Product Intro

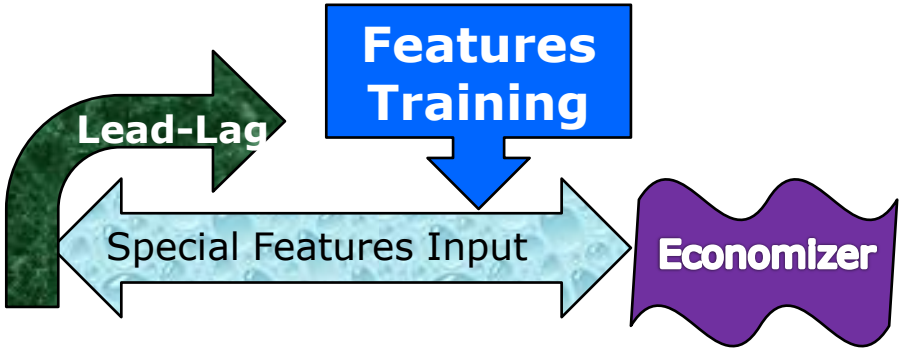
OS X2 V1.5

New features and functions

Contents

New Functions

V1.5



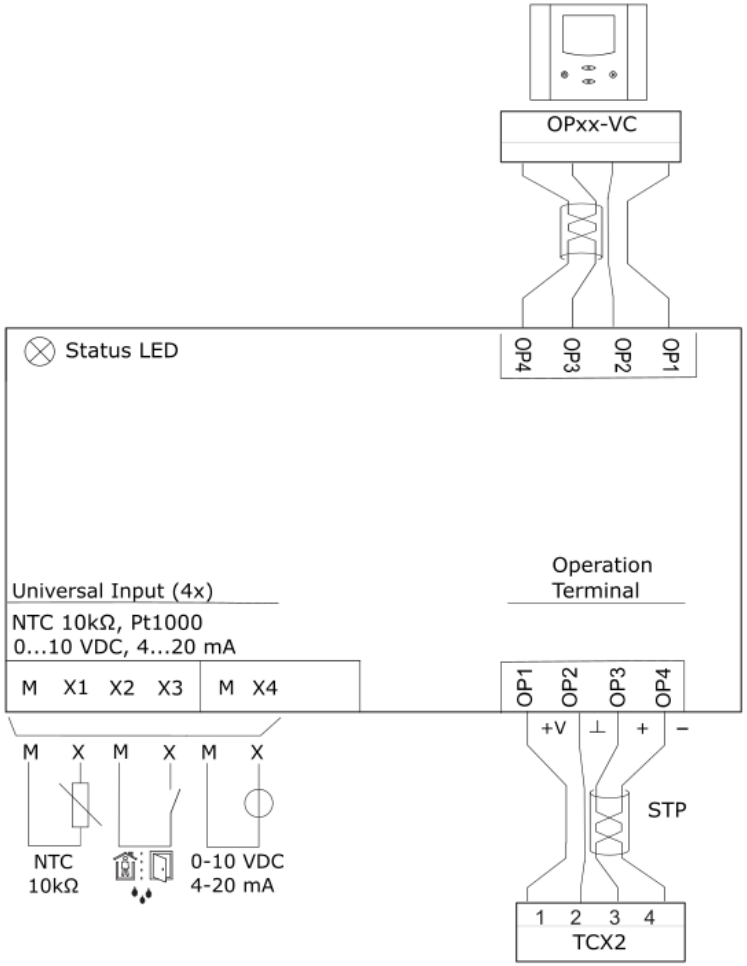
New Feature X2 V1.5

- AEI-4UI: Accessory for more inputs for all X2 products except TRI2.
- Extended delays for alarms (up to 252 hours)
- Intermediate alarms for all type of modulating outputs
- Control for 6 way valves
- Improved PI settings with integral reset time
- Step mode for analog outputs
- Enable controller through alarm or interlock
- Special functions on virtual inputs:
  - Absolute humidity
  - Superheat/Supercool table for R717 (Ammonia), R290 (Propane), R744 (CO2), R22, R134A, R507
  - Multiplication with factor
  - Improved handling of inputs with different range and multiplier

AEI-4UI

- Accessory for 4 additional inputs
- Inputs are Universal: NTC, mA, VDC
- Same housing as AER-D13, Jumper on back.
- AEI-4UI is in series with OPA2-VC
- Configuration as virtual input, select datatype with jumper and define with input parameter u5.

AEI-4UI



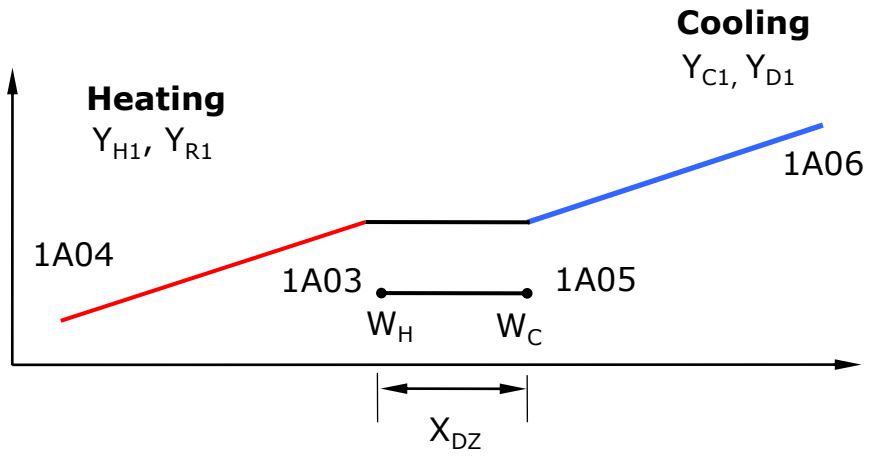
Overview

Alarms

- Alarms delay up to 252h
  - Usage: supervise general function of control. E.g. setpoint deviation.
  - If setpoint can not be met for over 5 days, something is wrong…
- Intermediate alarms
  - For AO, Floating and PWM outputs
  - If one alarm is both activated as 0% and 100% alarm, an intermediate position can be defined: A15 and D10
- Enable controller with FU1 with alarms
  - By assigning an alarm or interlock to 1FU8, the controller may now be activated through an alarm.
  - Usage: Time schedule override button

Control of 6-way valve

- One sequence may be reversed while the other operates normal.
- This will set the off position at the minimum value of the last active sequence:
- Set minimum of cooling at 50%
- Set minimum of heating at 50% and maximum of heating at 0%



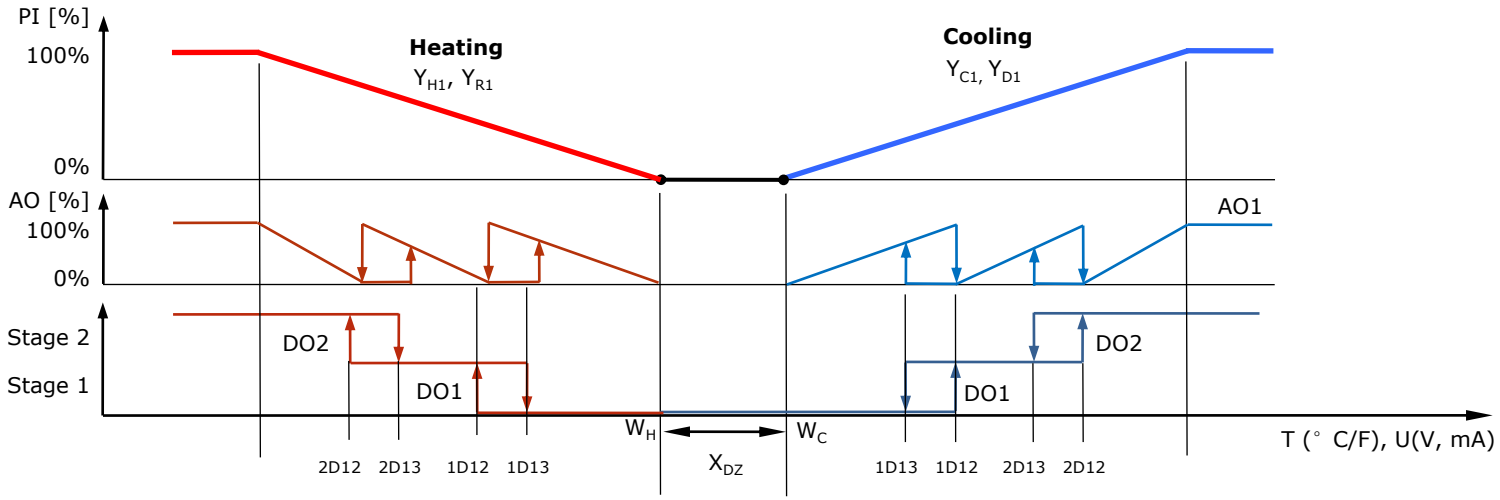
Reset time to define PI control

- The Reset Time is defined as the time required to obtain the same output as for the proportional action by using an integral action only.
- Formula for PI with Tn: Y = e/Xp + esum/Tn/Xp
- The reset time Tn instead of Ki can be defined by setting Ti to 0. In order for the reset time to work, a proportional band Xp is essential. If both Xp and Ti are set to 0, the controller will assume Xp to its maximum value for calculation purpose.

Recommended Values						
	heating (air)	heating (radiant)	humidifying	cooling	dehumidifying	pressure
P-band	2°C(4°F)	1.5°C(3°F)	10%	1.5°C(3°F)	10%	0
Measuring interval (Ti)	2	5	15	1	15	1
Integral gain (Ki)	0.2	0.1	0.1	0.2	0.1	0.3
Reset time (Tn) Ti = 0	9 min	60 min	27 min	6 min	27 min	14 s

Step mode for Analog outputs

- The analog output function checks if any binary outputs in PI mode are assigned to the same loop and sequence.
- It will then adjust its limits of the PI sequence based on those of the active binary output
- Used to optimize additional heat/cool stages



Special Features Input

- Different types can mix → AO, PI-Sequence, UI, VI, Fan, DO
- Different input types, ranges and multiplier can mix
- Calculation for Dew Point, Enthalpy, Absolute humidity
- Superheat/Supercool table for R717 (Ammonia), R290 (Propane), R744 (CO2), R22, R134A, R507
- Multiplication with factor

Overview

Quality – Innovation - Partnership