2 Application

NOTE

For reasons of clarity this manual has not been written to cover every detail about every type of the product and cannot take account of every possible eventuality in mounting, running and maintaining the product.

The list below does not contain all safety measures required to operate the equipment (unit, module) because special operating conditions can make further measures necessary.

If you would like more information or have special problems that are not dealt with in sufficient detail in this Manual you can request the information you require through your local Siemens office.

We should also like to point out that the content of this Manual is not part of a previous or existing agreement, undertaking or legal contract nor is it intended to modify any of these.
Siemens is only bound by the pertinent sales contract, which also contains the complete and exclusive warranty conditions. These contractual warranty conditions are neither extended nor restricted by anything stated in this Manual.

Warning

While electrical equipment is in use, certain parts of this equipment necessarily carry a dangerous voltage. Serious injury or material damage can therefore result if proper measures are not taken.

- Before making any connections of any type, the equipment must be earthed through the protective earth terminal.
- Dangerous voltages can be present in all parts of the circuit which are connected to the power supply.
- Even after the power supply has been disconnected dangerous voltages can still be present in the equipment (capacitor charges).
- Equipment containing current transformer circuits must not be operated open.
- The limit values stated in the manual or instruction manual must not be exceeded, even during testing and commissioning.
- Only qualified personnel must work on the equipment.
  Safe and reliable operation of this equipment can only be ensured with proper transport, correct storage, assembly and mounting and careful operation and maintenance.

QUALIFIED PERSONNEL

Qualified personnel are those who are familiar with the assembly, mounting, commissioning and operation of the product and who possess the qualifications to perform their task, such as

- Training or instruction and/or authorization to switch on and off, enable, earth and label circuits and units/systems in accordance with the safety standards.
- Training or instruction in the care and use of the appropriate safety equipment in accordance with the safety standards.
- Training in first aid.

Caution!

Never insert or remove modules under power! First put the miniature slide switch on the power supply module into the O OFF position.

2.1 Application

The microcomputer–controlled 8TK switchgear interlock units are used to control and interlock electrically operated switchgear. They are suitable for installation in the front panels of bays in medium–voltage switchyards and for installation in operating cubicles of high-voltage indoor or outdoor switchyards of all current types and voltage levels.

The prerequisite for reliable switchgear interlocking is precise feedback of the switch position of the switching device. Switching operations can be performed manually and locally directly on the switchgear interlock unit or electrically from a remote or local control point via the telecontrol inputs of the switchgear interlock unit.

2.2 Features

- digital feeder interlocking, i.e. internal interlocking of the switchgear in the microcomputer of the feeder
- digital switchyard interlocking, i.e. interlocking of all external bays and switching devices in the microcomputer of the master unit
- standardized 902 packaging system
- modular structure with PCBs in double-height Eurocard format
- easy adaptation of the switchgear interlocking unit to the configuration of the bay and switchyard
- variable feeder control image to represent all feeder combinations in the switchyard configuration
- expandable for bays with up to 14 switching devices and switchyards with up to 33 bays
- small mounting dimension and low weight
- minimum cabling between switchgear interlock units
- simple extension of feeders or switchyards
- self–monitoring for the microcomputer
- testing of all input and output circuits
- display and signalling of internal faults
- display of switching failure
- monitoring of switchgear operating time
- indication and display of "circuit-breaker trip"

As of 10.93, the additional functions are available:

- coupling of two master units for up to 64 bays
- blocking contact for protection OPEN of two bus–ties (bus–tie OPEN disable)
- telecontrol voltages 24 V DC to 250 V DC
- separate potentials for indications (status, fault indications)
- remote interlock cancellation of keyswitches S1 to S4
- additional indication contact S5 remote
- manual control module possible only with keyswitch S1
- decoupling diodes in the feedback circuits (interface and control module)
- extended software functions