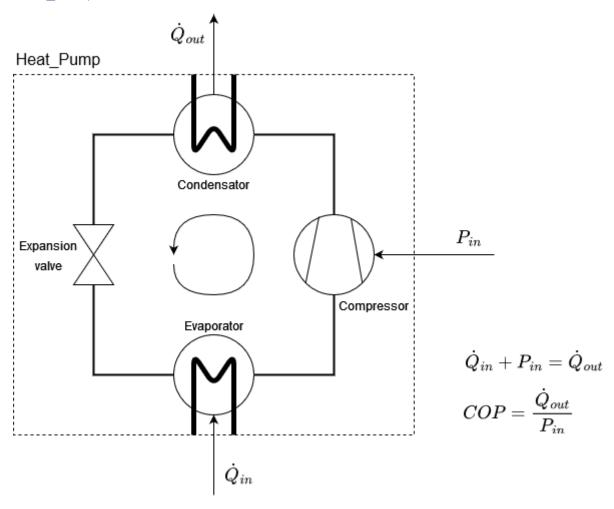
Equipment

Heat_Pump



Entity

KEY	VALUE	
id	urn:ngsi_ld: <system_name>:Heat_Pump:<int></int></system_name>	
type	Heat_Pump	
ontology	KEY	VALUE
	type	text
	value	Brick, extended by EBC
definition	KEY	VALUE
	type	text
	value	A device that transfers heat between spaces with the use of electrical energy, based on the refrigeration [vapor-compression] cycle.

Devices

Condenser – Thermal Power Sensor

KEY	VALUE
device_id	Heat_Pump_ <int>_Condenser_Thermal_Power_Sensor</int>
entity_name	urn:ngsi-ld: <system_name>:Heat_Pump:<int>:Condenser:Thermal_Power_Sensor</int></system_name>
entity_type	Thermal_Power_Sensor
definition	type: text, value: Measures the amount of instantaneous power consumed
isPartOf	type: Relationship,
	value: urn:ngsi-ld: <system_name>:Heat_Pump:<int></int></system_name>
dynamic_attrs	heatFlow, temperature

Evaporator – Thermal Power Sensor

KEY	VALUE
device_id	HeatPump_ <heat_pump_number>_Evaporator_Thermal_Power_Sensor</heat_pump_number>
entity_name	urn:ngsi-ld: <system_name>:Heat_Pump:<int>:Evaporator:Thermal_Power_Sensor</int></system_name>
entity_type	Thermal_Power_Sensor
definition	type: text, value: Measures the amount of instantaneous power consumed
isPartOf	type: Relationship, value: urn:ngsi-ld: <system_name>:Heat_Pump:<int></int></system_name>
dynamic_attrs	heatFlow, temperature

Compressor – Power Sensor

KEY	VALUE
device_id	HeatPump_ <heat_pump_number>_Compressor_Electrical_Power_Sensor</heat_pump_number>
entity_name	urn:ngsi-ld: <system_name>:Heat_Pump:<id>:Compressor:Electrical_Power_Sensor</id></system_name>
entity_type	Electrical_Power_Sensor
definition	type: text, value: Measures the amount of instantaneous power consumed
isPartOf	type: Relationship, value: urn:ngsi-ld: <system_name>:Heat_Pump:<int></int></system_name>
dynamic_attrs	power

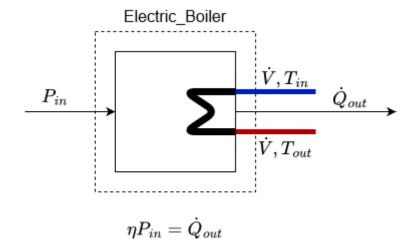
Compressor – Power Actuator (Command)

KEY	VALUE
device_id	HeatPump_ <int>_Compressor_Command</int>
entity_name	urn:ngsi-ld: <system_name>:Heat_Pump:<int>:Compressor:Command</int></system_name>
entity_type	Command
definition	type: text, value: A Command is an output point that directly determines the
	behavior of equipment and/or affects relevant operational points.
isPartOf	type: Relationship,
	urn:ngsi-ld: <system_name>:Heat_Pump:<int></int></system_name>
dynamic_attrs	power

${\bf Heat_Pump-Coefficient\ of\ performance}$

KEY	VALUE
device_id	HeatPump_ <heat_pump_number>_COP</heat_pump_number>
entity_name	urn:ngsi-ld: <system_name>:Heat_Pump:<int>:COP</int></system_name>
entity_type	COP
definition	type: text, value: Coefficient of performance
isPartOf	type: Relationship,
	urn:ngsi-ld: <system_name>:Heat_Pump:<int></int></system_name>
dynamic_attrs	COP

Electric_Boiler



Entity

KEY	VALUE		
id	urn:ngsi_ld:	<system_name>:Electric_Boiler:<int></int></system_name>	
type	Heat_Pump	Heat_Pump	
ontology	KEY	VALUE	
	type	text	
	value	Brick	
definition	KEY	VALUE	
	type	text	
	value	A closed, pressure vessel that uses electricity for heating water or other fluids to supply steam or hot water for heating, humidification, or other applications.	

Devices

Power Sensor

KEY	VALUE
device_id	Electric_Boiler_ <int>_Electrical_Power_Sensor</int>
entity_name	urn:ngsi-ld: <system_name>:Electric_Boiler:<int>:Electrical_Power_Sensor</int></system_name>
entity_type	Electrical_Power_Sensor
definition	type: text, value: Measures the amount of instantaneous power consumed
isPartOf	type: Relationship,
	value: urn:ngsi-ld: <system_name>:Electric_Boiler:<int></int></system_name>
dynamic_attrs	power

Power Actuator (Command)

KEY	VALUE
device_id	Electric_Boiler_ <int>_Power_Command</int>
entity_name	urn:ngsi-ld: <system_name>:Electric_Boiler:<int>:Power_In:Command</int></system_name>
entity_type	Command
definition	type: text, value: A Command is an output point that directly determines the
	behavior of equipment and/or affects relevant operational points.
isPartOf	type: Relationship, value: urn:ngsi-ld: <system_name>:Electric_Boiler:<int></int></system_name>
dynamic_attrs	power

Thermal Power Sensor

KEY	VALUE
device_id	Electric_Boiler_ <int>_Thermal_Power_Sensor</int>
entity_name	urn:ngsi-ld: <system_name>:Electric_Boiler:<int>:Thermal_Power_Sensor</int></system_name>
entity_type	Thermal_Power_Sensor
definition	type: text, value: Measures the amount of instantaneous power consumed
isPartOf	type: Relationship,
	value: urn:ngsi-ld: <system_name>:Electric_Boiler:<int></int></system_name>
dynamic_attrs	heatFlow, temperature

Water Flow Sensor

KEY	VALUE
device_id	Electric_Boiler_ <int>_Water_Flow_Sensor</int>
entity_name	urn:ngsi-ld: <system_name>:Electric_Boiler:<int>:Water_Flow_Sensor</int></system_name>
entity_type	Water_Flow_Sensor
definition	type: text, value: Measures the rate of flow of water
isPartOf	type: Relationship,
	value: urn:ngsi-ld: <system_name>:Electric_Boiler:<int></int></system_name>
dynamic_attrs	volumeFlow

Conversion Efficiency

KEY	VALUE
device_id	Electric_Boiler_ <int>_conversionEfficiency</int>
entity_name	urn:ngsi-ld: <system_name>:Electric_Boiler:<int>:conversionEfficiency</int></system_name>
entity_type	conversionEfficiency
definition	type: text, value: The percent efficiency of the conversion process (usually to power
	or energy) carried out by the entity
isPartOf	type: Relationship, value: urn:ngsi-ld: <system_name>:Electric_Boiler:<int></int></system_name>
dynamic_attrs	conversionEfficiency

Natural_Gas_Boiler