

## **Chardon Polymer Insulated Loadbreak Switch**



## APPLICATION & FEATURES

The Chardon Load Break Switch (LBS) allows for safe making and breaking of load currents within a powered system. With manual and remote operation capabilities, the LBS provides strategic disconnection for maintenance or alteration of the network's configuration. They are especially useful to visibly isolate sections of a network without the need to power off the entire system, ensuring flexibility and uninterrupted service.

### KEY FEATURES:

- / Solid insulation - environmentally friendly product
- / Spring Throttle Mechanism & Vacuum Interrupter
- / Maintenance Free during its entire lifetime
- / Compact Design
- / Six voltage sensors (capacitive) & Three Current Transformers
- / USB port plus RS232 ports for communication and SCADA system
- / Sectionalizing Option

## RATINGS

|   |        |                            |
|---|--------|----------------------------|
| Model                                       | CKEL-A |                            |
| Maximum System Voltage                      | kV     | 27                         |
| Rated Current                               | A      | 630                        |
| Rated Frequency                             | Hz     | 50/60                      |
| Mechanical Operation                        | C-O    | 5,000                      |
| Breaking Capacity                           |        |                            |
| Short Time Withstand Current (1sec)         | kA     | 12.5                       |
| Making Current (peak)                       | kA     | 32.5                       |
| Cable Charging Current                      | A      | 25                         |
| Line Charging Current                       | A      | 1.5                        |
| Impulse Basic Insulation Level (1.2 x 50us) |        |                            |
| Phase to Earth                              | kV BIL | 150                        |
| Across Interrupter                          | kV BIL | 150                        |
| Power Frequency Insulation Level            |        |                            |
| Phase to Earth                              | kV     | 60                         |
| Across Interrupter                          | kV     | 60                         |
| Operation Control Cabinet                   | V      | AC 220V or AC 120 (Option) |
| Model : CKEL                                | V      | DC 24                      |
| Ambient Temperature                         | °C     | -30 ~ +70                  |

Revision Date: 01.08.2025

## SOLID INSULATED LOAD BREAK SWITCH

### Insulation Material

- / Hydrophobic cycloaliphatic Epoxy resin.
- / Light weight & compact design for easy handling and installation.
- / Improved performance in heavily polluted areas.
- / Increased weather durability and improved aging.

### Integrated sensors

- / 3 Imbedded Current Transformers.
- / 6 Imbedded Capacitive Voltage Dividers.

### Mechanism

- / Spring Toggled Mechanism.
- / Simple design with quick Close & Open actions.

### Vacuum Interrupter

- / High interrupting capacity.
- / Very compact design.

## FTU-P200T

### FUNCTIONS

- / Fault Current Indication
- / Negative Phase Sequence (NPS) Detection
- / Direction Detection
- / 2nd Harmonic Detection
- / Open Line Detection (Loss of Phase)
- / Phase Sync Check
- / Under/Over Voltage
- / Under/Over Frequency
- / Sectionalizing Function
- / Analog Alarm
- / Multiple Settings Groups

### MEASUREMENT

- / Voltage, current, active power, reactive power, power factor, frequency, energy, harmonic, demand current and power.

### COMMUNICATION

- / Telecommunication Port: RS232C, RS232/RS485, Ethernet(TCP/IP) options

### RECORDING

- / Event Recording: I/O events, Function, System, Fault, PQM, Demand I, P, Q, Max. I,P,Q Event
- / Waveform event recording



# CONTROL CABINET

## MEASUREMENT

- / Voltage, Current, Active power, Reactive power, Power factor, Frequency, Energy, Harmonic, Demand Current and Power.

## COMMUNICATION PORT

- / RS232C, RS485, Ethernet/Fiber Optic, GSM(SMS)
- / -USB port or RS232 port for maintenance.

## RECORDING

- / Event recording.
  - I/O(1023 events), Function(1023), System(255), Fault(255), PQM(255), Demand I, P, Q Events(1023), Max. I, P, Q Event(1023).
- / Waveform event recording.
  - 128 samples, 20 cycles (64 samples/40 cycles, 32 samples/80cycles, 16 samples/160cycles)
- / COMTRADE file format rule

## COUNTER

- / FTU restarting time.
- / Switch trip, Fault detection, PQM, THD.

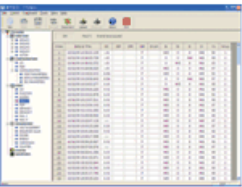
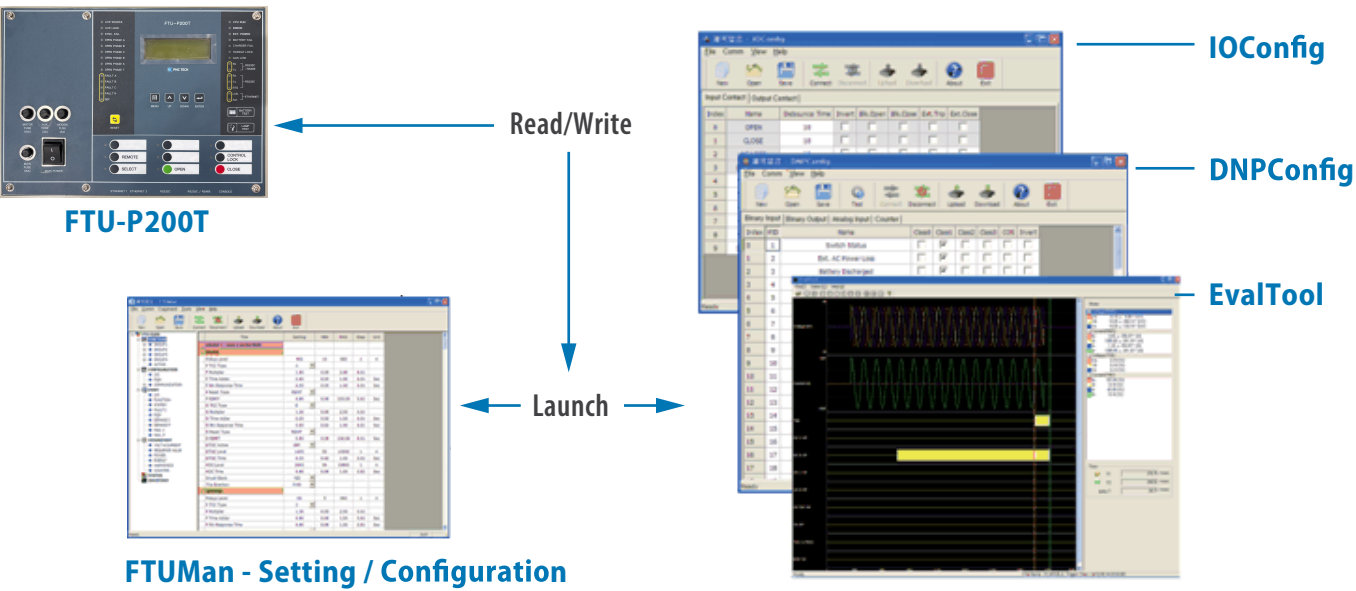


FTU-P200T

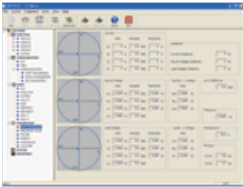


## SOFTWARE FTUMan

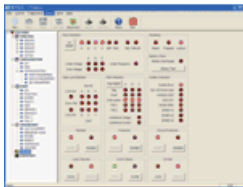
- / New interface presentation for configuration & settings.
- / Event & Waveform load.
- / Measurement & Status display.
- / Waveform File upload and convert.
- / SCADA monitors protocol data frame between devices.



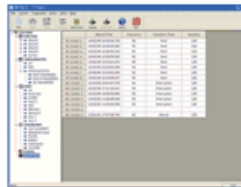
Event



Measurements

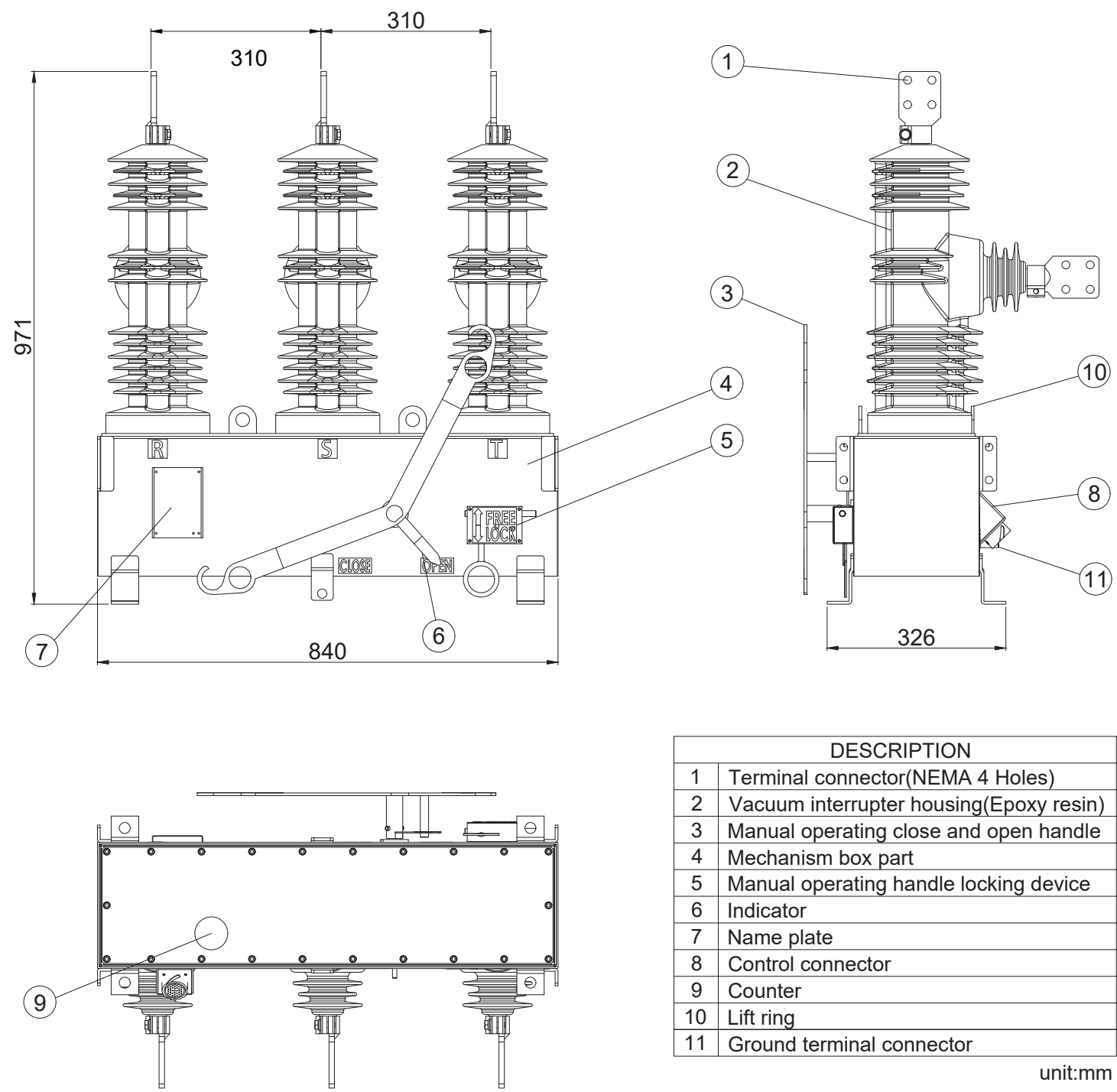


Status



Waveform

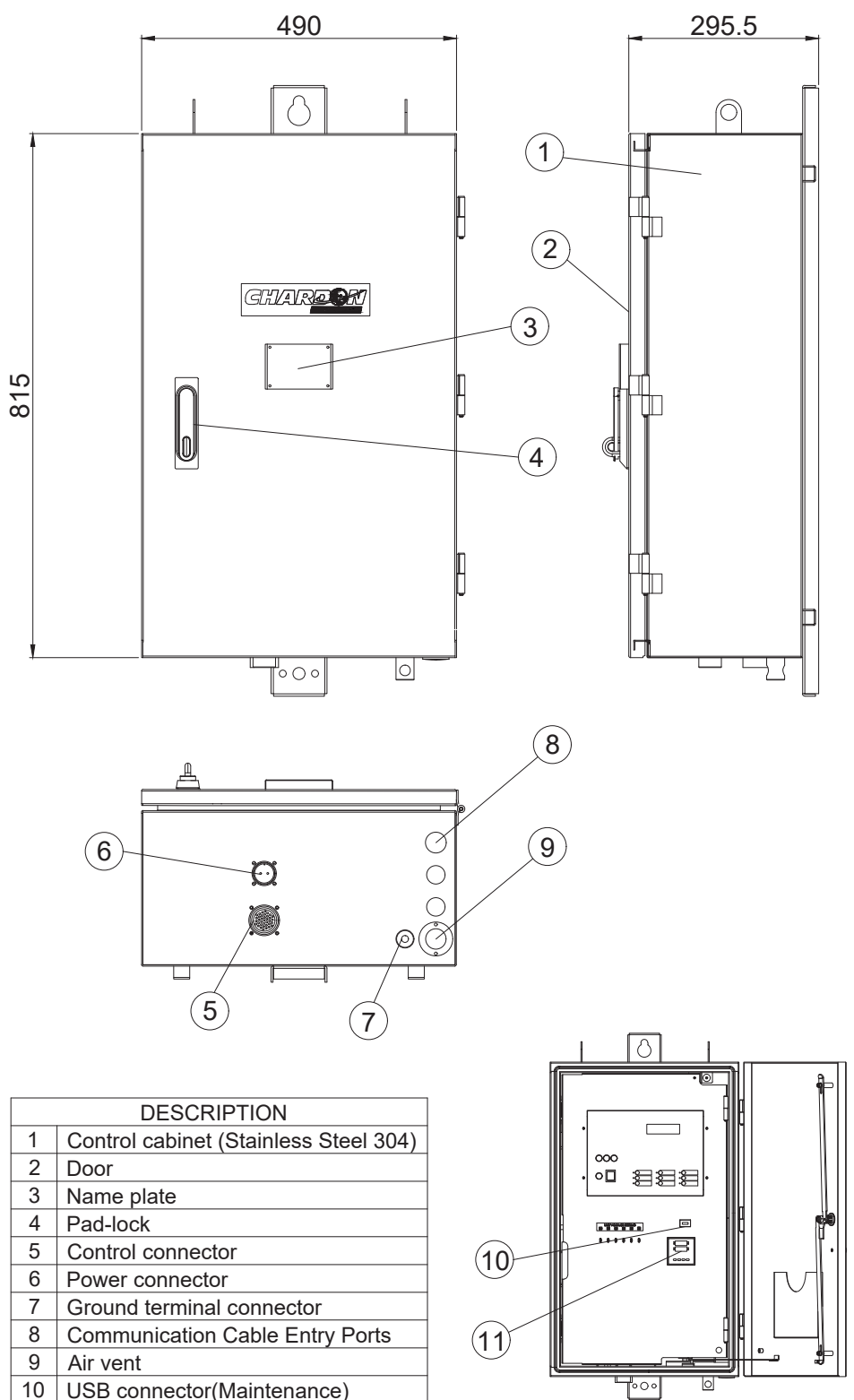
/ BODY



| DESCRIPTION |   |
|-------------|---|
| 1           | Terminal connector(NEMA 4 Holes)        |
| 2           | Vacuum interrupter housing(Epoxy resin) |
| 3           | Manual operating close and open handle  |
| 4           | Mechanism box part                      |
| 5           | Manual operating handle locking device  |
| 6           | Indicator                               |
| 7           | Name plate                              |
| 8           | Control connector                       |
| 9           | Counter                                 |
| 10          | Lift ring                               |
| 11          | Ground terminal connector               |

unit:mm

/ CONTROL BOX



| DESCRIPTION |                                       |
|-------------|---------------------------------------|
| 1           | Control cabinet (Stainless Steel 304) |
| 2           | Door                                  |
| 3           | Name plate                            |
| 4           | Pad-lock                              |
| 5           | Control connector                     |
| 6           | Power connector                       |
| 7           | Ground terminal connector             |
| 8           | Communication Cable Entry Ports       |
| 9           | Air vent                              |
| 10          | USB connector(Maintenance)            |
| 11          | Temperature and humidity controller   |

unit:mm





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