

Product Features

The HGP electronic type is equipped with intelligent electronic functions for the new era and has the highest breaking in the whole frame (100 kA at 500 V). In addition, various coordination such as selective breaking is possible, and maximizes energy efficiency through communication and power monitoring function.

Protection for various low voltage system (L/S/I/G/IN)

- L : Long-time delay
- S : Short-time delay
- I : Instantaneous
- G : Ground fault trip
- IN : Neutral protection

Customized type selection and convenient system UI

- Normal type : Key button
- Display type : Normal type
- + Segment LCD + Ampere measurement
- Ammeter type : Display type
- + Communication
- Energy-meter type : Ammeter type
- + Voltage / Energy measurement

Save accident information

- Save the trip data : 20 EA (damaged phase, type, time)
- Save the system data : 32 EA

Test and monitoring for maintenance

- LOAD monitoring using RS-485 modbus-RTU
- TEST KIT can maximize the use of a circuit breaker



Essential for Today
Potential for Tomorrow

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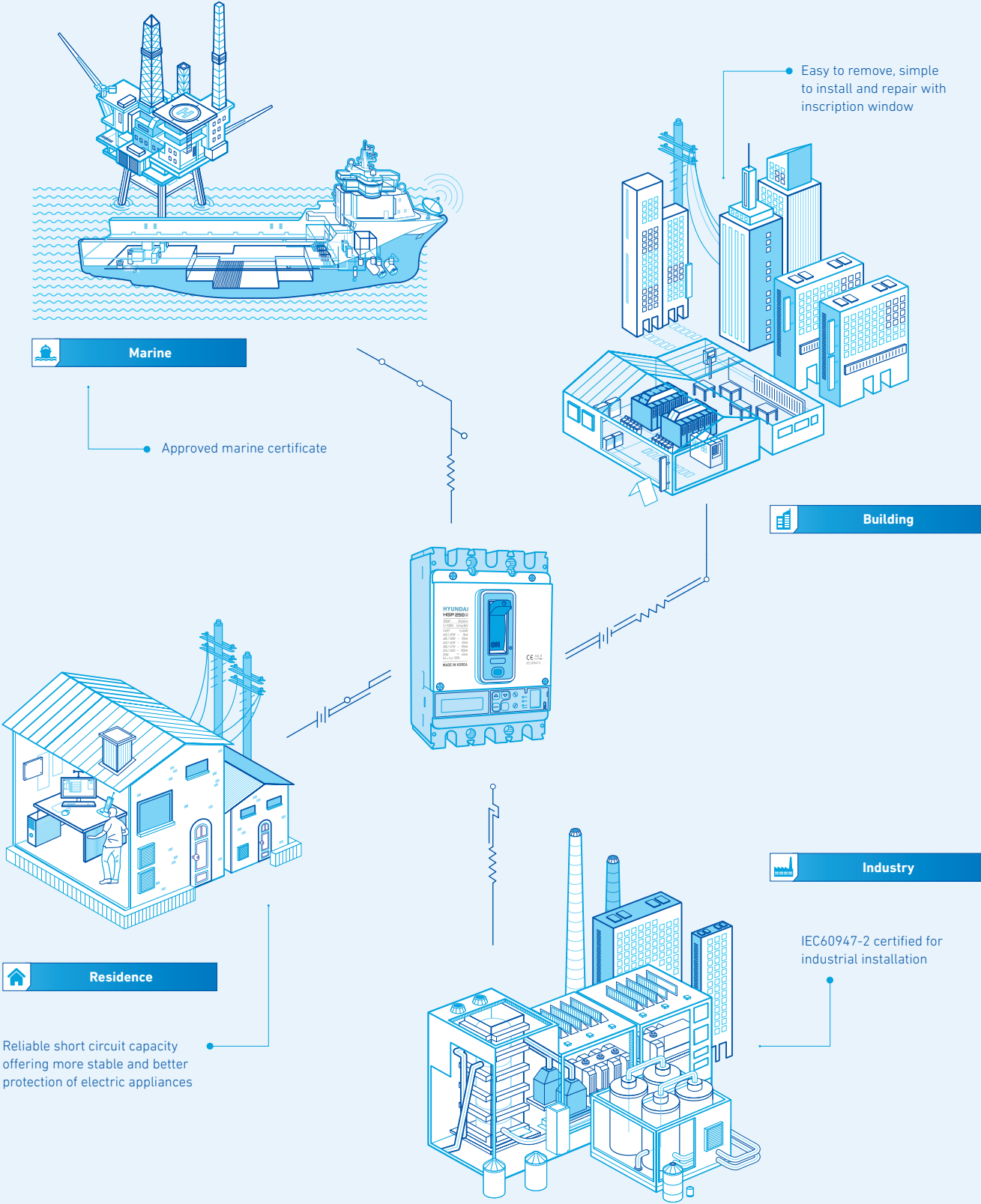


HGP Series Molded Case Circuit Breakers

HYUNDAI ELECTRIC

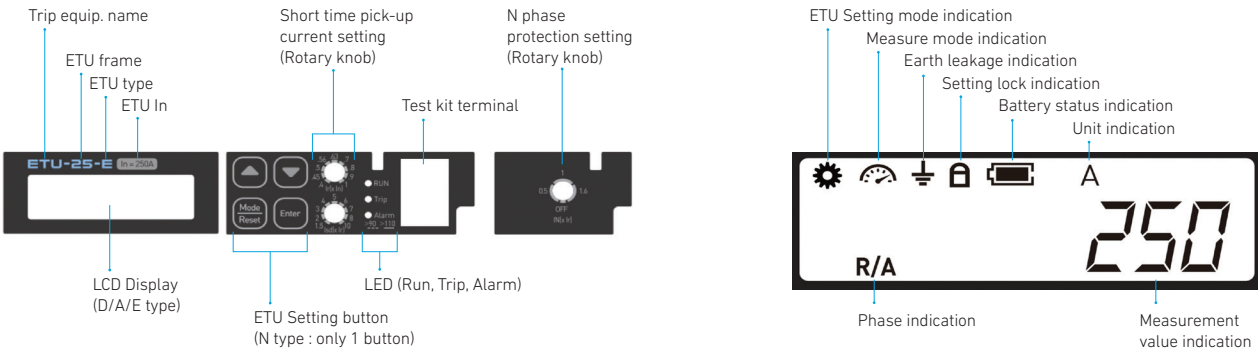
HGP Type Molded Case Circuit Breakers

Applicable to Various Location



Overview

ETU Part Name



ETU Type / AF

Type	Trip unit							
	Model (AF)	HGP250			HGP400		HGP630	HGP800
	Rated current (A)	100	160	250	250	400	630	800
Normal type		ETU-25-N			ETU-63-N		ETU-63-N	ETU-80-N
Display type		ETU-25-D			ETU-63-D		ETU-63-D	ETU-80-D
Ammeter type		ETU-25-A			ETU-63-A		ETU-63-A	ETU-80-A
Energy-meter type		ETU-25-E			ETU-63-E		ETU-63-E	ETU-80-E

Summary of New Electronic MCCB Features

	N	D	A	E	Remark
HMI	• Dial 2 EA, key button 1 EA	• Dial 2 EA, key button 4 EA • Segment LCD	• Dial 2 EA, key button 4 EA • Segment LCD	• Dial 2 EA, key button 4 EA • Segment LCD	Dial setting (Ir, Isd)
Protection	• L (dial) • S (dial) • I (key button) • IN (dial)	• L (dial, key button) • S (dial) • I (key button) • G (key button) • IN (dial)	• L (dial, key button) • S (dial) • I (key button) • G (key button) • IN (dial)	• L (dial, key button) • S (dial) • I (key button) • G (key button) • IN (dial)	L, S time to be changed by key button
Measurement		• IR, IS, IT, IN, IG	• IR, IS, IT, IN, IG, I avg, I max	• IR, IS, IT, IN, IG • I avg • I max/min • I unbalance • VLL, VLN • VLL avg • VLL unbalance	External power required
History / Event	• 20 Trip information (damaged phase, type, time)	• 20 Trip information (damaged phase, type, time)	• 20 Trip information (damaged phase, type, time) • 32 System event	• 20 Trip information (damaged phase, type, time) • 32 System event	External power required
Power	• Self-power	• Self-power	• Self-power External power input (24 V DC)	• Self-power External power input (24 V DC)	
Battery	●	●	●	●	
Add-on function	• Test terminal	• Test terminal	• Test terminal • ZSI OUT: 250AF • ZSI IN/OUT: 430AF, 800AF • Trip / Alarm counter • Operating time 50 % In Over - 24 h	• Test terminal • ZSI OUT: 250AF • ZSI IN/OUT: 430AF, 800AF • Trip / Alarm counter • Operating time 50 % In Over - 24 h	External power required
Communication			• RS-485 MODBUS-RTU	• RS-485 MODBUS-RTU	External power required
Indication	• LED 3 EA • Run LED / Trip LED • Current LED (90 % off, 110 % on)	• LED 3 EA • Run LED / Trip LED • Current LED (90 % off, 110 % on)	• LED 3 EA • Run LED / Trip LED • Current LED (90 % off, 110 % on)	• LED 3 EA • Run LED / Trip LED • Current LED (90 % off, 110 % on)	

Model Selection Table

Things in common		Things in common	
Rated insulation voltage, Ui	1,000 V	Suitability for isolation	Yes
Rated operational voltage, Ue	690 V	Utilization category	A
Impulse withstand voltage, Uimp	8 kV	Pollution degree	3
Protection function	Overload, short-circuit and instantaneous protection	Reference standard	IEC60947-2

Model	HGP50D	HGP125D	HGP160D
Frame (AF)	50	125	160
Pole (P)	3, 4 ¹⁾	3, 4 ¹⁾	3, 4 ¹⁾
Recognition code for order	F ⁴⁾ S H X	F ⁴⁾ S H X	F ⁴⁾ S H X
Rated short-circuit breaking capacity [Icu] (kA rms)	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V DC 250 V ²⁾	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V
Service breaking capacity [Ics = % Icu] (kA rms)	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V
Rated short-circuit making capacity [Icu] (kA lcm)	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V
Endurance (Durability)	Mechanical Electrical	Mechanical Electrical	Mechanical Electrical
Trip device	●	●	●
Thermal magnetic	Rated current, at 40 °C (A) Long time [LT] Instantaneous [INST] Rated current, at 40 °C (A) Long time [LT] Short time [STD] Electronic	Rated current, at 40 °C (A) Long time [LT] Instantaneous [INST] Rated current, at 40 °C (A) Long time [LT] Short time [STD] Electronic	Rated current, at 40 °C (A) Long time [LT] Instantaneous [INST] Rated current, at 40 °C (A) Long time [LT] Short time [STD] Electronic
Installation and dimensions	Front connection Rear connection Plug-in	Front connection Rear connection Plug-in	Front connection Rear connection Plug-in
Dimensions (mm)	a (3/4P) b c	a (3/4P) b c	a (3/4P) b c

※ 1) 4 pole arrangement : Basic specification is R-S-T-N
2) Only applicable if Ir < 0.63 ("1" is applicable if Ir ≥ 0.63)

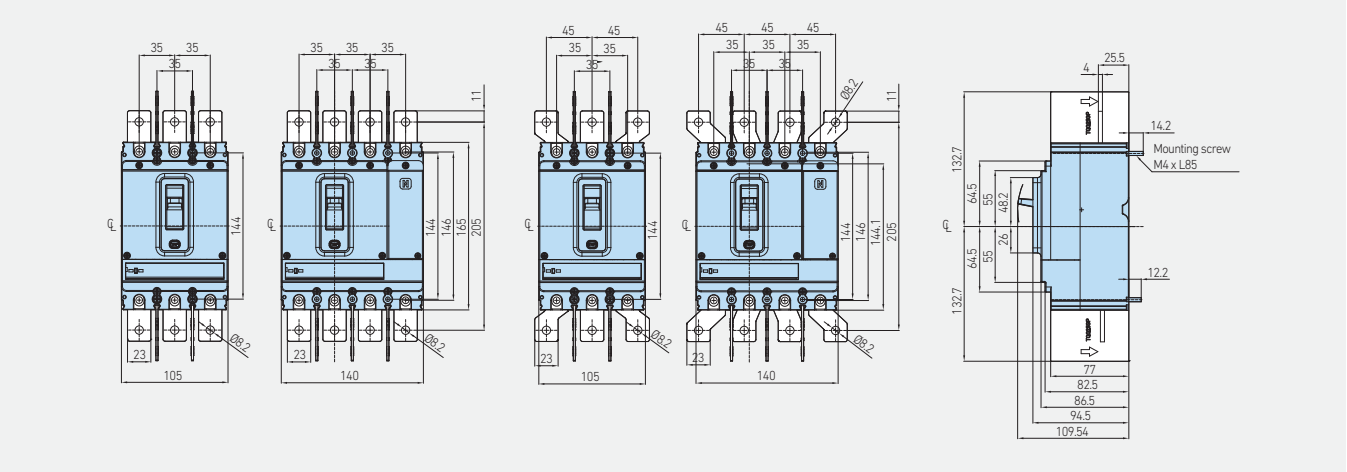
Accessory	
Internal	Auxiliary switch (AUX), Alarm switch (ALT), Shunt trip (SHT), Undervoltage trip (UVT)
External	Rotary handle - Front contact (TFG)/Extended (TFH), Motor operator (MOT), Mechanical interlock (MIF), Locking device (PLD), Cage terminal block (CTB), Insulation terminal cover (TCF), Insulation barrier (TQO) ※ Plug-in TDM is only for 3 pole and can be selected by LINE/LODE(P3), LINE Only(P3). Terminal extensions (TBB) excludes HGP50D, 125D and 160D types.

HGP100	HGP160	HGP250	HGP400	HGP630	HGP800
100	160	250	400	630	800
3, 4 ¹⁾	3, 4 ¹⁾	3, 4 ¹⁾	3, 4 ¹⁾	3, 4 ¹⁾	3, 4 ¹⁾
F ⁴⁾ S H X	F ⁴⁾ S H X	F ⁴⁾ S H X	F ⁴⁾ S H X	F ⁴⁾ S H X	F ⁴⁾ S H X
Rated short-circuit breaking capacity [Icu] (kA rms)	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V DC 250 V ²⁾	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V DC 250 V ²⁾	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V DC 250 V ²⁾	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V DC 250 V ²⁾	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V DC 250 V ²⁾
Service breaking capacity [Ics = % Icu] (kA rms)	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V
Rated short-circuit making capacity [Icu] (kA lcm)	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V	AC 600/660 V AC 480/500 V AC 440/460 V AC 380/415 V AC 220/240 V
Endurance (Durability)	Mechanical Electrical	Mechanical Electrical	Mechanical Electrical	Mechanical Electrical	Mechanical Electrical
Trip device	●	●	●	●	●
Thermal magnetic	Rated current, at 40 °C (A) Long time [LT] Instantaneous [INST] Rated current, at 40 °C (A) Long time [LT] Short time [STD] Electronic	Rated current, at 40 °C (A) Long time [LT] Instantaneous [INST] Rated current, at 40 °C (A) Long time [LT] Short time [STD] Electronic	Rated current, at 40 °C (A) Long time [LT] Instantaneous [INST] Rated current, at 40 °C (A) Long time [LT] Short time [STD] Electronic	Rated current, at 40 °C (A) Long time [LT] Instantaneous [INST] Rated current, at 40 °C (A) Long time [LT] Short time [STD] Electronic	Rated current, at 40 °C (A) Long time [LT] Instantaneous [INST] Rated current, at 40 °C (A) Long time [LT] Short time [STD] Electronic
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Dimensions (mm)	a (3/4P) b c	a (3/4P) b c	a (3/4P) b c	a (3/4P) b c	a (3/4P) b c

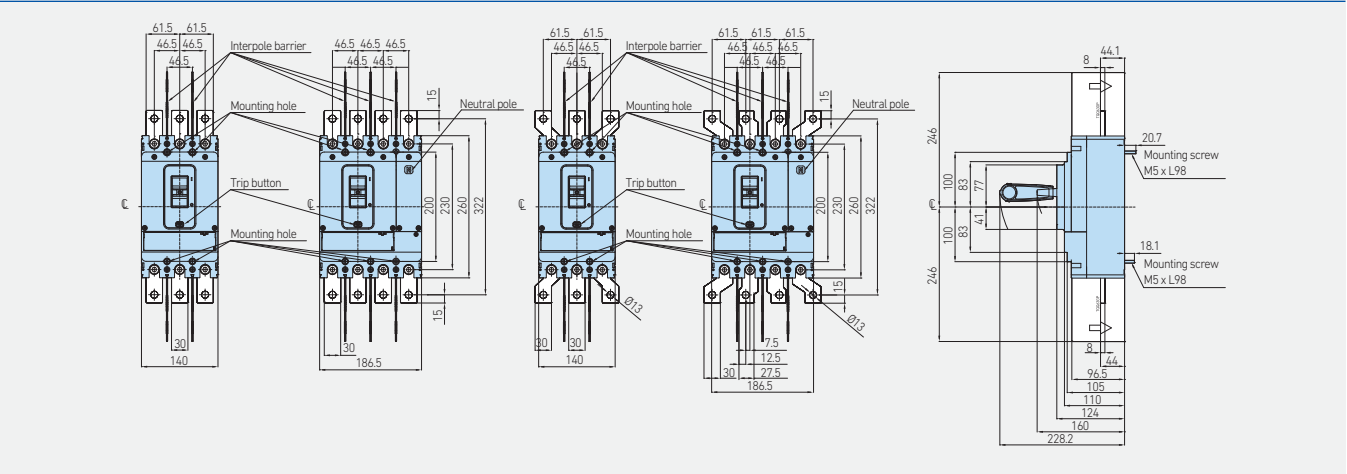
※ 3) DC is only applicable to thermal magnetic
4) *Only applicable to oversea products/ship products

Dimensions for Electronic MCCB

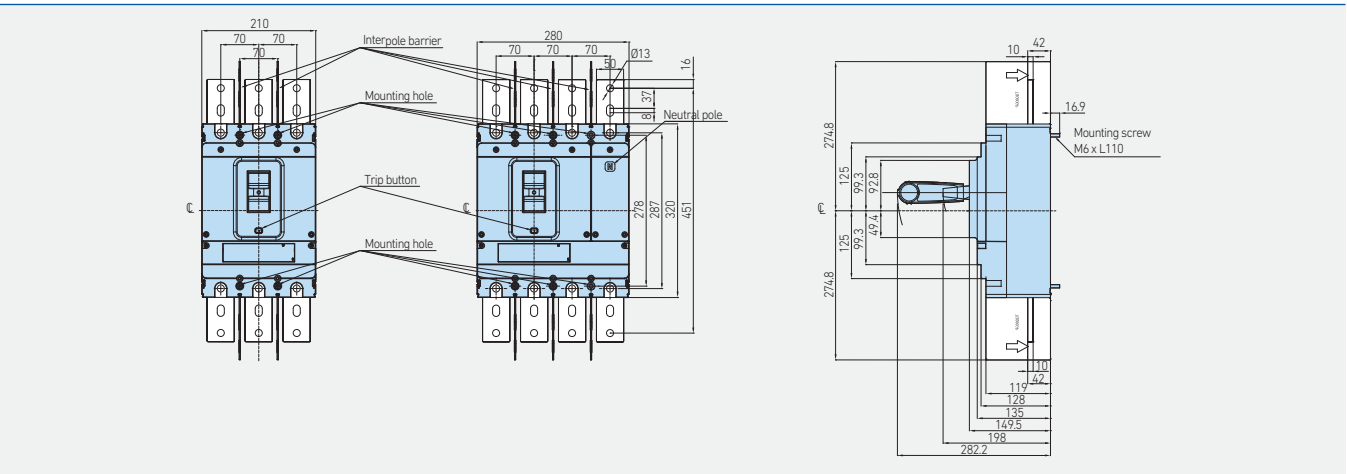
HGP250



HGP630



HGP800



※ Dimensions for mounting body / Terminal connections bus / Panel cover cutting : Refer to HGP catalog on homepage