A	UTS150-L-ETS23-60-3		15~60A	11 x In (Fixed)	0.2~1 x In	100, 200, 300, 400
100A	UTS150-L-ETS23-100-3		40~100A			
150A	UTS150-L-ETS23-150-3		60~150A			

* Time delay at 6 x Ir: fixe 16s, accuracy ±20%

* Time delay: non-tripping time 70ms / maximum break time 140ms

* Tripping time: ≤60ms

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
150A	UTS150-N-MCS-150-2	UTS150-N-MCS-150-3	UTS150-H-MCS-150-2	UTS150-H-MCS-150-3

Ampere Rating, In	150kA at 240V, 100kA at 480V, 50kA at 600V	
	2-Pole	3-Pole
150A	UTS150-L-MCS-150-2	UTS150-L-MCS-150-3

MOTOR CIRCUIT PROTECTOR

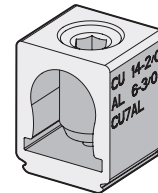
WITH MCP TRIP UNIT (ADJUSTABLE MAGNETIC ONLY)				
Ampere Rating, In	3-Pole	3-Pole	3-Pole	Magnetic range
1.6A	UTS150-N-MCP-1.6-3	UTS150-H-MCP-1.6-3	UTS150-L-MCP-1.6-3	10-20A
3.2A	UTS150-N-MCP-3.2-3	UTS150-H-MCP-3.2-3	UTS150-L-MCP-3.2-3	20-40A
6.3A	UTS150-N-MCP-6.3-3	UTS150-H-MCP-6.3-3	UTS150-L-MCP-6.3-3	40-80A
12A	UTS150-N-MCP-12-3	UTS150-H-MCP-12-3	UTS150-L-MCP-12-3	70-140A
20A	UTS150-N-MCP-20-3	UTS150-H-MCP-20-3	UTS150-L-MCP-20-3	120-240A
32A	UTS150-N-MCP-32-3	UTS150-H-MCP-32-3	UTS150-L-MCP-32-3	190-380A
50A	UTS150-N-MCP-50-3	UTS150-H-MCP-50-3	UTS150-L-MCP-50-3	300-600A
60A	UTS150-N-MCP-60-3	UTS150-H-MCP-60-3	UTS150-L-MCP-60-3	400-800A
100A	UTS150-N-MCP-100-3	UTS150-H-MCP-100-3	UTS150-L-MCP-100-3	600-1200A
150A	UTS150-N-MCP-150-3	UTS150-H-MCP-150-3	UTS150-L-MCP-150-3	900-1800A

ACCESSORIES FOR UTS150

MECHANICAL LUGS

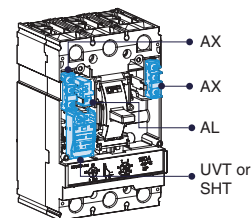
MAXIMUM BREAKER AMPERES	TERMINAL BODY MATERIAL	WIRE TYPE	ORDERING TYPE
150A	Aluminum	Cu/Al	AL150TS

AL150TS 1.6~150A 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	
	AC 220~240V/DC 250V	
Undervoltage Trip, UVT	AC 380~500V	
	AC/DC 24V	
	AC/DC 48V	
	AC/DC 110~130V	
	AC 220~240V/DC 250V	
	AC 380~440V	
	AC 440~480V	



Type	Left(R)	Right(T)
AX	1	1
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	PL2



<Pad Lock>

PLATE HANDLE LOCKING DEVICE

DESCRIPTION	ORDERING TYPE
Lock in "ON" "OFF" or "ON"	PHL2



<Plate Handle Lock>

MECHANICAL INTERLOCKING DEVICE

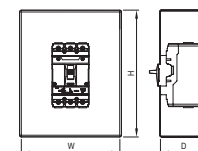
DESCRIPTION	ORDERING TYPE
For 3-Pole breaker	MIT23



<Mechanical Interlock>

ENCLOSURE

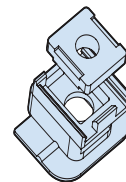
ENCLOSURE DIMENSION (W X H X D) Inch (mm)	ORDERING TYPE
8.58 (218) x 18.11 (460) x 4.02 (102)	-



ACCESSORIES FOR UTS150

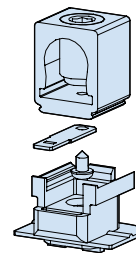
TERMINAL PLATES FOR BUSBAR CONNECTION

DESCRIPTION	QTY PER KIT	ORDERING TYPE
For 3-Pole breaker	3	TP2a3



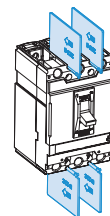
CONTROL WIRE TERMINALS

DESCRIPTION	QTY PER KIT	ORDERING TYPE
For Mechanical Lugs and Terminal Plate	2	CWT



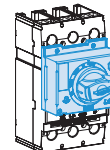
INSULATION BARRIERS

DESCRIPTION	QTY PER KIT	ORDERING TYPE
For 3-Pole breaker	4	B23

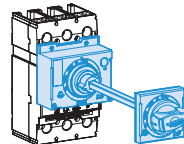


ROTARY OPERATING HANDLES

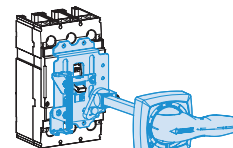
DESCRIPTION	TYPE	ORDERING TYPE
Directly Mounted	NEMA Type 1	DH-2
Directly Mounted (with Key lock)	NEMA Type 1	DHK-2
Extended (Door-Mounted)	NEMA Type 1	REH-2
	NEMA Type 1, 12	EHU-2
NEMA Door-Mounted	NEMA Type 3, 3R, 4	EHV-2
	NEMA Type 3, 4, 4X	EHX-2



<DH-2>



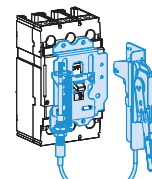
<REH-2>



<EHU-2>

FLANGE HANDLES WITH SLIDING OPERATING MECHANISM

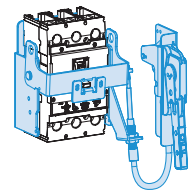
DESCRIPTION	TYPE	ORDERING TYPE
Handle (with sliding mechanism and without cable)	NEMA Type 1, 12, 3, 3R, 4	FHU-2
	NEMA Type 4, 4X	FHX-2
Cable	36 inch	FH2-36
	48 inch	FH2-48
	60 inch	FH2-60
	72 inch	FH2-72



<FHU-2>

FLANGE HANDLES WITH CABLE OPERATING MECHANISM

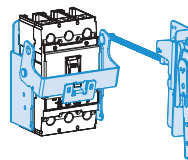
DESCRIPTION	TYPE	ORDERING TYPE
Cable operating mechanism (without cable)		COM-2
Standard type handle (with operating mechanism)	NEMA Type 1, 12, 3, 3R, 4	[COM-2]+[FHU-S]
	NEMA Type 4, 4X	[COM-2]+[FHX-S]
Cable	36 inch	FH2-36
	48 inch	FH2-48
	60 inch	FH2-60
	72 inch	FH2-72



<COM-2>

FLANGE HANDLES WITH CABLE OPERATING MECHANISM

DESCRIPTION	TYPE	ORDERING TYPE
Variable depth operating mechanism with threaded-rod and handle		VDM-2
Standard type handle with operating mechanism	NEMA Type 1, 12, 3, 3R, 4	[VDM-2]+[FHU-S]
	NEMA Type 4, 4X	[VDM-2]+[FHX-S]



<VDM-2>

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 (Not lockable)	DC 24V	MOP2U
	AC 110V/DC 110V	MOP2U
	AC 230V/DC 220V	MOP2U
Lockable type	DC 24V	MOP2U-L
	AC 110V/DC 110V	MOP2U-L
	AC 230V/DC 220V	MOP2U-L



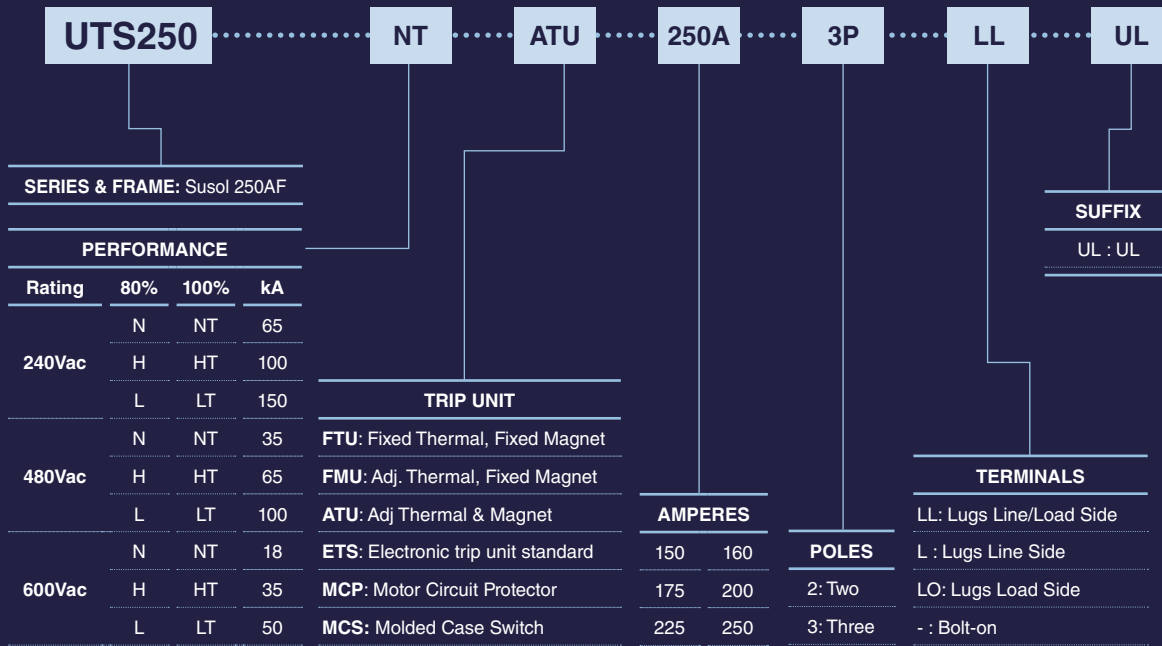
MOP2U-L

SELECTION GUIDE

UTS250



CATALOG NUMBERING [PRODUCT SELECTION]



UTS250 FRAME

UTS250 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
UTS250N	2, 3	65	35	18	35	35
UTS250H	2, 3	100	65	35	50	50
UTS250L	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
UTS250N	2, 3	65	35	18
UTS250H	2, 3	100	65	35
UTS250L	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

POLES	DIMENSIONS inch (mm)		
	W	H	D
2-Pole	4.13 (105)	7.48 (190)	3.44 (87.5)
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, 60-250A	Adjustable, 1.5-11 x In / Fixed, 11 x In(LIG only)	Electronic
MCS	N.A.	Fixed, 10 x In	Magnetic only
MCP	N.A.	Adjustable, 6-12 x In	Magnetic only

UTS250 FRAME

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
150A	UTS250-N-FTU-150-2	UTS250-N-FTU-150-3	UTS250-H-FTU-150-2	UTS250-H-FTU-150-3
175A	UTS250-N-FTU-175-2	UTS250-N-FTU-175-3	UTS250-H-FTU-175-2	UTS250-H-FTU-175-3
200A	UTS250-N-FTU-200-2	UTS250-N-FTU-200-3	UTS250-H-FTU-200-2	UTS250-H-FTU-200-3
225A	UTS250-N-FTU-225-2	UTS250-N-FTU-225-3	UTS250-H-FTU-225-2	UTS250-H-FTU-225-3
250A	UTS250-N-FTU-250-2	UTS250-N-FTU-250-3	UTS250-H-FTU-250-2	UTS250-H-FTU-250-3

Ampere Rating, In	150kA at 240V, 100kA at 480V, 50kA at 600V	
	2-Pole	3-Pole
150A	UTS250-L-FTU-150-2	UTS250-L-FTU-150-3
175A	UTS250-L-FTU-175-2	UTS250-L-FTU-175-3
200A	UTS250-L-FTU-200-2	UTS250-L-FTU-200-3
225A	UTS250-L-FTU-225-2	UTS250-L-FTU-225-3
250A	UTS250-L-FTU-250-2	UTS250-L-FTU-250-3

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
160A	UTS250-N-FMU-160-2	UTS250-N-FMU-160-3	UTS250-H-FMU-160-2	UTS250-H-FMU-160-3
200A	UTS250-N-FMU-200-2	UTS250-N-FMU-200-3	UTS250-H-FMU-200-2	UTS250-H-FMU-200-3
250A	UTS250-N-FMU-250-2	UTS250-N-FMU-250-3	UTS250-H-FMU-250-2	UTS250-H-FMU-250-3

Ampere Rating, In	150kA at 240V, 100kA at 480V, 50kA at 600V		Thermal range
	2-Pole	3-Pole	
160A	UTS250-L-FMU-160-2	UTS250-L-FMU-160-3	128-160A
200A	UTS250-L-FMU-200-2	UTS250-L-FMU-200-3	160-200A
250A	UTS250-L-FMU-250-2	UTS250-L-FMU-250-3	200-250A

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
160A	UTS250-N-ATU-160-2	UTS250-N-ATU-160-3	UTS250-H-ATU-160-2	UTS250-H-ATU-160-3
200A	UTS250-N-ATU-200-2	UTS250-N-ATU-200-3	UTS250-H-ATU-200-2	UTS250-H-ATU-200-3
250A	UTS250-N-ATU-250-2	UTS250-N-ATU-250-3	UTS250-H-ATU-250-2	UTS250-H-ATU-250-3

Ampere Rating, In	150kA at 240V, 100kA at 480V, 50kA at 600V		Adjustable range	
	2-Pole	3-Pole	Thermal	Magnetic
160A	UTS250-L-ATU-160-2	UTS250-L-ATU-160-3	128-160A	800-1600A
200A	UTS250-L-ATU-200-2	UTS250-L-ATU-200-3	160-200A	1000-2000A
250A	UTS250-L-ATU-250-2	UTS250-L-ATU-250-3	200-250A	1250-2500A

CIRCUIT BREAKER

WITH ETS23 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		
150A	UTS250-N-ETS23-150-3		UTS250-H-ETS23-150-3		
250A	UTS250-N-ETS23-250-3		UTS250-H-ETS23-250-3		

Ampere Rating, In	150kA at 240V, 100kA at 480V, 50kA at 600V		Setting value		
	3-Pole		I _r (A)	I _i (A)	Tr (s)
150A	UTS250-L-ETS23-150-3		60~150A	(1.5, 2, 3, 4, 5, 6, 8, 10, 11) x I _n	0.5, 1, 2, 4, 8, 16, Accuracy ±20%
250A	UTS250-L-ETS23-250-3		80~250A		

WITH ETS23 LSI TRIP UNIT FOR UTS150 (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		
150A	UTS250-N-ETS23-150-3		UTS250-H-ETS23-150-3		
250A	UTS250-N-ETS23-250-3		UTS250-H-ETS23-250-3		

Ampere Rating, In	150kA at 240V, 100kA at 480V, 50kA at 600V		Setting value		
	3-Pole		I _r (A)	I _i (A)	I _{sd} (A)
150A	UTS250-L-ETS23-150-3		60~150A	(1.5, 2, 3, 4, 5, 6, 8, 10, 11) x I _n	(1.5, 2, 3, 4, 5, 6, 7, 8, 10) x I _r Accuracy±15%
250A	UTS250-L-ETS23-250-3		80~250A		

WITH ETS23 LIG 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		
150A	UTS250-N-ETS23-150-3		UTS250-H-ETS23-150-3		
250A	UTS250-N-ETS23-250-3		UTS250-H-ETS23-250-3		

Ampere Rating, In	150kA at 240V, 100kA at 480V, 50kA at 600V		Setting value			
	3-Pole		I _r (A)	I _i (A)	I _g (A)	t _g (ms)
150A	UTS250-L-ETS23-150-3		60~150A	11 x I _n (Fixed)	0.2~1 x I _n	100, 200, 300, 400
250A	UTS250-L-ETS23-250-3		80~250A			

* Time delay at 6 x I_r: fixe 16s, accuracy ±20%

* Time delay: non-tripping time 70ms / maximum break time 140ms

* Tripping time: ≤60ms

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
175A	UTS250-N-MCS-175-2	UTS250-N-MCS-175-3	UTS250-H-MCS-175-2	UTS250-H-MCS-175-3
250A	UTS250-N-MCS-250-2	UTS250-N-MCS-250-3	UTS250-H-MCS-250-2	UTS250-H-MCS-250-3

Ampere Rating, In	150kA at 240V, 100kA at 480V, 50kA at 600V	
	2-Pole	3-Pole
175A	UTS250-L-MCS-175-2	UTS250-L-MCS-175-3
250A	UTS250-L-MCS-250-2	UTS250-L-MCS-250-3

MOTOR CIRCUIT PROTECTOR

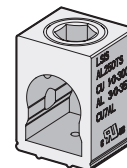
WITH MCP TRIP UNIT (ADJUSTABLE MAGNETIC ONLY)				
Ampere Rating, In	3-Pole	3-Pole	3-Pole	Magnetic range
220A	UTS250-N-MCP-220-3	UTS250-H-MCP-220-3	UTS250-L-MCP-220-3	1320-2640A

ACCESSORIES FOR UTS250

MECHANICAL LUGS

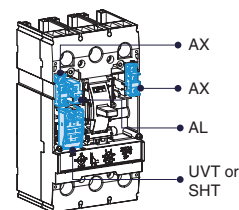
MAXIMUM BREAKER AMPERES	TERMINAL BODY MATERIAL	WIRE TYPE	ORDERING TYPE
250A	Aluminum	Cu/Al	AL250TS

AL250TS 150~250A 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	
	AC 220~240V/DC 250V	
Undervoltage Trip, UVT	AC 380~500V	
	AC/DC 24V	
	AC/DC 48V	
	AC/DC 110~130V	
	AC 220~240V/DC 250V	
	AC 380~440V	
	AC 440~480V	



Type	Left(R)	Right(T)
AX	1	1
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	PL2



<Pad Lock>

PLATE HANDLE LOCKING DEVICE

DESCRIPTION	ORDERING TYPE
Lock in "OFF" or "ON" position	PHL2



<Plate Handle Lock>

MECHANICAL INTERLOCKING DEVICE

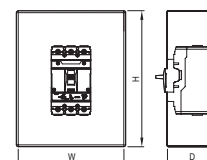
DESCRIPTION	ORDERING TYPE
For 3-Pole breaker	MIT23



<Mechanical Interlock>

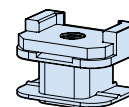
ENCLOSURE

ENCLOSURE DIMENSION (W X H X D) Inch (mm)	ORDERING TYPE
12.13 (308) x 28.5 (724) x 5.35 (136)	-



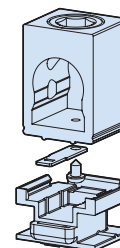
TERMINAL PLATES FOR BUSBAR CONNECTION

DESCRIPTION	QTY PER KIT	ORDERING TYPE
For 3-Pole breaker	3	TP2b3



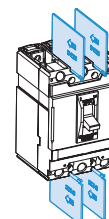
CONTROL WIRE TERMINALS

DESCRIPTION	QTY PER KIT	ORDERING TYPE
For Mechanical Lugs and Terminal Plate	2	CWT



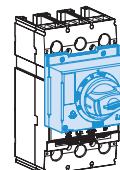
INSULATION BARRIERS

DESCRIPTION	QTY PER KIT	ORDERING TYPE
For 3-Pole breaker	4	B23

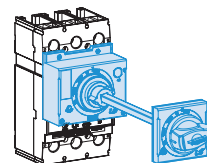


ROTARY OPERATING HANDLES

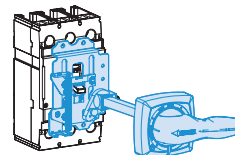
DESCRIPTION	TYPE	ORDERING TYPE
Directly Mounted	NEMA Type 1	DH-2
Directly Mounted (with Key lock)	NEMA Type 1	DHK-2
Extended (Door-Mounted)	NEMA Type 1	REH-2
	NEMA Type 1, 12	EHU-2
NEMA Door-Mounted	NEMA Type 3, 3R, 4	EHV-2
	NEMA Type 3, 4, 4X	EHX-2



<DH-2>



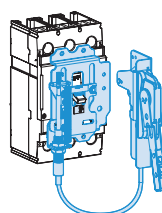
<REH-2>



<EHU-2>

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-2
	NEMA Type 4, 4X	FHX-2
Cable	36 inch	FH2-36
	48 inch	FH2-48
	60 inch	FH2-60
	72 inch	FH2-72

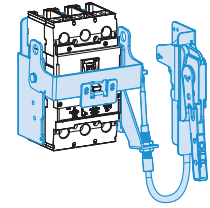


<FHU-2>

ACCESSORIES FOR UTS250

FLANGE HANDLES WITH CABLE OPERATING MECHANISM

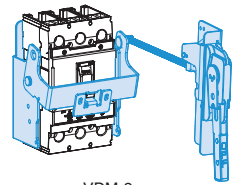
DESCRIPTION	TYPE	ORDERING TYPE
Cable operating mechanism (without cable)		COM-2
Standard type handle (with operating mechanism)	NEMA Type 1, 12, 3, 3R, 4	[COM-2]+[FHU-S]
	NEMA Type 4, 4X	[COM-2]+[FHX-S]
Cable	36 inch	FH2-36
	48 inch	FH2-48
	60 inch	FH2-60
	72 inch	FH2-72



<COM-2>

FLANGE HANDLES WITH VARIABLE-DEPTH OPERATING MECHANISM

DESCRIPTION	TYPE	ORDERING TYPE
Variable depth operating mechanism with threaded-rod and handle		VDM-2
Standard type handle with operating mechanism	NEMA Type 1, 12, 3, 3R, 4	[VDM-2]+[FHU-S]
	NEMA Type 4, 4X	[VDM-2]+[FHX-S]



<VDM-2>

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 (Not lockable)	DC 24V	MOP2U
	AC 110V/DC 110V	MOP2U
	AC 230V/DC 220V	MOP2U
Lockable type	DC 24V	MOP2U-L
	AC 110V/DC 110V	MOP2U-L
	AC 230V/DC 220V	MOP2U-L



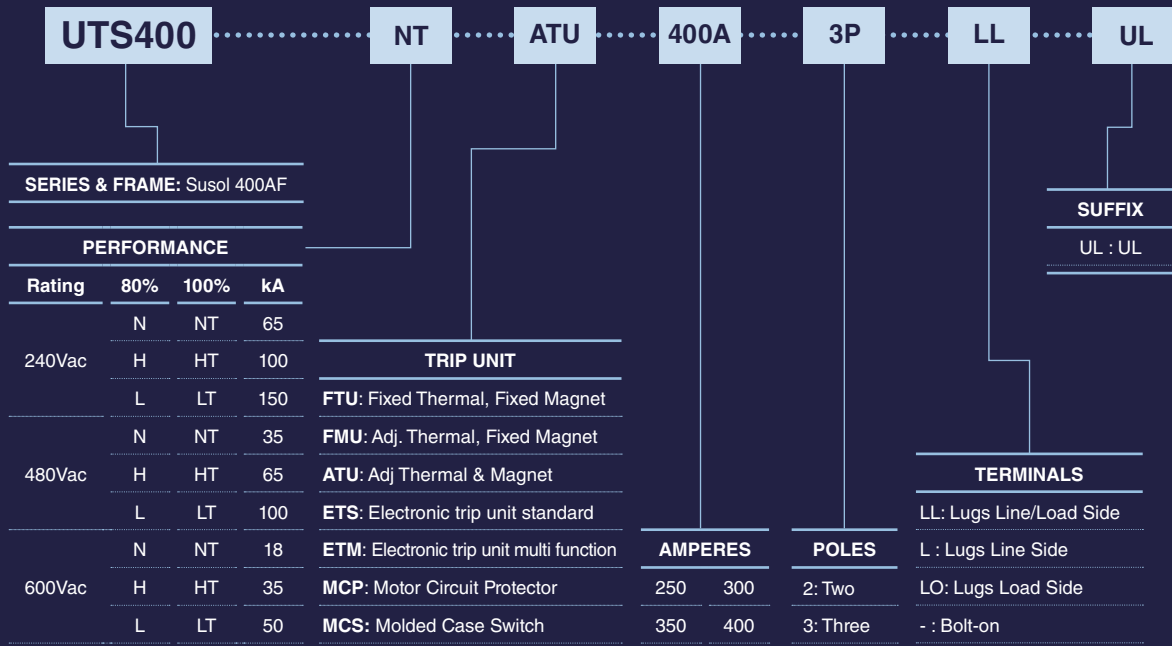
MOP2U-L

SELECTION GUIDE

UTS400



CATALOG NUMBERING [PRODUCT SELECTION]



UTS400 FRAME

UTS400 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
UTS400N	2, 3	65	35	18	35	35
UTS400H	2, 3	100	65	35	50	50
UTS400L	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
UTS400N	2, 3	65	35	18
UTS400H	2, 3	100	65	35
UTS400L	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)	11.42 (290)	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
250A	UTS400-N-FTU-250-2	UTS400-N-FTU-250-3	UTS400-H-FTU-250-2	UTS400-H-FTU-250-3
300A	UTS400-N-FTU-300-2	UTS400-N-FTU-300-3	UTS400-H-FTU-300-2	UTS400-H-FTU-300-3
350A	UTS400-N-FTU-350-2	UTS400-N-FTU-350-3	UTS400-H-FTU-350-2	UTS400-H-FTU-350-3
400A	UTS400-N-FTU-400-2	UTS400-N-FTU-400-3	UTS400-H-FTU-400-2	UTS400-H-FTU-400-3

Ampere Rating, In	150kA at 240V, 100kA at 480V, 50kA at 600V	
	2-Pole	3-Pole
250A	UTS400-L-FTU-250-2	UTS400-L-FTU-250-3
300A	UTS400-L-FTU-300-2	UTS400-L-FTU-300-3
350A	UTS400-L-FTU-350-2	UTS400-L-FTU-350-3
400A	UTS400-L-FTU-400-2	UTS400-L-FTU-400-3

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
300A	UTS400-N-FMU-300-2	UTS400-N-FMU-300-3	UTS400-H-FMU-300-2	UTS400-H-FMU-300-3
400A	UTS400-N-FMU-400-2	UTS400-N-FMU-400-3	UTS400-H-FMU-400-2	UTS400-H-FMU-400-3

Ampere Rating, In	150kA at 240V, 100kA at 480V, 50kA at 600V		Thermal range
	2-Pole	3-Pole	
300A	UTS400-L-FMU-300-2	UTS400-L-FMU-300-3	240-300A
400A	UTS400-L-FMU-400-2	UTS400-L-FMU-400-3	320-400A

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
300A	UTS400-N-ATU-300-2	UTS400-N-ATU-300-3	UTS400-H-ATU-300-2	UTS400-H-ATU-300-3
400A	UTS400-N-ATU-400-2	UTS400-N-ATU-400-3	UTS400-H-ATU-400-2	UTS400-H-ATU-400-3

Ampere Rating, In	150kA at 240V, 100kA at 480V, 50kA at 600V		Adjustable range	
	2-Pole	3-Pole	Thermal	Magnetic
300A	UTS400-L-ATU-300-2	UTS400-L-ATU-300-3	240-300A	1500-3000A
400A	UTS400-L-ATU-400-2	UTS400-L-ATU-400-3	320-400A	2000-4000A

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	
250A	UTS400-N-ETS33-250-3		UTS400-H-ETS33-250-3	
400A	UTS400-N-ETS33-450-3		UTS400-H-ETS33-450-3	

Ampere Rating, In	150kA at 240V, 100kA at 480V, 50kA at 600V		Setting value		
	3-Pole		I _r (A)	I _i (A)	T _r (s)
250A	UTS400-L-ETS33-250-3		80-250A	(1.5, 2, 3, 4, 5, 6, 8, 10, 11) x I _n	0.5, 1, 2, 4, 8, 16, Accuracy ±20%
400A	UTS400-L-ETS33-450-3		150-400A		

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	
250A	UTS400-N-ETS33-250-3		UTS400-H-ETS33-250-3	
400A	UTS400-N-ETS33-450-3		UTS400-H-ETS33-450-3	

Ampere Rating, In	150kA at 240V, 100kA at 480V, 50kA at 600V		Setting value		
	3-Pole		I _r (A)	I _i (A)	I _{sd} (A)
250A	UTS400-L-ETS33-250-3		80-250A	(1.5, 2, 3, 4, 5, 6, 8, 10, 11) x I _n	(1.5, 2, 3, 4, 5, 6, 7, 8, 10) x I _r Accuracy±15%
400A	UTS400-L-ETS33-450-3		150-400A		

* Time delay at 6 x I_r: fixe 16s, accuracy ±20%
 * Time delay: non-tripping time 20ms / maximum break time 80ms
 * Tripping time: ≤50ms

UTS400 FRAME

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		
250A	UTS400-N-ETM33-250-3		UTS400-H-ETM33-250-3		UTS400-L-ETM33-250-3		
400A	UTS400-N-ETM33-450-3		UTS400-H-ETM33-450-3		UTS400-L-ETM33-450-3		

Ampere Rating, In	Setting value						
	Overload protection (long time)		Short-circuit protection (short time)		Instantaneous	Option	
	I _r (A)	T _r (s)	I _{sd} (A)	t _{sd} (ms)	I _i (A)	I _g (A)	t _g (A)
250A	80-250A	0.5, 1, 2, 4, 8, 16, Accuracy ±20%	(1.5, 2, 3, 4, 5, 6, 7, 8, 10) x I _r Accuracy ±15%	50, 100, 200, 300, 400	(1.5, 2, 3, 4, 5, 6, 8, 10, 11) x I _n	0.2-1 x I _n	100, 200, 300, 400
400A	150-400A						

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
400A	UTS400-N-MCS-400-2	UTS400-N-MCS-400-3	UTS400-H-MCS-400-2	UTS400-H-MCS-400-3

Ampere Rating, In	150kA at 240V, 100kA at 480V, 50kA at 600V	
	2-Pole	3-Pole
400A	UTS400-L-MCS-400-2	UTS400-L-MCS-400-3

MOTOR CIRCUIT PROTECTOR

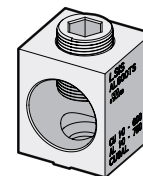
WITH MCP TRIP UNIT (ADJUSTABLE MAGNETIC ONLY)				
Ampere Rating, In	3-Pole	3-Pole	3-Pole	Magnetic Range
320A	UTS400-N-MCP-320-3	UTS400-H-MCP-320-3	UTS400-L-MCP-320-3	1920-3840A

ACCESSORIES FOR UTS400

MECHANICAL LUGS

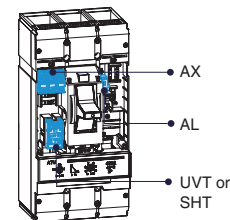
MAXIMUM BREAKER AMPERES	TERMINAL BODY MATERIAL	WIRE TYPE	ORDERING TYPE
400A	Aluminum	Cu/Al	AL400TS

AL400TS 250~400A 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	
	AC 220~240V/DC 250V	
Undervoltage Trip, UVT	AC 380~500V	
	AC/DC 24V	
	AC/DC 48V	
	AC/DC 110~130V	
	AC 220~240V/DC 250V	
	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



<Pad Lock>

PLATE HANDLE LOCKING DEVICE

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



<Plate Handle Lock>

MECHANICAL INTERLOCKING DEVICE

DESCRIPTION	ORDERING TYPE
For 3-Pole breaker	MIT33

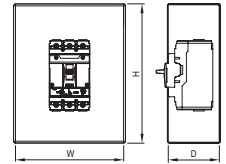


<Mechanical Interlock>

ACCESSORIES FOR UTS400

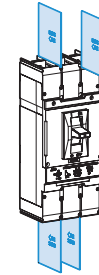
ENCLOSURE

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



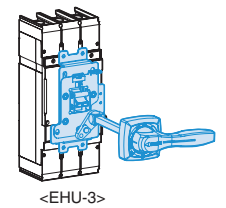
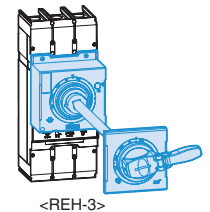
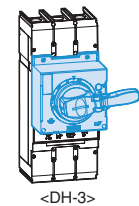
INSULATION BARRIERS

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



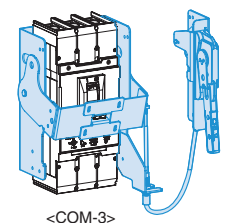
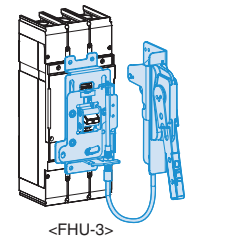
ROTARY OPERATING HANDLES

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



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
Cable	36 inch	FH3-36
	48 inch	FH3-48
	60 inch	FH3-60
	72 inch	FH3-72
	128 inch	FH3-128

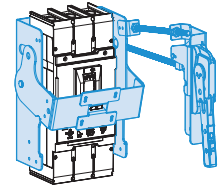


FLANGE HANDLES WITH CABLE OPERATING MECHANISM

DESCRIPTION	TYPE	ORDERING TYPE
Cable operating mechanism (without cable)		COM-3
Long type handle (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]



<VDM-3>

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 (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



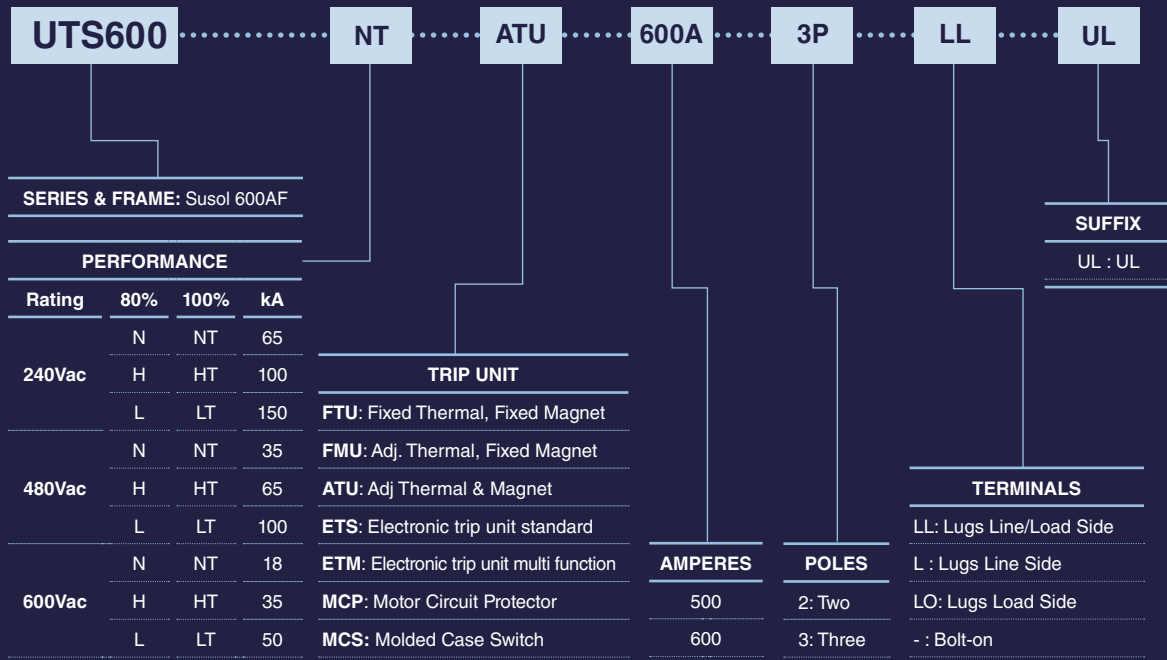
MOP3U-L

SELECTION GUIDE

UTS600



CATALOG NUMBERING [PRODUCT SELECTION]



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		I _r (A)	I _i (A)	T _r (s)
400A	UTS600-L-ETS33-400-3		150~400A	(1.5, 2, 3, 4, 5, 6, 8, 10, 11) x I _n	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		I _r (A)	I _i (A)	I _{sd} (A)
400A	UTS600-L-ETS33-400-3		150~400A	(1.5, 2, 3, 4, 5, 6, 8, 10, 11) x I _n	(1.5, 2, 3, 4, 5, 6, 7, 8, 10) x I _r Accuracy±15%
600A	UTS600-L-ETS33-600-3		225~600A		

* Time delay at 6 x I_r: fixe 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	
	I _r (A)	T _r (s)	I _{sd} (A)	t _{sd} (ms)	I _i (A)	I _g (A)	t _g (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 _r Accuracy ±15%	50, 100, 200, 300, 400	(1.5, 2, 3, 4, 5, 6, 8, 10, 11) x I _n	0.2-1 x I _n	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

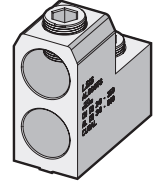
Ampere Rating, In	3-Pole	Magnetic Range
500A	UTS600-L-MCP-500-3	3000-6000A

ACCESSORIES FOR UTS600

MECHANICAL LUGS

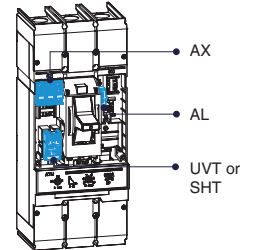
MAXIMUM BREAKER AMPERES	TERMINAL BODY MATERIAL	WIRE TYPE	ORDERING TYPE
600A	Aluminum	Cu/Al	AL600TS

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



<Pad Lock>

PLATE HANDLE LOCKING DEVICE

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



<Plate Handle Lock>

MECHANICAL INTERLOCKING DEVICE

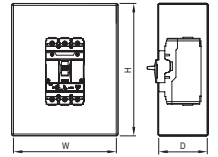
DESCRIPTION	ORDERING TYPE
For 3-Pole breaker	MIT33



<Mechanical Interlock>

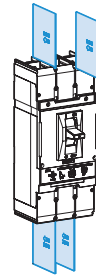
ENCLOSURE

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	-



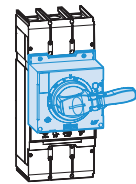
INSULATION BARRIERS

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

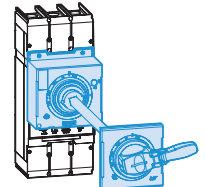


ROTARY OPERATING HANDLES

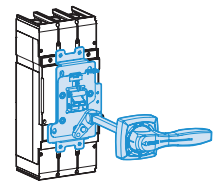
DESCRIPTION	TYPE	ORDERING TYPE
Directly Mounted	NEMA Type 1	DH-3
Directly Mounted (with Key lock)	NEMA Type 1	DHK-3
Extended (Door-Mounted)	NEMA Type 1	REH-3
	NEMA Type 1, 12	EHU-3
NEMA Door-Mounted	NEMA Type 3, 3R, 4	EHV-3
	NEMA Type 3, 4, 4X	EHX-3



<DH-3>



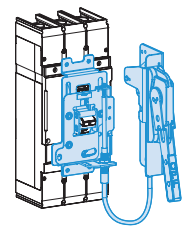
<REH-3>



<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
Cable	36 inch	FH3-36
	48 inch	FH3-48
	60 inch	FH3-60
	72 inch	FH3-72
	128 inch	FH3-128

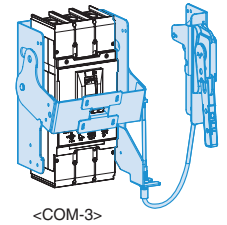


<FHU-3>

ACCESSORIES FOR UTS600

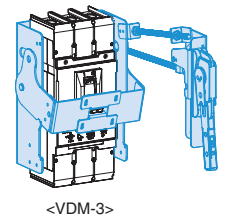
FLANGE HANDLES WITH CABLE OPERATING MECHANISM

DESCRIPTION	TYPE	ORDERING TYPE
Cable operating mechanism (without cable)		COM-3
Long type handle (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

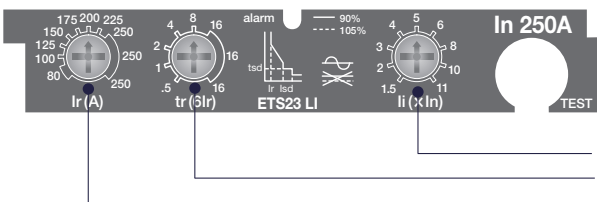
DESCRIPTION	CONTROL VOLTAGE	ORDERING TYPE
Standard type (Not lockable)	DC 24V	MOP3U
	AC 110V/DC 110V	MOP3U
	AC 230V/DC 220V	MOP3U
Lockable type	DC 24V	MOP3U-L
	AC 110V/DC 110V	MOP3U-L
	AC 230V/DC 220V	MOP3U-L



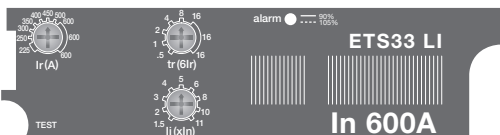
ELECTRONIC TRIP UNITS (STANDARD) ETS23 LI/LIG, ETS33 LI FOR UTS150/UTS250/UTS400/UTS600

Configuration

ETS23 LI TYPE

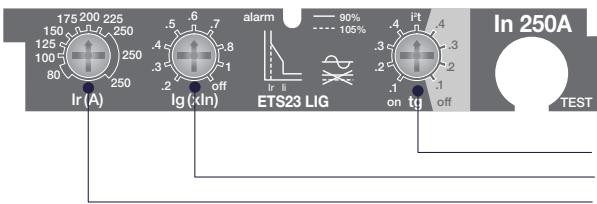


ETS33 LI TYPE



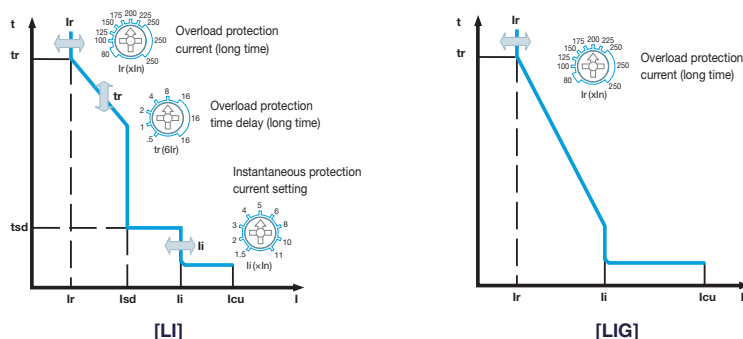
li: Adjustable instantaneous current setting
tr: Adjustable long time setting
Ir: Adjustable rated current setting

ETS23 LIG TYPE



tg: Adjustable earth fault delay setting
lg: Adjustable earth fault current setting
Ir: Adjustable rated current setting

※ Refer to page 51 for how to set the ground fault operation characteristics of LIG type and page 136 for the ground fault characteristic curve.



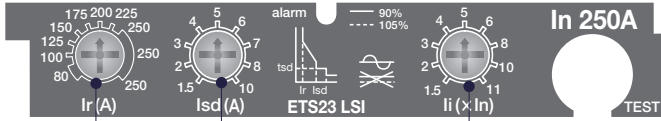
PROTECTION (LI/LIG)

LONG TIME		
In (A)	Overload protection setting current(Ir=Setting value)	
Current setting (A), Ir	60A	15 20 25 30 35 40 45 50 60
	100A	40 45 50 60 70 80 90 100 -
	150A	60 70 80 90 100 110 125 150 -
	250A	80 100 125 150 175 200 225 250 -
	400A	150 175 200 225 250 300 350 400 -
Time delay (s), tr accuracy=±20%	600A	225 250 300 350 400 450 500 600 -
	tr@(6.0 x Ir)	0.5 1 2 4 8 16 - - - Fixed 16s(LIG Only)
INSTANTANEOUS		
Current setting (A), li	li=In X ... 1.5 2 3 4 5 6 8 10 11 Fixed 11 x In(LIG Only)	
Tripping time	≤60ms	

ELECTRONIC TRIP UNITS (STANDARD) ETS23 LSI, ETS33 LSI FOR UTS150/UTS250/UTS400/UTS600

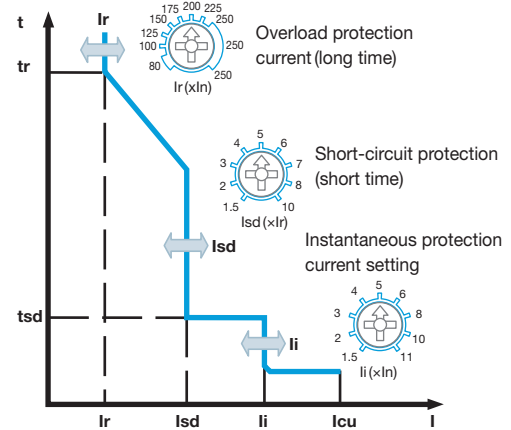
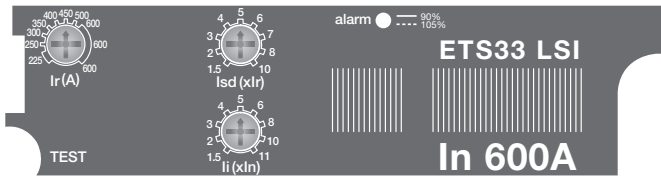
Configuration

ETS23 LSI TYPE



li: Adjustable instantaneous current setting
Isd: Adjustable short time current setting
Ir: Adjustable rated current setting

ETS33 LSI TYPE



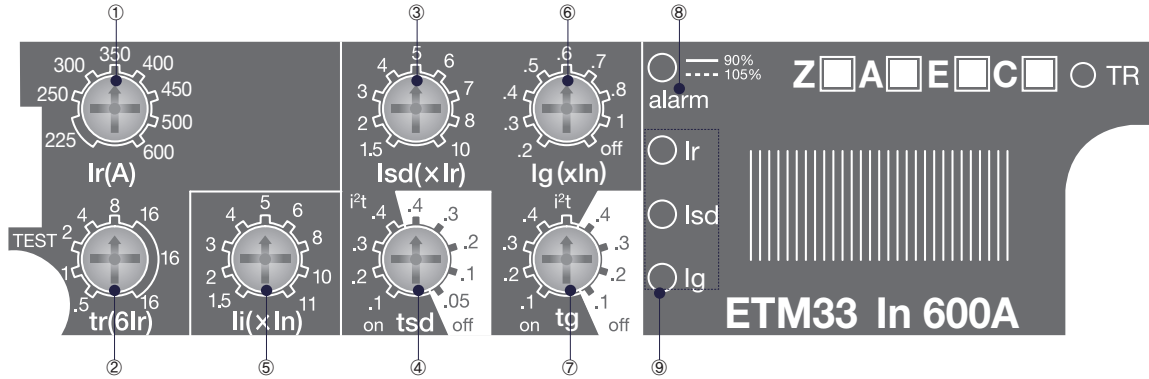
PROTECTION (LSI)

LONG TIME										
	In (A)	Overload protection setting current(Ir=Setting value)								
			15	20	25	30	35	40	45	50
Current setting (A), Ir	60A	40	45	50	60	70	80	90	100	-
	100A	60	70	80	90	100	110	125	150	-
	150A	80	100	125	150	175	200	225	250	-
	250A	150	175	200	225	250	300	350	400	-
	400A	225	250	300	350	400	450	500	600	-
Time delay (s), tr	tr@6.0 x Ir					Fixed 16s				
SHORT TIME										
Current setting (A), Isd accuracy=±15%	Isd=Ir X ...	1.5	2	3	4	5	6	7	8	10
Tripping time (Non-adjustable)	Non-Tripping time	70ms								
	Maximun break time	140ms								
INSTANTANEOUS										
Current setting (A), li	li=In X ...	1.5	2	3	4	5	6	8	10	11
Tripping time		≤60ms								

ELECTRONIC TRIP UNITS (MULTI-FUNCTION) ETM33 FOR UTS400/UTS600

Configuration

ETM33 TYPE



- ① Ir: Adjustable rated current setting
- ② tr: Adjustable long time setting
- ③ Isd: Adjustable short time current setting
- ④ tsd: Adjustable time delay setting
- ⑤ li: Adjustable instantaneous current setting
- ⑥ Ig: Adjustable earth fault current setting
- ⑦ tg: Adjustable earth fault delay setting
- ⑧ Alarm LED
- ⑨ Indication LED

Alarm indication

The LED lights up and remains lit when the load exceeds 90 % of Ir.
The LED blinks for an overload ($\geq 105\% I_r$), warning that the circuit breaker may trip.

Fault indications

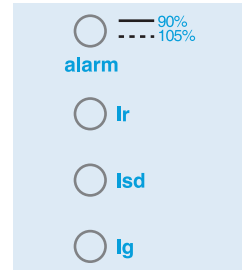
LEDs indicate the type of fault condition

- Ir : overload
- Isd : short-circuit (short time, instantaneous)
- Ig : earth fault

If the TR button is pressed in the trip state, the LED indicates the trip condition.

When the breaker is reset, the LED automatically turns off and the information stored in memory disappears.

If the TR button is pressed in the normal state, all LEDs except Alarm are turned on to check the auxiliary power and LED.

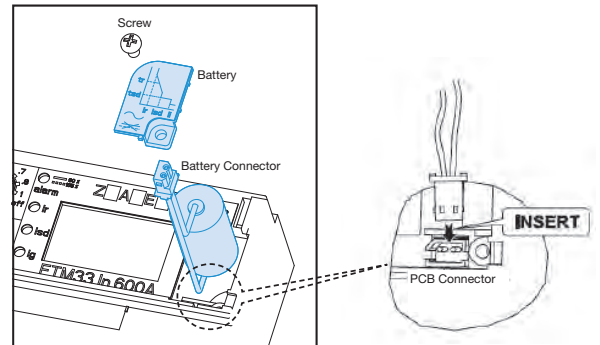


Maintenance the Battery

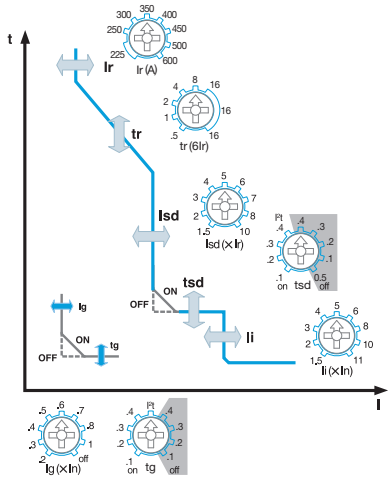
1. Battery Inspection Method
Please check if over-current LED is ON.
Press TR button to check, replace the battery if LED does not light up .
2. When battery discharged
Fault Indicator LED is not on and if a circuit-breaker is tripped by over-current,
Thermal Memory does not operate and accordingly it holds the cold characteristic.
3. Please contact our sales team for battery purchase.
(LS exclusive battery shall be used.)

Change the Battery for ETM33 Series

1. Unfasten the Screw.
2. Remove the Battery.
3. Insert a New battery.
4. Insert the Battery connector into the PCB connector.
5. Fasten the screw.
6. Press the TR button.
Confirm the alarm indication LED light.



ELECTRONIC TRIP UNITS (MULTI-FUNCTION) ETM33 FOR UTS400/UTS600



Long time protection against overloads
Ir = Fine adjustment
tr = Long time delay

Short circuit protection
Isd = Short circuit threshold,
tsd = Short circuit time delay
I²t curve in position ON or OFF

Instantaneous protection
li = Instantaneous threshold

Earth fault protection
Ig = Insulation fault threshold
tg = Earth fault time delay
I²t curve in position ON or OFF

PROTECTION

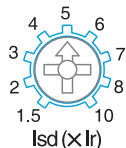
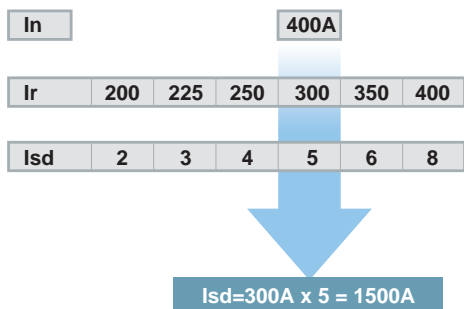
LONG TIME										
	In (A)	Overload protection setting current(Ir=Setting value)								
Current setting (A), Ir	250A	80	100	125	150	175	200	225	250	-
	400A	150	175	200	225	250	300	350	400	-
	600A	225	250	300	350	400	450	500	600	-
Time delay(s),tr accuracy=±20%	tr@6.0 x Ir	0.5	1	2	4	8	16	-	-	-
SHORT TIME										
Current setting (A), Isd accuracy=±15%	Isd=Ir X ...	1.5	2	3	4	5	6	7	8	10
	adjustable	50	100	200	300	400				
Time delay(ms), tsd constant "I ² t=fuction" On, Off	I ² t On	Tripping time ±40ms or ±20%								
	(I ² t Off) Min.trip time (ms)	30	70	140	240	350				
	(I ² t Off) Max.trip time (ms)	70	140	240	350	500				
INSTANTANEOUS										
Current setting (A), li	li=In X ...	1.5	2	3	4	5	6	8	10	11
Tripping time		≤60ms								
INDICATION OF TRIPPING REASON										
Trip reason LED indication		Ir, Isd, li, (Ig)								
OPTION FOR ETM										
Ammeter (A)		Maximum load phase current and R,ST phase current								
Earth fault protection (E)										
GROUND FAULT										
Pick-up (A), Ig	Ig=In X ...	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
	adjustable	100	200	300	400					
	I ² t On	Tripping time ±40ms or ±20%								
Time delay(ms), tg	(I ² t Off) Min.trip time (ms)	60	140	230	350					
	(I ² t Off) Max.trip time (ms)	140	230	350	500					
Communication (C)		Setting, R,S,T phase current, tripping reason								
ZSI (Z)		ZSI input and output signal								

ELECTRONIC TRIP UNITS (MULTI-FUNCTION) ETM33 FOR UTS400/UTS600

Short circuit protection

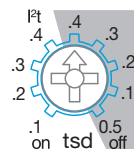
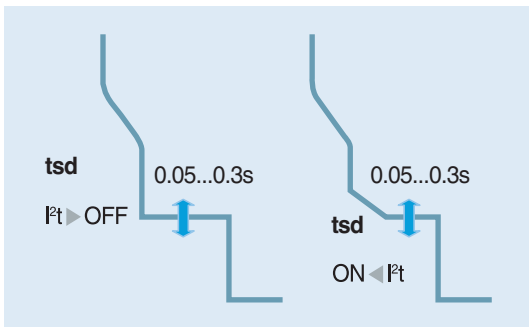
The short circuit threshold, I_{sd} is a multiple of the overload setting, I_r .

Setting example :



The breaker trips when the current exceeds 1500A.

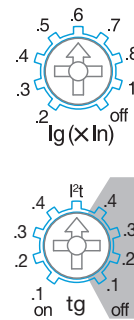
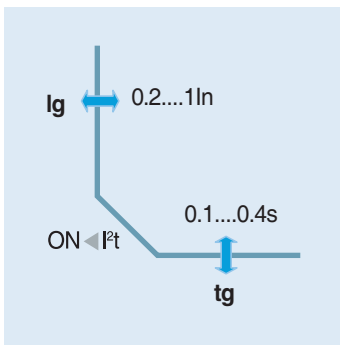
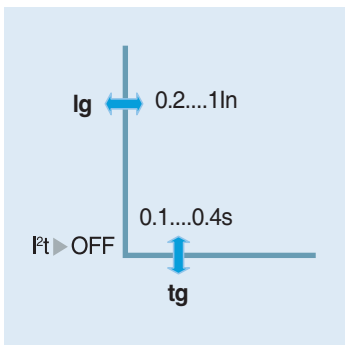
Short circuit time delay



Earth fault protection(E), optional

The ETM trip units measure the vectorial sum of the three phase current and, if present, that of the neutral conductor.

If the sum of these values exceeds the set current thresholds for a period of time greater than the time delay, the breaker is tripped.



I_g = insulation fault threshold
 t_g = earth fault time delay

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Ammeter (A), optional

The Ammeter device has an accuracy of $\pm 10\%$.
The highest phase current is displayed in upper line.
In under line, R, S and T phase current is scrolled autom.

Ammeter display limits:

- minimum current $\geq 0.3 \times I_n$ (one phase)
- maximum current $\leq 10 \times I_n$

Zone selective interlocking (ZSI), optional

Zone Selective Interlocking is mainly used in systems with high rated current and short circuit current values, with safety and service continuity requirements. This type of discrimination can be achieved with circuit breakers equipped with specially designed electronic trip units (ETM for TS circuit breakers).

Zone selective interlocking (ZSI) is a system designed

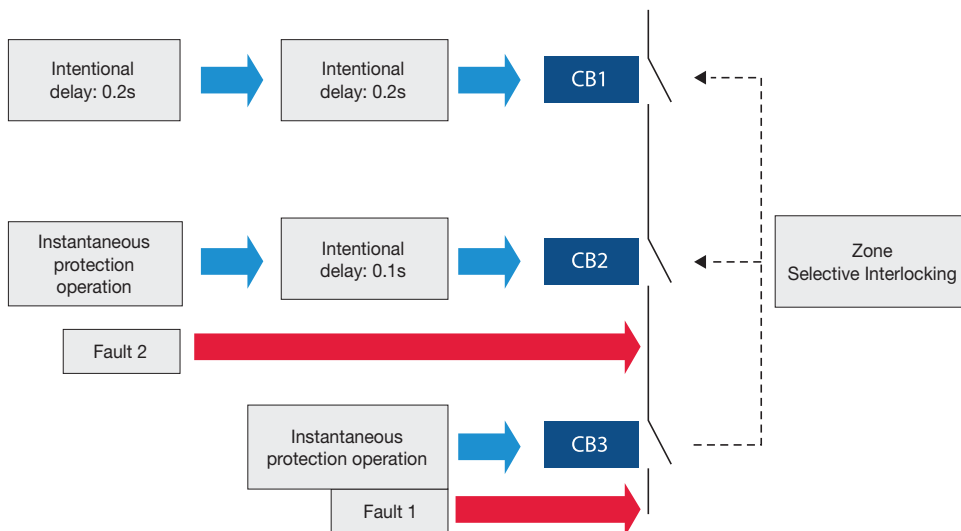
- to reduce the stress on electrical distribution components during short-circuit or earth fault conditions.
- to reduce the tripping times (Lower than hundred milliseconds).
- to reduce the damage caused by the fault and of interferences to the power supply system;

A number of circuit breakers are interconnected one after another by a pilot-wire.

Power source: DC24V Power is required.

Operation

- With ZSI, ETM trip unit detects the fault and then send the signal to upstream circuit breaker which applies the set time delay and ignore its present short-time and or/ earth fault delay and clear the fault with no intentional delay.
- Without ZSI, ETM trip unit detects the fault and then trips the circuit breaker with intentional delay



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Communication(C), optional

Communication interface: RS485 (Modbus-RTU)

The Modbus RS485 system is an open bus on which communicating Modbus devices are installed. All kinds of PLCs and computers can be connected to the bus.

Transmitted data :

- Protection setting values
- Highest current of the three phases
- Measurement: R, S, T and N phase current
- Fault reading: Type of fault (Overload, short-circuit, etc)

The setting of communication address using TR button and LCD display (Ammeter).

Power source: DC24V Power is required.

Combination of options

- | | |
|--|---|
| <input type="checkbox"/> A(Ammeter) | <input type="checkbox"/> Z(Zone selective interlocking) |
| <input type="checkbox"/> E(Earth fault protection) | <input type="checkbox"/> Z+A |
| <input type="checkbox"/> A+E | <input type="checkbox"/> Z+E |
| <input type="checkbox"/> A+C(Communication) | <input type="checkbox"/> Z+A+E |
| <input type="checkbox"/> A+E+C | <input type="checkbox"/> Z+A+C |
| | <input type="checkbox"/> Z+A+E+C |

FEATURE OF TRIP UNIT ACCORDING TO OPTION

ETM33 A+E

ETM33 A+E+C

ETM33 Z+A+E

ETM33 Z+A+E+C

ETM33 A

ETM33 A+C

ETM33 Z+A

ETM33 Z+A+C

ETM33 E

ETM33 E+Z

ETM33

ETM33 Z

A: Ammeter
E: Earth fault protection
C: Communication
Z: Zone selective interlocking

