Incheon International Airport: Modern airline hub in the Asiatic Area

Totally Integrated Automation

Answers for industry.

SIEMENS

The requirements

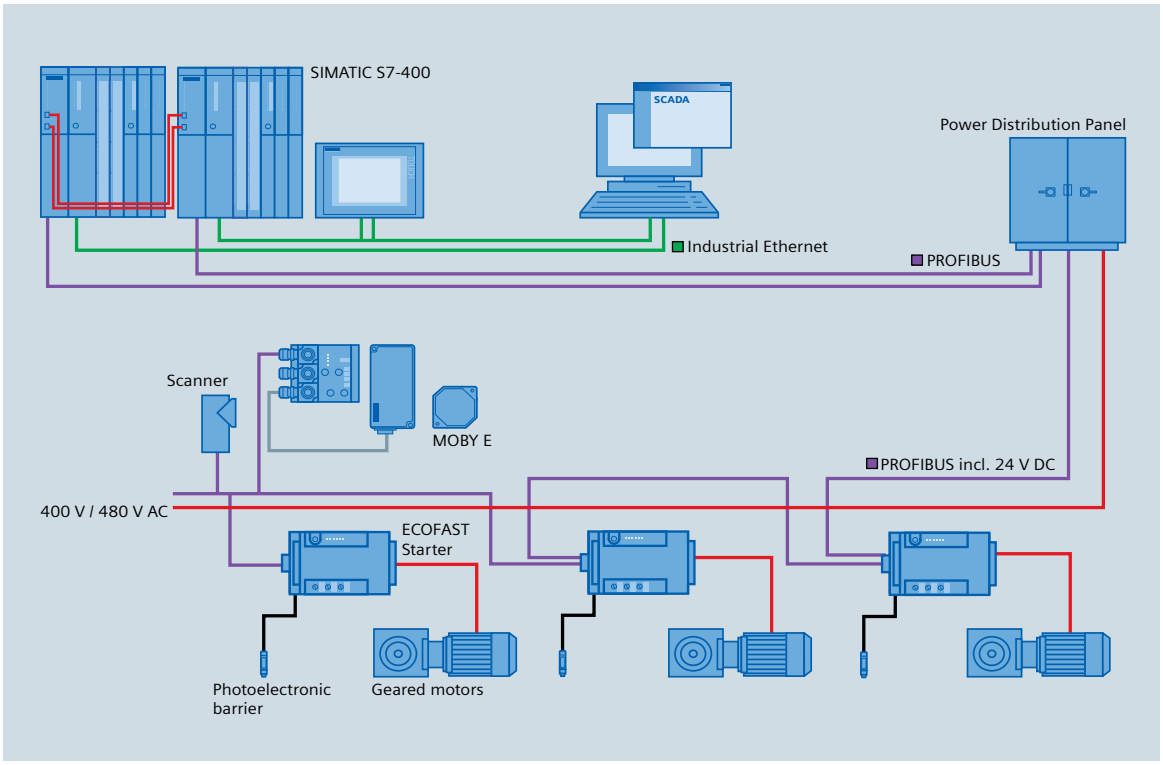
Incheon, the international airport of Seoul, is increasingly developing into one of the most modern airline hubs for millions of passengers in the Asiatic area. In response to the constantly rising number of passengers, it became essential to augment the existing baggage handling system. For the hardware and software to be used for this purpose, the customer specified several special requirements: maximum redundancy and flexibility were to ensure that the newly installed system would already be equipped to meet the challenges of the future.

The solution

Having been upgraded by Siemens, the baggage handling system is highly impressive in every respect and now includes the following features:

- 115 check-in desks
- 69 km of conveying systems
- Approx. 12,000 drives, consisting of highly efficient geared motors with efficiencies of 94 to 96 % – combined with distributed starters or converters
- Distributed control of the geared motors with the ECOFAST system – thus considerably reducing the amount of wiring and cabling
- 131 bar code scanners
- 503 RFID reader stations for tray identification
- 40 manual encoding stations

The distributed drive system is linked up to the control system via PROFIBUS, the world's number one field bus.



The advantages

With the new system, Incheon is now in a position to double its capacity – to more than 40 million passengers a year. For such installations, simulation ensures that all the different parts of the system function correctly. The technologies and components used undergo extensive tests in the globally unique Siemens Airport Center. As a result, the customer can rest assured in the knowledge that his requirements will be met completely from the very beginning – and, what's more, the entire project is completed within a considerably shorter time.

The solution based on Totally Integrated Automation is characterized by the integral nature of its components – from the control system to the implemented automation solution in the field. Moreover, it ensures that the high redundancy requirements are satisfied to the full as is the requirement for data exchange via the networks that are used.

MOBY E systems, a form of RFID technology from Siemens, are used for identifying baggage trays. Their outstanding reading quality reduces the ratio of mishandled baggage and also enables a higher sorting speed.

Other enormous advantages that are characteristic of Totally Integrated Automation include optimum harmonization of all components used and problem-free expansion of baggage handling capacity whenever it becomes necessary. During operation of the system, the customer can, of course, depend on competent and reliable service and support – 24 hours a day, seven days a week.

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