

SIPROTEC 7VE51 Paralleling Device



Fig. 11/106 SIPROTEC 7VE51 paralleling device

Description

The numerical SIPROTEC 7VE51 paralleling device is used to synchronize networks and generators.

In the operating mode “Paralleling of synchronous networks”, the frequency difference measurement is performed with extremely high accuracy. If no frequency difference is detected during an extended period of time, then the networks are considered synchronous and a larger switching angle can be permitted.

When synchronizing generators, it is advantageous to automatically adjust the speed to the network frequency and the generator voltage to the network voltage. For this purpose, a model with integrated frequency and voltage matching is available.

The paralleling device can be delivered in two versions: The 7VE511 unit is the smaller version and contains 2 parameter blocks for the synchronizing points (circuit-breakers) but does not include a frequency matching unit.

The 7VE512 unit is the larger version and contains 6 parameter blocks for the synchronizing points (circuit-breakers) and one integrated frequency and voltage matching unit.

Function overview

Version 7VE511

- For paralleling asynchronous or synchronous voltages sources with two selectable parameter blocks

Version 7VE512

- For paralleling asynchronous or synchronous voltages sources with six selectable parameter blocks
- With frequency balancer
- With voltage balancer

Features

- Dual-channel design of measured value processing with two different and logically independent methods
- Remote switch-over of setting parameter blocks for use on several different paralleling locations possible

Monitoring functions

- Operational measured values
- Self-supervision of the relay
- 30 event logs
- 3 synchronizing logs

Hardware

- 4 or 8 binary inputs
- 5 or 9 binary output relays

Front design

- PC front port for convenient relay setting
- 8 or 16 LEDs for local indication

Selection and ordering data

Description	Order No.
7VE51 paralleling device	7VE51□0-□□A□0-0A
<i>Versions</i>	
Without frequency and voltage matching units	1
With 2 selectable parameter blocks in housing 7XP2030	
With frequency and voltage matching units	2
With 6 selectable parameter blocks in housing 7XP2040	
<i>Rated auxiliary voltage</i>	
24, 48 V DC	2
60, 110, 125 V DC	4
220, 250 V DC	5
<i>Unit version</i>	
For panel flush mounting or cubicle mounting	C
For panel surface mounting	D
For panel flush mounting or cubicle mounting, without glass cover	E
<i>Language / Frequency</i>	
English, 50/60 Hz	1

Accessories

<i>DIGSI 4</i>	
Software for configuration and operation of Siemens protection units running under MS Windows (version Windows 95 and higher) device templates, Comtrade Viewer, electronic manual included as well as "Getting started" manual on paper, connecting cables (copper)	
<i>Basis</i>	
Full version with license for 10 computers, on CD-ROM (authorization by serial number)	7XS5400-0AA00
<i>Demo</i>	
Demo version on CD-ROM	7XS5401-0AA00
<i>Professional</i>	
<i>Complete version:</i>	
DIGSI 4 Basis and additionally SIGRA (fault record analysis), CFC Editor (logic editor), Display Editor (editor for default and control displays) and DIGSI 4 Remote (remote operation)	7XS5402-0AA00
<i>Connecting cable</i>	
(contained in DIGSI 4, but can be ordered additionally) Between PC/notebook/laptop (9-pin connector) and protection unit (25-pin connector)	7XV5100-2
<i>Manual for 7VE51</i>	
English	C53000-G1176-C80-7