

### SYMAP®-COMPACT

- Full Color Touchscreen Display
- 3 x Status LEDs
- 8 x Programmable LEDs
- USB Connections as Standard
- Stainless Steel Housing
- Pluggable Connections
- Multi Lingual
- Customizable Menu Screens
- Self Diagnostic
- 3 x Processors for Ultimate Reliability and Speed Off Operation
- All Protection Functions Included without Additional Costs
- Control of Circuit Breaker
- IEC61850, -103, Profibus, etc.
- SYMAP® Parameter Tool Software
- 4 x Parameter Sets
- Remote Display (optional)



### SYMAP®-COMPACT Technical Data

Description	Specification	
Dimensions (H x W x D)	210 x 210 x 87 (mm)	
Cut Out (H x W)	192 x 192 (mm)	
Weight	2.2 kg	
Auxiliary Supply	24/48/60/110/220V DC; 110/230V AC	
Power Consumption	< 20 W	
Climatic Conditions	Operation	-20°C to +70°C
	Maximum	-40°C to +70°C
	Shipping	-40°C to +70°C
	Rel. Humidity	< 80 %
Housing	Front	IP54 (IEC529)
	Rear	IP20 (IEC529)
Max. Connections	Spring Terminals	Max. 1.5 mm
	Current Terminals	Max. 6 mm

#### Stucke Elektronik GmbH

Stucke Elektronik have designed and manufactured premium quality, high performance electronic devices in Hamburg since 1968. Our systems provide supervision, protection and control to ensure optimum reliability for your electrical supply. To guarantee the highest quality all our products are manufactured exclusively in Hamburg, Germany.

Stucke have been specialists in electronic protection systems for over 40 years.

Our company is certified according to ISO 9001:2008 and ISO 14001:2004

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# SYMAP®-COMPACT

Digital Protection and Control Relays  
 User-friendly, flexible and future proof

- Differential Protection for
  - Motors and Generators
  - Transformers
- Transmission & Distribution Systems
- Mains Decoupling (incl. G59/G10/BDEW/VDN)
- Feeders



The SYMAP®-COMPACT range of relays offer flexible digital protection for a wide range of LV and HV applications.

At the heart of the SYMAP® is a large, full colour, touch screen display which quickly enables complete programming of all protection and control functions.

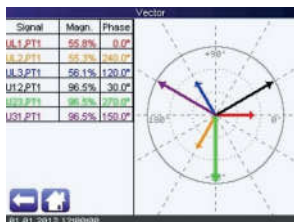
Alternatively you can do this via PC using the standard USB connection. The fully programmable nature of these relays gives you an extremely versatile and cost effective solution for all switchgear applications.

All SYMAP®-COMPACT devices are made in Germany.

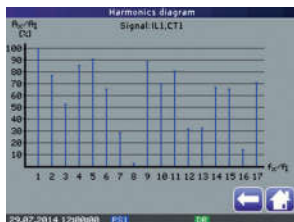




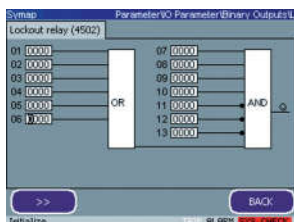
SYMAP® GC: Generator Control Functions



Vector Diagram



Harmonics



Programmable Logic Functions

Above are examples of SYMAP®-COMPACT display capabilities

### SYMAP®-COMPACT Hardware-Versions

	COMPACT						
	F0	F1	F2	F3	F4	SYN	GC
<b>HMI</b>							
Full colour touchscreen display	•	•	•	•	•	•	•
Programmable Hotkeys	•	•	•	•	•	•	•
3 x Status LEDs	•	•	•	•	•	•	•
8 x programmable LEDs	•	•	•	•	•	•	•
<b>Communication</b>							
PROFIBUS DP	(0)	(0)	(0)	(0)	(0)	(0)	(0)
MODBUS, RS485/422	•	•	•	•	•	•	•
<b>Inputs / Outputs</b>							
Ethernet / MiniUSB (rear)	•	•	•	•	•	•	•
USB (front)	•	•	•	•	•	•	(0)
Digital Inputs	5/(19)	5/(19)	5/(19)	5/(19)	5/(19)	5/(19)	5/(19)
Relay Outputs	5/(12)	5/(12)	5/(12)	5/(12)	5/(12)	5/(12)	5/(12)
<b>Analogue Outputs</b>							
Analogue Outputs 4-20 mA	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Analogue Output PWM or +/- 10V	(1)	(1)	(1)	(1)	(1)	(1)	(1)
<b>Analogue Inputs for Measurement and Protection</b>							
Bus Current Inputs (x3)	-	•	•	•	•	-	•
Earth Fault Current Input (x1)	-	•	•	•	•	-	-
Feeder Voltage Input (x3)	•	-	-	•	•	•	•
BUS1 Voltage Inputs (x3)	•	-	-	-	•	•	•
BUS2 Voltage Inputs (x3)	-	-	-	-	-	•	•
Neutral Voltage Displacement Input (x1)	•	-	•	•	•	-	-

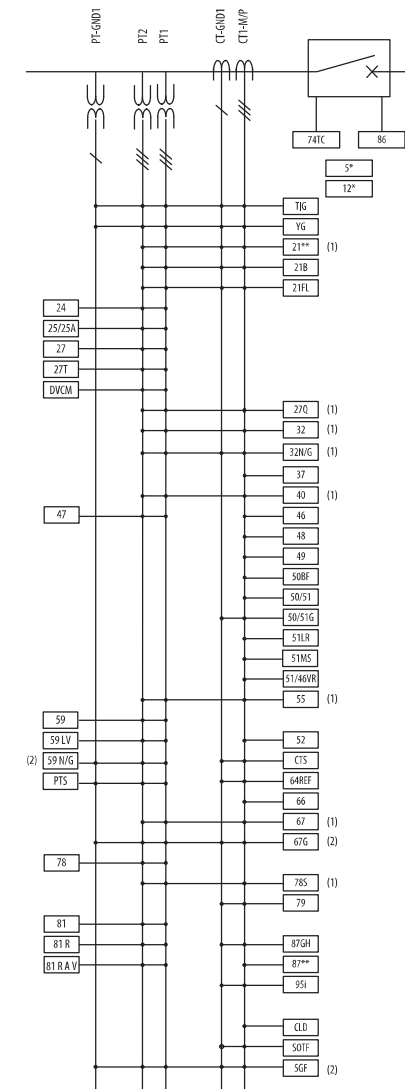
(0) optional

### SYMAP®-COMPACT Protective Functions

	COMPACT							avail.*
	F0	F1	F2	F3	F4	SYN	GC	
21	-	-	-	(+)	(+)	-	-	o
21B	-	-	-	-	-	-	-	o
21FL	-	-	-	-	-	-	-	✓
24	-	-	-	-	-	-	-	o
25	•	-	-	-	-	-	-	✓
25A	•	-	-	-	(-)	•	•	✓
27	•	-	-	-	-	-	-	✓
270	-	-	-	-	-	-	-	✓
27T	•	-	-	-	-	-	-	✓
32	-	-	-	-	-	-	-	✓
32N/G	-	-	-	-	-	-	-	✓
37	-	•	•	•	•	-	-	✓
40	-	-	-	-	-	-	-	o
46	-	•	•	•	•	•	•	✓
46BC	-	•	•	•	•	-	-	✓
47	•	-	-	-	-	-	-	✓
48	-	•	•	•	•	-	-	o
49	-	•	•	•	•	-	-	✓
50/51	-	•	•	•	•	-	-	✓
50BF	-	•	•	•	•	-	-	✓
50/51G	-	•	•	•	•	-	-	✓
51LR	-	•	•	•	•	-	-	o
51MS	-	•	•	•	•	-	-	o
51/46VR	-	-	-	-	-	-	-	✓
52	-	•	•	•	•	-	-	✓
55	-	•	•	•	•	-	-	o
59	•	-	-	-	-	-	-	✓
59N/G	•	-	-	-	-	-	-	✓
59LV	•	•	•	•	•	-	-	✓
64REF	-	•	•	•	•	-	-	✓
66	-	•	•	•	•	-	-	o
67	-	-	-	-	-	-	-	✓
67G	-	-	-	-	-	-	-	✓
74TC	•	•	•	•	•	•	•	✓
78	•	-	-	-	-	-	-	✓
78S	-	-	-	-	-	-	-	o
79	-	•	•	•	•	-	-	✓
81	•	-	-	-	-	-	-	✓
81R	•	-	-	-	-	-	-	✓
81RAV	•	-	-	-	-	-	-	✓
86	•	•	•	•	•	•	•	✓
87GH	-	•	•	•	•	-	-	o
95i	-	•	•	•	•	-	-	✓
G59	(+)	-	-	(+)	(+)	(+)	(+)	✓
CLD	-	•	•	•	•	-	-	✓
CTS	-	•	•	•	•	-	-	✓
DCVM	•	•	•	•	•	-	-	✓
PTS	-	-	-	-	-	-	-	✓
SGF	-	-	-	-	-	-	-	o
SOTF	-	•	•	•	•	-	-	✓
TIG	-	-	(+)	(+)	(+)	-	-	✓
YG	-	-	(+)	(+)	(+)	-	-	✓

\* Function in development. Please request. o not yet available ✓ now available

### SYMAP®-COMPACT Protective Functions by ANSI



(1) depending on power measurement at common changeover  
(2) measured or calculated