

# 200 A 21.1/35 kV Well-type Molded Bushing with Fixed and Removable Stud

## GENERAL

Celeco® well-type bushing 21.1/35 kV with removable bolt has been designed to IEEE 386-2016 standards as an external component for pad-mounted distribution transformers filled with mineral/vegetable oil or an equivalent. It is mounted directly to the tank wall on the high-voltage side by passing the phase from the outside to the inside of the tank, by means of a stud connected to the transformer's primary coil continuously sending an effective current of 200 A (RMS).

The Celeco® bushing is installed easily on uneven surfaces, and operates in critical conditions such as overload, short circuit ensuring insulation and fixation to the outside of the tank.

The well-bushing is built with a 3/8" diameter copper stud with excellent electrical and thermal conductivity which have corrosion and oxidation protection keeping the contacts clean while maintaining low electrical resistance between contacts avoiding damage.

Each stud is molded with an insulating support with thermoplastic high temperature, which provides an exceptional sealing during continuous changes in temperature, humidity, and internal pressure of the tank, while retaining its mechanical and electrical stability, even in extreme environments.



## TECHNICAL DATA

Table 1 - Voltage Rating

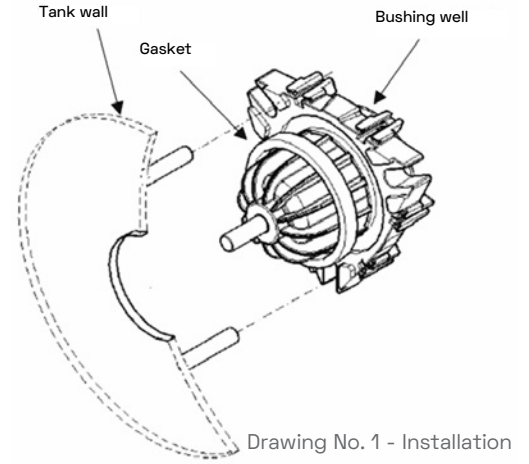
Standard voltage class (RMS)	35 kV
Maximum voltage rating (RMS)	21.1 kV
BIL and full wave (crest)	150 kV
AC 60 Hz 1 min withstand voltage	50 kV
Partial discharge minimum extinction voltage (RMS)	26 kV

Table 2 - Current Rating

Continuous current rating (RMS)		200 A
Overload current 4 h rating (RMS)		300 A
Short-time current rating		
Symetrical (RMS)	Duration (s)	Min x/r
10,000 A	0.17	6
3,500 A	3.00	

# INSTALLATION

The bushing well is mounted according to drawing No. 1, ensuring that a 2.56" diameter gasket is included on the bushing. The assembly must be coupled with the clamping studs welded to the tank concentrically with the 2.56" minimum hole in the tank wall, clamping the bushing as recommended with flat washers, pressure and nuts applying a sequential increment of tightening on each stud, until reaching a torque of 130 in-lb, finally connect the primary coil through an connector to the threaded stud.

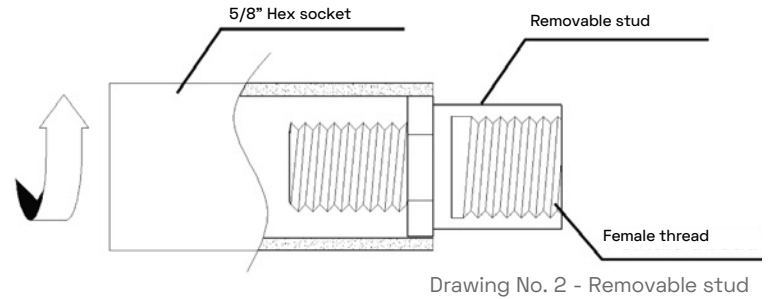


# REMOVABLE CELECO STUD REPLACEMENT INSTRUCTIONS

The removable stud instructions only apply to the bushing well No. B1965.

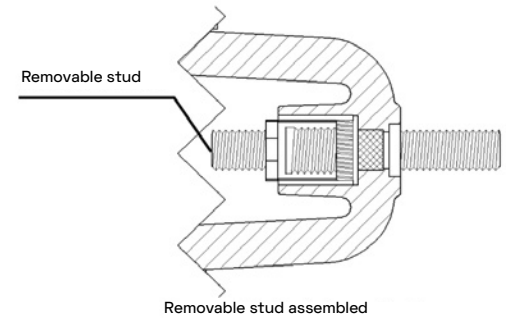
Essential tools:

1. Celeco® removable stud new No. C214.
2. Hex socket 5/8" or 16 mm.
3. Ratchet or torque wrench.
4. Extender socket 3".



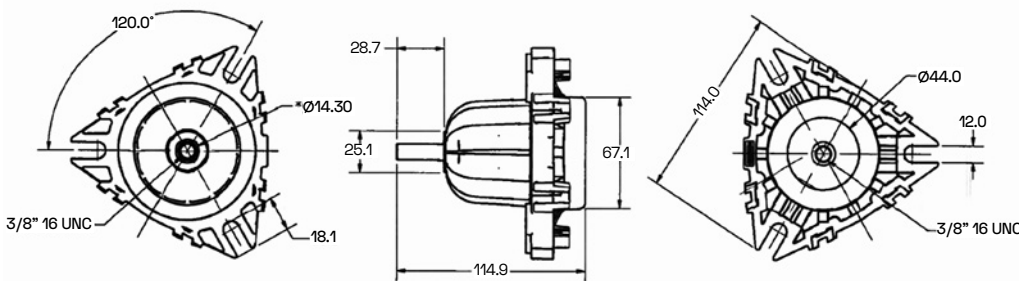
# INSTRUCTIONS

1. Remove the broken bolt with the 5/8" socket turning counter clockwise according to drawing No. 2.
2. Install the new Celeco® removable stud No. C214, locating the female thread on the male thread of the bushing (see drawing No. 3).
3. Tighten to 120 lb-in using the 5/8" hexagonal socket.



# OVERALL DIMENSIONS

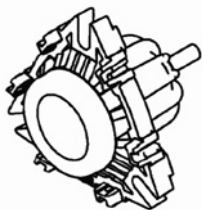
The dimensions of drawing No. 4 allow interchangeability with other products, complying with the 200 A specifications found in IEEE 386-2016.



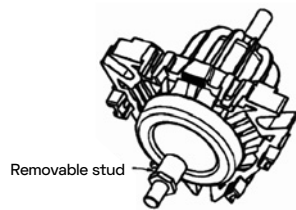
- NOTES**
- Material: high temperature nylon copper stud
  - Finish: free of burrs, pores and spots
  - \*Tolerances of critical dimensions: ±0.5 mm
  - General tolerances: ±1.0 mm

Drawing No. 4 - Dimensions

Dimensions are only for reference.



Type 1  
Fixed stud  
Item No. B1963



Type 2  
Removable stud  
Item No. B1965

Voltage class: 35 kV  
Basic impulse level: 150 kV  
Applied voltage: 50 kV  
Current: 200 A