PLCs, Software,
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Connecting ConveyLinx-Ai/Ai2 modules to Siemens S7 PLCs

Appendix B

Motor Digital I/O Diagnostic and Control in PLC mode

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1. Output Data - "CLXPLC_OUT"

"**LeftMDRasDIO**" – Controls left motor port. Both motor ports can work in Digital I/O mode independently, where the motor pins can act as outputs. To switch the motor port in Digital I/O mode, ConveyLinx-Ai module has to be in PLC/IO mode. To put the motor port in Digital O mode the Left/Right MDRasDIA.SetMotDIO bit has to be set. When the motor is in Digital I/O mode, user can drive 2 NMOS transistors for each port.

The maximum current that should be drawn should be no more than 750mA per pin.

 **The pins that are available, however are different between the two motor ports. The available pins for each port are:**

Left MDR port – Pin4 and Pin3 are available to be controlled. The control bits in the LeftMDRAasDIO are called DrivePIN3/DrivePIN4

Right MDR port – Pin2 and Pin 3 are available to be controlled. The control bits in the LeftMDRAasDIO are called DrivePIN2/DrivePIN3

When the control bits are set to ON, the appropriate transistor will provide GND on its pin.

"**RightMDRasDIO**" – Controls the right motor port. DrivePIN2 and DrivePIN3 are the control bits in this field, alongside the general activation SetMotDIO bit.

"**LeftMDR_DIOstatus**" – Left motor port, I/O mode diagnostic. Only one bit is used for the ConveyLinx-Ai/Ai2 – Short circuit.

The un-named bit called Reserved6 also contains information. It will be set to ON, if the total current for this side is higher than 2Amps. In the future the UDT files will be updated to change the name of the bit.

"**RightMDR_DIOstatus**" – Right motor port I/O mode diagnostic. Only one bit is used for the ConveyLinx-Ai/Ai2 – Short circuit.

The un-named bit called Reserved6 also contains information. It will be set to ON, if the total current for this side is higher than 2Amps. In the future the UDT files will be updated to change the name of the bit.