

HVAC control

Application: medium to large size buildings

Reduce your electrical consumption by controlling your HVAC system's motors

“ I want to reduce the amount of electricity my HVAC system uses by installing the most relevant control devices. ”

Install **TeSys U starter-controllers** to protect and control constant-load motors and **ATV variable speed drives** to control variable-load motors

Designed for constant loads, TeSys U intelligent starter-controllers offer control, protection, and measurement functions. When you install TeSys U units, you generate indirect savings by detecting abnormal operation and taking the appropriate corrective measures, and direct savings through lower consumption of the control and protection equipment. TeSys U electronics are designed to cut consumption four-fold as compared to traditional electro-mechanical solutions.

TeSys U offers protection while constantly measuring motor current so that the following information can be transmitted via the communication module (Modbus, CanOpen, Profibus, DeviceNet, Asl, or Advantys STB) or by direct display via the multifunction control unit:

- Operating faults, so that corrective measures can be taken quickly
- Overheating, to avoid breakdowns

Designed for variable loads, ATV variable speed drives ensure that consumption is scaled to match motor needs at all times. Variable speed drives generate significant direct savings over direct-start motors.

Solution

Benefits

For the user

> **Reduce electrical consumption by 20% for variable loads**

> **Reduce electrical consumption of the protection and control system by 75% for constant loads**

> **Save up to 20% space due to TeSys U compact unit size**

> **Lower the amount of heat generated by TeSys U motor start-up by up to 75%, reducing the need for cooling fans in the enclosure**

> **ROI in under two years**

For professionals

+ Design

- Simple, innovative solution
- TeSys U: fewer part numbers due to modular base with plug-and-play options for easy preparation, selection, and ordering

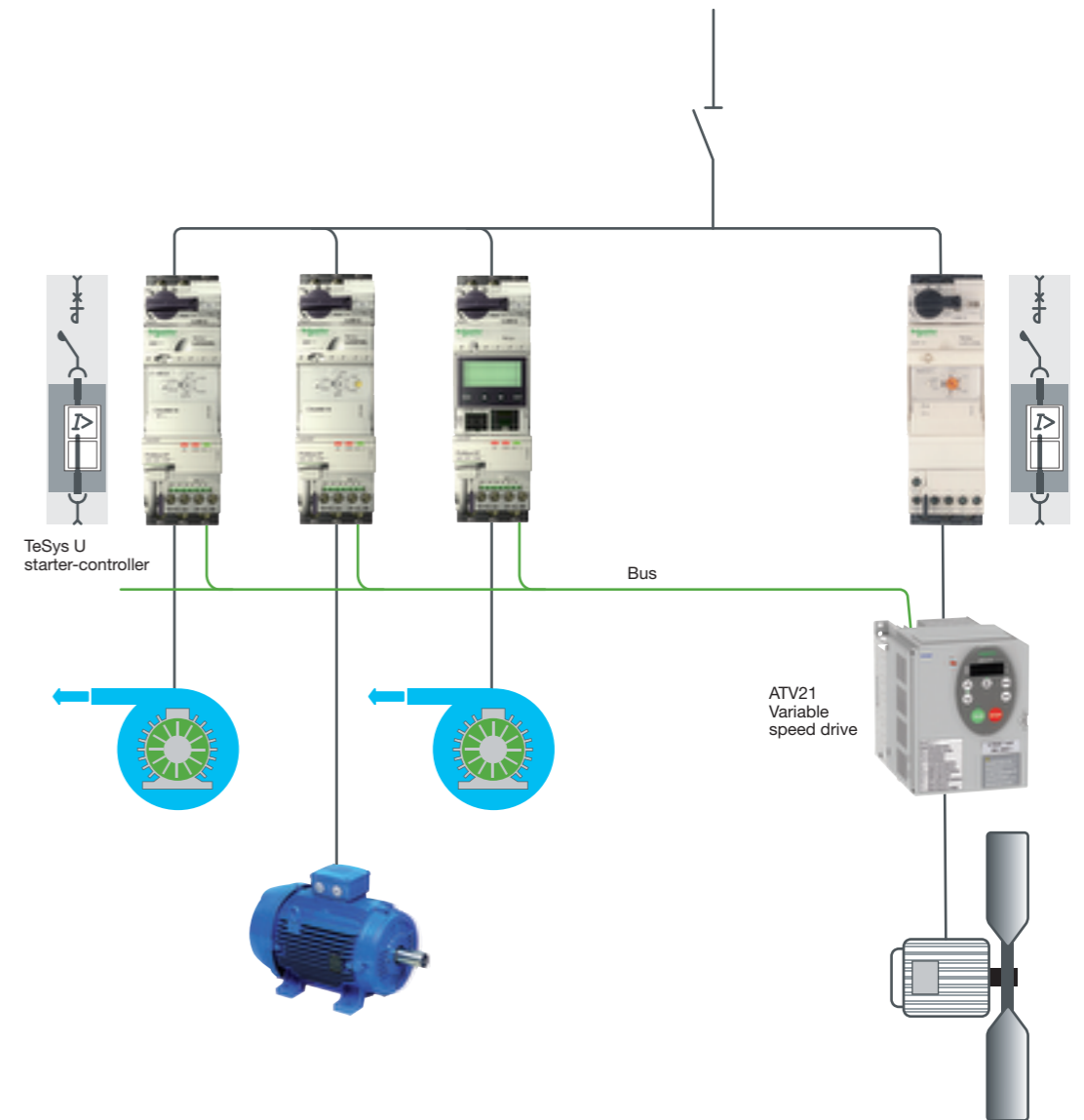
+ Installation

- Easy upgrades: during installation, each motor can be adjusted to nominal speed; TeSys U can be easily customized without tools or wiring
- Save time: with TeSys U there is no need for wiring between the contactor and the circuit breaker; it is easy to integrate into the HVAC system via RJ45 Modbus connectors

+ Maintenance

- Plug-and-play makes changing the control unit faster and easier, minimizing downtime
- Access motor settings (heat, overloads, breakdown log) at all times to better avoid breakdowns
- TeSys U: highly modular design reduces spare parts stock tenfold

- Measure
- Reduce energy consumption
- Reduce energy costs



TeSys U offers a capacity of up to 32A/15 kW, and consists of

- One 45 mm power base:
 - Two ratings, reversing or non-reversing
 - Circuit-breaker function
 - Built-in interference suppression

- One of a choice of three clip-on units:
 - Standard CU for protection against overloads and short-circuits
 - Expandable CU plus alarm and fault differentiation
 - Multifunction CU for real-time control of motor load, local or remote troubleshooting, and settings

- One of a choice of three automation control modules:
 - Modbus, CanOpen, AS-Interface
 - Profibus DP, Ethernet, DeviceNet, Fipio, Interbus S via Advantys STB
 - Simple parallel link
 - Two optional 45-mm power functions:
 - Limiter-isolator
 - Changeover relay

