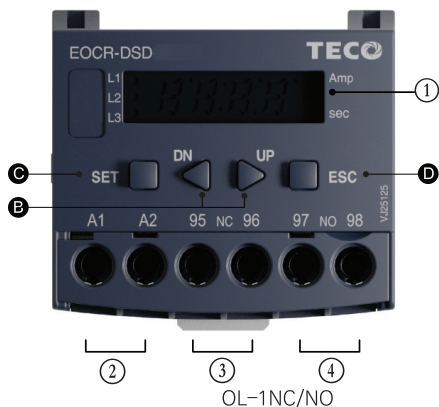


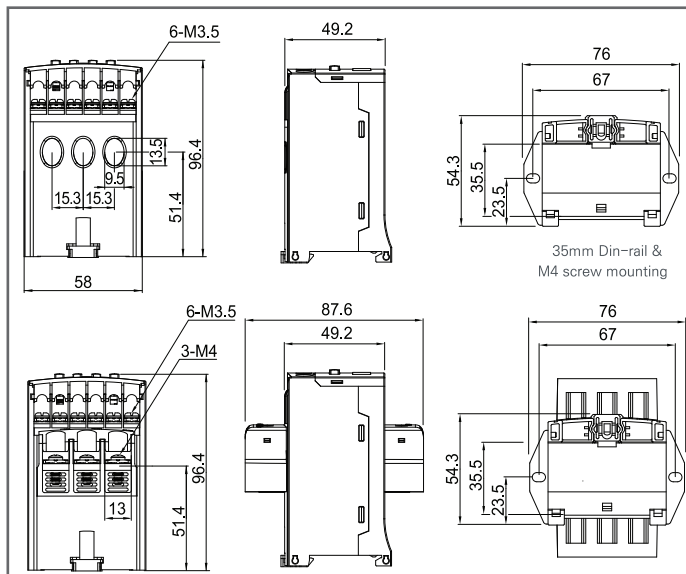
! DANGER

This product has been evaluated for conformity for use in a business environment, and may cause radio interference when used in a home environment.

■ Appearance



■ Dimensions



B	Navigation		Press UP or DN to find a menu item. Refer to the User's guide for detailed menu description.
C	SET		In the menu mode, pressing SET makes blinking. A parameter and allows modifying paramete.
B	Adjust		Press "UP" or "DN" key to set the parameter while blinking.
C	SET		Press "SET" again then blinking is stopped and it will be stored the parameter in the non-volatile memorywhile blinking.
D	ESC		To return normal display mode, either press "ESC" or wait for 50sec of the time elapsed from set menu.

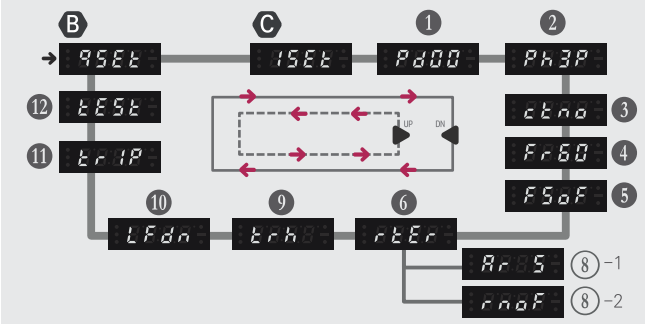
[illegible]

Mode	Description	Range	Default
	Firmware version and product code	Alternate between firmware version and reference code.	▪ InFo
	L1, L2, L3 phase current, ground fault current, residual current calibration modes.	The calibration range is 70–130% of the indicated current and only the phase with the LED indicating the phase is ON is calibrated.	70–130 cAL
	Reset fault history	When pressing the SET button, the menu flashes and is reset by pressing the SET button again.	▪ FcLr
	Reset cumulative total operation time	(Pressing the ESC button when flashing will not reset)	▪ tcLr
	Reset to factory defaults	Select y to reset to factory default.	y, n n

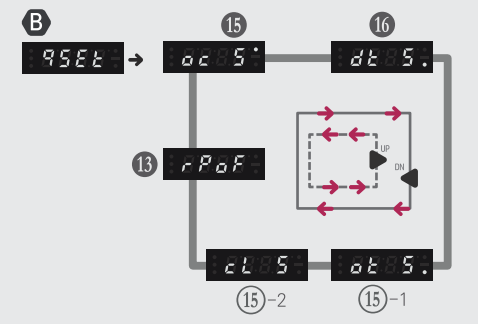
■ Display Cause of Operation

Mode	Description
Overcurrent	• 0235 • Current above the overcurrent (oc) setpoint (3.5 A) on L1 is sustained for longer than the operating time (ot).
Undercurrent	• 0415 • Current below the undercurrent (uc) setpoint (1.5 A) on L3 sustained for longer than the operating time (ut).
Current Open-Phase	• PL - r • Open-phase detected on L1, and sustained longer than the phase relay time (PLt).
Current Unbalance	• 0610 • Operates when the current imbalance on Line 1 (Ub) exceeds the set value for longer than the set operating time (Ubt).
Stall at starting (Stall)	• 5245 • During operation, a current above the stalling (Sc) setting (45 A) on L1 sustained for longer than the operation delay time (dt).
Stall at running (Jam)	• 1235 • During operation, a current above the jamming (Ja) setting (35 A) on L1 is sustained for longer than the operating time (Jt).
Leakage/ ground fault current	• E201 • The current above the ground fault (Ec) setpoint (0.15 A) has been sustained for longer than the operating time (Et).
Residual Current	• r210 • Current above the residual current (rc) setpoint (1.0 A) has been operating for longer than the operating time (Et).
Ground fault current	• E2F1 • Triggers when a ground fault current that exceeds the maximum set value is detected. When this occurs, please confirm that the product is working properly before resuming its use.
Voltage Negative Sequence	• rP • Detected voltage negative sequence
Auto Reset Limit	• r n FL • Autoreverted more than the set number of times in 30 minutes.
Internal failures	• 16Er • Activated due to an internal failure.
Test completed	• End • Activated after the test was completed.

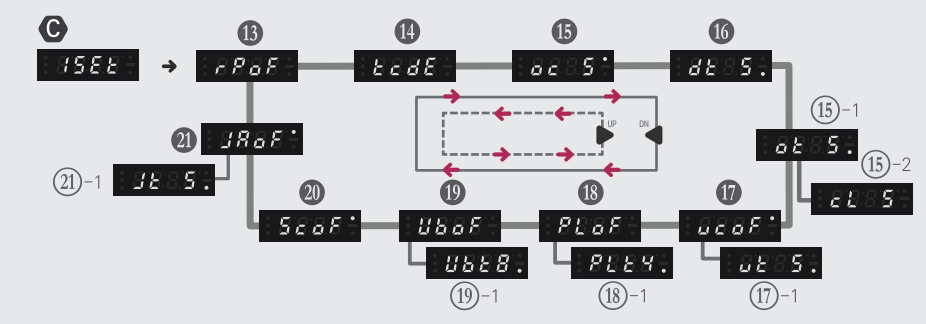
A. Main Menu Settings



B. Quick Menu Settings



C. Current-related Settings



■ Setup Order

NO Model	MODE	Description	Range	Default	Display Condition
B	95Et	Quick Menu Setup Mode			
C	15Et	Current Protection Setup Mode			
1	Pd00	Set password to restrict non-authorized operators from changing any settings. "00" means no password.	00-99	00	
2	Ph3P	Three-phase operation or single-phase operation selection mode	1P, 3P	3P	Settings cannot be changed while the load is running.
3	ctno	External CT Ratio Setup Mode The CT penetration count is 2t or 5t, and the external CT's primary current setting is 50 to 800 A. However, the external CT's secondary current is fixed at 5 A.	no, 2t, 5t, 50-800	no	Only the current settings can be viewed.
4	Fr60	Mode to select the frequency of the grid voltage	50, 60	60	If a setting attempt is made, "AonY" will be displayed.
5	FSoF	When the Fail Safe function is enabled and control power is applied, the OL(overload) output contacts (97-98) a switch to b,(95-96) b switch to a. After setting, the product must be turned off and then on again.	oF, on	oF	
6	rEtEr	Reset Selection Mode When EOCR is activated, you can choose one of three reset methods. Electric Reset is also known as remote reset because it is possible to reset remotely by removing the control power to the EOCR.			
7	rEtHr	Manual Reset means that the only way to reset is by pressing the Reset button on the main unit and the sPDM ESC button. Use when you need to determine the cause of the action and reset it.	Er, Hr, Ar	Er	
8	rEtAr	Auto Reset is a feature that allows the EOCR to automatically reset after a set auto reset time (A-r) after an operation. Only overcurrent, undercurrent, and unbalance rate protection are automatically restored.			
(8)-1	Ar 5	Mode to set automatic reset time This mode can only be set when the fail reset setting is selected to Auto-Reset (r-tA-r).	0.5-99	5	(8) rEtAr
(8)-2	rnoF	Set a restart limit Fail reset setpoints can be set when rt:A-r is selected. When the Fail Reset setting is selected as Auto-Reset (rt:A-r), a restart limit can be set, which sets the number of times a restart can occur within 30 minutes and is used to prevent excessive heat buildup. Fail reset setpoints can be set when rt:A-r is selected.	oF, 1-5	oF	(8) rEtAr (14) tc dE
9	tErh	Display cumulative total operation time When the EOCR is installed and flows above the minimum sensing current, the operating hours are accumulated and total up to 99,999 hours. The minimum display time is one hour. The cumulative total operation time cannot be cleared or set. Press the SET button to see the cumulative total operation time with "-trh ↔ 0.0"	0-99999	0	
		ex) 203 → This means the load has been operating for 20 hours and 18 minutes (0.3 × 6).			
10	LFdn	Selecting "y" for low-frequency operation, such as inverter operation, can improve the accuracy of current measurement and protection behavior.	y, n	n	

11	tEr IP	Mode for determining the cause of fault information If this action is performed five or more times, the oldest memory will be automatically deleted and the most recent action record will be saved.	5 records		
12	tESt	Output Relay Test Only available when the motor is stopped. When this mode is selected, tESt will blink and count down the set O-Time for 3 seconds before displaying End and the output will trip. Pressing ESC will return to the current display and this mode will not be displayed when the motor is running to prevent tripping.			
		3sec → ot 5 → 10sec → End			
C	15Et	Current Protection Setup Mode			
13	rPoF	Mode to select whether to use negative sequence protection. Applies only when the motor is started.	on, oF	oF	
14	tc dE	Mode to select how overload is detected When tc:no is selected, the overcurrent protection function is disabled. When tc:dE is selected, definite-time protection characteristics are applied. When tc:ln is selected, reverse-time protection characteristics are applied. Settings cannot be changed while the load is running. Only the current settings can be viewed. If a setting attempt is made, "AonY" will be displayed.	no, dE, ln	dE	
15	oc 5	Modes for setting overcurrent values 0.5-100A for definite time selection, reverse time/heat accumulation	0.5-60 (tc:ln = Max:30)	5	
16	dt 5	Mode to set a delay time to prevent tripping by the motor's starting current During this startup delay, behaviors such as overcurrent, undercurrent, stall, and jam functions are suspended.	0, 1-99	5	
(15)-1	ot 5	Mode to set the overcurrent action time Overload immediately after the set operating time (ot) if the current above the overcurrent (oc) setpoint is sustained.	0.2-99	5	(14) tc dE
(15)-2	cL 5	Mode to set the operation characteristic curve for reverse time or thermal storage reverse time The overload detection method can be set by selecting tc:ln or tc:th.	1-30	5	(14) tc ln
17	uc oF	Modes for setting undercurrent values It will not be set above overcurrent (oc:xx).	0.5-59	oF	
(17)-1	ut 5	Mode to set the undercurrent action time Underload behavior immediately after the set action time (UT) if current below the Undercurrent (UC) set value is sustained. Not set when undercurrent uc:oF is selected.	0.2-99	5	(17) uc 0.5
18	PL oF	Mode to set whether to use current fault protection	on, oF	oF	
(18)-1	PLt 4	Mode to set the current open-phase operation time The open-phase protection cannot be set when PL:oF is selected.	1-9	4	(18) PL on
19	Ub oF	Mode to set current unbalance as a percentage (%) Unbalance rate = (max phase current - min phase current)/max phase current x 100%	oF, 10-50	oF	
(19)-1	Ub t 8	Mode to set the current unbalance operation time This setting cannot be configured if the imbalance threshold is set to cU:oF.	1-9	8	(19) Ub 15
20	Sc oF	Stalling is set as a multiple of the overcurrent set value (oc:xx) and operates within 0.5 seconds after the startup delay time (D-Time) ends. If D-Time is 0, this mode does not appear. [Up to 220A, excluding external CT]	oF, 2-8	oF	(16) dt 5
21	JA oF	Jamming is set as a multiple of the overcurrent set value (oc:xx) and protects when a sudden increase in load occurs during operation. [Up to 220A, excluding external CT]	oF, 1.5-8	oF	
(21)-1	Jt 5	Mode to set the duration of the jamming The set Jam action time only applies while the motor is running. Jam current setpoint cannot be set when JA:oF is selected.	0.2-10	5	(21) JA 4