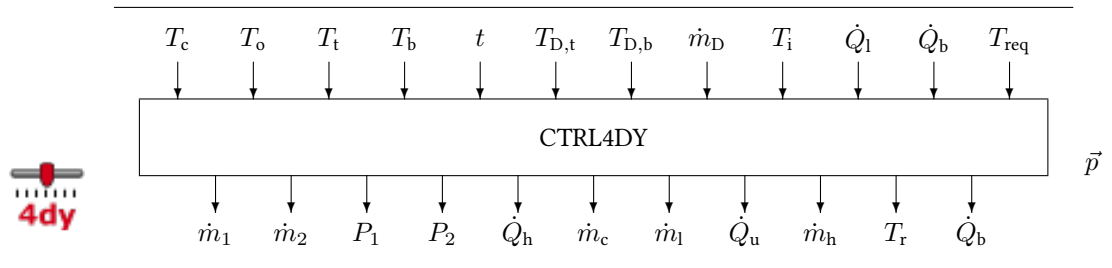


Block CTRL4DY

The CTRL4DY block simulates a real controller of a solar system of a solar driven absorption cooling machine including DHW and heating support.



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Function	st0039
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Inputs

- 1 Collector temperature / °C
- 2 Collector outlet temperature at HX / °C
- 3 Storage tank temperature at top node / °C
- 4 Storage tank temperature at bottem node / °C
- 5 Time in seconds / s
- 6 DHW storage tank temperature at top node / °C
- 7 DHW storage tank temperature at bottom node / °C
- 8 Required mass flow DHW / kg s^{-1}
- 9 Inlet temperature of cold water / kg s^{-1}
- 10 Heating load DHW / kW
- 11 Heating load building / kW
- 12 Required supply temperature heating system / °C

Outputs

- 1 Controlled collector mass flow primary pump / kg s^{-1}
- 2 Controlled collector mass flow secondary pump / kg s^{-1}
- 3 Electricity consumption primary collector pump / kW
- 4 Electricity consumption secondary collector pump / kW

- 5 Heating energy transferred to storage tank / kW
- 6 Charge mass flow DHW tank / kg s^{-1}
- 7 Load mass flow DHW tank / kg
- 8 Heating load DHW not covered / kW
- 9 Mass flow to heating system / kg s^{-1}
- 10 Return temperature from heating circuit / $^{\circ}\text{C}$
- 11 Heating energy not delivered by solar system / kW

Parameters

- 1 Nominal collector mass flow primary pump / kg s^{-1}
- 2 Nominal collector mass flow secondary pump / kg s^{-1}
- 3 Temperature hysteresis / K
- 4 Minimum operation time / s
- 5 Electricity consumption primary collector pump / kW
- 6 Electricity consumption secondary collector pump / kW
- 7 Control options for the collector pumps 0 - separate control primary and secondary pump 1 - common control primary and secondary pump
- 8 Charge mass flow DHW tank / kg s^{-1}
- 9 Supply water temperature / $^{\circ}\text{C}$
- 10 Heat capacity of water / $\text{kJ kg}^{-1} \text{K}^{-1}$
- 11 Temperature difference building heating circuit / K

Strings

None
