

### CEE and IEC

The term “CEE” generally refers to Industrial Plugs and Sockets that comply with International Standard IEC 60309. CEE is the abbreviation of “International Commission on rules for the approval of Electrical Equipment”.

### Conformity to Standards

CEE plugs and sockets are internationally normalized by **IEC 60309-1** and **IEC 60309-2**, equivalent to the **European Norms EN 60309 part 1** and **EN 60309 Part 2**.

IEC is the “International Electrotechnical Commission, which is the world organization for international standardization of electrical equipment.

### CENELEC

European committee for Electrotechnical Normalization—members are the national electrotechnical committees from Belgium, Denmark, Germany, Finland, France, Greece, Ireland, Iceland, Italy, Luxemburg, Netherlands, Norway, Austria, Portugal, Sweden, Switzerland, Spain, Czech Republic and the United Kingdom.

Connected National Committees are Bosnia, Bulgaria, Estonia, Croatia, Latvia, Lithuania, Poland, Romania, Slovakia, Turkey, Hungary and Cyprus.

### System

The standard CEE plugs and socket according to EN 60309 respectively, IEC 60309 are designed in their main dimensions in a way that plugs and sockets with the same rated currents, nominal working voltage ranges, the same number of poles and frequency of different producers are **compatible**.

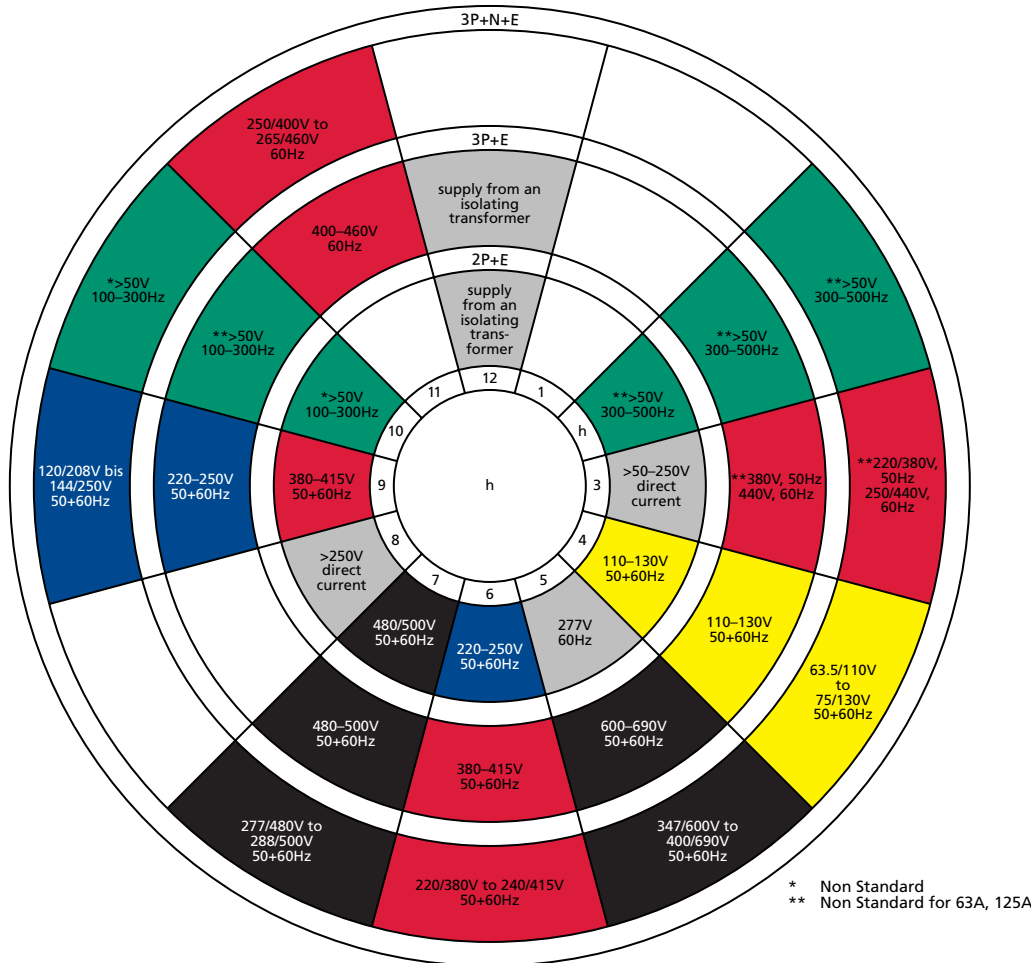
In order to prevent the insertion of plugs and sockets of **different** voltages and frequencies, 12 positions of the earthing contact are assigned to the polarizing slot of the skirt of a socket.

The number with the following letter “h” indicates the position of the earth contact tube, comparing the frontside of the **socket** or **connector** with the face of a clock (Please see the chart on opposite page).

### Pilot Contact

CEE plugs and sockets with 63A and 125A have placed a **pilot contact** according to EN 60309 to enable an electric interlocking. This contact closes inductively at the plug-in and pre-mating at the drawing.

## Position of the earthing contact according to IEC 60309-2



## IP-Classifications

CEE-plugs and sockets with rated currents 16A, 32A, and 63A must meet the system of protection IP44 or IP67; 125A protection degree IP67 according to EN60529.

The protection degree is tested:

- on sockets and connectors, with and without inserted plug or appliance plug
- on plugs and appliance plugs, when fully inserted into the socket or connector

1st Digit	Protection against ingress of solid objects	2nd Digit	Protection against penetration of water
3	Ø 2.5mm	3	spraying water at an angle up to 60° from the vertical
4	Ø 1mm	4	splashing water from any direction
5	dust proof	5	water jets from any direction
6	dust-tight	6	strong water jets from any direction
		7	immersion in water under defined conditions of pressure & time
		8	continuous submersion in water

# EN60309 Plugs and Connectors

## Dual Approved UL, CSA, and VDE

\*Part numbers in red carry only European approvals

		Ampere Europe / USA	Poles	110V- 125V 50/60Hz 4h* Part No.	220V- 250V 50/60Hz 3p=6h 4p+5p=9h* Part No.	380V- 400V 50/60Hz 3p=9h 4p+5p=6h* Part No.
	<b>Plug</b> IP 44	16/20	3	TP-S31.11A	TP-S31.21A	TP-013-9
		16/20	4	TP-014-4	TP-S41.20A	TP-014-6
		16/20	5	TP-015-4	TP-015-9	TP-S51.30A
		32/30	3	TP-S32.11A	TP-S32.21A	TP-S32.31A
		32/30	4	TP-S42.10A	TP-S42.20A	TP-S42.30A
		32/30	5	TP-S52.10A	TP-S52.20A	TP-S52.30A
		63/60	4	TP-S43.11A	TP-S43.21A	TP-S43.31A
		63/60	5	TP-S53.11A	TP-S53.21A	TP-S53.31A
	<b>Plug</b> IP 67	16/20	3	TP-S31.15A	TP-S31.25A	TP-0132-9
		16/20	4	TP-0142-4	TP-S41.25	TP-0142-6
		32/30	3	TP-S32.15A	TP-S32.25A	TP-S32.35A
		32/30	4	TP-0242-4	TP-S42.25A	TP-0242-6
		32/30	5	TP-0252-4	TP-S52.25A	TP-0252-6
		63/60	4	TP-S43.15A	TP-S43.25A	TP-S43.35A
		63/60	5	TP-S53.15A	TP-S53.25A	TP-S53.35A
			<b>Flush mounted socket outlet</b> IP 44	16/20	3	TP-F31.13A
16/20	4			TP-314-4ft7	TP-F41.23A	TP-314-6ft7
32/30	3			TP-F32.13A	TP-F32.23A	TP-F32-33A
32/30	4			TP-324-4ft7	TP-F42.23A	TP-F42-33A
32/30	5			TP-325-4ft7	TP-F52.24A	TP-325-6ft7
63/60	4			TP-F43.11A	TP-F43.21A	TP-F43-31A
63/60	5			TP-F53.11A	TP-F53.21A	TP-F53-31A

\*Ground Position

		Ampere Europe / USA	Poles	110V- 125V 50/60Hz 4h* Part No.	220V- 250V 50/60Hz 3p=6h 4p+5p=9h* Part No.	380V- 400V 50/60Hz 3p=9h 4p+5p=6h* Part No.
	<b>Flush mounted socket outlet</b> 20° angle IP 67	16/20	5	TP-3132-4	TP-F51.26A	TP-F51.36A
		32/30	5	TP-F52.16A	TP-F52.26A	TP-F52.36A
		63/60	4	TP-F43.16A	TP-F43.26A	TP-F43.36A
		63/60	5	TP-F53.16A	TP-F53.26A	TP-F53.36A
	<b>Panel mounted inlet</b> IP 44	16/20	3	TP-613-4	TP-A31.24A	TP-613-9
		16/20	4	TP-614-4	TP-A41.24A	TP-A41.34A
		16/20	5	TP-615-4	TP-615-9	TP-A51.34A
		32/30	3	TP-623-4	TP-A32.24A	TP-623-9
		32/30	4	TP-A42.14A	TP-A42.24A	TP-A42.34A
		32/30	5	TP-625-4	TP-625-9	TP-A52.34A
		63/60	4	TP-A43.14A	TP-A43.24A	TP-A43.34A
		63/60	5	—	—	TP-A53.34A
	<b>Connector</b> IP 44	16/20	3	TP-K31.10A	TP-K31.20A	TP-213-9
		16/20	4	TP-214-4	TP-K 41.20A	TP-214-6
		16/20	5	TP-215-4	TP-K51.20A	TP-K51.30A
		32/30	3	TP-K32.10A	TP-K32.20A	TP-K32.30A
		32/30	4	TP-K42.10A	TP-K42.20A	TP-K42.30A
		32/30	5	TP-K52.10A	TP-K52.20A	TP-K52.30A
		63/60	4	TP-K43.11A	TP-K43.21A	TP-K43.31A
		63/60	5	TP- K53.11A	TP-K53.21A	TP- K53.31A
	<b>Connector</b> IP 67	16/20	3	TP-K31.15A	TP-K31.25A	TP-2132-9
		16/20	4	TP-2142-4	TP-K41.25A	TP-2142-6
		16/20	5	TP-2152-4	TP-K51.25A	TP-2152-6
		32/30	3	TP-K32.15A	TP-K32.25A	TP-K32.25A
		32/30	4	TP-2242-4	TP-K42.25A	TP-2242-6
		32/30	5	TP-2252-4	TP-K52.25A	TP-2252-6
		63/60	4	TP-K43.15A	TP-K43.25A	TP-K43.35A
		63/60	5	TP-K53.15A	TP-K53.25A	TP-K53.35A

\*Ground Position