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Basics of PLC

Analog Value Processing & Conclusion of Basics of PLC

Analog Value Processing

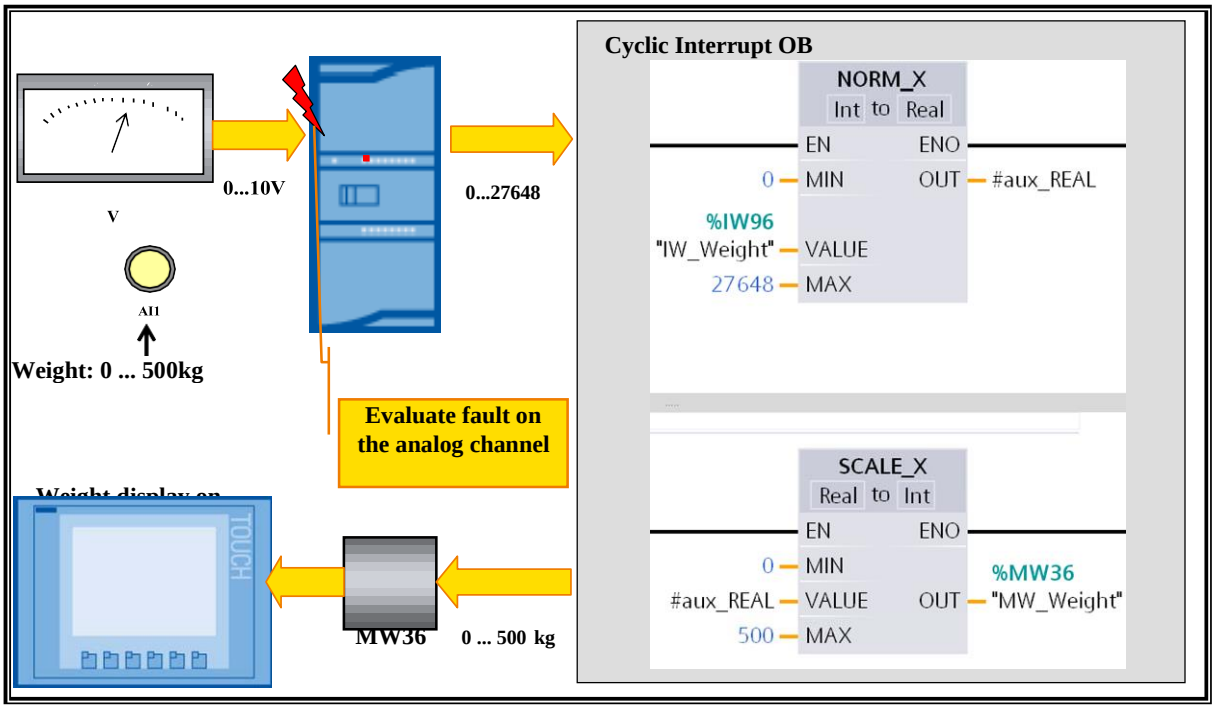
The participant should ...

- … be familiar with the principle of analog value processing be
- ... able to parameterize an analog module
- ... be able to address an analog module
- ... be able to interpret the resolution (capability) of a module
- … be familiar with the operations for the analog value conversion be able
- … to program a simple analog value conversion
- ... be able to evaluate the diagnostics interrupt of the analog module be
- … familiar with the principle of interrupt processing
- … be able to generate and program a cyclic interrupt

Objectives

In this chapter, the principle of analog value processing is presented. The goal is that the participant is capable of parameterizing an analog module and of interpreting the resolution.

Furthermore, the necessary conversion operations are presented in order to be able to process an analog value. The participant should be able to program a simple analog value conversion and be able to interpret a diagnostics interrupt of an analog module.



Task Description

Task Description

In this chapter, the conversion and processing of analog signals is handled.

For this, a voltage is to be set and read in on the simulator potentiometer. This voltage simulates part weight values. It will be your task to convert the read in values every 250ms in the cyclic interrupt into weight values between 0 kg and 500 kg using the operations NORM_X and SCALE_X. The weight is only valid in the range of 100kg to 400kg. If the weight of the part exceeds or falls below these limits, the part is considered invalid and no further transport sequence can be started (Bay LEDs remain dark and conveyor movement to the right cannot be started).

As well, you will learn how you must proceed when there is a channel fault of an analog module in order to get detailed information on the fault event.

Conclusion-Basics of PLC

Course outcomes, that is the outcomes of basics of PLC in the learning videos of basics of PLC you all have learnt about introduction of PLC, types of PLC, programming languages of PLC, role of PLC in Industrial Automation, software TIA portal, hardware S7 1200, in the software TIA portal, bit logic operations, clock memory bits, timers, counters, blocks, math functions and comparators, analog value processing and tasks for each and every concept, this task will improve your logical thinking and also your programming skills. We, also have covered sinking and Sourcing concept.

Further scope for learning in basics of PLC and the basics of PLC we have only covered basic instructions. You can even learn extended instructions under basics of PLC we have only worked

on ladder logic programming language, there are also other programming languages like FBD- functional block diagram and SCL- structured control language in S7 1200. You can also learn and work on these different languages, we have only worked on S7 1200 you can try working on S7 300 and other PLC's. If there is any scope for you and we have only worked on one S7 1200, you can try to work on multiple PLC's, multiple S7 1200's. Hope you enjoyed the learning from learning videos of basics of PLC.