Different Types of M580 I/O

Introduction

M580's have three types of I/O.

Topic Objectives

By the end of this section the student will be able to:

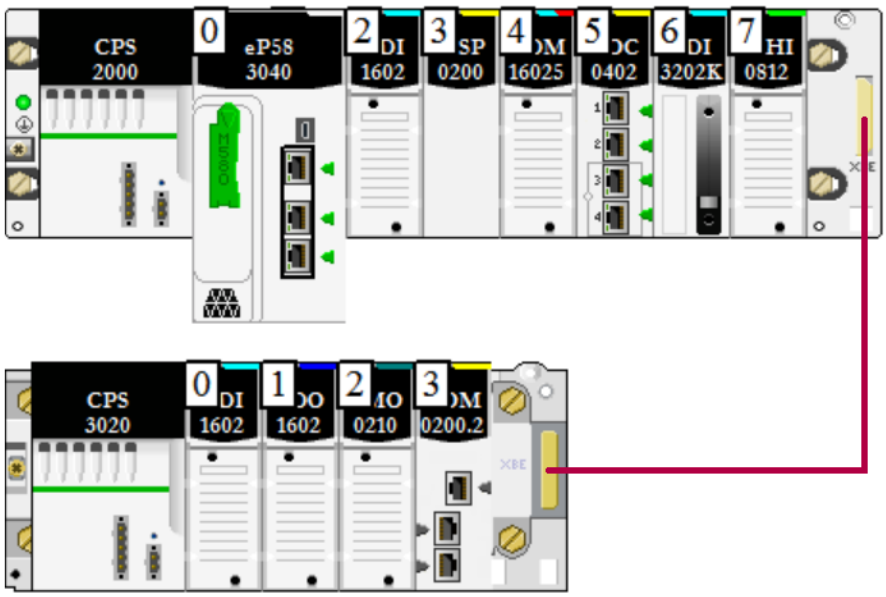
- Describe the three types of I/O

Different Types of I/O

In Automation architecture, the heart of a system is a PAC. Information coming from the field (sensors, push buttons, etc.) and commands sent to the devices (motor control, variable speed drive references, etc.) are often **linked** to the PAC via digital or analogue inputs and outputs. These inputs and outputs are physically connected through wiring between field devices and input and output modules. These modules can be located in different positions: **Locally**, **Remotely**, or **Distributed**.

Local I/O

Local I/O consists of input and output modules that are located in the local rack of the PAC. The internal **backplane** is used as a medium of communication. This structure can achieve very high performances in terms of response time.

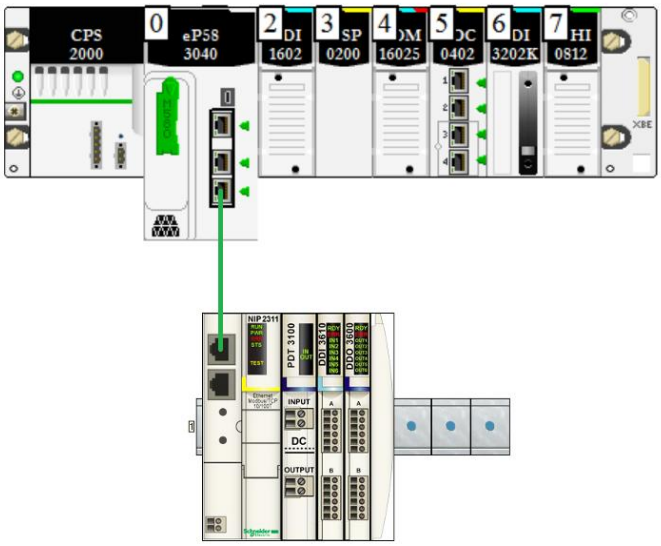


I/O modules located on **Extension** racks are also considered as **Local I/O**.

Different Types of M580 I/O (cont.)

Distributed I/O

To achieve greater distances and flexibility, Distributed I/O ia a reasonable option. Distributed I/O consists of input and output modules but also specific modules (to better integrate devices) located on an island which communicate with the PAC over a **fieldbus** or **network**.



Due to the fieldbus communication over the network, Distributed I/O has a limitation in terms of performance depending on the medium used between them and the PAC.