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Part 4: Control applications

Systèmes d'automatisation et de contrôle des bâtiments (BACS) —

Partie 4: Applications de contrôle

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Foreword

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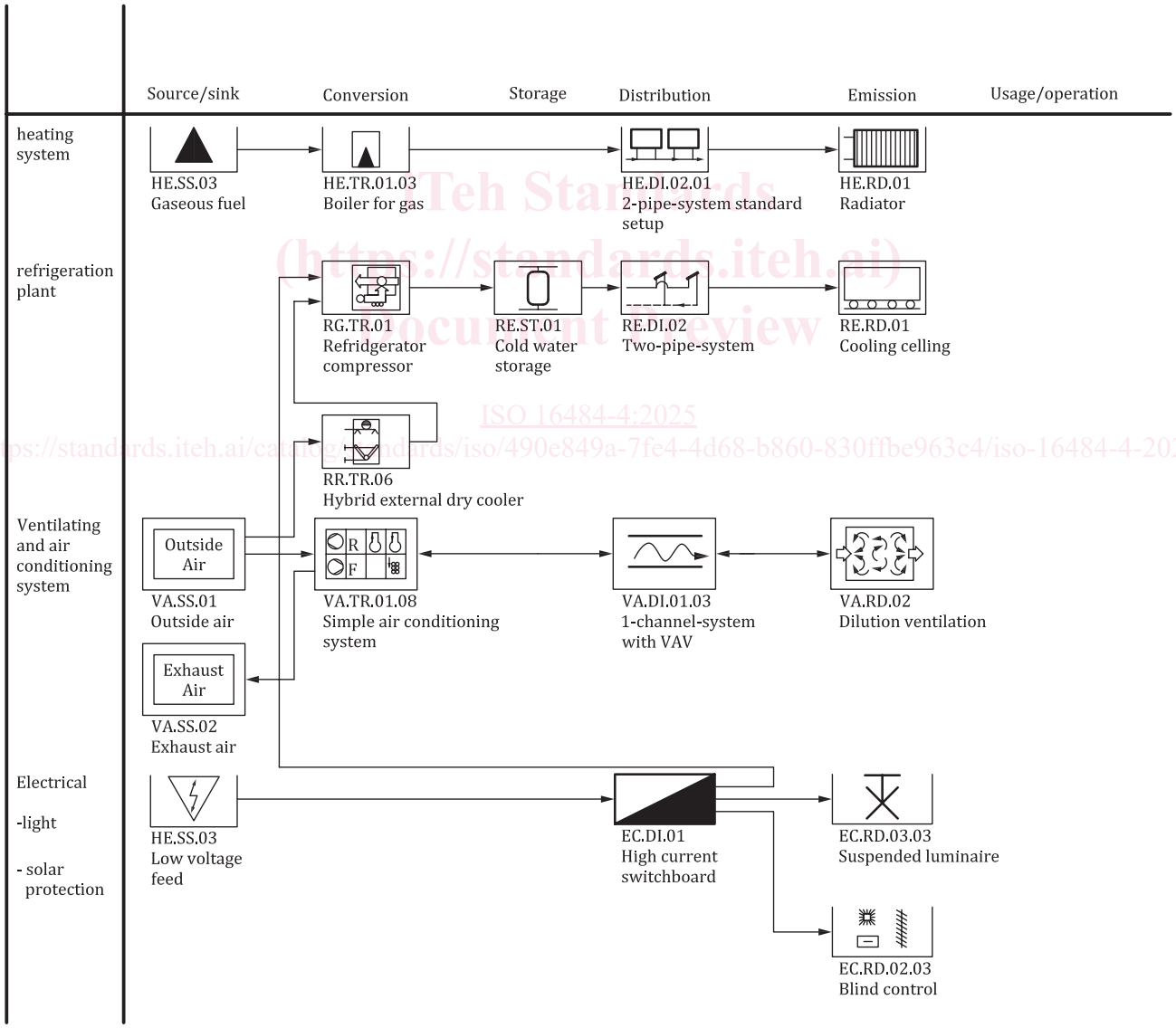
Introduction

Buildings are built and operated to serve a specific purpose, e.g. as an office workspace, a manufacturing floor, or a data centre. In each case, the usage of the space requires specific environmental conditions, e.g. temperature, light level or air quality.

Increasing the efficient usage of energy to provide these environmental conditions is a key aspect of building design as addressed in ISO 52120-1.

Energy efficiency requirements cannot be fulfilled by optimizing the primary systems of a building alone. A holistic view on the building and especially on the room control systems for lighting, solar protection and heating, ventilation and air conditioning (HVAC) is the basis for optimizing the energy efficiency of buildings. This requires integration of the room and building controls and management systems from the design phase through installation and commissioning to the building operation.

The planning process for the technical infrastructure of a building and its spaces includes several steps starting with a rough set of requirements. With each step in the planning process the design becomes more detailed. Firstly, basic design choices or decisions allow for a budget estimate. These first design choices can be documented as depicted in Figure 1.



SOURCE SN 502411:2016 / SIA 411:2016

Figure 1 — Example for documentation of design choices for technical infrastructure of a building