

Reyrolle Product Introduction

Reyrolle – Solution for Distribution Grids

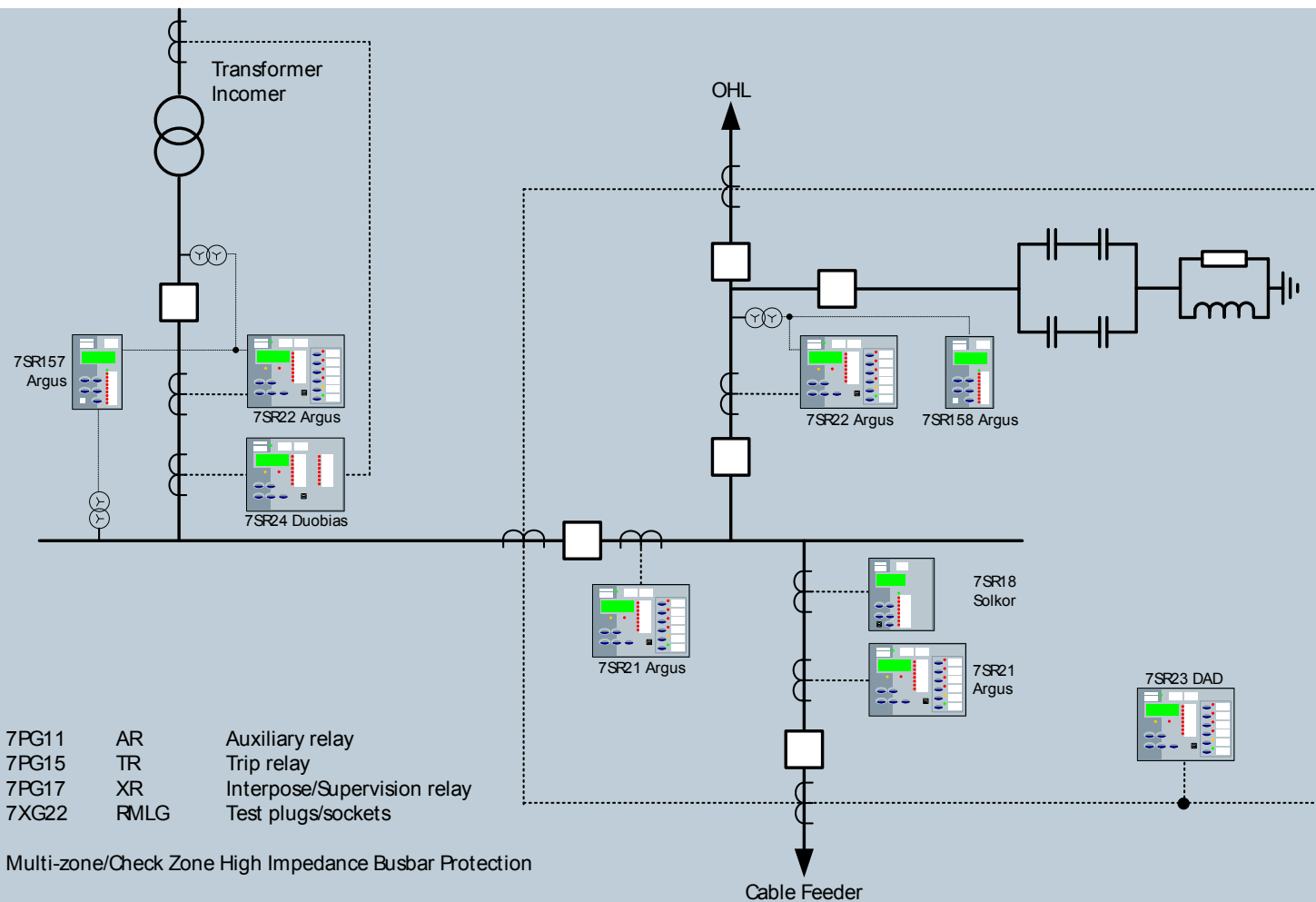
SIEMENS

| | | | | |
|--|--|--|---------------------------|-------------------------------------|
| Overcurrent and Earth Fault Protection | 7SR10, 7SR45 7SR110 & 7SR120 7SR210 & 7SR220 |  | 7SR191 | Capacitor Bank Protection |
| Line Differential & Phase Comparison | 7PG21, 7SG18, 7SR18 | | 7SR23, 7PG23 | High Impedance Protection |
| Arc Protection | 7XG31 | | 7SR158 | Voltage & Frequency |
| Transformer Protection and Control | 7SR242 | | 7SR157, 7SR220, 7SR224 | Auto-Reclose & Check Synchronizing |
| Motor Protection | 7SR105 & 7SR17 | | 7PG11 to 7PG17 | Auxiliaries, Trip Relays and Timers |
| | | | | |

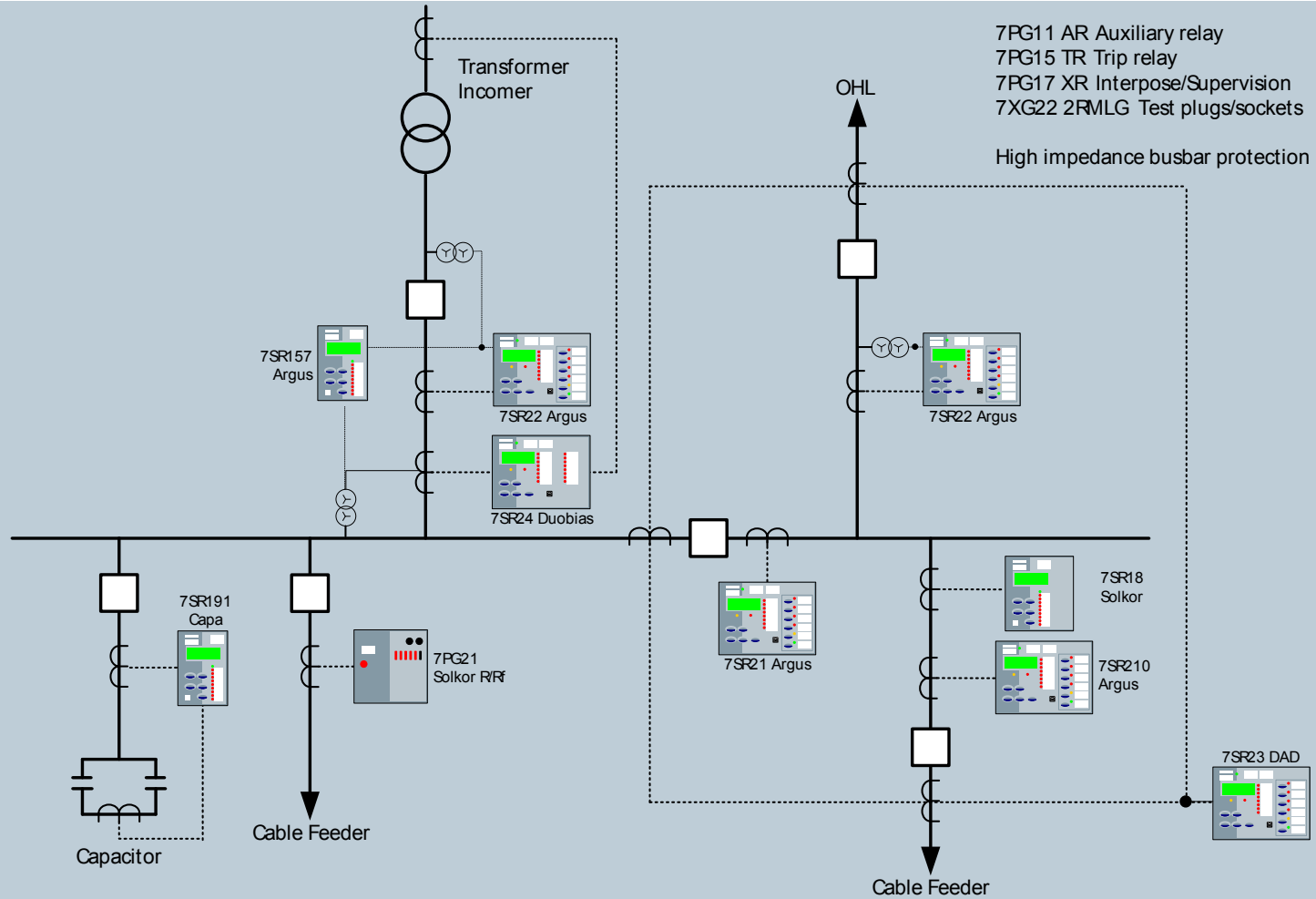
Test Equipment: 7XG222, 7XG224, 7XG225, 7XG226

Easy engineering with Reydisp

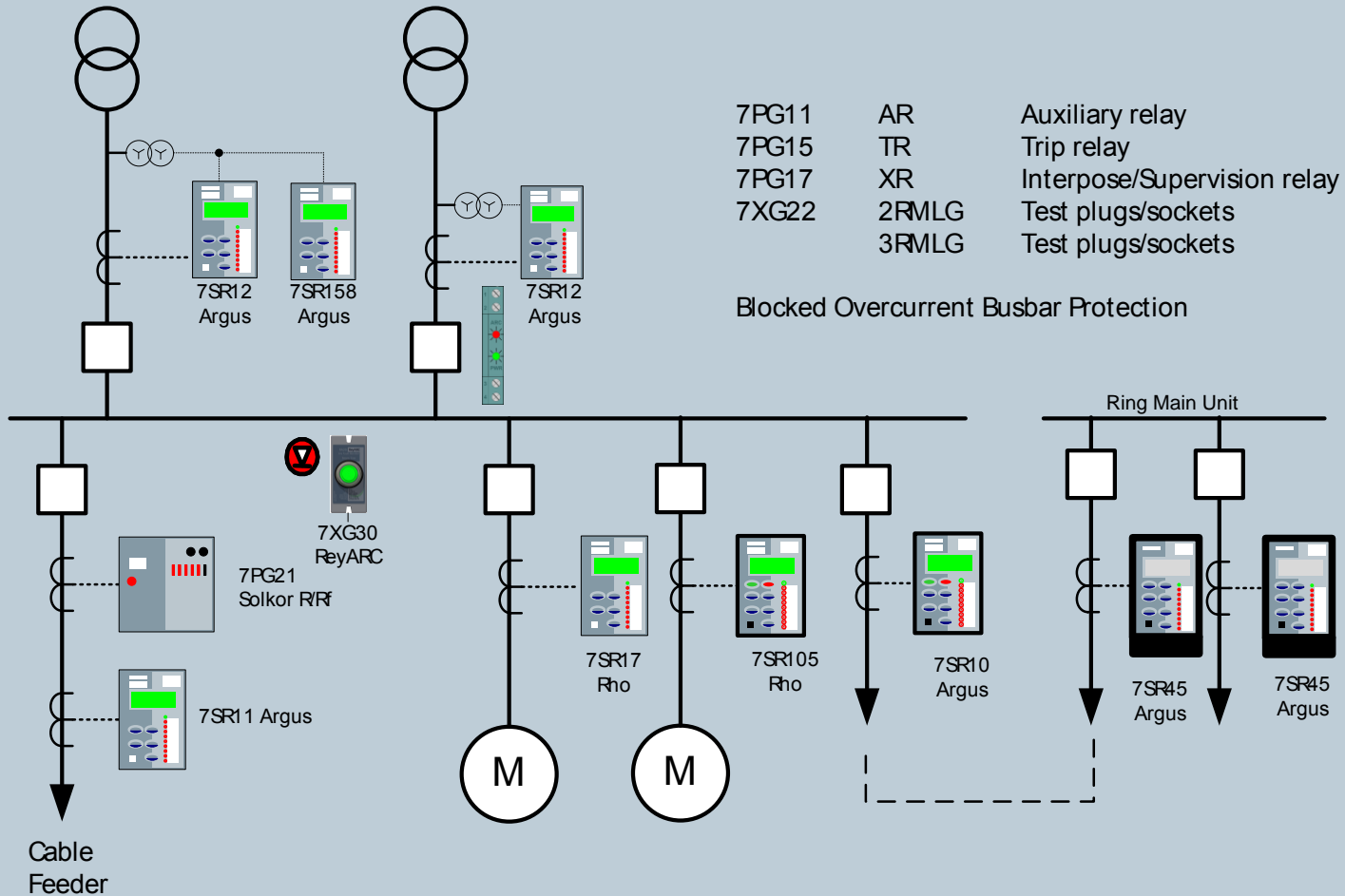
SPDL Introduction – Sub-Transmission



SPDL Introduction – Distribution



SPDL Introduction – Industrial



Reyrolle Platform Overview

7SR Fixed Case Overview

SIEMENS



Time-Overcurrent Protection



CT Powered Overcurrent Protection



Motor Protection



Reyrolle Platform Overview

7SR1* Overview

SIEMENS



Time-Overcurrent Protection



Capacitor Bank Protection



Directional Overcurrent Protection



Motor Protection



Voltage & Frequency Protection



Synchronising Relay



Line Differential Relay

Reyrolle Platform Overview

7SR2* Overview

SIEMENS

7SR21

Time-Overcurrent Protection

7SR23

High Impedance Protection

7SR22

Directional Overcurrent Protection

7SR24

Transformer Protection

7SR224

Recloser Controller



Product Introduction

7SR10 (Argus) Overcurrent Protection; non-directional

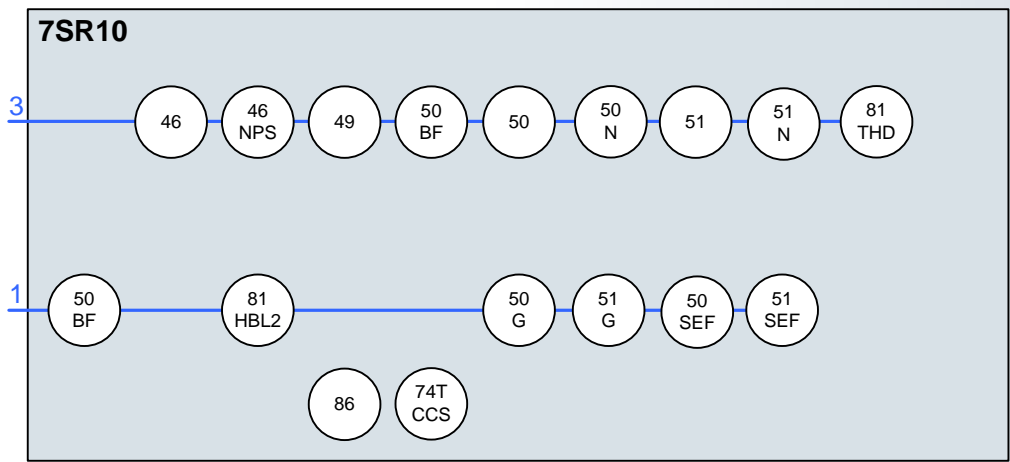


Overcurrent (non-directional) based protection / backup protection for all plant items :- cables, overhead lines, transformers, reactors etc.



- Housing I/O & Fascia options;**
- Size 4 = 4 CT / 3 BI / 3 BO / 10 LEDs / Open/Close
 - Size 4 = 4 CT / 6 BI / 6 BO / 10 LEDs / Open/Close
- Communication Interface Options;**
- Rear RS485 Electrical
- Power Supply Options;**
- AC/DC 60-240V
 - DC 24-60V

- Protection Functions;**
- 46NPS Negative Phase Sequence OC
 - 49 Thermal Overload
 - 50 Instantaneous Ph Fault OC
 - 50BF CB Fail Monitoring
 - 50G/50N Instantaneous EF
 - 50SEF Instantaneous Sensitive EF
 - 51 Time Delayed Ph Fault OC
 - 51G/51N Time Delayed EF
 - 51SEF Time Delayed Sensitive EF
 - 74T&C Trip & Close Circuit Supervision
 - 51C Cold Load Pickup
 - 79 Auto Reclose
 - 81HBL2 Inrush Restraint
 - 81THD Total Harmonic Distortion
 - 86 Lockout



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Product Introduction

7SR11 (Argus) Overcurrent Protection; non-directional

Overcurrent (non-directional) based protection / backup protection for all plant items :- cables, overhead lines, transformers, reactors etc.



Housing I/O & Fascia options;

- E4 = 1 CT / 3 BI / 5 BO / 10 LEDs
- E4 / E6 = 4 CT / 3 BI / 5 BO / 10 LEDs
- E4 / E6 = 4 CT / 6 BI / 8 BO / 10 LEDs

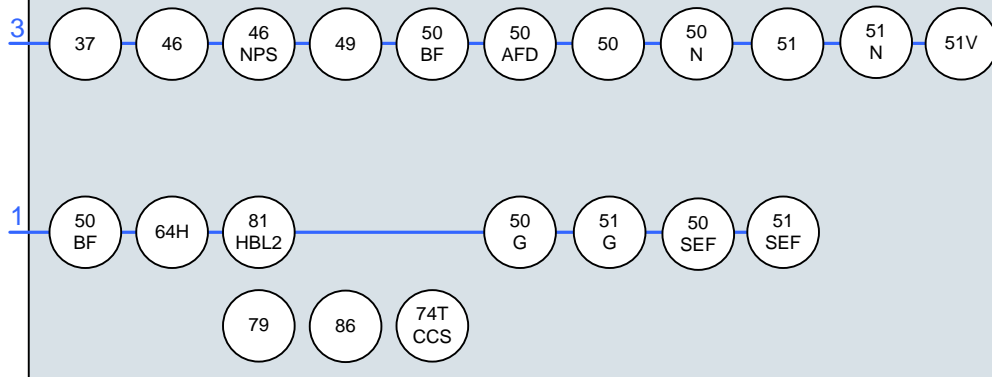
Communication Interface Options E6 case;

- Electrical RJ45 Ethernet (x2) – for IEC61850
- F/O LC Ethernet (x2) – for IEC61850

Protection Functions;

- 37 Undercurrent
- 46BC Broken Conductor/Load Unbalance
- 46NPS Negative Phase Sequence OC
- 49 Thermal Overload
- 50AFD Arc Flash Detector
- 50BF CB Fail Monitoring
- 50 Instantaneous Ph Fault OC
- 50G/50N Instantaneous EF
- 50SEF Instantaneous Sensitive EF
- 51 Time Delayed Ph Fault OC
- 51G/51N Time Delayed EF
- 51SEF Time Delayed Sensitive EF
- 60CTS CT Supervision
- 64H High Impedance REF
- 74T&C Trip & Close Circuit Supervision
- 51C Cold Load Pickup
- 81HBL2 Inrush Restraint
- 79 Auto Reclose
- 86 Lockout

7SR11



Product Introduction

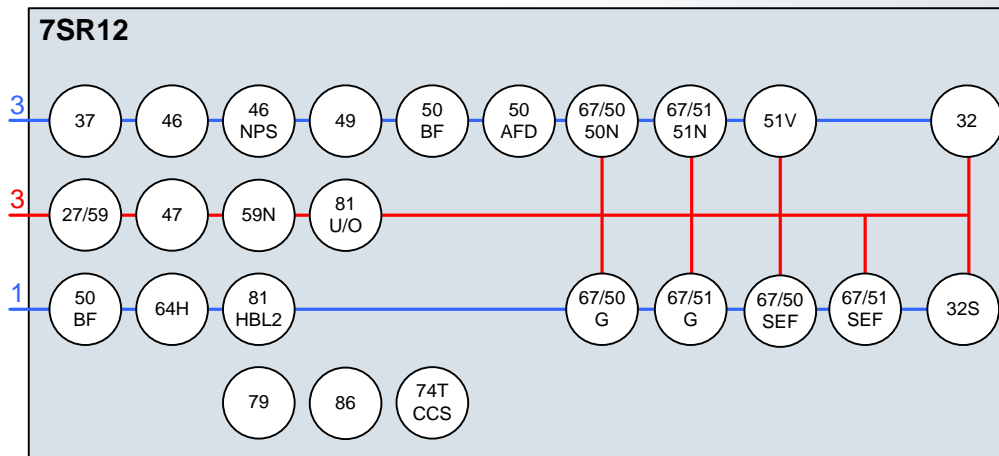
7SR12 (Argus) Overcurrent Protection; directional



Overcurrent (directional) based protection / backup protection for all plant items :- cables, overhead lines, transformers, reactors etc.



- Housing I/O & Fascia options;**
- E4 = 1 CT / 3 VT / 3 BI / 5 BO / 10 LEDs
 - E4 / E6 = 4 CT / 3 VT / 3 BI / 5 BO / 10 LEDs
 - E4 / E6 = 4 CT / 3 VT / 6 BI / 8 BO / 10 LEDs
- Communication Interface Options E6 case;**
- Electrical RJ45 Ethernet (x2) – for IEC61850
 - F/O LC Ethernet (x2) – for IEC61850



Protection Functions;

- 27/59 Under/Over Voltage
- 32 Power
- 32S Sensitive Power
- 37 Undercurrent
- 46BC Broken Conductor/Load Unbalance
- 46NPS Negative Phase Sequence OC
- 47 Negative Phase Sequence V
- 49 Thermal Overload
- 50AFD Arc Flash Detector
- 50BF CB Fail Monitoring
- 51V Voltage Controlled OC
- 59N Neutral Voltage Displacement
- 60CTS CT Supervision
- 60VTS VT Supervision
- 64H High Impedance REF
- 67/50 Dir-Instantaneous Ph OC
- 67/50G/50N Dir-Instantaneous EF
- 67/50SEF Dir-Instantaneous SEF
- 67/51 Dir-Time Delayed Ph OC
- 67/51G/51N Dir-Time Delayed EF
- 67/51SEF Dir-Time Delayed SEF
- 74T&C Trip & Close Circuit Supervision
- 51C Cold Load Pickup
- 81HBL2 Inrush Restraint
- 81U/O Under/Over Frequency
- 79 Auto Reclose
- 86 Lockout

Product Introduction

7SR21 (Argus) Overcurrent Protection; non-directional

Overcurrent (non-directional) based protection / backup protection for all plant items :- cables, overhead lines, transformers, reactors etc.



Housing I/O & Fascia options;

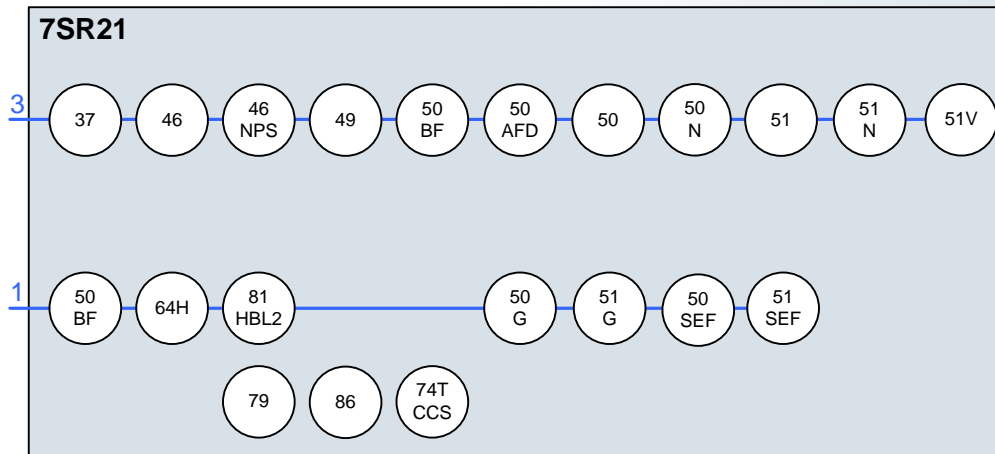
- E6 = 4 CT / 9 BI / 8 BO / 8 LEDs
- E8 = 4 CT / 19 BI / 16 BO / 16 LEDs
- E8 = 4 CT / 19 BI / 16 BO / 8 LEDs / 6 KEYS
- E12 = 4 CT / 39 BI / 16 BO / 32 LEDs
- E12 = 4 CT / 39 BI / 16 BO / 16 LEDs / 12 KEYS

Communication Interface Options;

- F/O ST connectors (x2) & IRIG-B
- RS485 & IRIG-B
- RS232 & IRIG-B
- Electrical RJ45 Ethernet (x2) – for IEC61850
- F/O LC Ethernet (x2) – for IEC61850

Protection Functions;

- 37 Ph Undercurrent
- 46BC Broken Conductor/Load Unbalance
- 46NPS Negative Phase Sequence OC
- 49 Thermal Overload
- 50AFD Arc Flash Detector
- 50BF CB Fail Monitoring
- 50 Instantaneous Ph Fault OC
- 50G/50N Instantaneous EF
- 50SEF Instantaneous Sensitive EF
- 51 Time Delayed Ph Fault OC
- 51G/51N Time Delayed EF
- 51SEF Time Delayed Sensitive EF
- 60CTS CT Supervision
- 64H High Impedance REF
- 74T&C Trip & Close Circuit Supervision
- 51C Cold Load Pickup
- 81HBL2 Inrush Restraint
- 79 Auto Reclose
- 86 Lockout



Product Introduction

7SR22 (Argus) Overcurrent Protection; directional

Overcurrent (directional) based protection / backup protection for all plant items :- cables, overhead lines, transformers, reactors etc.



Housing I/O & Fascia options;

- E6 = 5 CT / 4 VT / 3 BI / 6 BO / 8 LEDs
- E8 = 5 CT / 4 VT / 13 BI / 14 BO / 16 LEDs
- E8 = 5 CT / 4 VT / 13 BI / 14 BO / 8 LEDs / 6 KEYS
- E12 = 5 CT / 4 VT / 33 BI / 14 BO / 32 LEDs
- E12 = 5 CT / 4 VT / 33 BI / 14 BO / 16 LEDs / 16 KEYS

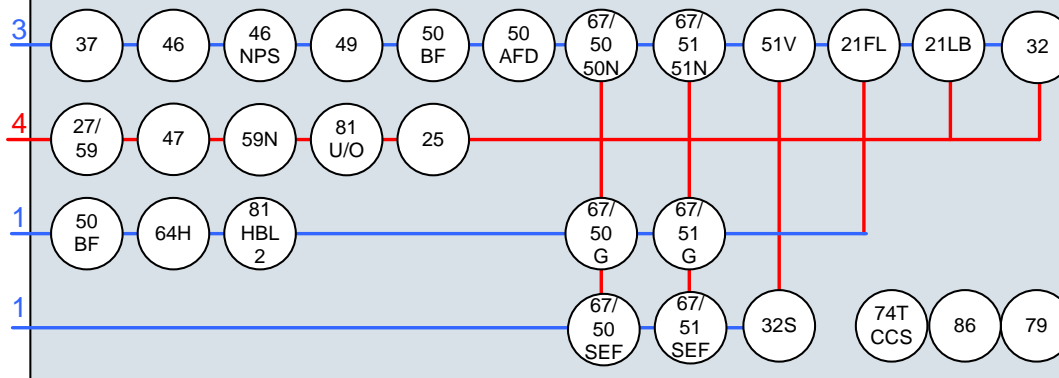
Communication Interface Options;

- F/O ST connectors (x2) & IRIG-B
- RS485 & IRIG-B
- RS232 & IRIG-B
- Electrical RJ45 Ethernet (x2) – for IEC61850
- F/O LC Ethernet (x2) – for IEC61850

Protection Functions;

- 21FL Fault Locator
- 21LB Load Blinder
- 25 Check Synchronising
- 27/59 Under/Over Voltage
- 32 Power
- 32S Sensitive Power
- 37 Undercurrent
- 46BC Broken Conductor/Load Unbalance
- 46NPS Negative Phase Sequence OC
- 47 Negative Phase Sequence V
- 49 Thermal Overload
- 50AFD Arc Flash Detector
- 50BF CB Fail Monitoring
- 51V Voltage Controlled OC
- 55 Power factor
- 59N Neutral Voltage Displacement
- 60CTS CT Supervision
- 60VTS VT Supervision
- 64H High Impedance REF
- 67/50 Dir-Instantaneous Ph OC
- 67/50G Dir-Instantaneous EF
- 67/50SEF Dir-Instantaneous SEF
- 67/51 Dir-Time Delayed Ph OC
- 67/51G Dir-Time Delayed EF
- 67/51SEF Dir-Time Delayed SEF
- 74T&C Trip & Close Circuit Supervision
- 51c Cold Load Pickup
- 81HBL2 Inrush Restraint
- 81HBL5 Overfluxing
- 81U/O Under/Over Frequency
- 79 Auto Reclose
- 86 Lockout

7SR22



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Product Introduction

7SR224 (Recloser M) Delayed Auto Reclose Relay

Overcurrent (directional) based protection / backup protection for all plant items :- cables, overhead lines, transformers, reactors etc.



Housing I/O & Fascia options;

- E10 = 4 CT / 13 BI / 14 BO / 8 LEDs / 12 KEYS
- E10 = 4 CT / 23 BI / 22 BO / 8 LEDs / 12 KEYS
- E10 = 4 CT / 33 BI / 14 BO / 8 LEDs / 12 KEYS
- E12 = 4 CT / 33 BI / 14 BO / 16 LEDs / 12 KEYS
- E12 = 4 CT / 33 BI / 30 BO / 16 LEDs / 12 KEYS
- E12 = 4 CT / 43 BI / 22 BO / 16 LEDs / 12 KEYS

Each of the above 4 VT or 6VT

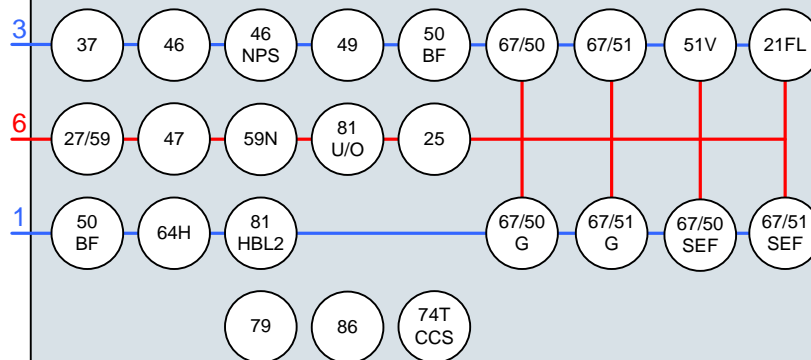
Communication Interface Options;

- F/O ST connectors (x2) & IRIG-B
- RS485 & IRIG-B
- RS232 & IRIG-B
- Electrical RJ45 Ethernet (x2) – for IEC61850
- F/O LC Ethernet (x2) – for IEC61850

Protection Functions;

- 21FL Fault Locator
- 25 Check Synchronising
- 27/59 Under/Over Voltage
- 37 Undercurrent
- 46BC Broken Conductor/Load Unbalance
- 46NPS Negative Phase Sequence OC
- 47 Negative Phase Sequence V
- 49 Thermal Overload
- 50BF CB Fail Monitoring
- 51V Voltage Controlled OC
- 59N Neutral Voltage Displacement
- 60CTS CT Supervision
- 60VTS VT Supervision
- 64H High Impedance REF
- 67/50 Dir-Instantaneous Ph OC
- 67/50G Dir-Instantaneous EF
- 67/50SEF Dir-Instantaneous SEF
- 67/51 Dir-Time Delayed Ph OC
- 67/51G Dir-Time Delayed EF
- 67/51SEF Dir-Time Delayed SEF
- 74T&C Trip & Close Circuit Supervision
- 51c Cold Load Pickup
- 81HBL2 Inrush Restraint
- 81U/O Under/Over Frequency
- 79 Auto Reclose

7SR224



Product Introduction

7SR45 (Argus) CT Powered Overcurrent Protection; non-directional

SIEMENS

Overcurrent (non-directional) based protection for all plant items :- Ring Main Units.

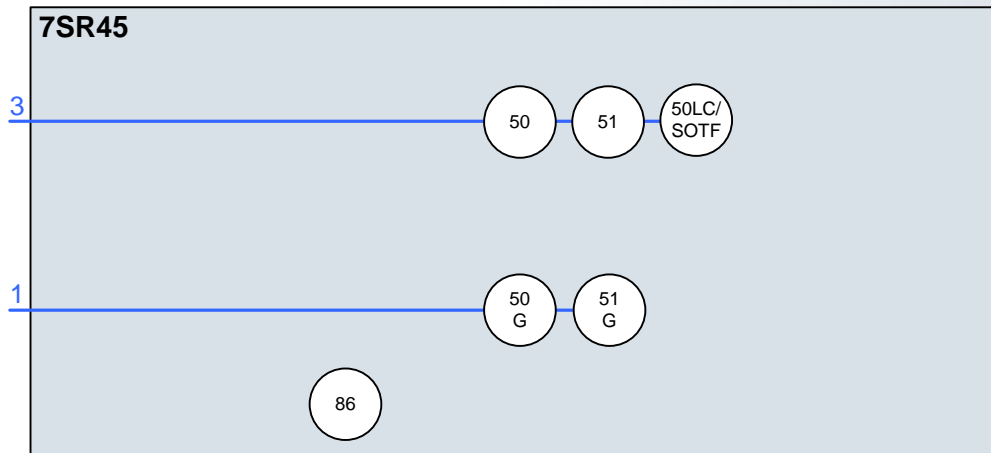


Housing I/O & Fascia options;

- Size 4 = 4 CT / 2 BI / 3 BO / 9 Fixed LEDs

Protection Functions;

- 50 Instantaneous Ph Fault OC
- 50G/50N Instantaneous EF
- 51 Time Delayed Ph Fault OC
- 51G/51N Time Delayed EF
- 50LC/SOTF Line Check/Switch Onto Fault
- 86 Lockout



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Product Introduction

7SR17 (Rho) Motor Protection

Motor and thermal based protection for use on motors and static plant circuits.



Housing I/O & Fascia options;

- E4/E6 = 4 CT / 3 BI / 5 BO / 10 LEDs
- E4/E6 = 4 CT / 6 BI / 8 BO / 10 LEDs
- E4/E6 = 4 CT / 3 VT / 3 BI / 5 BO / 10 LEDs
- E4/E6 = 4 CT / 3 VT / 6 BI / 8 BO / 10 LEDs

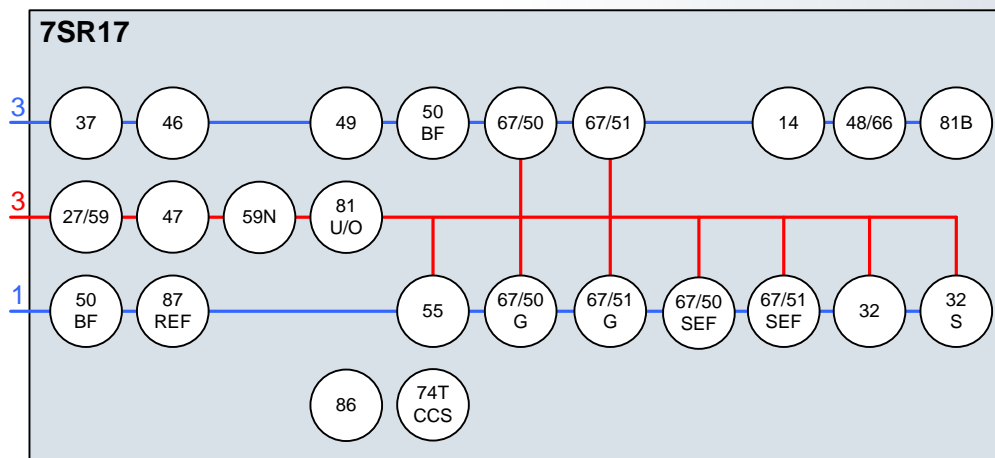
Optional 4 or 8 Temperature Sensor Inputs

Communication Interface Options E6 case;

- Electrical RJ45 Ethernet (x2) – for IEC61850
- F/O LC Ethernet (x2) – for IEC61850

Protection Functions;

- 14** Stall Protection
- 27/59** Under/Over Voltage
- 32** Power & Sensitive Power
- 37** Undercurrent
- 46BC** Broken Conductor/Load Unbalance
- 46NPS** Negative Phase Sequence OC
- 47** Negative Phase Sequence V
- 48/66** Start Protection
- 49** Thermal Overload
- 50BF** CB Fail Monitoring
- 51V** Voltage Controlled OC
- 55** Power Factor
- 59N** Neutral Voltage Displacement
- 60CTS** CT Supervision
- 60VTS** VT Supervision
- 87REF** High Impedance REF
- 67/50** Dir-Instantaneous Ph OC
- 67/50G** Dir-Instantaneous EF
- 67/50SEF** Dir-Instantaneous SEF
- 67/51** Dir-Time Delayed Ph OC
- 67/51G** Dir-Time Delayed EF
- 67/51SEF** Dir-Time Delayed SEF
- 74T&C** Trip & Close Circuit Supervision
- 51c** Cold Load Pickup
- 81B** Back Spin
- 81HBL2** Inrush Restraint
- 81U/O** Under/Over Frequency
- 86** Lockout



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Product Introduction

7SR105 (Rho) Motor Protection

Motor and thermal based protection for use on motors and static plant circuits.



Housing I/O & Fascia options;

- Size 4 = 4 CT / 6 BI / 6 BO / 10 LEDs / Start/Stop
- Size 4 = 4 CT / 6 BI / 6 BO / 10 LEDs / Start/Stop / 6 RTD

Communication Interface Options;

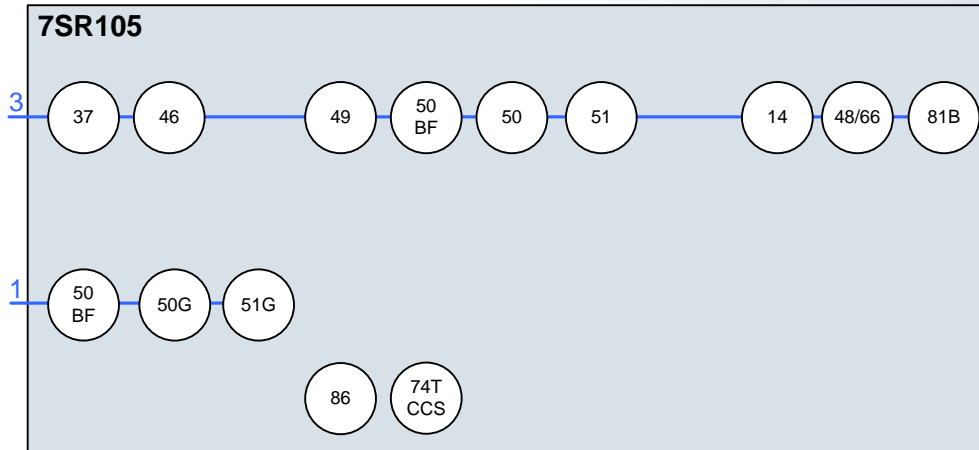
- Rear RS485 Electrical

Power Supply Options;

- AC/DC 60-240V
- DC 24-60V

Protection Functions;

- 14 Stall Protection
- 37 Undercurrent
- 46BC Broken Conductor/Load Unbalance
- 46 PH REV Phase Reversal
- 48/66 Start Protection
- 49 Thermal Overload
- 50 Instantaneous Ph Fault OC
- 50BF CB Fail Monitoring
- 50G/50N Instantaneous EF
- 51 Time Delayed Ph Fault OC
- 51G/51N Time Delayed EF
- 74T&C Trip & Close Circuit Supervision
- 81B Back Spin
- 86 Lockout



Product Introduction

7SR158 Voltage & Frequency Protection

Range of Voltage & Frequency Relays for Supervision, Auto-Changeover and Load-Shedding Schemes.



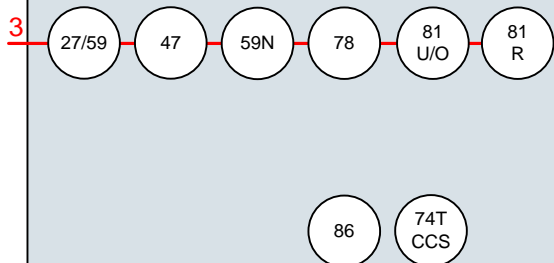
Housing I/O & Fascia options;

- E4/E6 = 3 VT / 6 BI / 8 BO / 10 LEDs

Communication Interface Options E6 case;

- Electrical RJ45 Ethernet (x2) – for IEC61850
- F/O LC Ethernet (x2) – for IEC61850

7SR158



Protection Functions;

- 27/59 Under/Over Voltage
- 47 NPS Voltage
- 59N Neutral Voltage Displacement
- 74T&C Trip & Close Circuit Supervision
- 78 Vector Shift
- 81 Under/Over Frequency
- 81R Rate of Change of Frequency
- 86 Lockout

- When a generator is connected to an electricity supply system, the generator will respond to any transitory changes in load to keep both voltage & frequency levels as close to constant as possible. Vector Shift and ROCOF are used to detect 'islanding' or loss of connection between a generator and the main utility supply.
- Voltage vector shift detects a phase 'jump'(vector shift) in all three system voltages over a half-cycle window when a large-scale change in load occurs. If the detected vector shift is greater than the setting on all three measured voltages an output is issued.
- Rate of Change of Frequency (ROCOF) is used to detect rise in frequency due to the excess of generated power.

Product Introduction

7SR157 (Argus) Synchronising Relay

The 7SR157 Argus is a combined Check & System Synchronising Relay for use with CB Close Control Schemes. The relay is designed to carry out controlled closing of a circuit breaker using measurements of the Line & Bus Voltages.

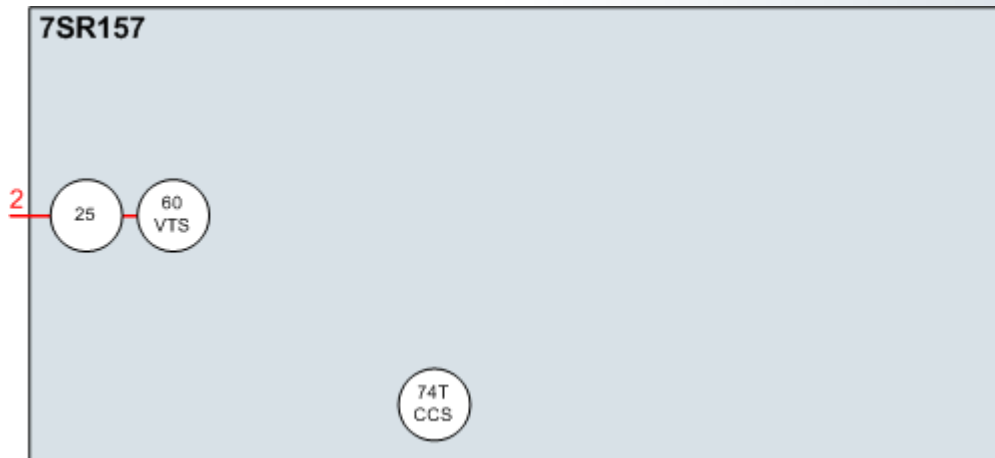


Housing I/O & Fascia options;

- E4/E6 = 2 VT / 3 BI / 5 BO / 10 LEDs
- E4/E6 = 2 VT / 6 BI / 8 BO / 10 LEDs

Communication Interface Options E6 case;

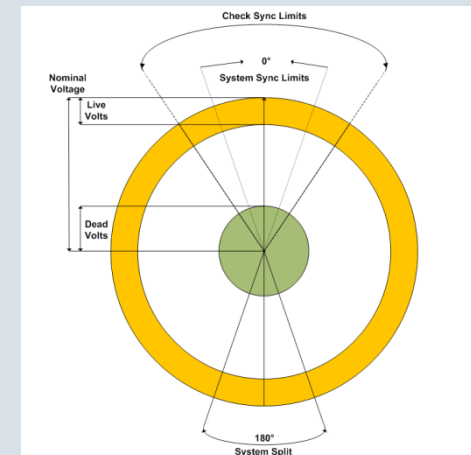
- Electrical RJ45 Ethernet (x2) – for IEC61850
- F/O LC Ethernet (x2) – for IEC61850



Protection Functions;

- 25 Check Synchronising
- 60VTS VT Supervision
- 74CCS Close Circuit Supervision

- Independent check, system sync and close on zero settings.
- Adjustable slip frequency, phase angle, voltage blocking and differential voltage blocking.
- Split system detection.
- Configurable dead/live bus and dead/live line voltage settings.
- Integrated manual close guard feature.
- Synchronising bypass logic is provided to connect a dead line or bus to a live line bus.



Product Introduction

7SR191 (Capa) Capacitor Protection

Capacitor Protection with Overcurrent based Protection/Backup Protection for capacitor banks. 7SR1x Platform Device for Distribution Networks (Standard and 'H' Connected Capacitors).



Housing I/O & Fascia options;

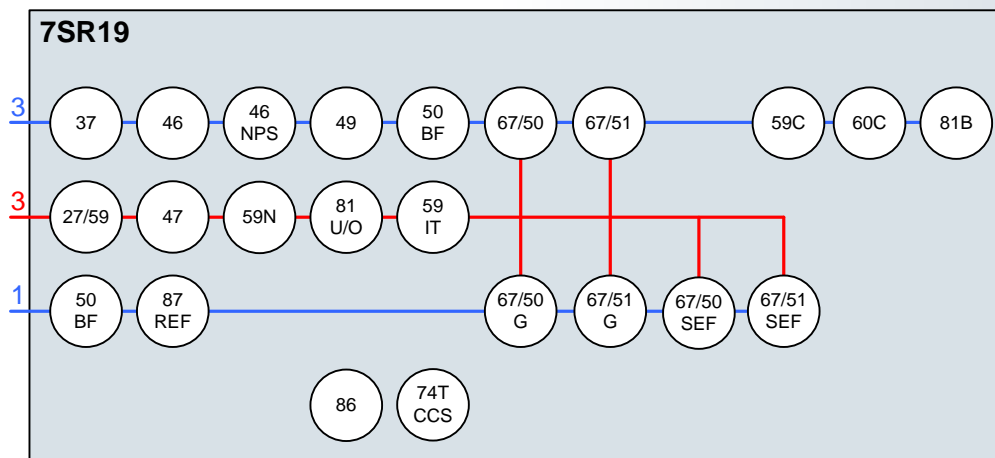
- E4/E6 = 4 CT / 3 BI / 5 BO / 10 LEDs
- E4/E6 = 4 CT / 6 BI / 8 BO / 10 LEDs
- E4/E6 = 4 CT / 3 VT / 3 BI / 5 BO / 10 LEDs
- E4/E6 = 4 CT / 3 VT / 6 BI / 8 BO / 10 LEDs

Communication Interface Options E6 case;

- Electrical RJ45 Ethernet (x2) – for IEC61850
- F/O LC Ethernet (x2) – for IEC61850

Protection Functions;

- 27/59 Under/Over Voltage
- 37 Undercurrent
- 46BC Broken Conductor/Load Unbalance
- 46NPS Negative Phase Sequence OC
- 47 Negative Phase Sequence V
- 49 Thermal Overload
- 50BF CB Fail Monitoring
- 51V Voltage Controlled OC
- 59N Neutral Voltage Displacement
- 59C Overvoltage by Current Integration
- 59IT Overvoltage Inverse Time
- 60C Capacitor Unbalance Current
- 60CTS CT Supervision
- 60VTS VT Supervision
- 87REF High Impedance REF
- 67/50 Dir-Instantaneous Ph OC
- 67/50G Dir-Instantaneous EF
- 67/50SEF Dir-Instantaneous SEF
- 67/51 Dir-Time Delayed Ph OC
- 67/51G Dir-Time Delayed EF59N
- 67/51SEF Dir-Time Delayed SEF
- 74T&C Trip & Close Circuit Supervision
- 51c Cold Load Pickup
- 81HBL2 Inrush Restraint
- 81U/O Under/Over Frequency
- 86 Lockout



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Product Introduction

7SR24 (Duobias) Transformer Protection

Current differential protection for 2 winding transformers.



Housing I/O & Fascia options;

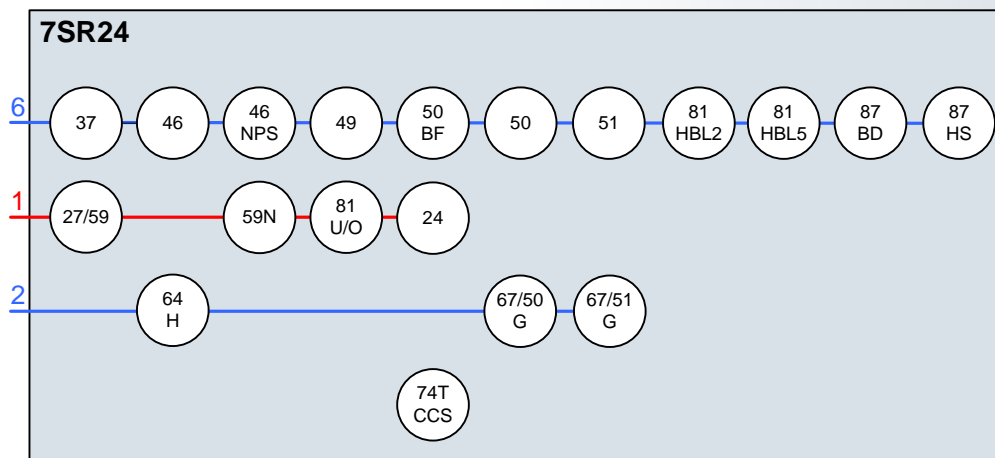
- E8 = 8 CT / 1 VT / 9 BI / 6 BO / 16 LEDs
- E10 = 8 CT / 1 VT / 19 BI / 14 BO / 24 LEDs
- E12 = 8 CT / 1 VT / 39 BI / 14 BO / 32 LEDs

Communication Interface Options;

- F/O ST connectors (x2) & IRIG-B
- RS485 & IRIG-B
- RS232 & IRIG-B
- Electrical RJ45 Ethernet (x2) – for IEC61850
- F/O LC Ethernet (x2) – for IEC61850

Protection Functions;

- 24 Overfluxing
- 27/59 Under/Over Voltage
- 37 Undercurrent
- 46BC Broken Conductor/Load Unbalance
- 46NPS Negative Phase Sequence OC
- 47 Negative Phase Sequence V
- 49 Thermal Overload
- 50BF CB Fail Monitoring
- 50 Instantaneous Ph OC
- 50G Instantaneous EF
- 51 Time Delayed Ph OC
- 51G Time Delayed EF
- 59N Neutral Voltage Displacement
- 64H High Impedance REF
- 74T&C Trip & Close Circuit Supervision
- 81U/O Under/Over Frequency
- 81HBL2 Inrush Detector
- 81HBL5 Overfluxing Detector
- 87BD Biased Current Differential
- 87HS Current Differential Highset



Product Introduction

7SR23 (DAD) High Impedance

SIEMENS

**3-Phase High Impedance Circulating Current protection for:
Busbars, Connections, Auto-transformers, Motors, Reactors, Generators.**



Housing I/O & Fascia options;

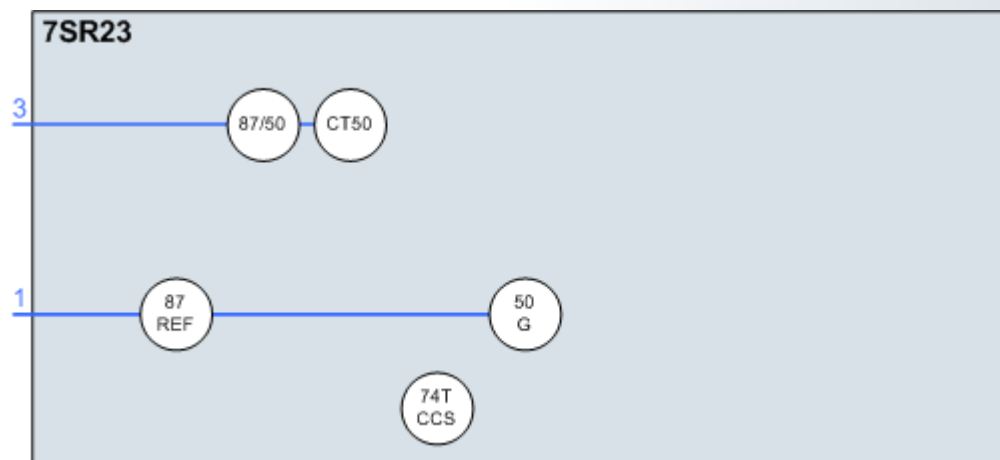
- E6 = 4 CT / 9 BI / 8 BO / 8 LEDs
- E6 = 4 CT / 19 BI / 16 BO / 16 LEDs

Communication Interface Options;

- F/O ST connectors (x2) & IRIG-B
- RS485 & IRIG-B
- RS232 & IRIG-B
- Electrical RJ45 Ethernet (x2) – for IEC61850
- F/O LC Ethernet (x2) – for IEC61850

Protection Functions;

- | | |
|-------|--|
| 50G | Instantaneous EF |
| 87/50 | Phase Segregated High Impedance Differential Protection |
| 87REF | High Impedance REF |
| CT50 | CT Supervision |
| 74TCS | Trip Circuit Supervision |



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Product Introduction

7XG1520 High Impedance Component Box (Option)

SIEMENS

Standardises component ordering for high impedance schemes – ordering, engineering and installation simplified.

High impedance component box (7XG15).

Includes:

- Stabilising resistors.
- Non-linear Voltage limiting resistors (Varistors).

3 user selectable values of resistance (500R, 1K or 2K), selected by external connections.

Software settings tool.

Protection zone short circuiting relay (7PG1110).



Product Introduction

7SR18 (Solkor) Feeder Differential Protection; with directional OC

SIEMENS

Feeder Differential based protection with backup overcurrent / directional overcurrent protection.



Housing I/O & Fascia options;

- E6 = 4 CT / 3 VT / 3 BI / 5 BO / 10 LEDs
- E6 = 4 CT / 3 VT / 6 BI / 8 BO / 10 LEDs

Signalling Channels:

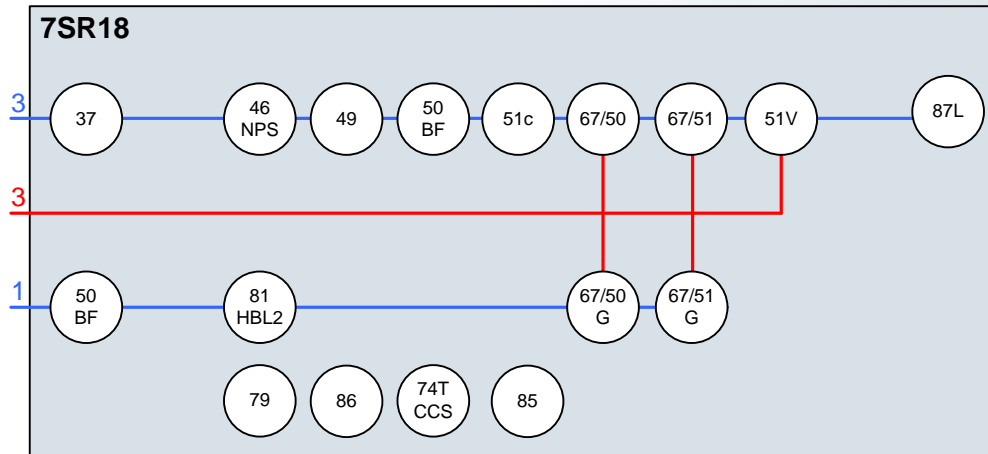
- Upto 2km Fibre Optic (820nm)
- Upto 40km Fibre Optic (1300nm)

Communication Interface Options;

- Electrical RJ45 Ethernet (x2) – for IEC61850
- F/O LC Ethernet (x2) – for IEC61850

Protection Functions;

- 37 Undercurrent
- 46NPS Negative Phase Sequence OC
- 49 Thermal Overload
- 50BF CB Fail Monitoring
- 51V Voltage Controlled OC
- 60CTS CT Supervision
- 60VTS VT Supervision
- 67/50 Dir-Instantaneous Ph OC
- 67/50G Dir-Instantaneous EF
- 67/51 Dir-Time Delayed Ph OC
- 67/51G Dir-Time Delayed EF
- 74T&C Trip & Close Circuit Supervision
- 51C Cold Load Pickup
- 81HBL2 Inrush Restraint
- 79 Auto Reclose
- 85 Intertripping
- 86 Lockout
- 87L 3 phase Differential



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Product Introduction

7PG21 (Solkor-R/RF) Feeder Differential Protection

SIEMENS

Current Differential Protection applied to cables and Overhead Line Circuits.

- Established, well proven design, easy to install, commission and maintain. Compatible with older Solkor R installations.
- Operates over a pair of dedicated metallic pilot wires.
- 5kV pilot insulation standard. 15kV isolation transformer option.
- Flag indication.
- Optional overcurrent guard and pilot supervision schemes with the use of additional components.



Housing I/O options;

- E6
- 3 N/O contacts

Product Introduction

7PG (Alpha) Electro-Mechanical Relays

SIEMENS

- 7PG11 (AR) – Auxiliary Relays.
Alarm repeat, interlocking, plant multiplication etc.
Up to 8 contacts – self, electrical or hand reset.
Operation indicator – self, electrical or hand reset.
Multiple operating voltages options.
- 7PG15 (TR) – Trip Relays.
Co-ordinate tripping outputs, increase contact rating etc.
High-speed, multi-contact, operation indicator.
Low and high burden options.
- 7PG17 (XR) Special Purpose Relays.
Intertripping send and receive relays.
Interposing control relays.
DC supply supervision.
Trip circuit supervision.



Product Introduction

7XG22 (Test Equipment)

SIEMENS

- 7XG222 Test Module (14 way).
 - 2RMLG01: With terminal 13-14 open circuit facility.
 - 2RMLG02: Without terminal 13-14 open circuit facility.
 - 2RMLG07: With automatic CT shorting.
 - 2RMLG08: With automatic CT shorting.
- 7XG224 Test Plug.
- E2 Case.



Product Introduction

7XG22 (Test Equipment)

SIEMENS

- 7XG225 Test Module (14 or 28 way).
 - 3RMLG01: With terminal 13-14 open circuit facility.
 - 3RMLG02: Without terminal 13-14 open circuit facility.
 - 3RMLG07: With automatic CT shorting.
 - 3RMLG08: With automatic CT shorting 8 CT's.
- 7XG226 Test Plug.
- E2 or E4 Case.



Product Introduction

ReyARC System

SIEMENS

The 7XG31 ReyArc range provides a choice of devices to suit multiple Arc Fault Scheme Designs for both new and existing switchgear installations.

- 7XG3130 RA30 High Speed Arc Sensor.
- 7XG3123 RA23 Arc Fault Monitor with 1 or 2 Sensor Inputs.
- 7XG3120 RA20 Arc Fault Monitor with 2 or 3 Sensor Inputs.
- 7XG3124 RA24 Arc Fault Monitor with up to 16 Sensor Inputs and IEC-61850.



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High Flexibility

By utilising the diverse protection functionalities the protection scheme requirements can be fully achieved, reducing installation, wiring and engineering time.

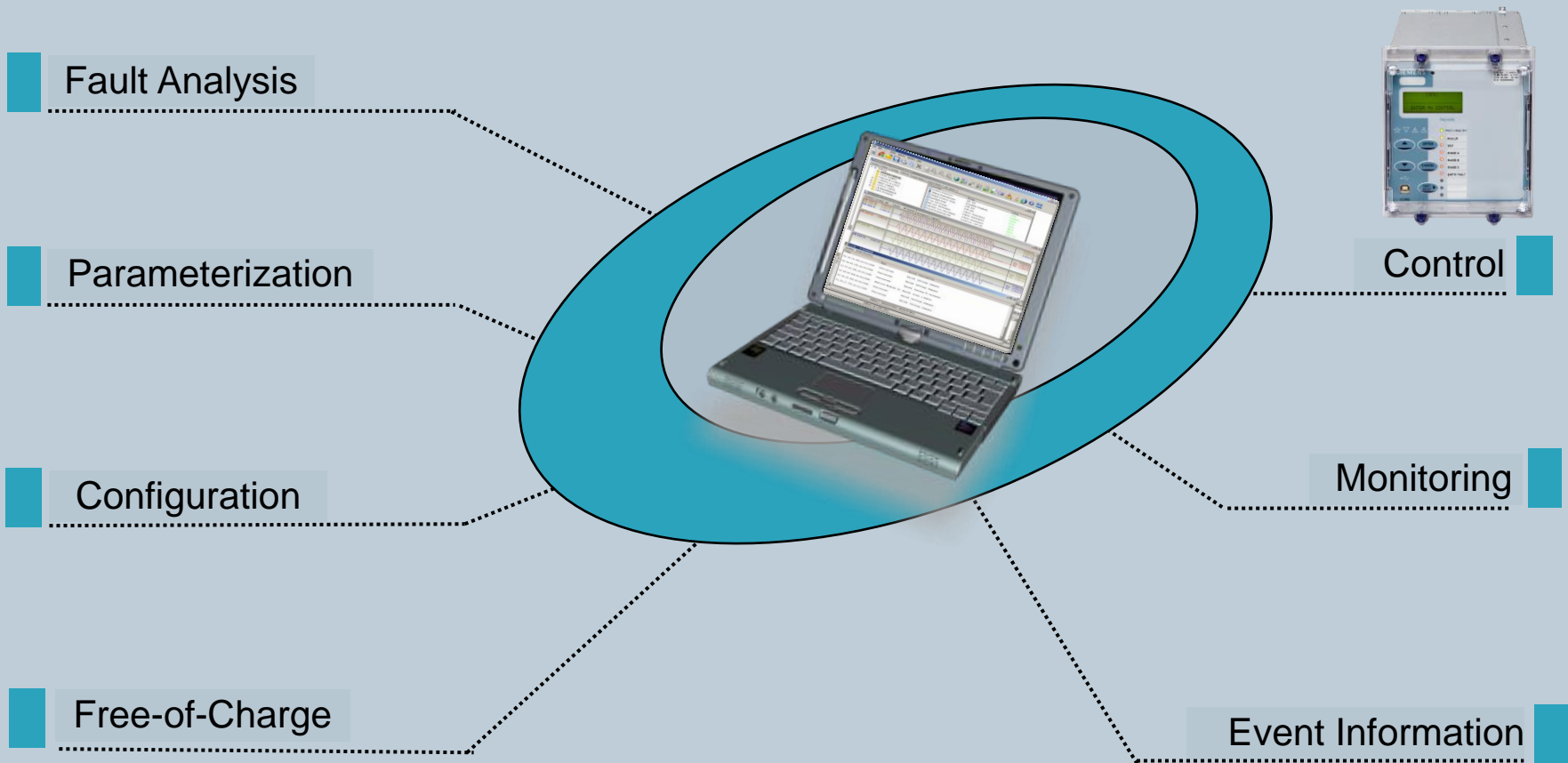
Efficient Investment

Protection, Monitoring, Instrumentation, Metering, Logic, Fault Reporting and Data Logging. In addition, the various communication options, including IEC61850, ensure suitability for a wide range of communication networks.

User-friendly relay menu structure and software

The logically designed relay interface and the free software makes the programming of the relay an uncomplicated and cost-effective activity for the user.

Reydisp Evolution for stand alone devices



Reydisp Manager for system solutions

