

NEMA Motor Loads and Product Selection

In North America and some other parts of the world, motors are rated in horsepower (HP). Although there are many voltages supplied by the serving utilities, 460 VAC three phase, 60 hertz (hZ), is the most common. This table will help in selecting which current transducer to use when monitoring a specific motor load. Please keep in mind that these full load amperages (FLA) are averages based on four-pole motors. It is good practice to ask the customer what current level they plan on monitoring.

AC Current Transducer Ranges

AT and ATR Series: Field selectable within each model; AT0 Series: 0–2 and 0–5 amps; AT1 Series: 0–10, 0–20 and 0–50 amps; AT2 Series: 0–100, 0–150, and 0–200 amps; ATR Series: 0–100, 0–150, and 0–200 amps. Always select a model with a range lower than the actual load being monitored.

HP	Average FLA 460 VAC 60 hZ	Average Responding 50-60 hZ	True RMS Distorted Wave Form	Range
0.5	1.1	AT0	ATRO	low
0.75	1.5	AT0	ATRO	low
1.0	1.9	AT0	ATRO	low
1.5	2.5	AT0	ATRO	high
2	3.1	AT0	ATRO	high
3	4.5	AT0	ATRO	high
5	6.7	AT1	ATR1	low
7.5	10.8	AT1	ATR1	mid
10	13.7	AT1	ATR1	mid
15	20.2	AT1	ATR1	high
20	25.8	AT1	ATR1	high
25	32.3	AT1	ATR1	high
30	38.2	AT1	ATR1	high
40	50.8	AT2	ATR2	low
50	62.3	AT2	ATR2	low
60	74.3	AT2	ATR2	low
75	91.4	AT2	ATR2	low
100	124	AT2	ATR2	mid
125	156	AT2	ATR2	high
150	180	AT2	ATR2	high
200	240	AT3	ATR3	low
250	302	AT3	ATR3	low
300	361	AT3	ATR3	low
350	414	AT3	ATR3	mid
400	477	AT3	ATR3	mid
450	515	AT3	ATR3	high
500	590	AT3	ATR3	high

This chart covers just the most common models NK Technologies manufactures. There are many newer products with higher and lower ranges, many in split core housings which may make your installation easier. Contact our applications support specialists at the factory for help selecting a product to fit your needs.