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Quick start instructions to replace an Indramat/Bosch Rexroth drive amplifier

The drives we supply are overhauled by the original manufacturer, Bosch Rexroth, originally packed and sealed, and warrantied for two years. However, the settings Bosch uses for their tests and runoff *do not match* the settings you need in your machine. Here are easy instructions to set up the drives correctly:

There are 4 different versions of Diac 04 drives:

Single drives HDS 02.xx with or without a glass scale interface (left picture); spindle drives HDS 03xx and HDS 04.xx (center left picture); double drives HDD 02.xx without a glass scale interface (center right picture); and double drives HDD 02.xx with a glass scale interface (right picture):

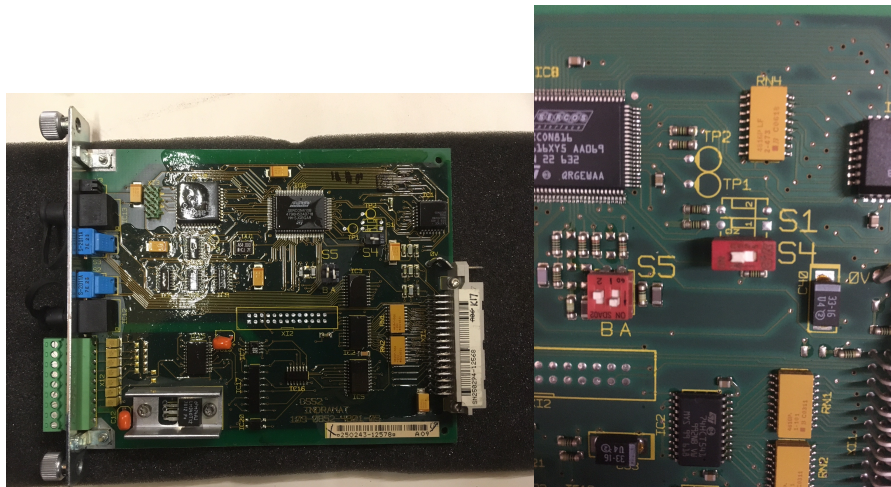


You need to check and set the SERCOS interface (fibre optic) transmission speed and capacity. The three drives pictured on the left all have the same SERCOS card. All these cards are identical except the axis address (little blue turn switches). They also have 3 DIP switches inside that must to be set correctly.

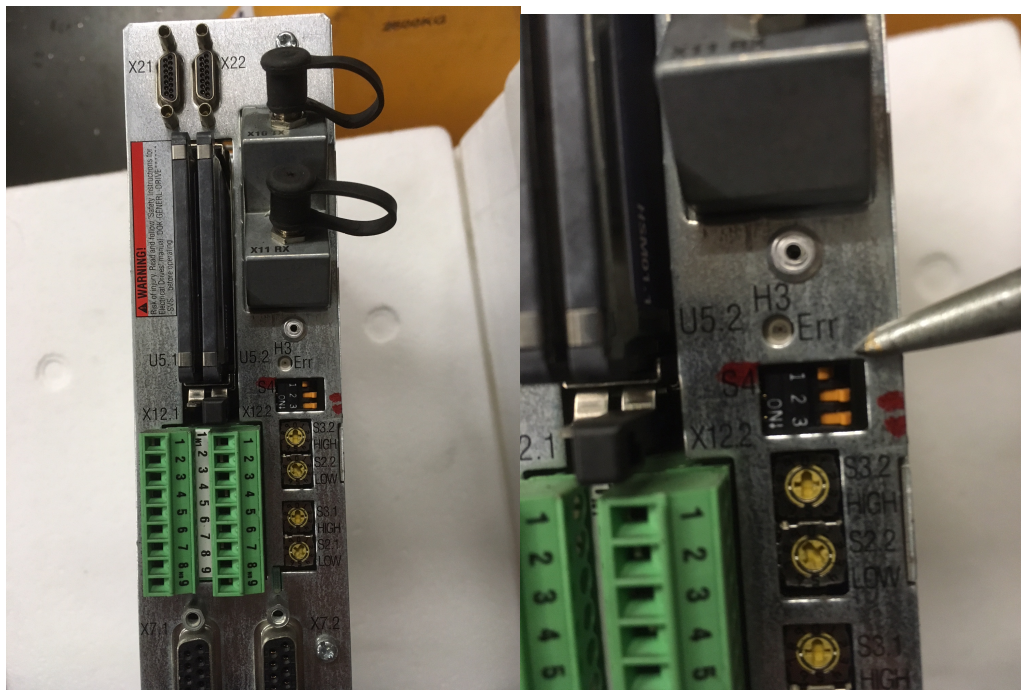
!!! Safety advice !!!

Please turn the machine completely off (using the Main Switch) before you start to work on any electrical components !! There are dangerous voltages on the drives and the components could be damaged if they get connected and disconnected while the power is on!!

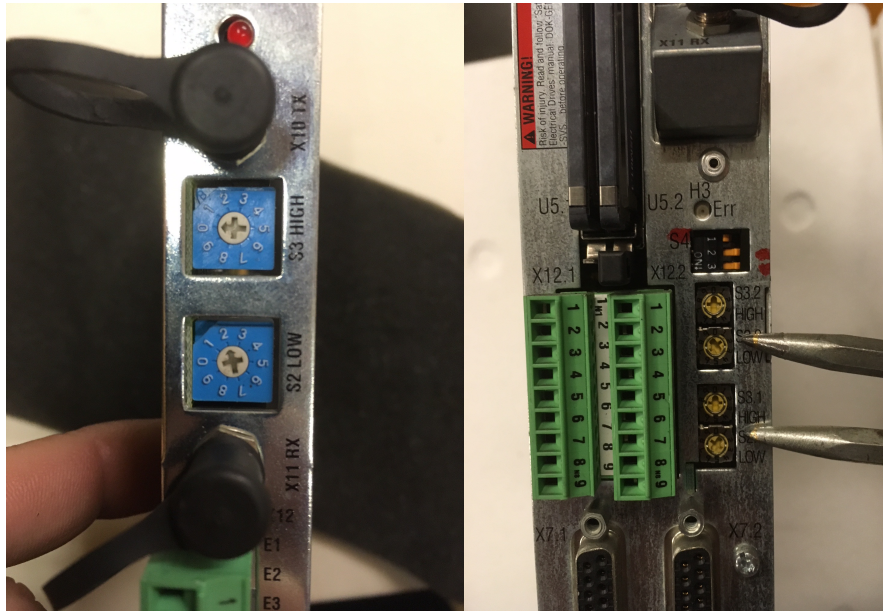
1. Loosen the two thumb screws and pull the **SERCOS card** out. Make sure the switches S4 and S5 are set as shown in the pictures below.



On double drives with a glass scale interface the SERCOS card is built in and the DIP switches are in the drive. See the picture below with location and settings.



- After the SERCOS settings are correct, set the **drive address** for the correct axis. The left picture shows a SERCOS card and the right picture shows a double drive with glass scale interface. **Take Care:** On the double drive with glass scale, the top two address switches are the right drive and the bottom ones are the left drive!



Drive addresses:	S2 Low	S3 High	
A axis	1	0	
X axis	2	0	
Z axis	3	0	
Y axis	4	0	
C axis	6	0	
W axis	0	1	Loader Machines only
U axis	1	1	Loader Machines only
Q axis	2	1	

3. Programming and “personality card”

Every axis has a parameter set and 0 position that is stored in a PCMCIA card, better known as the “personality card.”

For the first start up of the new drive and if the original card isn’t broken, use the old card from the old drive (blue label with Indramat) and put it in the new drive.



Now install the drive in the machine and connect everything back like it was original.

The machine should boot up and the drives should come on fine. Please do the first “Ref All Move” only with 20% - just in case something does not go as it should.

If the drive replacement was successful, we highly recommend saving the drive data from the old personality card to the hard drive and replacing the personality card as well. Then upload the data to the new personality card. Otherwise there is an old card in a rebuilt drive and the card could fail soon due to its age. The new cards have all silver labels with Rexroth (see below).



If the machine *does not* boot-up with the old personality card, the likely explanation is an incompatibility with the updated firmware in the drive we supplied. (We provide updated firmware even in 1st generation drives.) In that case:

- Put the new personality card we supplied in the drive
- Load the drive parameters from the machine’s hard drive to the personality card
- Reset the axis zero position (We have instructions for this, if needed)