



## Nanotech Common Mode (CoolBLUE®) Cores per Horsepower and Cable Length

CoolBLUE®	CBO43HP1/4-50A4	CBO43HP1/4-50A4	CBO68HP51-100A6	CBO155HP101-428A12	CBR166HP429-1631A16	CBO326HP1632+A23
Power Range (hp)	*1/4-10	11-50	51-100	101-428	429-1631	1632+
Cable Length **	# Cores	# Cores	# Cores	# Cores	# Cores	# Cores
150ft/50m	2	4	4	4	4	4
300ft/100m	4	4	4	4	4	4
450ft/150m	6	6	6	6	6	6
900ft/300m	8	8	8	8	8	8

Note 1 – Data above is for information/guideline purposes.

Note 2 – All cables/phases must travel through the CoolBLUE® cores. NaLA® cores are installed around each individual power cable, regardless of how many cables. Per application guide, NaLA® cores are per cable. No ground or shielding through cores!

**\*Note 3** – On motors up to **10hp**, two turns are needed through the CoolBLUE® cores (pass cable through cores twice).

Note 4 – It is important to use the correct number and type of cores.

Note 5 – For servo and DC motors, please call CoolBLUE® Engineering.

Note 6 – Install cores on load side of drive for typical motor applications. Cores may be installed on line side of VFD as well to reduce conductive and radiated emissions back to the power grid.

Note 7 – CoolBLUE® offers brackets, and cable ties to hold cores in place.

Please call CoolBLUE® Engineering for alternative methods.\*\* Cable length between drive and motor must be multiplied by the number of cables per phase, to calculate the total cable length to be used in above guide for CoolBLUE®. The actual length of each cable, is used in the NaLA® guide.

\*\*\* For cable runs over 950ft, contact CoolBLUE® Engineering.

## Differential Mode Chokes (NaLA®) Cores per Horsepower and Cable Length

The use of NaLA® increases the reliability of these systems by further reducing the noise and peak values. These cores must be placed around each individual cable.

NaLA® Part number	N18HP1/4-10	N18HP11-40	N29HP41-102	N57HP103-428	N75HP429-1631	N123HP1632+
Power Range (hp)	1/4-10	11-40	41-102	103-428	429-1631	1632 and above
Cable Length	# Cores	# Cores	# Cores	# Cores	# Cores	# Cores
150ft/50m	2	1	1	1	1	1
300ft/100m	3	2	2	2	2	2
450ft/150m	4	3	3	3	3	3
900ft/300m	5	4	4	4	4	4

*It is important to use the correct number of cores to prevent the cores from getting too hot.*

*Note 1 – Data above is for information/guideline purposes.*

*Note 2 – All cables/phases must travel through the CoolBLUE® cores. NaLA® cores are installed around each individual power cable, regardless of how many cables. Per application guide, NaLA® cores are per cable. No ground or shielding through cores!*

**\*Note 3** – *On motors up to 10hp, two turns are needed through the CoolBLUE® cores (pass cable through cores twice).*

*Note 4 – It is important to use the correct number and type of cores.*

*Note 5 – For servo and DC motors, please call CoolBLUE® Engineering.*

*Note 6 – Install cores on load side of drive for typical motor applications. Cores may be installed on line side of VFD as well to reduce conductive and radiated emissions back to the power grid.*

*Note 7 – CoolBLUE® offers brackets, and cable ties to hold cores in place. Please call CoolBLUE® Engineering for alternative methods.*

**\*\*** Cable length between drive and motor must be multiplied by the number of cables per phase, to calculate the total cable length to be used in above guide for CoolBLUE®. The actual length of each cable, is used in the NaLA® guide.

**\*\*\*** For cable runs over 950ft, contact CoolBLUE® Engineering.