



Vehicle Exhaust Test Machine Control with E+PLC¹⁰⁰

Advanced control, data management
and visualization in a single box
solution



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Life Is 

Eurotherm
by Schneider Electric

A machine manufacturer implemented Eurotherm™ E+PLC¹⁰⁰ to control part of a test machine at an automotive research and development centre specializing in new technologies.

The machine is used for testing newly designed vehicle exhaust system components, with the aim of reducing toxic emissions. Tight temperature control, accurate measurement, and calculation of mass flow equations were required, as well as local visualization and recording of key parameters.

The E+PLC¹⁰⁰ single box solution was chosen for its combination of multiple precision PID loops, accurate I/O, maths, recording and PLC functionality. In this case, the overall automation system is monitored by a PC based measurement and control system via Ethernet communications, and the E+PLC¹⁰⁰ integrated display is used for local visualization of the mass flow and temperature parameters.

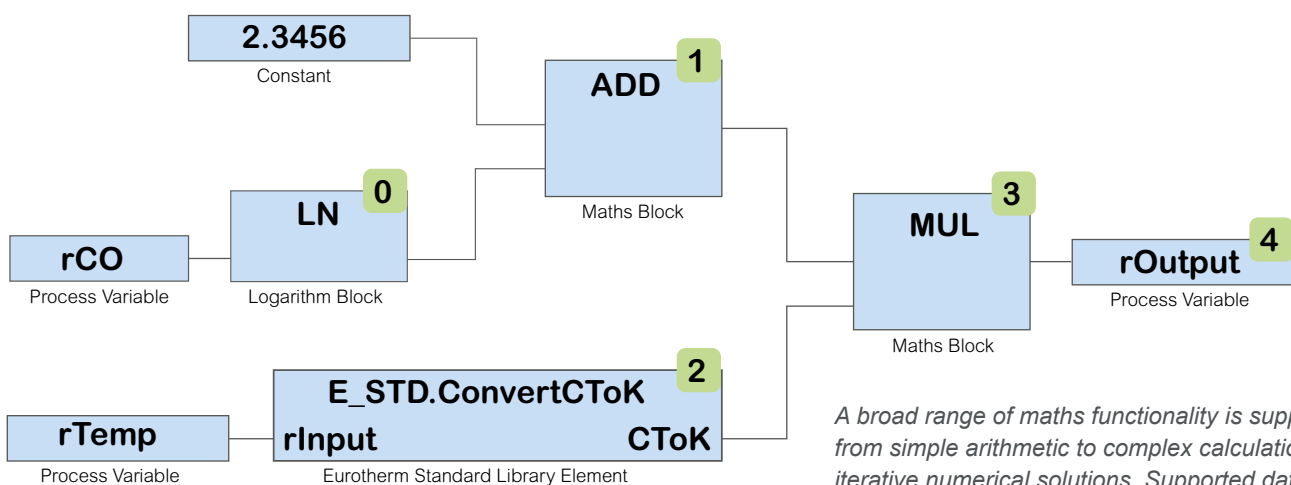
Features, Solutions and Services Included:

- Precise temperature control
- Accurate measurement
- Programmable logic control
- Maths equation calculation
- Ethernet communications
- Local display

“The flexibility of programming in CODESYS® integrated development environment in combination with the precision control and maths functionality made E+PLC¹⁰⁰ the most convenient solution”.

OEM Engineer

Calculation Example: Online Compensation Factor



A broad range of maths functionality is supported, from simple arithmetic to complex calculations and iterative numerical solutions. Supported data types include integers (8, 16, 32 and 64 bit, signed and unsigned), and floating point real numbers (single and double precision).