Re: Help calculating a different electromagnetic coil please...

Source: http://sci.tech−archive.net/Archive/sci.electronics.design/2006−02/msg00588.html

- *From*: Rich Grise <richgrise@xxxxxxxxxxx>
- *Date*: Fri, 03 Feb 2006 17:01:50 GMT

On Fri, 03 Feb 2006 09:43:11 −0600, John Fields wrote:

> On Fri, 03 Feb 2006 01:13:29 GMT, Rich Grise <richgrise@xxxxxxxxxxx>
> wrote:
>
> > On Thu, 02 Feb 2006 15:53:36 −0600, John Fields wrote:
> >
> > > On Thu, 02 Feb 2006 20:10:52 GMT, Rich Grise
> > > <richgrise@xxxxxxxxxxx>
> > >
> > > > On Thu, 02 Feb 2006 10:49:43 −0800,
> > > > WildIrish wrote:
> > > >
> > > > > I know the following:
> > > > > Current flow through the
> > > > > coil, number of wraps,
> > > > > size of wire,
> > > > > area of the bobbin it's
> > > > > wound on, length of finished
> > > > > coil.
> > > > >
> > > > > WHAT I WANT TO DO:
> > > > > determine the correct wire
> > > > > size and coil wrap
> > > > > count to replicate the same
> > > > > amount of magnetic force as
> > > > > the original
> > > > > coil.... hopefully with less
> > > > > wraps and hopefully thicker
> > > > > wire to allow me to handle it
> > > > > by hand,
> > > > > the original
> > > > > was probably machine
> > > > > wound.

> ...
>
> > You could simply measure it.
> >
> > You must have missed this part:
> >
> > "I know the following: Current flow through the coil, number
> > of
> > wraps"...
>
> I guess my brain−pan skipped over that, because if he knows that already,
> then what's the question about?
>
> What's he really trying to do? Or what does he really want to know?

> −−−
> You must have missed this part:
>
> "WHAT I WANT TO DO: determine the correct wire size and coil wrap count to
> replicate the same amount of magnetic force as the original coil....
> hopefully with less wraps and hopefully thicker wire to allow me to handle
> it by hand, the original was probably machine wound."

Well, if he knows the number of turns, and the number of amps, that's
ampere−turns. All he would need to do is decide how fat of wire he wants
to use, pick a number of amps, and divide the ampere−turns from (1) above
by amps to get the number of turns.

Or am I missing something?

Thanks,
Rich

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