Catalogue number: **TS1000/1250/16000 Range**

Electronic MCCB: 3,4 Pole 800A ~ 1600A

Generic photo only (actual product may change depending on configuration)

Electronic MCCB Range

- Higher short circuit breaking capacity
- Fixed Dimensions
- Available in 3 or 4 Pole Range
- Optional Auxiliaries Available
- Shunt/Undervoltage release auxiliaries available.
- Auxiliary/Alarm/Fault Alarm auxiliary Switches available.

TS □□□□ □□

Frame Size	
1000	1000AF
1250	1250AF
1600	1600AF

Trip Unit Type	
N	Normal
A	Ammeter
P	Power Meter
S	Supreme meter

Communication & protection	
G	Without comm.
Z	Without comm. + Earth Leakage
E	Without comm. + Earth Leakage
C	Comm.
K	Comm. + Earth Leakage
X	Comm. + Earth Leakage

Voltage & frequency	
0	Self-Power, 60Hz
1	AC/DC 100V~250V, 60Hz
2	DC 24V~60V, 60Hz
3	Self-Power, 50Hz
4	AC/DC 100V~250V, 50Hz
5	DC 24V~60V, 50Hz
6	Self-Power, 60Hz
7	AC/DC 100V~250V, 60Hz

Rated Current	
1000	1000A
1250	1250A
2000	2000A

N type	A type	P type	S type
			

Figure 1 Trip Unit Types

Catalogue number: **TS1000/1250/16000 Range**

Electronic MCCB: 3,4 Pole 800A ~ 1600A

Specifications				MCCB Type					
				TS1000		TS1250		TS1600	
Frame Size			AF	1000		1250		1600	
Rated Current	In		-5~40°C	800, 1000		1,250		1,600	
			50°C	800, 1000		1,250		1,560	
			65°C	800, 1000		1,250		1,420	
No. of poles				3,4		3,4		3,4	
Rated operational voltage, Ue	AC		50/60Hz V	690		690		690	
	DC		V	-		-		-	
Rated impulse withstand voltage, Uimp			kV	8		8		8	
Rated Insulation Voltage. Ui			V	1000		1000		1000	
Rated Ultimate short-circuit				N	H	N	H	N	H
breaking capacity, Icu	AC	220/240V	[kA]	55	75	55	75	55	75
		380/415V	[kA]	50	70	50	70	50	70
		440/460V	[kA]	50	65	50	65	50	65
		480/500	[kA]	40	50	40	50	40	50
		660/690	[kA]	30	45	35	42	35	45
Rated service breaking Capacity Ics	AC		[%Icu]	100%	75%	100%	75%	100%	75%
Rated short-circuit making capacity (Ka) (Icw)	AC50/60Hz		1s	25	12	25		25	
			3s	-		-		-	
Overriding instantaneous protection			kA peak	50	30	50		50	
Mechanical life			Operations	10000	4000	10000		10000	
Electrical life	440V		In/2	6000	4000	5000		5000	
			In	5000	3000	4000		4000	
	690V		In/2	4000	3000	3000		3000	
			In	2000	2000	2000		2000	
Weight (Kg)			3-pole	13					
			4-pole	16.8					

Catalogue number: **TS1000/1250/16000 Range**

Electronic MCCB: 3,4 Pole 800A ~ 1600A

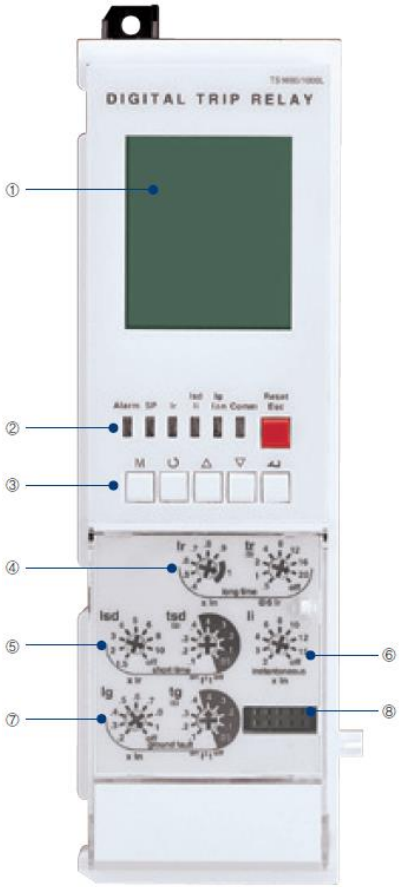
Trip Unit Types and Configuration

Trip Unit Type	N	A	P	S
Current Protection	L / S / I / G / Thermal	L / S / I / G / Thermal ZSI(Protective coordination)	L / S / I / G / Thermal ZSI(Protective coordination)	L / S / I / G / Thermal ZSI(Protective coordination)
Other Protection		Earth leakage (Option)	Earth leakage (Option) Over/Under current Over/Under frequency Unbalance(Voltage/Current) Reverse power	Earth leakage (Option) Over/Under current Over/Under frequency Unbalance(Voltage/Current) Reverse power
Measurement function		Individual 3- Phase line Currents	3 Phase Voltage/Current Power(P, Q, S), PF(3-Phase) Energy(Positive/Negative) Frequency, Demand	3 Phase Voltage/Current Power(P, Q, S), PF(3-Phase) Energy(Positive/Negative) Frequency, Demand Voltage/Current harmonics (1st~63th) 3 Phase Waveforms THD, TDD, K-Factor
Fine Adjustment			Fine adjustment for long/short time delay/instantaneous/ ground	Fine adjustment for long/short time delay/instantaneous/ ground
Pre Trip Alarm			Overload protection relays DO (Alarm) (Ground fault is not available when using Pre trip alarm)	Overload protection relays DO (Alarm) (Ground fault is not available when using Pre trip alarm)
Digital Output		3DO (Fixed) L, S/I, G Alarm	3DO (Programmable) Trip, Alarm, General	3DO (Programmable) Trip, Alarm, General
IDMTL setting			Compliance with IEC60255-3 SIT, VIT, EIT, DT	Compliance with IEC60255-4 SIT, VIT, EIT, DT
Power Supply	Self Power Power source works over 25% of current of In (one pole)	Self Power -Power source works over 25% of current of In (one pole) -External power source required for comms. AC/DC 100~250V DC 24~60V	AC/DC 100~250V DC 24~60V	AC/DC 100~250V DC 24~60V
RTC timer	Availble	Availble	Availble	Availble
LED for trip info.	Long time delay Short time delay/Instantaneous Ground fault	Long time delay Short time delay/Instantaneous Ground fault	Long time delay Short time delay/Instantaneous Ground fault	Long time delay Short time delay/Instantaneous Ground fault
Fault recording		10 records (No fault records when using self power) (Fault/Current/Date and Time)	256 records (Fault/Current/Date and Time)	256 records Last fault wave recording (3 Phase)
Event recording			256 records (Content, Status, Date)	257 records (Content, Status, Date)
Operatin Buttons	Reset button	Reset button Navigational buttons	Reset button Navigational buttons	Reset button Navigational buttons

Catalogue number: **TS1000/1250/16000 Range**

Electronic MCCB: 3,4 Pole 800A ~ 1600A

Trip Unit Relay Configuration



① **Graphic LCD: Indication of measurement and information**

② **LED: Indication of trip info. and overload state**

③ **Key: Navigational Keys**

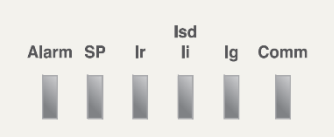
④ **Ir: Long-time current setting, tr: Long-time tripping delay setting**

⑤ **Isd: Short-time current setting, tsd: Short-time tripping delay setting**

⑥ **Ii: Instantaneous current setting**

⑦ **Ig: Ground fault current setting, tg: Ground fault tripping delay setting**

⑧ **Test terminal: OCR test terminal (Connected with OCR tester)**



Comm: indicating comm.

Ig: indicating ground fault

Isd/Ii: indicating short-time or instantaneous tripping

Ir: indicating long-time delay

SP: Self-protection LED and battery test LED

Alarm: indicating an overload

			N type								
Long time											
Current setting (A)	Iu = In×		0.5	0.6	0.7	0.8	0.9	1			
	Ir = Iu×		0.8	0.83	0.85	0.88	0.9	0.93	0.95	0.98	1
Time delay (s)	tr@(1.5×Ir)		12.5	25	50	100	200	300	400	500	Off
Accuracy: ±15% or below	tr@(6.0×Ir)		0.5	1	2	4	8	12	16	20	Off
100ms	tr@(7.2×Ir)		0.34	0.69	1.38	2.7	5.5	8.3	11	13.8	Off
Short Time											
Current setting (A)	Isd = Ir×		1.5	2	3	4	5	6	8	10	Off
Accuracy: ±10%											
Time delay (s)	tsd	I²t Off	0.05	0.1	0.2	0.3	0.4				
@10×Ir		I²t On		0.1	0.2	0.3	0.4				
	(I²t Off)	Min. Trip Time (ms)	20	80	160	260	360				
		Max. Trip Time (ms)	80	140	240	340	440				
Instantaneous											
Current setting (A)	Ii = In×		2	3	4	6	8	10	12	15	Off
Tripping time			50(±10ms)								
Ground fault											
Pick-up (A)											
Accuracy:	±10%(Ig>0.4In)	Ig = In×	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1	Off
	±20%(Ig>0.4In)										
Time delay (s)	tg	I²t Off	0.05	0.1	0.2	0.3	0.4				
@ 1×In		I²t On		0.1	0.2	0.3	0.4				
	(I²t Off)	Min. Trip Time (ms)	20	80	160	260	360				
		Max. Trip Time (ms)	80	140	240	340	440				

Catalogue number: **TS1000/1250/16000 Range**

Electronic MCCB: 3,4 Pole 800A ~ 1600A

NV type										
Long time										
Current setting (A)	Iu = In×		0.8	0.9	1	1.05	1.1	1.15	1.2	1.25	Off
Time delay (s)	tr@(1.2×Ir)		10	15	20	25	30	40	50	60	100
Accuracy: ±15% or below	tr@(3×Ir)		0.99	1.49	1.99	2.48	2.98	397	4.97	5.96	9.93
100ms	tr@(6×Ir)		0.24	0.36	0.48	0.59	0.71	0.95	1.19	1.43	2.38
Short Time										
Current setting (A)	Isd = Ir×		2	2.5	2.7	3	3.5	4	4.5	5	Off
Accuracy: ±10%											
Time delay (s)	tsd	I²t Off	0.05	0.1	0.2	0.3	0.4				
		I²t On		0.1	0.2	0.3	0.4				
	(I²t Off)	Min. Trip Time (ms)	20	80	160	260	360				
		Max. Trip Time (ms)	80	140	240	340	440				
Instantaneous										
Current setting (A)	Ii = In×		2	4	6	8	10	12	14	16	Off
Tripping time			50(±10ms)								

A type										
Long time										
Current setting (A)	Iu = In×		0.5	0.6	0.7	0.8	0.9	1			
	Ir = Iu×		0.8	0.83	0.85	0.88	0.9	0.93	0.95	0.98	1
Time delay (s)	tr@(1.5×Ir)		12.5	25	50	100	200	300	400	500	Off
Accuracy: ±15% or below	tr@(6.0×Ir)		0.5	1	2	4	8	12	16	20	Off
100ms	tr@(7.2×Ir)		0.34	0.69	1.38	2.7	5.5	8.3	11	13.8	Off
Short Time										
Current setting (A)	Isd = Ir×		1.5	2	3	4	5	6	8	10	Off
Accuracy: ±10%											
Time delay (s)	tsd	I²t Off	0.05	0.1	0.2	0.3	0.4				
@10×Ir		I²t On		0.1	0.2	0.3	0.4				
	I²t Off	Min. Trip Time (ms)	20	80	160	260	360				
		Max. Trip Time (ms)	80	140	240	340	440				
Instantaneous										
Current setting (A)	Ii = In×		2	3	4	6	8	10	12	15	Off
Tripping time			50(±10ms)								
Ground fault										
Pick-up (A)											
Accuracy:	±10%(Ig>0.4In)	Ig = In×	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1	Off
	±20%(Ig>0.4In)										
Time delay (s)	tg	I²t Off	0.05	0.1	0.2	0.3	0.4				
@ 1×In		I²t On		0.1	0.2	0.3	0.4				
	(I²t Off)	Min. Trip Time (ms)	20	80	160	260	360				
		Max. Trip Time (ms)	80	140	240	340	440				
Earth leakage (Option)										
Current setting (A)	IΔn		0.5	1	2	3	5	10	20	30	Off
Time delay (ms)	Δt	Alarm Time(ms)	140	230	350	800	950				
Accuracy: ±15%		Alarm Time(ms)	140	230	350	800					

Catalogue number: **TS1000/1250/16000 Range**

Electronic MCCB: 3,4 Pole 800A ~ 1600A

P type											
Long time											
Current setting (A)	Iu = In×		0.4	0.5	0.6	0.7	0.8	0.9	1		
Time delay (s)	tr@(1.5×Ir)		12.5	25	50	100	200	300	400	500	Off
Accuracy: ±15% or below	tr@(6.0×Ir)		0.5	1	2	4	8	12	16	20	Off
100ms	tr@(7.2×Ir)		0.34	0.69	1.38	2.7	5.5	8.3	11	13.8	Off
Short Time											
Current setting (A)	Isd = Ir×		1.5	2	3	4	5	6	8	10	Off
Accuracy: ±10%											
Time delay (s)	tsd	I²t Off	0.05	0.1	0.2	0.3	0.4				
		I²t On		0.1	0.2	0.3	0.4				
	I²t Off	Min. Trip Time (ms)	20	80	160	260	360				
		Max. Trip Time (ms)	80	140	240	340	440				
Instantaneous											
Current setting (A)	Ii = In×		2	3	4	6	8	10	12	15	Off
Tripping time			50(±10ms)								
Ground fault											
Pick-up (A)											
Accuracy:	±10%(Ig>0.4In)	Ig = In×	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1	Off
	±20%(Ig>0.4In)										
Time delay (s)	tg	I²t Off	0.05	0.1	0.2	0.3	0.4				
@ 1×In		I²t On		0.1	0.2	0.3	0.4				
	(I²t Off)	Min. Trip Time (ms)	20	80	160	260	360				
		Max. Trip Time (ms)	80	140	240	340	440				
Earth leakage (Option)											
Current setting (A)	IΔn		0.5	1	2	3	5	10	20	30	Off
Time delay (ms)	Δt	Alarm Time(ms)	140	230	350	800	950				
Accuracy: ±15%		Alarm Time(ms)	140	230	350	800					
PTA(Pre Trip Alarm)											
Current setting (A)	Ip = Ir x		0.6	0.65	0.7	0.75	0.8	0.85	0.9	0.95	1
Time delay (s)		tp@(1.2×Ip)	1	5	10	15	20	25	30	35	Off
Accuracy: ±15%											

Other protections		Pick-up			Time delay(s)		
		Setting range	Step	Accuracy	Setting range	Step	Accuracy
Under voltage		80V ~ 0V_Pick-up	1V	±5%	1.2~40sec	0.1sec	±0.1sec
Over voltage		UV_Pick-up ~ 980V	1V	±5%			
Voltage unbalance		6% ~ 99%	0.01	±2.5% or (±10%)			
Reverse power		10~500 kW	1kW	±10%	0.2~40sec		
Over power		500~5000 kW	1kW	±10%			
Current unbalance		6% ~ 99%	0.01	±2.5% or (±10%)	1.2~40sec		
Over	60Hz	UF_Pick-up ~ 65	1Hz	±0.1Hz			
frequency	50Hz	UF_Pick-up ~ 55	1Hz	±0.1Hz			
Under	60Hz	55Hz ~ OF_Pick-up	1Hz	±0.1Hz			
frequency	50Hz	45Hz ~ OF_Pick-up	1Hz	±0.1Hz			

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Electronic MCCB: 3,4 Pole 800A ~ 1600A

S type										
Long time										
Current setting (A)	Iu = In×		0.4	0.5	0.6	0.7	0.8	0.9	1	
Time delay (s)	tr@(1.5×Ir)		12.5	25	50	100	200	300	400	500	Off
Accuracy: ±15% or below	tr@(6.0×Ir)		0.5	1	2	4	8	12	16	20	Off
100ms	tr@(7.2×Ir)		0.34	0.69	1.38	2.7	5.5	8.3	11	13.8	Off
Short Time										
Current setting (A)	Isd = Ir×		1.5	2	3	4	5	6	8	10	Off
Accuracy: ±10%										
Time delay (s)	tsd	I²t Off	0.05	0.1	0.2	0.3	0.4			
		I²t On		0.1	0.2	0.3	0.4			
	I²t Off	Min. Trip Time (ms)	20	80	160	260	360			
		Max. Trip Time (ms)	80	140	240	340	440			
Instantaneous										
Current setting (A)	Ii = In×		2	3	4	6	8	10	12	15	Off
Tripping time			50(±10ms)								
Ground fault										
Pick-up (A)										
Accuracy:	±10%(Ig>0.4In)	Ig = In×	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1	Off
	±20%(Ig>0.4In)										
Time delay (s)	tg	I²t Off	0.05	0.1	0.2	0.3	0.4			
@ 1×In		I²t On		0.1	0.2	0.3	0.4			
	(I²t Off)	Min. Trip Time (ms)	20	80	160	260	360			
		Max. Trip Time (ms)	80	140	240	340	440			
Earth leakage (Option)										
Current setting (A)	IΔn		0.5	1	2	3	5	10	20	30	Off
Time delay (ms)	Δt	Alarm Time(ms)	140	230	350	800	950				
Accuracy: ±15%		Alarm Time(ms)	140	230	350	800					
PTA(Pre Trip Alarm)										
Current setting (A)	Ip = Ir x		0.6	0.65	0.7	0.75	0.8	0.85	0.9	0.95	1
Time delay (s)		tp@(1.2×Ip)	1	5	10	15	20	25	30	35	Off
Accuracy: ±15%											

Other protections		Pick-up			Time delay(s)		
		Setting range	Step	Accuracy	Setting range	Step	Accuracy
Under voltage		80V ~ 0V_Pick-up	1V	±5%	1.2~40sec	0.1sec	±0.1sec
Over voltage		UV_Pick-up ~ 980V	1V	±5%			
Voltage unbalance		6% ~ 99%	0.01	±2.5% or (±10%)			
Reverse power		10~500 kW	1kW	±10%	0.2~40sec		
Over power		500~5000 kW	1kW	±10%			
Current unbalance		6% ~ 99%	0.01	±2.5% or (±10%)	1.2~40sec		
Over	60Hz	UF_Pick-up ~ 65	1Hz	±0.1Hz			
frequency	50Hz	UF_Pick-up ~ 55	1Hz	±0.1Hz			
Under	60Hz	55Hz ~ OF_Pick-up	1Hz	±0.1Hz			
frequency	50Hz	45Hz ~ OF_Pick-up	1Hz	±0.1Hz			

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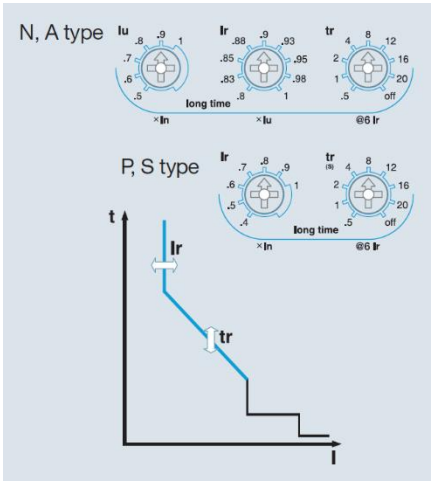
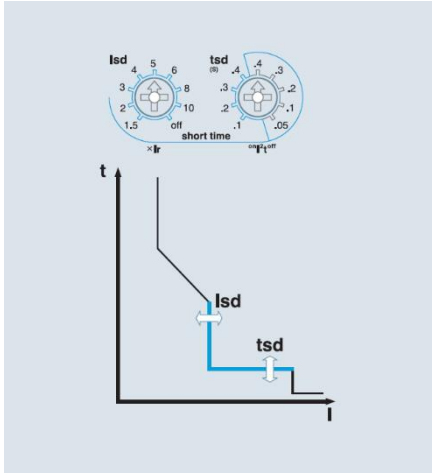
Electronic MCCB: 3,4 Pole 800A ~ 1600A

Long-time delay(L)



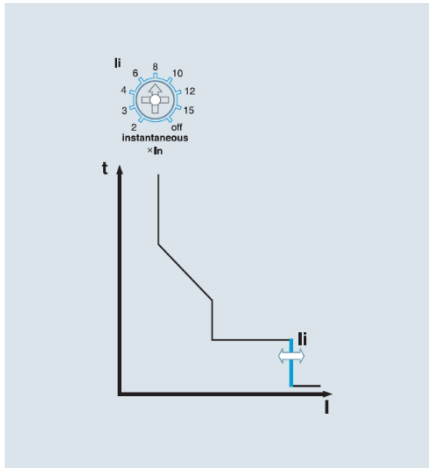
1. Standard current setting knob: Ir
   1) Setting range in P type and S type: (0.4-0.5-0.6-0.7-0.8-0.9-1.0)×In
   2) Setting range in N type and A type: (0.4 ~1.0) ×In
      - Iu: (0.5-0.6-0.7-0.8-0.9-1.0) ×In
      - Ir: (0.8-0.83-0.85-0.88-0.9-0.93-0.95-0.98-1.0) ×Iu
2. Time delay setting knob: tr
   - Standard operating time is based on the time of 6×Ir
   - Setting range: 0.5-1-2-4-8-12-16-20-Off sec (9 modes)
3. Relay pick-up current
   - When current over (1.15) ×Ir flows in, relay is picked up.
4. Relay operates basing on the largest load current among the 3 phases.

Short-time delay(s)



1. Standard current setting knob: Isd
   - Setting range: (1.5-2-3-4-5-6-8-10-Off) ×Ir
2. Time delay setting knob: tsd
   - Standard operating time is based on the time of 10×Ir.
   - Inverse time (I^2t On): 0.1-0.2-0.3-0.4 sec
   - Definite time (I^2t Off): 0.05-0.1-0.2-0.3-0.4 sec
3. Relay operates basing on the largest load current among the 3 phases.
4. When ZSI function was set, the protection operation will take place instantaneously with input absence by downstream devices. It is advised to disable its ZSI function on the last downstream device.

Instantaneous (I)



1. Standard current setting knob: Ii
   - Setting range: (2-3-4-6-8-10-12-15-Off)×In
2. Relay operates basing on the largest load current among the 3 phases.
3. Total breaking time is below 50 (×10)ms.

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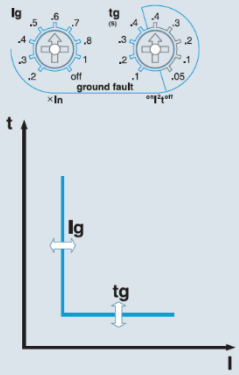
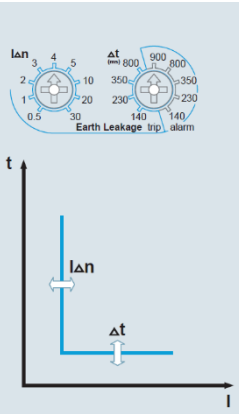
Electronic MCCB: 3,4 Pole 800A ~ 1600A

Ground Fault (G)



1. Standard setting current knob: Ig
   - Setting range: (0.2-0.3-0.4-0.5-0.6-0.7-0.8-1.0-Off)×In
2. Time delay setting knob: tg
   - Inverse time (I^2t On): 0.1-0.2-0.3-0.4 sec
   - Definite time (I^2t Off): 0.05-0.1-0.2-0.3-0.4 sec
3. Ground fault current is vector sum of each phase current. Therefore, 3Pole products may operate under its phase-unbalance including ground fault situations.
4. When ZSI function was set, the protection operation will take place instantaneously with input absence by downstream devices. It is advised to disable its ZSI function on the last downstream device.
5. Ground-fault functions are basically provided with products equipped with a trip relay through its internal CT that is embedded in each phase.(But, it can't be used with earth-leakage protection function at the same time)

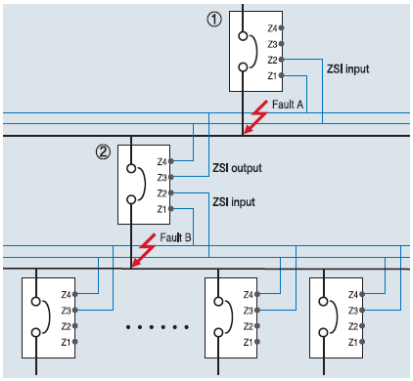
Earth Leakage (G)



1. Standard setting current knob: I□n
   - Setting range: 0.5-1-2-3-4-5-10-20-30-Off (A)
2. Time delay setting knob: Δt
   - Trip time: 140-230-350-800 ms
   - Alarm time: 140-230-350-800-950 ms
3. Settings within its alarm range will prevent its breaker from tripping but activating its alarm.
4. This function is enabled and can be used only with standard ZCT provided by LS or private external CT(secondary output 5A) selected by customers.
5. When ZSI function was set, the protection operation will take place instantaneously with input absence by downstream devices. It is advised to disable its ZSI function on the last downstream device.

ZSI- Zone Selective Interlocking (A, P, S type)

1. In case of that short time-delay or ground fault accident occurs at ZSI built in system, the breaker at accident site sends ZSI signal to halt upstream breaker's operation.
2. To eliminate a breakdown, trip relay of MCCB at accident site activates trip operation without time delay.
3. The upstream breaker that received ZSI signal adhere to pre-set short time-delay or ground fault time-delay for protective coordination in the system. However upstream breaker that did not receive its signal will trip instantaneously.
4. For ordinary ZSI operation, it should arrange operation time accordingly so that downstream circuit breakers will react before upstream ones under overcurrent/short time delay/ ground fault situations.
5. ZSI connecting line needs to be Max. 3m.



1) Occurrence of fault A
   - Only breaker "1" performs instantaneous trip operation.
2) Occurrence of fault B
   - Breaker '2' performs instantaneous trip operation,
   breaker '1' performs trip operation after prearranged delay time
   - But if breaker '2' did not break the fault normally,
   Breaker '1' performs instantaneous trip operation to protect system.

Remote reset and digital I/O (A, P, S types)

In case of that MCCB operates due to accidents or over current,
Trip relay indicates the information of the accident through the LED and LCD.
Trip relay A, P and S type is possible to perform the remote reset by digital input,
and have 3 DO(Digital output).

1. Methods to reset Trip relay is to push the Reset button on the frontal side and to use the remote reset.

2. Digital input
- [R11-R22] input: Remote reset
- [Z1-Z2] Input: ZSI input
- [E1-E2] Input: ZCT for earth leakage detection or external CT input

* All DI are dry contact that has 3.3V of recognition voltage. When inputting close by SSR(Solid State Relay) or open-collector, connect collector(Drain) to R11.

3. Digital output 3a(524, 534, 544-513)
- Fault output: Long/Short time delay, Instantaneous, Ground fault, UVR, OVR, UFR, OFR, rPower, Vunbal, Iunbal
  (Maintains state as Latch form until user pushes reset.)
- General DO: when setting L/R as remote, it is available to control close/open remotely by using communication.

Communications

Modbus/RS-485

•Operation mode: Differential

•Distance: Max. 1.2km

•Cable :
General RS-485 shielded twist 2-pair cable

• Baud rate :
9600bps, 19200bps, 38400bps

•Transmission method: Half-Duplex

•Termination: 150Ω

Profibus-DP

• Profibus-DP module is installed separately (Option)

•Operation mode: Differential

•Distance: Max. 1.2km

• Cable :
Profibus-DP shielded twist 2-pair cable

•Baud rate: 9600bps~12Mbps

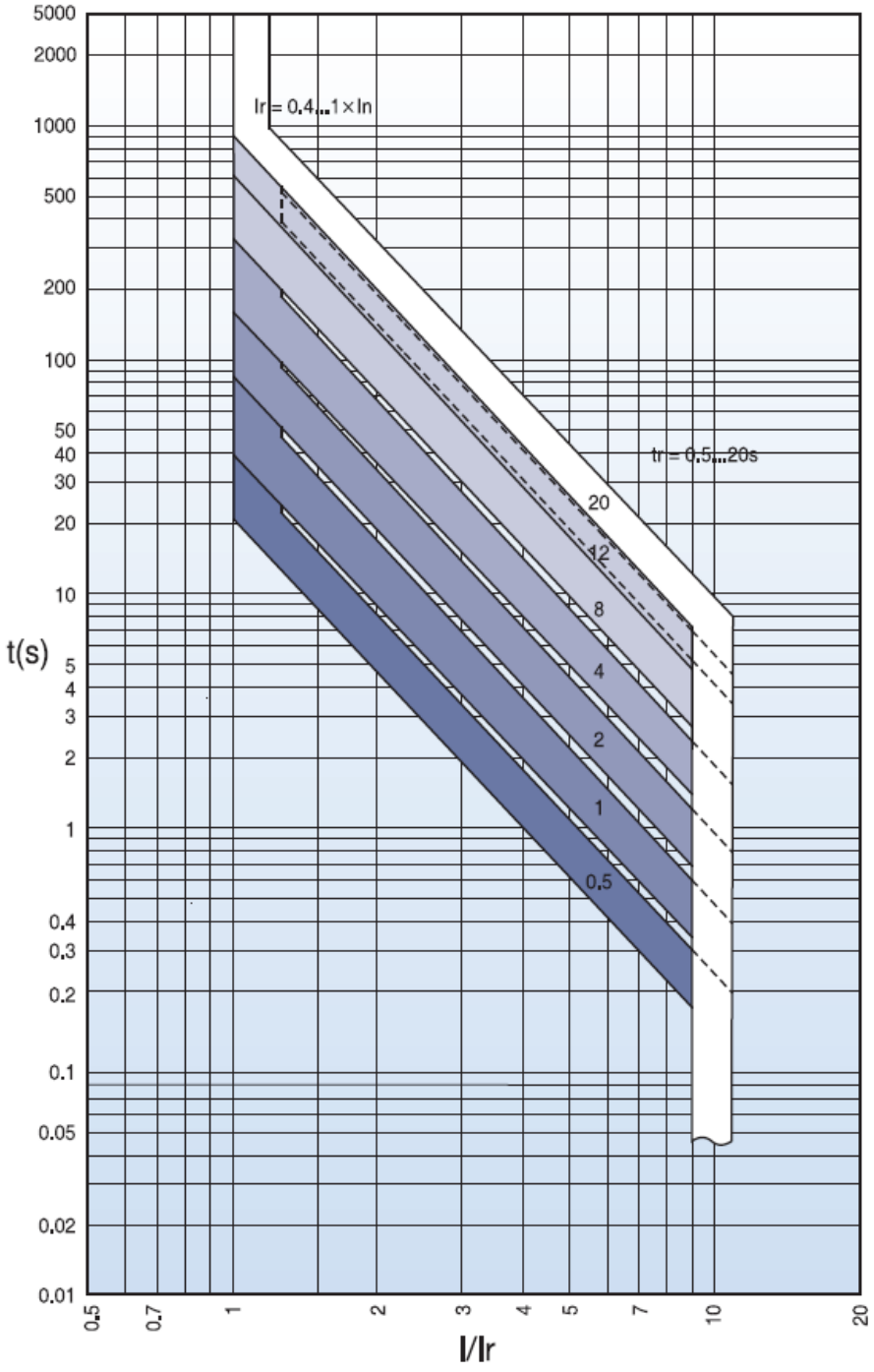
•Transmission method: Half-Duplex

•Termination: 150Ω

•Standard: EN 50170 / DIN 19245

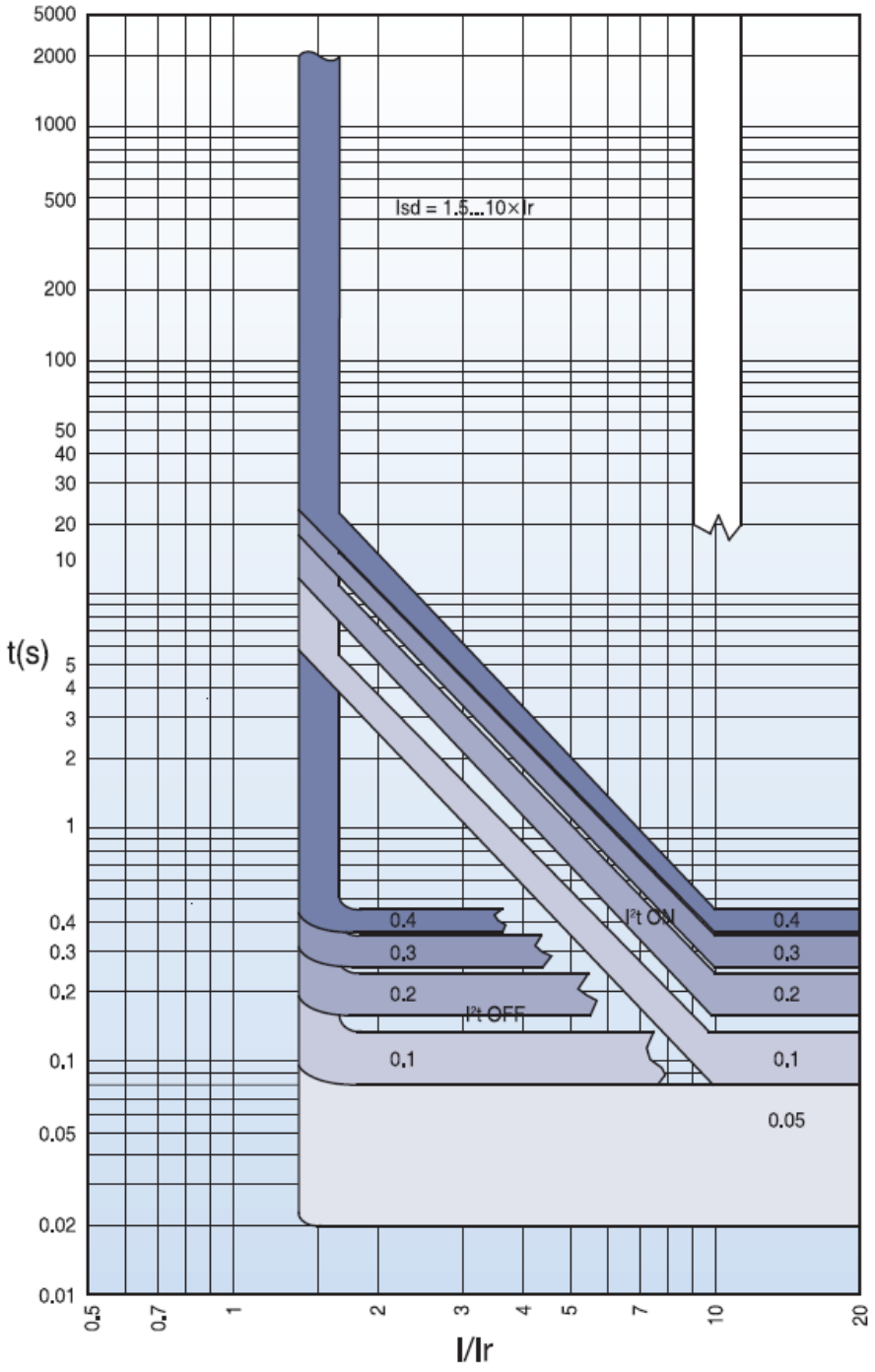
TS1000/1250/1600 ETM Characteristic Curve for Long-time delay (L)

TS1000NAG5800
TS1000NAG51000
TS1250NAG51250
TS1600NAG51600
TS1000HAG5800
TS1000HAG51000
TS1250HAG51250
TS1600HAG51600



TS1000/1250/1600 ETM Characteristic Curve for Short-time delay (L)

TS1000NAG5800
TS1000NAG51000
TS1250NAG51250
TS1600NAG51600
TS1000HAG5800
TS1000HAG51000
TS1250HAG51250
TS1600HAG51600

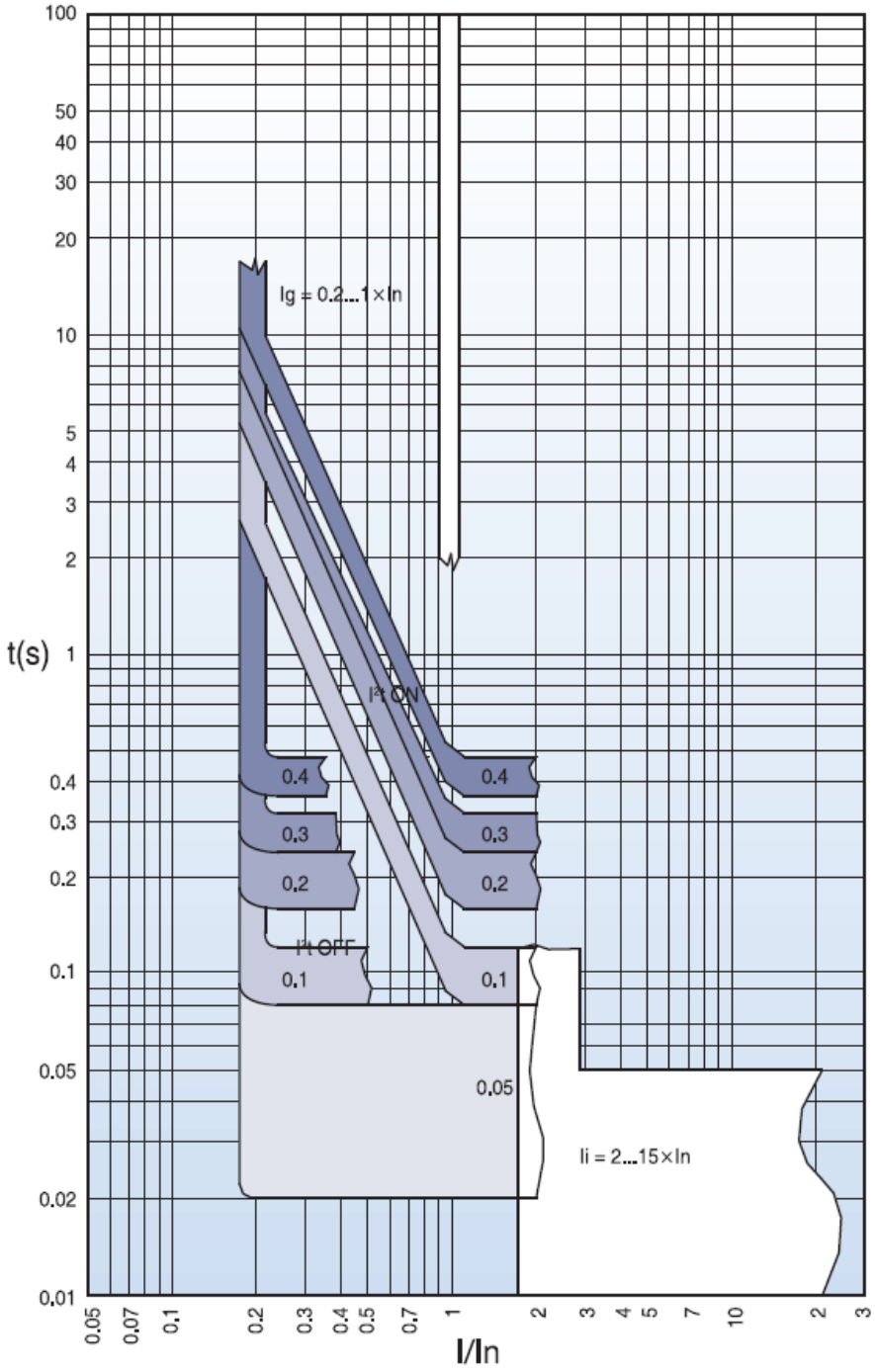


Catalogue number: **TS1000/1250/16000 Range**

Electronic MCCB: 3,4 Pole 800A ~ 1600A

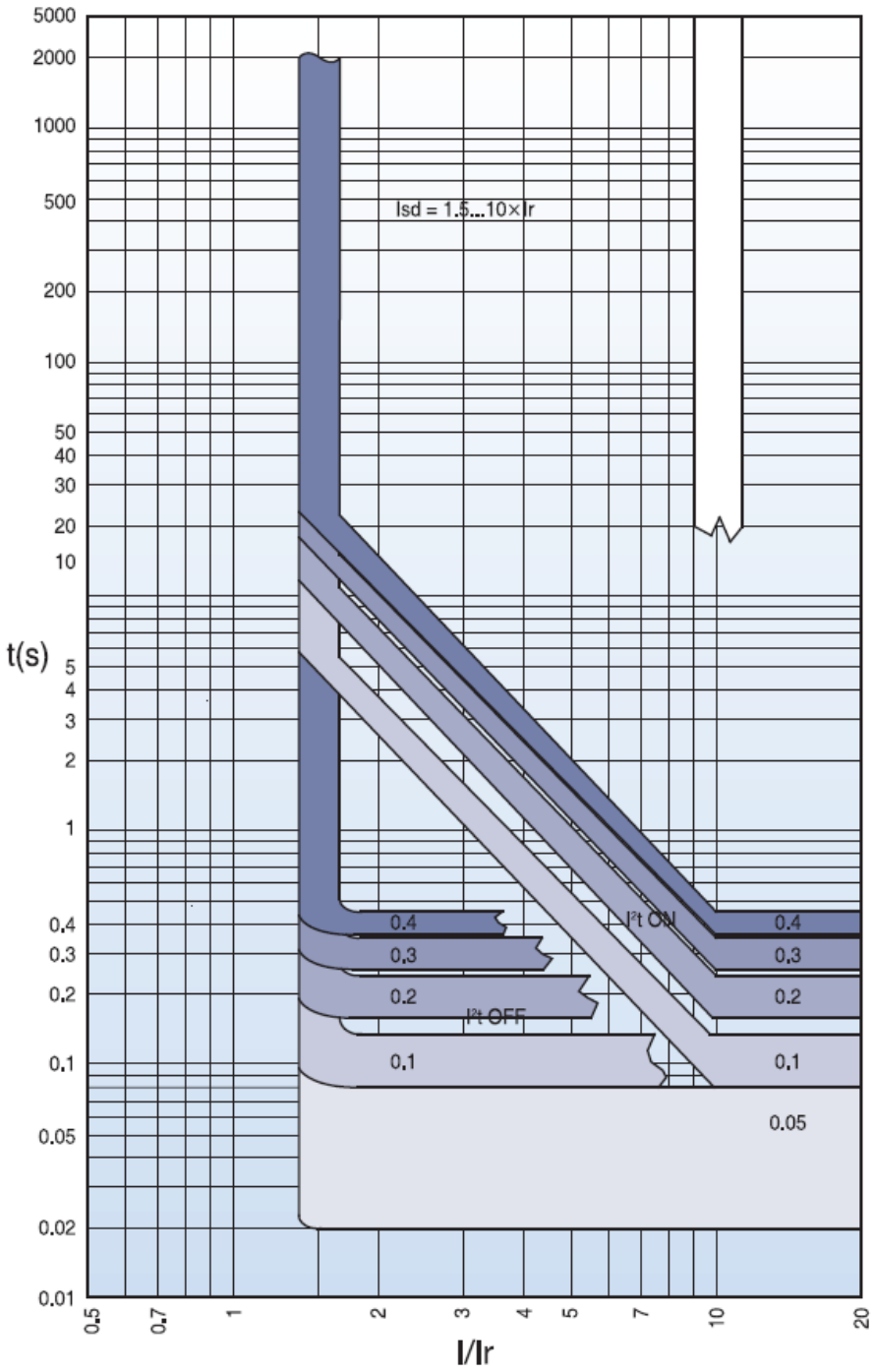
TS1000/1250/1600 ETM Characteristic Curve for Instantaneous (I) and Ground fault (G)

TS1000NAG5800
TS1000NAG51000
TS1250NAG51250
TS1600NAG51600
TS1000HAG5800
TS1000HAG51000
TS1250HAG51250
TS1600HAG51600



TS1000/1250/1600 ETM Characteristic Curve for IDTM, Earth Leakage (Optional)

TS1000NAG5800
TS1000NAG51000
TS1250NAG51250
TS1600NAG51600
TS1000HAG5800
TS1000HAG51000
TS1250HAG51250
TS1600HAG51600

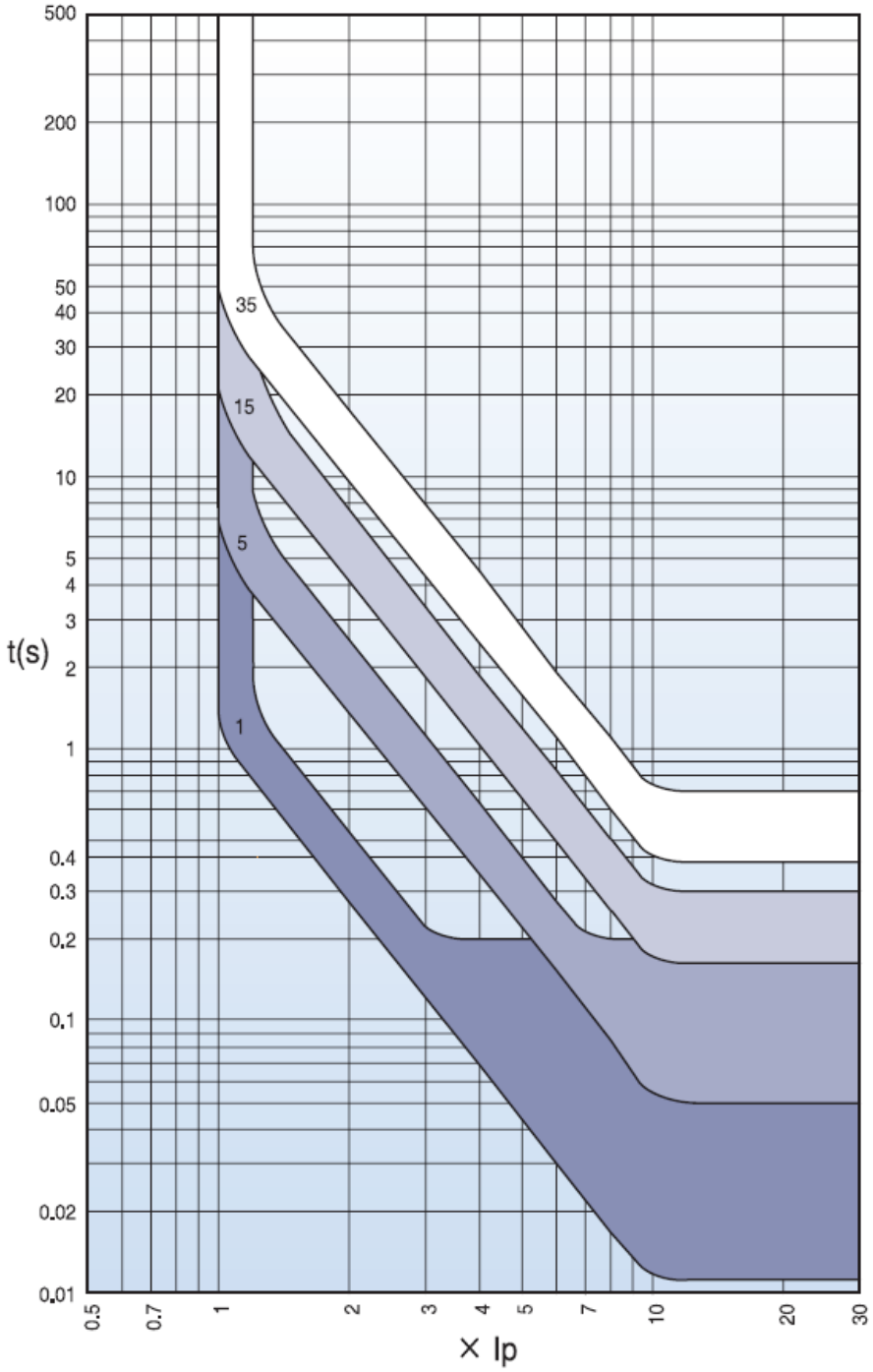


Catalogue number: **TS1000/1250/16000 Range**

Electronic MCCB: 3,4 Pole 800A ~ 1600A

TS1000/1250/1600 ETM Characteristic Curve for Pre Trip Alarm

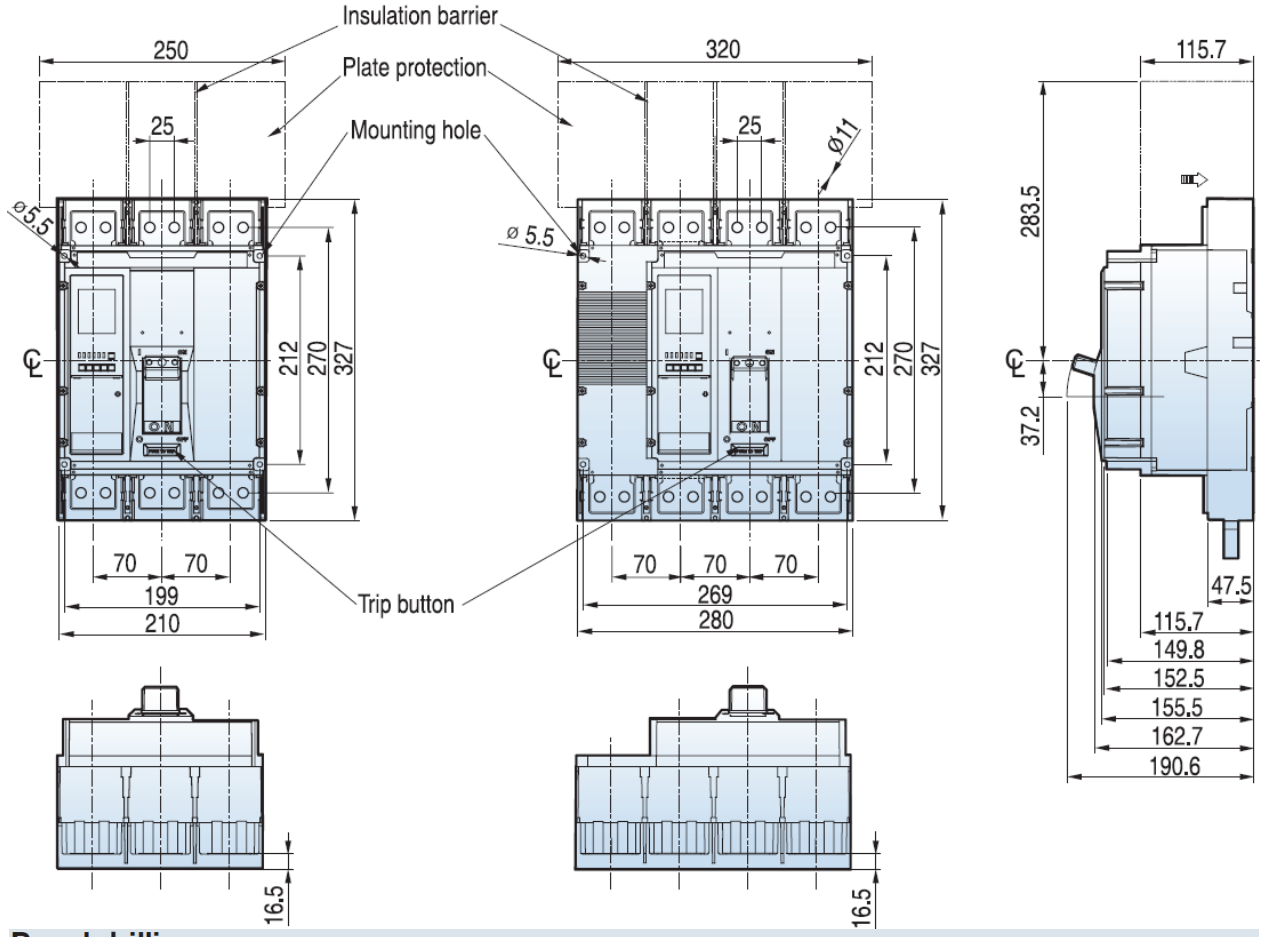
TS1000NAG5800
TS1000NAG51000
TS1250NAG51250
TS1600NAG51600
TS1000HAG5800
TS1000HAG51000
TS1250HAG51250
TS1600HAG51600



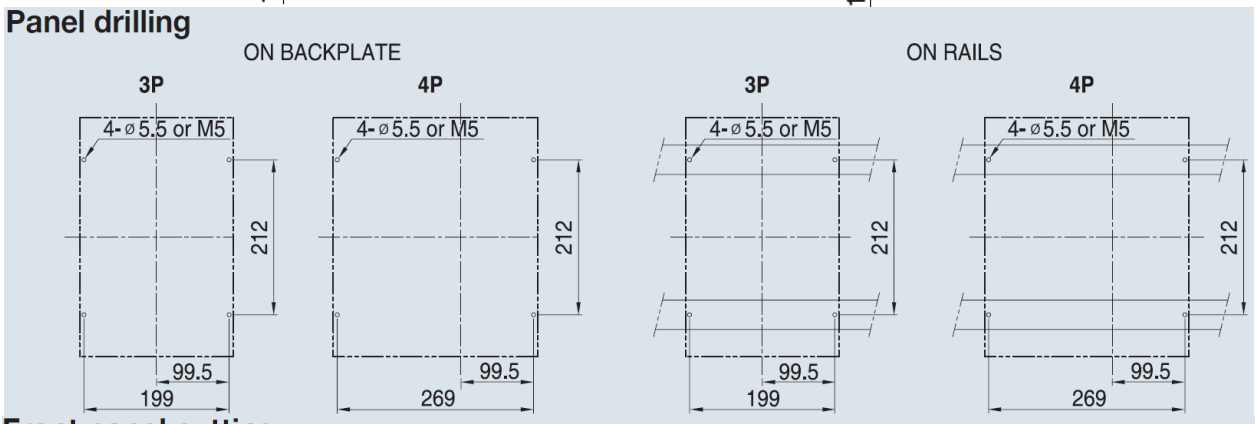
Catalogue number: **TS1000/1250/16000 Range**

Electronic MCCB: 3,4 Pole 800A ~ 1600A

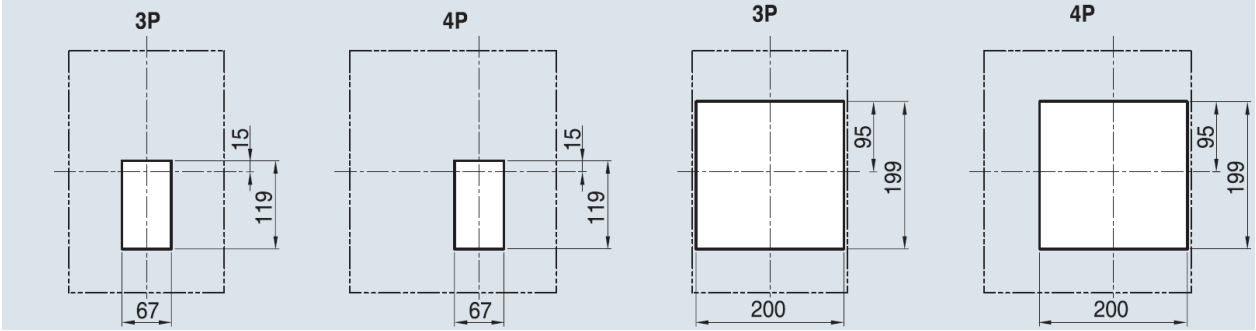
TS1000/1250/1600 ETM Electronic MCCB Front Type



Panel drilling



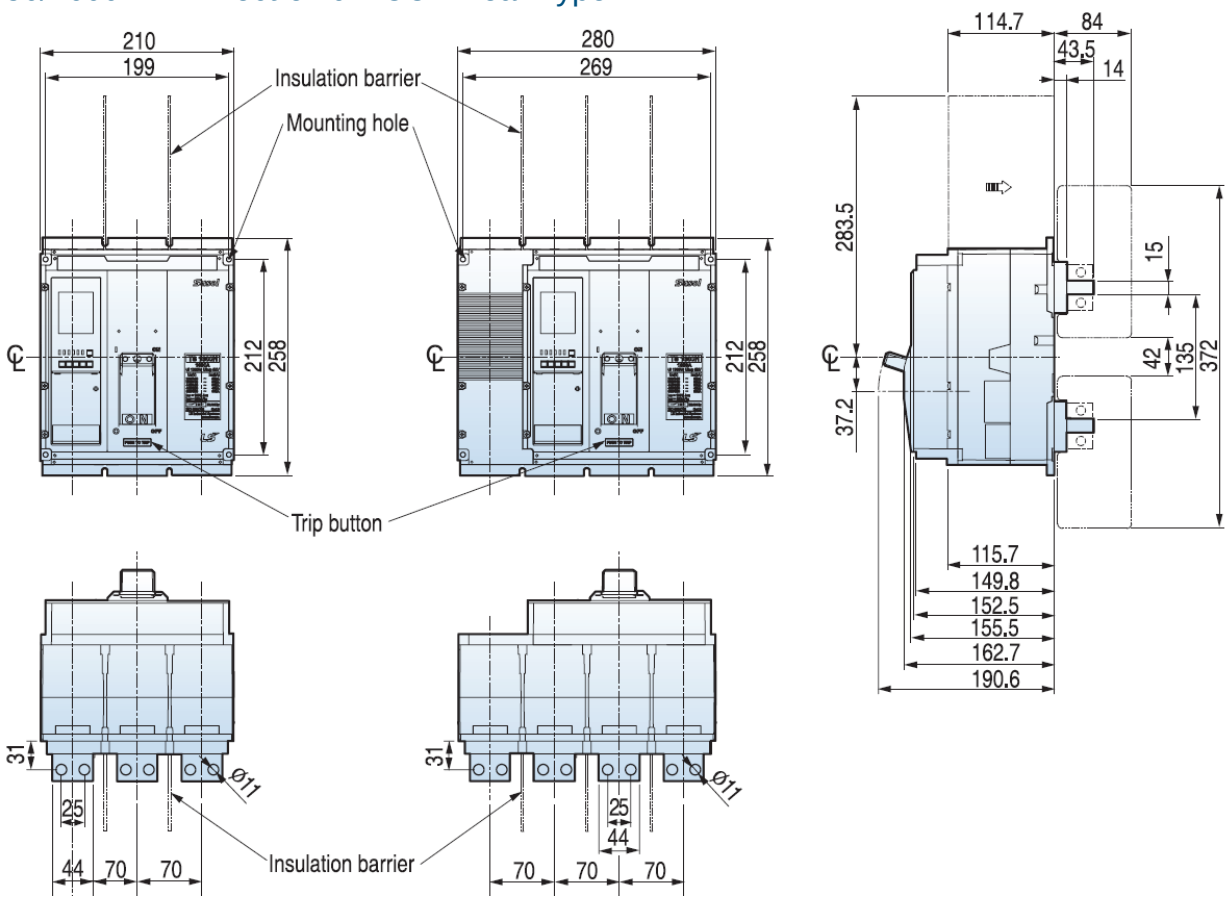
Front panel cutting



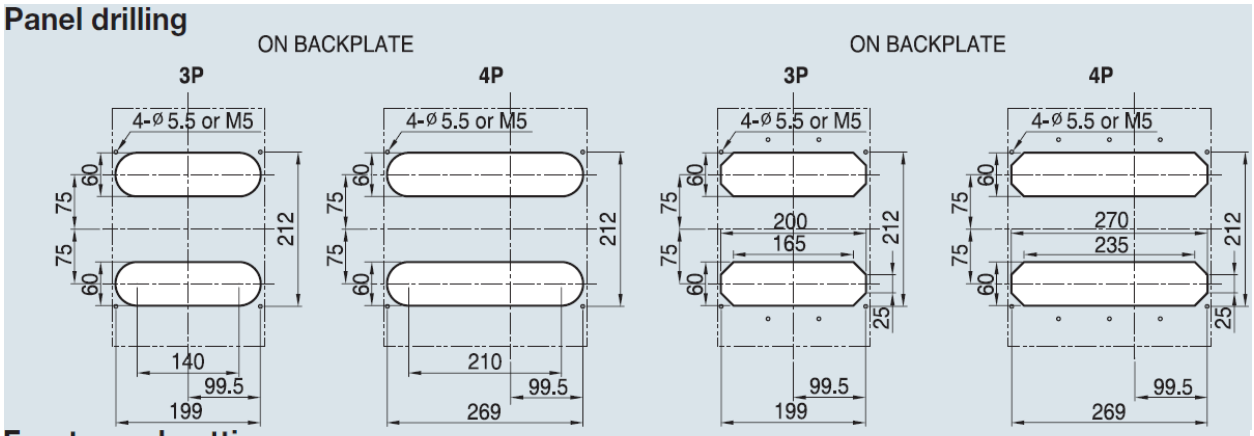
Catalogue number: **TS1000/1250/16000 Range**

Electronic MCCB: 3,4 Pole 800A ~ 1600A

TS1000/1250/1600 ETM Electronic MCCB Rear Type



Panel drilling



Front panel cutting