



The eBike Display
User Manual

KD716

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Product model

E-bike Intelligent LCD display

Model: KD716/KD716-V, both models have the same functionality and software. In this manual, we will only use one interface.

Specifications

- 36V/48V Power Supply
- Rated working current: 25mA
- The maximum working current: 30mA
- Off-state leakage current: <math><1\mu\text{A}</math>
- Operating temperature: $-20^{\circ}\text{C} \sim 60^{\circ}\text{C}$
- Storage temperature: $-30^{\circ}\text{C} \sim 70^{\circ}\text{C}$

Appearance and size

- ◆Display appearance and dimensional drawing (unit: mm)



Function summary and distribution

◆Function summary

KD716 display has many functions to meet riders' cycling needs. The indication elements are as follows:

- Intelligent Battery SOC
- Motor power indicator
- Assist level indicator and adjustments
- Speed indication (incl. current speed, Max. speed and Avg. speed)
- ODO and Trip
- Push-assistance function
- Trip time
- Backlight on/off
- Error code indication
- USB connection(**optional**)
- Various parameter settings (e.g. *wheel diameter, speed limit, battery level bar settings, assist level settings, power-on password settings, controller over-current cut settings etc.*)
- Recover default settings

◆ **Function layout**



KD716 Function distribution interface

General operations:

◆ **Switching the E-bike System On/Off**

To switch on the E-bike system and provide the power supply to the controller, hold the On/Off button on the remote for 1 second.

To switch off E-bike system, hold the On/Off button for 2s. The E-bike system no longer uses the battery power.

When E-bike system is switched off, the leakage current is less than 5 μ A.

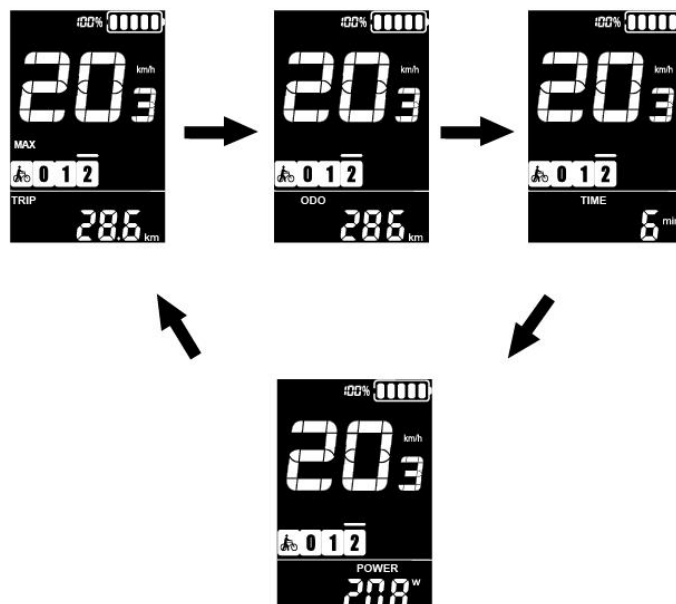
■ **When the E-bike is parked for approx. 10 minutes, the E-bike system switches off automatically.**

◆ **Display Interface**

After switching on the E-bike system, the display shows current Speed and ODO by default.


Press remote “i” button to switch between indication functions below:

Trip Distance (Km)→ ODO (Km)→ Trip Time (Min.)→ Power (Watts). Finally, it cycles back trip distance again.



Display indication cycle interface

◆ Switching Push-assist Mode On/Off

To activate the push-assistance function, press and hold the “-” button. After 2 seconds, E-bike is activated to go at a uniform speed of 6 Km/h while the screen displays  .



The push-assistance function is switched off as soon as you release the “-” button. The E-bike system stops the power output immediately.



Push-assistance mode

■ Push-assistance function may only be used when pushing the E-bike. Be aware of danger of injury when bike wheels do not have ground contact while using the push-assistance function.

◆Switching Lighting On/Off

Hold + or  for 2 seconds, display backlight turns on and in the meantime, displays sends command to controller to turn on the headlight. When there is lack of ambient light or the rider is riding the bike at night, the LCD backlight may be turned on. Again, hold + or  for 2 seconds to turn off the LCD backlight and display sends command to controller to turn off the headlight.



Backlight on Interface

◆Assist Level Selection

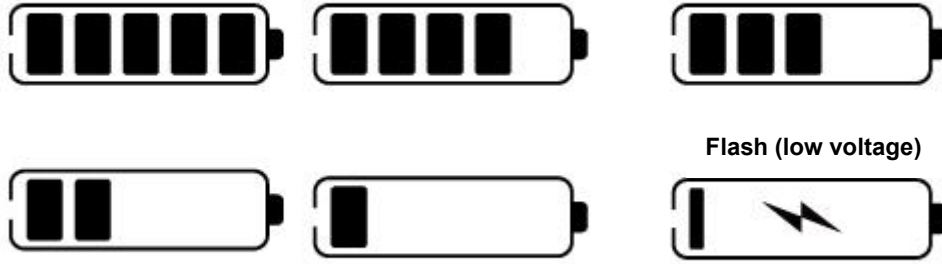
Press "+" or "-" button to switch between the E-bike system assist levels and change the motor output power. The default assist level mode is 0-5(level "0" to level "5"). The output power is zero on Level "0". Level "1" is the minimum output power. Level "5" is the maximum output power. When you reach "5", press the "+" button again, the interface still shows "5", and blinks at "5" to indicate the power maximum. When you are in level "0", press the "-" button again, the interface still shows "0" and blinks at "0" to indicate the power minimum. The default value is level "1".



Assist level interface

◆Battery Power Indicator

The five battery bars represent the capacity of the battery. Five bars are bright when the battery is in full voltage. When the battery is in low voltage, battery frame will flash at the frequency of 1HZ to give a notice that the battery needs to be recharged immediately.



Battery power indicator interface

◆Motor Power Indicator

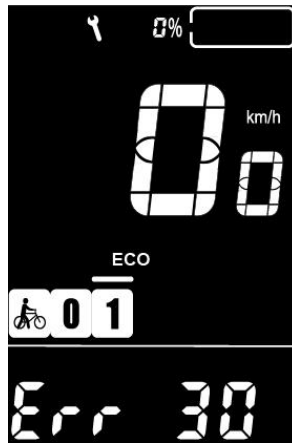
The power of the motor can be read via interface below by digital display.



Motor power interface

◆Error code indication

The components of the E-bike system are continuously and automatically monitored. When an error is detected, the respective error code is indicated in text indication area. Refer to detailed definition of the error codes in **Attached list 1**.



Error code interface

■Have the display inspected and repaired when an error code appears. Or else, you will not be able to ride the bike normally. Please always refer to an authorized bicycle dealer.

General Settings

Hold “i” button to switch on the display. In the case of a parked e-bike with its display activated, hold both ‘+’ and ‘-’ simultaneously for 2 seconds to enter General Settings.

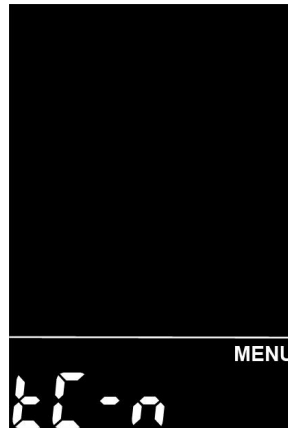
■All the Settings are operated in the case of a parked E-bike.

◆Trip Distance Clearance

TC represents trip distance clearance setting.

To clear trip distance, press “+” button or “-” button to select the Yes or No. Yes represents clearing a single ride distance. No represents not clearing a single ride distance.

To store a changed setting, press the “i” button and then access Backlight Settings.



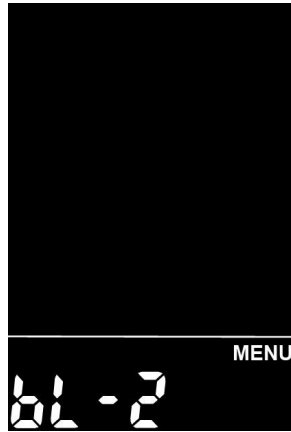
Trip distance clearance interface

◆ **Backlight settings:**

bL represents backlight settings. Level “1” is the lowest brightness. Level “2” is the medium brightness. Level “3” is the highest brightness. The default value is “1”.

To change the backlight brightness, press the +/- button to increase or decrease until the desired brightness level is displayed.

Press **i** button to store a changed setting and then access unit toggling settings.



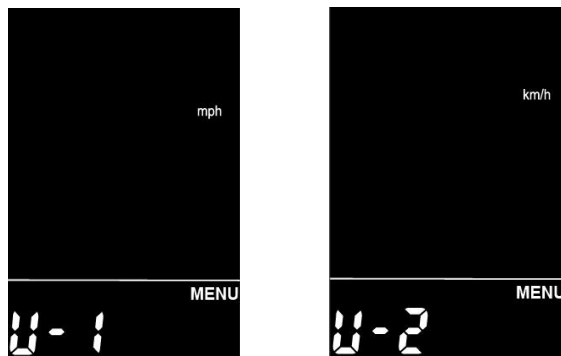
Backlight settings interface

◆ **Toggle the unit KM/Mile**

U represents unit settings, “1” is mile and “2” is kilometer. The default value is “2”.

To toggle the unit, press the +/- button to increase or decrease until the desired unit is displayed.

Press the **i** button to store a changed setting and then access trip distance clearance setting again or hold the **i** button for 2s and exit **General Settings**.



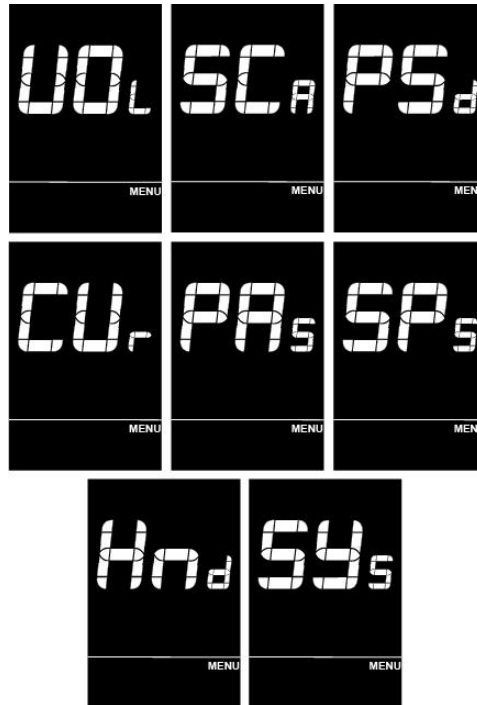
Miles and KM toggling interface.

Personalized Parameter Settings

Personalized Parameter Settings can meet a variety of requirements. 8 settings are Battery Power Bar Settings, Power Assist Level Settings, Over-current Cut Settings, Power Assist Sensor Settings, Speed Sensor Settings, Throttle Function Settings, System Settings and Power-on Password Settings.

Hold **+** and **-** button simultaneously for 2 seconds to enter **General Settings** and Hold **+** and **-** button simultaneously for another 2 seconds to enter personalized parameter settings interface.

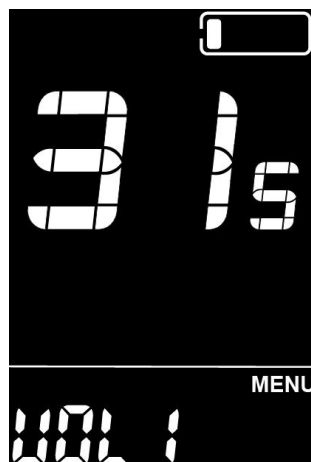
Press **+** or **-** button to choose the desired personalized parameter setting item, then press **i** button to enter the setting interface.



Personalized setting item cycle interface

◆ Battery Bar Settings

VOL represents voltage settings. Each bar of the battery pack symbol represents a voltage value. Each of the 5 values is to be entered one by one. For example, VOL 1 is the first battery bar and its default value is 31.5V. Press **+** or **-** to increase or decrease the voltage value. Press **i** button to store a changed setting and access the second battery bar setting. Likewise you can set the values in the same manner for other bars. After desired values for 5 bars are entered completely, hold **i** button for 2 s to confirm and return to previous menu.



Battery bar settings interface

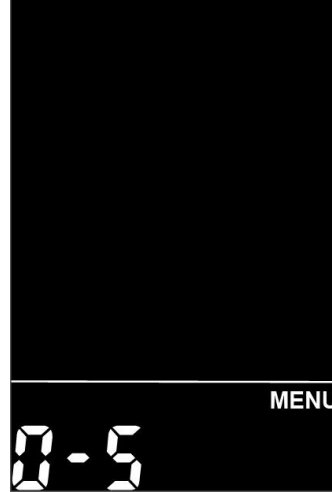
◆ Assist Level Settings

Assist level mode options

SCA represents assist level settings. In assist level settings, there are 8 assist level modes for your options: 0-3, 1-3, 0-5, 1-5, 0-7, 1-7, 0-9, 1-9. The default mode is 0-5.

To change assist level mode, press the “+” or the “-” button to choose the desired mode.

To store a changed setting, press **i** button to confirm and access the assist level ratio setting automatically



Assist level mode settings

Assist level ratio settings

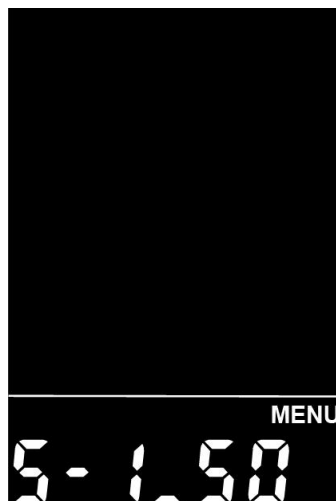
The speed of each assist level can be adjusted to meet different riders' needs by setting the ratios. For example, the default ratio is 50% for level “1” and the ratio range is 45%-55% for level “1”.

To change the ratio of a certain power assist level, press the **+/-** button to choose the desired percentage, and then press the “**i**” button to confirm.

To store a changed ratio, press the “**i**” button to confirm and move to the next level ratio setting.

After ratios of all levels were input, hold the “**i**” button for 2s to confirm and return to previous menu.

*Please refer to assist level ratio default values in **Attached list 2**.



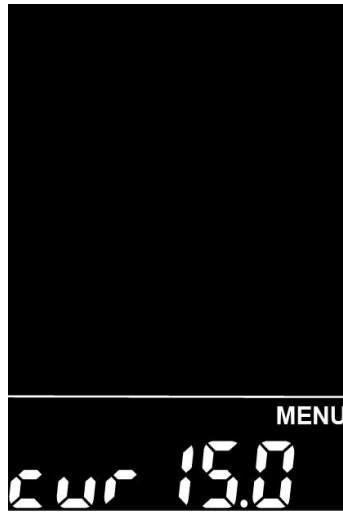
Assist level ratio settings interface

◆ Controller Over-Current Cut Settings (optional)

CUR represents controller over-current cut settings. The current value ranges from 7.0A to 22.0A. The default value is 15A.

To change a current value, Press the +/- button to increase or decrease to choose the desired value.

To store a changed setting, hold i button for 2s to confirm and return to previous menu.



Current settings interface

◆ Power assist sensor settings (optional)

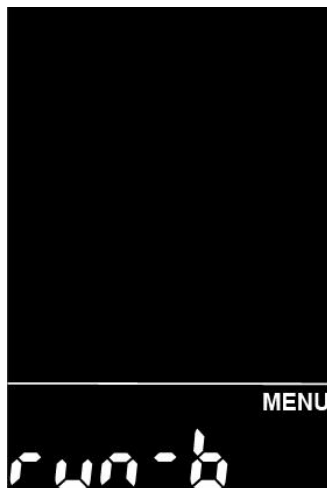
PAS represents power assist sensor settings.

PAS direction settings

“run-F” means “go forward” while “run-b” means “go backward”. The default value is “run-F”.

Press the +/- button to select F or b to change the direction of Power Assist Sensor.

To store a changed setting, press i button to confirm and access PAS sensitivity settings



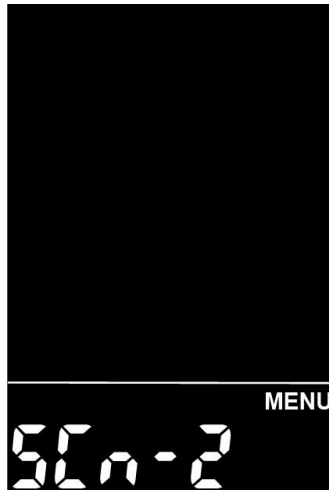
PAS direction settings

PAS Sensitivity Settings

SCN represents PAS sensitivity settings. The sensitivity value ranges from “2” to “9”. “2” is the strongest, “9” is the weakest. The default value is “2”.

To change the PAS sensitivity, press the +/- button to choose the desired sensitivity value.

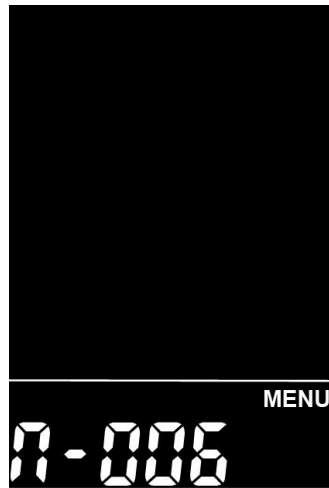
To store a changed setting, press i button to confirm and access magnet disk settings.



PAS sensitivity settings

PAS Magnet Quantity Settings

n represents the quantity of magnets in PAS. The default value is 6.
To change the number of magnets in PAS, press the +/- button to choose the desired quantity
To store a changed setting, hold **i** button for 2s to confirm and return to previous menu.

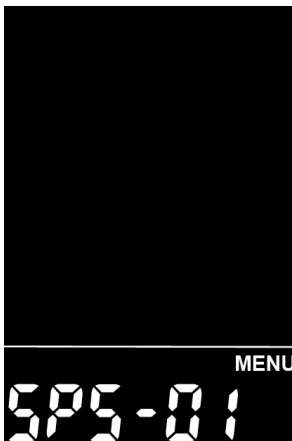


PAS magnet quantity settings

◆Speed sensor settings (optional)

SPS represents speed sensor settings.

Press the +/- button to choose the quantity of spoke magnets (the range is from 1 to 15). The default value is 1
To store a changed setting, hold **i** button for 2s to confirm and return to previous menu.



Speed sensor magnet settings

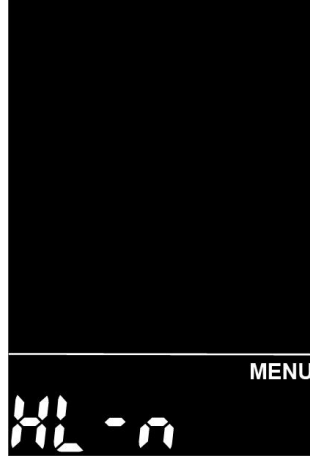
◆Throttle function settings (optional)

Throttle push-assistance enable/disable

HL represents throttle push-assistance function settings. HL-N means throttle push-assistance function is disabled. HL-y means throttle push-assistance function is enabled. The default value is N.

To enable throttle push-assistance function, select Y and hold **i** button for 2s to confirm and return to previous menu.

To disable throttle push-assistance function, select N and access Throttle Level Enable/Disable Setting



Throttle push-assistance enable/disable

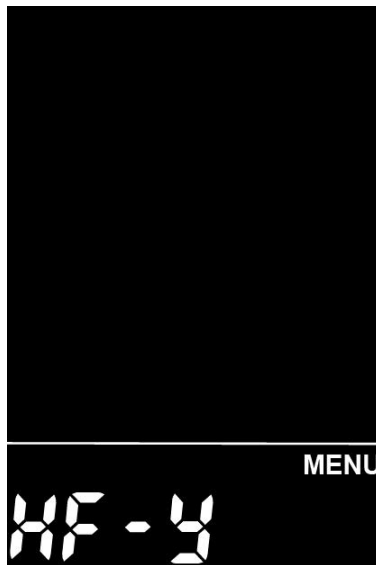
Throttle level enable/disable

HF-y means throttle speed is limited by current assist level while **HF-n** means throttle speed is not limited by current assist level. The default value is **n**.

If you choose **y**, the maximum speed can only be the highest speed powered by current assist level when you twist the throttle.

If you choose **n**, the maximum speed is not limited by current assist level and you can override whatever level you are in and reach rated maximum speed when you twist the throttle.

Press **+/-** to set Y or N and press **i** button to confirm and return to throttle push assistance enable/disable setting interface or hold down the 'i' button for 2s to return to previous menu interface.



Throttle level enable/disable

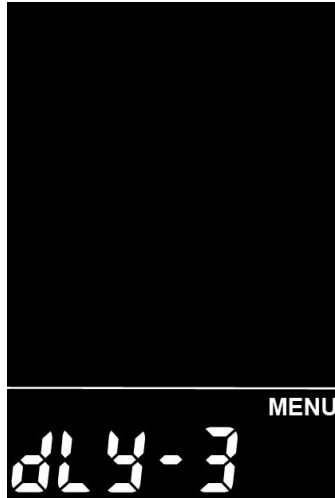
◆System settings (optional)

Delay time settings for battery power

DLY represents battery power delay time settings. The default value is 3s.

Press the +/- button to choose delay time 3s, 6s, 12s to change the settings.

Press **i** button to confirm and then access the max speed limit settings.



Delay time settings for battery power

◆Power-on password settings

PSd represents power-on password settings. Power-on password is a 4-digit code. The default password is "1212".

Press **i** button to enter the interface where "P2, 0000" is shown on the screen. Please input the current password or default password '1212'

Press +/- button to increase or decrease the numbers and press **i** button to confirm digits one by one until the correct 4-digit password is completed. Press **i** button to access power-on password Enable/Disable Settings.

Otherwise stay still in password input state.



Power-on password input interface

◆Exit the settings

In settings interface,

Press **i** button (less than 2 s) is to confirm the input and save current settings.

Hold the **i** button (more than 2 s) is to store the settings and exit the current setting.

Hold the - button (more than 2 s) is to cancel the operations but not to store settings data and exit the settings.

■If there is no operations in one minute, the display will exit settings interface automatically.

Quality assurance and warranty scope:

I. Warranty:

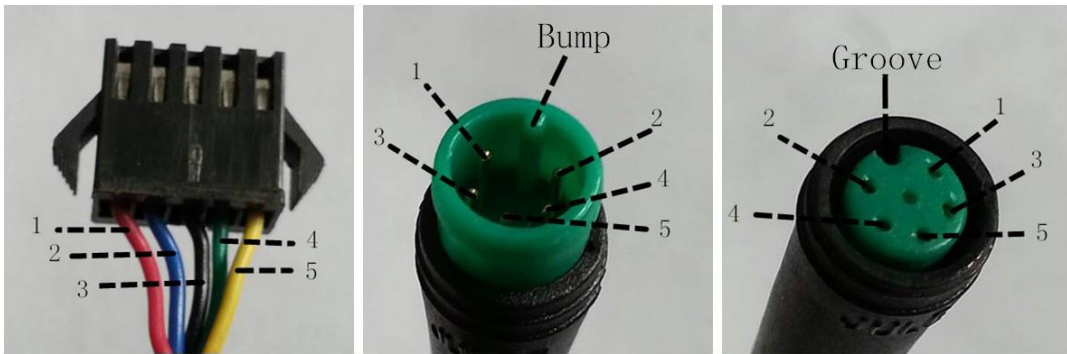
- 1) The warranty will be valid only for displays in normal conditions.
- 2) The warranty is valid for 24 months after the shipment or delivery to the customer.

II. The following cases do not belong to warranty scope:

- 1) The display is demolished.
- 2) The damage of the display is caused by wrong installation or operation.
- 3) The shell of the display is broken after the display leaves the factory.
- 4) The cable of the display is broken.
- 5) Beyond warranty period.
- 6) The fault or damage of the display is caused by the force majeure (e.g., fire, earthquake, etc.).

Wire connection layout

Connector wire sequence



Connector to controller

display end

connection wire end to display end

Wire sequence table

Wire sequence	Color	Function
1	Red(VCC)	+
2	Blue(K)	Lock
3	Black(GND)	-
4	Green(RX)	RX
5	Yellow(TX)	TX

■Some displays have wire connection with water-proof connectors; users cannot see the color of lead wires in the harness.

Warnings:

- 1. Use the display with caution. Don't attempt to release or link the connector when battery is on power.
- 2. Try to avoid hitting the display.
- 3. Don't modify system parameters to avoid parameter disorder.
- 4. Have the display repaired when error code appears.

■ This manual instruction is a universal version for **DISPLAY KD716/KD716-V**. Some versions of this display may be different from specification to specification as to the software. Please always refer to an actual version.

Attached list 1: Error code definition

Error Code	Definition
21	Current Abnormality
22	Throttle Abnormality
23	Motor Phase Abnormality
24	Motor Hall Signal Abnormality
25	Brake Abnormality
30	Communication Abnormality

Attached list 2: Assist level ratio defaults

Level PAS Level mode	1	2	3	4	5	6	7	8	9
0-3/1-3	50%	74%	92%	—	—	—	—	—	—
0-5/ 1-5	50%	61%	73%	85%	96%	—	—	—	—
0-7/ 1-7	40%	50%	60%	70%	80%	90%	96%	—	—
0-9/ 1-9	25%	34%	43%	52%	61%	70%	79%	88%	96%