README

ACT350 Precision Profinet IO PLC Demo Program

Hardwares:
      PLC types:
            Siemens S7-1200 CPU 1212C AC/DC/RLY

      Automation Transmitter:
            ACT350 Precision DIN PRNT

      Weighing Module:
            APW (Automated Precision Weighing)

Software:
      Siemens TIA Portal V13

      ACT350 Precision Firmware:
            1.05.0100

      ACT350 Precision Device Description Files:
            GSDML-V2.33-MT-ACT350 2P-20170626

      PLC Sample Programs:
            "ACT350_Precision_PNET_ST13_F1" – Full version, includes cyclic, acyclic communication and scale adjustment functions
            "ACT350_Precision_PNET_ST13_L1" – Light version, demonstrate cyclic communication

PLC Demo Program Structure:
      Cyclic Program
      Acyclic Program[1]
      Scale Adjustment[1, 2]

1 - Acyclic Program and Scale Adjustment Program are covered only in PLC Sample Program Full version.
2 - In the Scale Adjustment program, internal test and internal adjustment are only available for weigh module with built-in internal test weight.

Programs:	Demonstrated functionalities:	Remarks:
Main Routine	1. Calls up Cyclic Program subroutine 2. Calls up Acyclic Program subroutine 3. Calls up Scale Adjustment subroutine	
Cyclic Program	1. HeartBeat Monitor 2. Reads in Weight Data and Command Responses 3. Cyclic Command Acknowledgement 4. Cyclic PLC Commands: 4.1. Report Default Data – "0" 4.2. Report Rounded Gross – "1" 4.3. Report Rounded Tare – "2" 4.4. Report Rounded Net – "3" 4.5. Preset Tare – "201" 4.6. Tare – "400" 4.7. Zero – "401" 4.8. Clear Tare – "402" 4.9. Tare immediate – "403" 4.10. Zero immediate – "404"	Reference programming for most commonly used PLC cyclic commands.

	4.11. Configure Weighing Mode – "290" 4.12. Configure Environment Mode – "291" 4.13. Configure Linear Limit Frequency FCUT – "292" 4.14. Write Comparator 1 Limit – "240" 4.15. Write Comparator 2 Limit – "242" 4.16. Write Comparator 3 Limit – "244" 4.17. Write Comparator 4 Limit – "246" 4.18. Write Comparator 5 Limit – "248"	
Scale Adjustment	1. Internal Adjustment, C2 Profinet: 0/ 1/ 0x4001 (solt/ sub slot/ index) 2. External Adjustment, C3 Profinet: 0/ 1/ 0x4002 (solt/ sub slot/ index)	Reference programming for scale adjustment PLC acycic commands Internal adjustment/ test commands are only applicable to certain digital scales with built-in internal weight.

DISCLAIMER

The PLC Sample Program is intended for **demonstration and training purpose** only! It is deemed as "starter kit" to ease integrator during their integration and commissioning process.

It is the responsibility of the integrator to determine how any device should be **safely and correctly** integrated into their automation system.

Mettler Toledo does not accept any responsibility for damage or injuries caused by improper integration of any device.