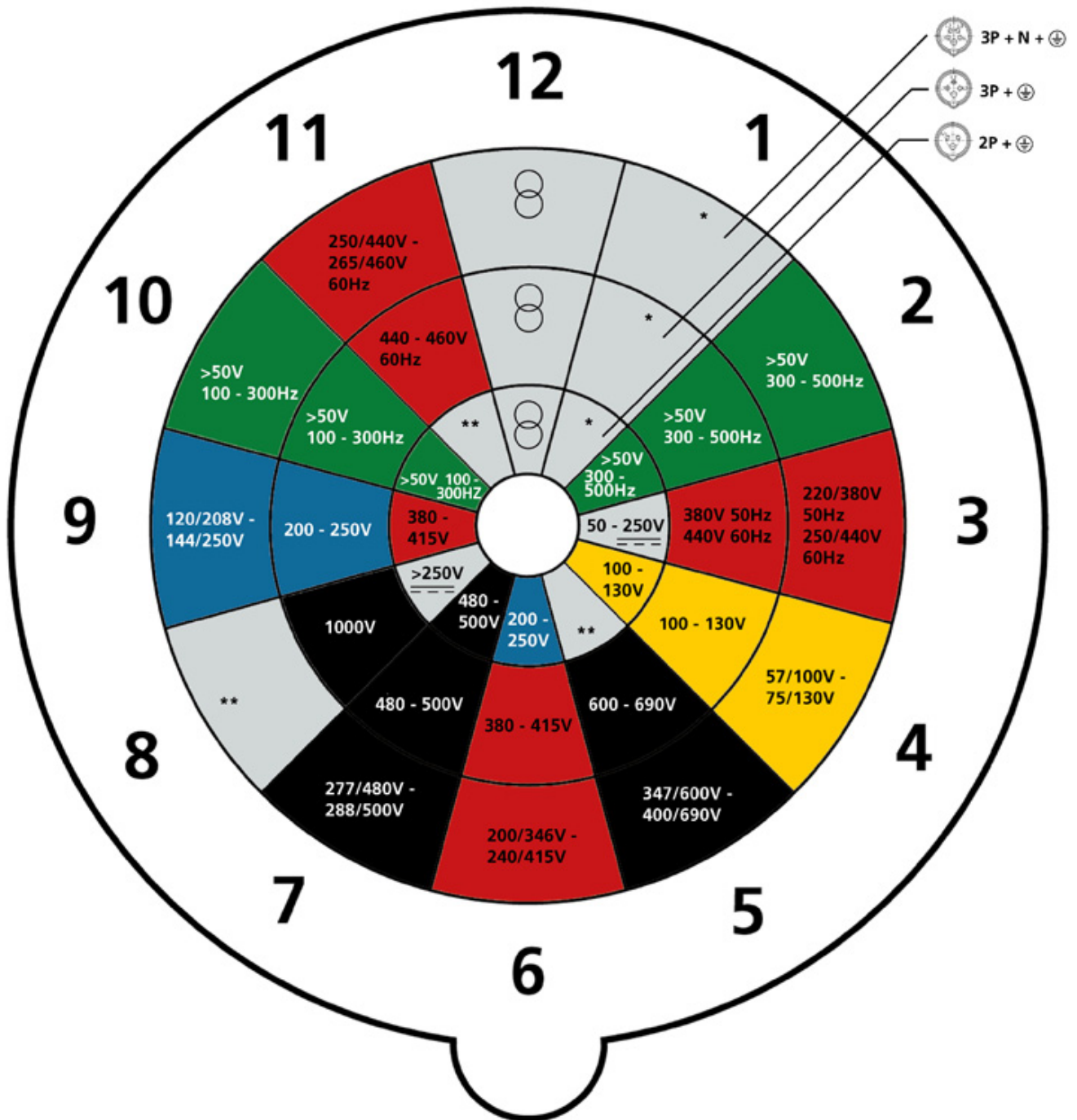


## CEE PLUG-IN DEVICES FOR NOMINAL OPERATING VOLTAGES ABOVE 50 V

Position of ground contact sleeve with respect to major keyway for various voltages and frequencies. The colour codes correspond to the nominal voltage.



\* Clock positions not normed and free for use for special applications.

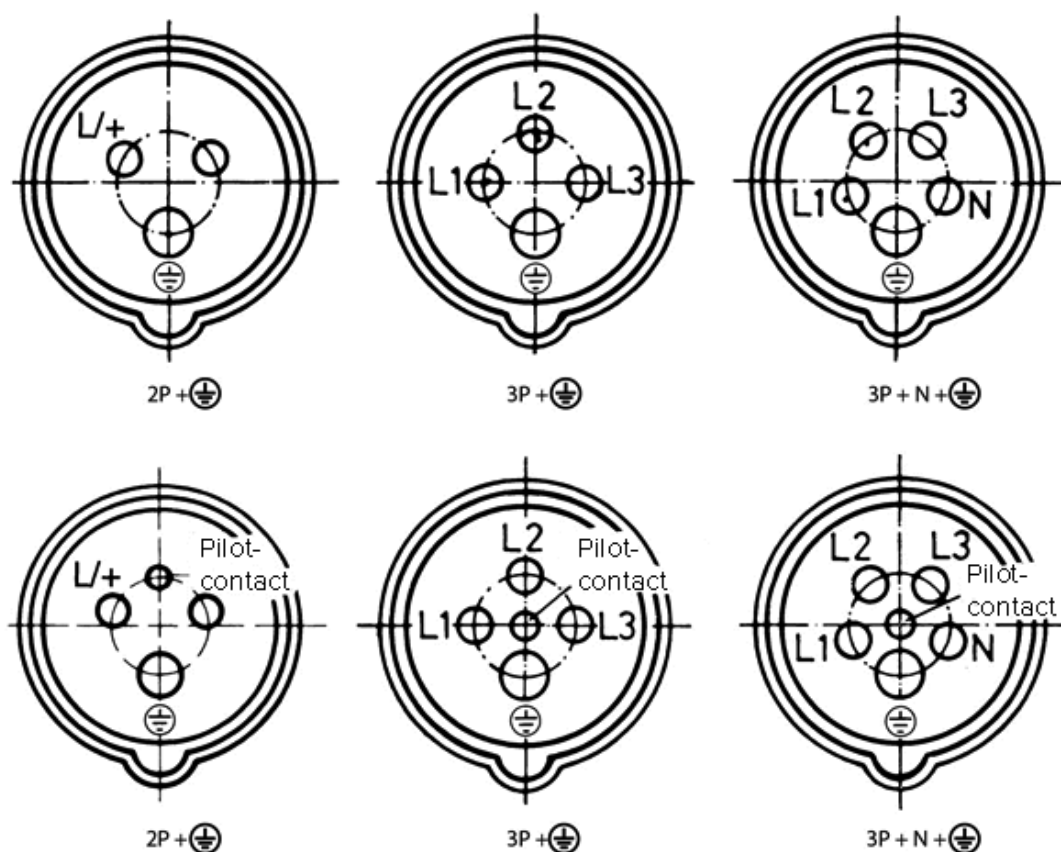
\*\*Clock positions not used.

## — Position of the earth contact

Plugs and sockets with rated voltages above 50 V must have an earth contact. To prevent incorrect insertion, a nose on the plug fits into a keyway in the socket, thus ensuring that the earth contact pin or tube is correctly positioned in accordance with the required electrical standard. The earth contact positions for the various frequencies and voltages are assigned a clockface position, in accordance with table 104 taken from EN 60309-2:1999 + A1:2007 + A2:2012.

Unintentional incorrect mating is prevented by the fact that the contact pin for the protective conductor has a larger diameter than the outer conductor contact pins and thus can not be inserted into the outer conductor contact sockets. It must not be possible for the user to change the position of the protective contact or any existing N-contact to the groove of a socket or nose of a plug. It must also be prevented to be able to use a plug insert in a socket or connector housing.

## — Marking and position of contacts



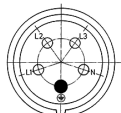
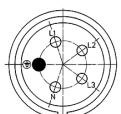

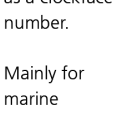
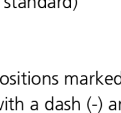

Viewed from the front, the pins of plugs and inlets must be arranged in the opposite way

On rewirable plugs and sockets the contacts must be marked with symbols as follows:

- Where there are three phase conductors the phase contacts are to be marked L1, L2, L3 or 1, 2, 3; the neutral contact (if present) is to be marked N and the earth contact is to be marked  $\perp$ .
- Where there is one phase conductor the live pole L/+ is to be marked with a symbol  $\perp$  for the earth contact, if applicable.

The contact tubes of sockets and connectors with rated voltages above 50 V must be arranged clockwise as viewed from the front.

— Clock position according to table 104 from EN 60309-2: 1999 + A: 2007 + A: 2012

Type	Frequency Hz	Rated operating voltage V	Position of ground contact <sup>1)</sup>		Examples: Front view of receptacle
			16/20A* 32/30A	63/60A* 125/100A	
1P+N+⊕*	50 and 60	100 to 130	4	4	
	60	277	5	5	
2P+⊕	50 and 60	100 to 130	4	4	
		200 to 250	6	6	
		380 to 415	9	9	
		480 to 500	7	7	
		with isolating transformer	12	12	400V = 6h
	100 to 300	above 50	10	10	
	above 300 to 500	above 50	2	2	
DC	above 50 to 250	3	3		
		above 250	8	8	230V = 9h
2P+N+⊕*	50 and 60	125/250 single phase	12	12	
2P+N+⊕	50 and 60	with isolating transformer	12	12	
3P+⊕	50 and 60	100 to 130	4	4	
		200 to 250	9	9	
		380 to 415	6	6	
	60	440 to 460 <sup>2)</sup>	11	11	
	50 and 60	480 to 500	7	7	
		600 to 690	5	5	
	50	380	3	3	
	60	440 <sup>3)</sup>			
	50 and 60	1000	–	8	
	100 to 300	above 50	10	10	
above 300 to 500	above 50	2	2		
3P+N+⊕	50 and 60	57/100 to 75/130	4	4	
		120/208 to 144/250	9	9	
		200/346 to 240/415	6	6	
		277/480 to 288/500	7	7	
		347/600 to 400/690	5	5	
	60	250/400 to 265/460 <sup>2)</sup>	11	11	
	50 and 60	with isolating transformer	12	12	
	50	220/380	3	3	
	60	250/440 <sup>3)</sup>			
	100 to 300	above 50	10	10	
above 300 to 500	above 50	2	2		
All types	All rated voltages and all frequencies not covered		1	1	

<sup>1)</sup> The position of the earth contact is given as a clockface number.

<sup>2)</sup> Mainly for marine installations.

<sup>3)</sup> Only for reefer containers (ISO standard)

Positions marked with a dash (-) are not standardised

by other configurations

This clock-hand position can additionally be used in special applications for which a differentiation to standardized positions is required.



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