

# Chapter 11

## EV and HEV Motors, Converters, and Inverters

Find the words in the grid. Words can go across, down and in the two forward diagonals.

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T Z L L Y L B D Y L M P H K H P Z D Q N I E K S
Q S F H C N K B C T E R H W I M K P R L N L X U
P Q G K M S J R V Z H N L N K G N W F Z T E L R
C U F B M M H R D P N B Z K P Y B V P R E C M F
W I R P L K J B N N M R J   S H E S D M R T G A
M R I C O M M U T A T O R R S L H Y C T I R G C
T R P F F C J W L N M P O D U L J R G X O O R E
N E D M N H F Q T M K T K R R R A S M N R M N P
Y L C C Y X K N P N O M D M V R E W B T P A R E
P C P N T H G R W M P N M D O N R L O R E G G R
R A N L L O B W S Q A T P T I O W F O H R N Z M
K G T L T T D S F H T C O L T P F K S J M E M A
W E L Q W V E C T K L M X A K J N C T L A T R N
Q R W X X L T H C N N U T H T R N B C R N I E E
M O W K H X G C R O L S T H W L L R O T E C S N
C T R S H I N D I F N S A B B N P N N D N I O T
T O U V R N L T J J C V N R M R K H V P T N L M
T R X T K F C Y P T L L E U M G L C E X M D V A
B M R M W U G R K R D K W R B A L P R Z A U E G
A C I M D K B P H X M P F F T B T G T Q G C R N
R R X N F C I N V E R T E R S E E U E R N T J E
T F I X H W R O T O R M D M G N R R R Z E I L T
L C M V T G Y G D K J T H S P M S S S E T O Q S
A E L E C T R O M A G N E T I S M Z J B S N Q V
  
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ACIM	Electromagnetism	Right hand rule
AC induction motor	Flux lines	Rotor
Armature	IGBs	Snubbers
Boost converters	Interior permanent magnets	SPMs
Brushless motors	Inverters	Squirrel cage rotor
Commutator	IPMs	Stator
DC to DC converters	Lenz's law	Surface permanent magnets
Electromagnetic induction	Resolver	