

ComPass B

Directional Short-Circuit and Directional Earth Fault Indicator



- Directional short-circuit and directional earth fault detection for all distribution networks/neutral point treatments
- Monitoring of V, I, f
- Load monitoring and load flow direction monitoring P, Q, S, $\cos \varphi$
- Multilingual OLED display, additional multicolour LED
- Remote indication using RS485/MODBUS interface and 4 freely configurable relay contacts
- Simple and intuitive operation, easy-to-read display

The ComPass B combines the functions of a directional short-circuit and directional earth fault indicator in one unit. It is used in medium voltage distribution systems. The voltage is measured by an Integrated Voltage Detecting System, either the WEGA 1.2 C, the WEGA 2.2 C, or the WEGA 1.2 vario device. Voltage tapping is also possible via HR interfaces or on divider insulators with capacitive coupling (set of measuring lines).

Technical Data	
Short-circuit indicator	▪
Earth fault indicator	▪
Directional short-circuit detection	▪
Directional earth fault detection	▪
Measured values/indication	<ul style="list-style-type: none"> ▪ Phase currents L1, L2, L3, IE with phase-angle ▪ Phase-to-earth voltage V1, V2, V3, VNE and phase-to-phase voltage V12, V23, V31, VNE ▪ Load flow direction B↓ or A↑ ▪ P, Q, S and $\cos \varphi$ (P_{1,2,3}, Q_{1,2,3}, S_{1,2,3}, $\cos \varphi$_{1,2,3} via RS485) ▪ Operating current, I_{1,2,3} \varnothing15 min, I_{max}. 24 h/7 days at 365 days, maximum demand indicator I_{max}. LR ▪ Frequency f
V> Overvoltage trip values	100 % – 200 %
V< Undervoltage trip values	0 % – 100 %
I>> Short-circuit trip current	10 – 2,000 A
tI>> Response delay	40 ms < t < 60 s
IE> Earth fault trip current	20 – 1,000 A (low-impedance/solidly earthed network) 5 – 200 A (isolated/compensated network)
tIE> Response delay	40 ms – 60 s
Accuracy	Class 1, 300 A ext. 200 % 3 % (0 – 630 A, resolution 1 A) 5 % (630 – 1,500 A) 10 % (1,500 – 2,000 A)
Indication	▪ LED status display (multicolour) and OLED display (multilingual)
Reset	<ul style="list-style-type: none"> ▪ Local, remote ▪ Automatic time reset: 1 min – 24 h ▪ Via RS485/MODBUS interface ▪ Voltage and current restoration
Remote signal/Communication	<ul style="list-style-type: none"> ▪ 4 potential-free relay contacts, freely configurable ▪ RS485/MODBUS interface
Relay contact	4 permanent or momentary contacts (1 s), NC or NO Contact capacity: 230 V AC/1 A/62.5 VA max.; 220 V DC/1 A/60 W max.
Power supply	<ul style="list-style-type: none"> ▪ 24 to 230 V AC/DC (\pm10 %) ▪ Built-in back-up supply 3.6 V long-life lithium cell, lifetime \geq20 years, >1,000 h total flashing time of the LED, >1,000 activations of the display
Housing	Polycarbonate, IP40 (plug-in housing)
Housing Dimensions	96 x 48 x 96 mm (W x H x D)
Temperature range	-30 to +70 °C

Article	Order No.
Equipment set	<ul style="list-style-type: none"> ▪ 1 Display unit ▪ 3 single-phase current sensors
Display unit in plug-in housing	38-0102-001
Short-circuit current sensor	
Split-core cable-type current sensor (15 – 55 mm), cable length 3 m	49-6024-001
Closed bushing current sensor (79,5 mm), cable length 3 m	49-6025-000
Earth fault current sensors	
Split-core summation sensor (180 – 220 mm), cable length 4 m	49-6023-010
Split-core summation sensor (220 – 250 mm), cable length 4 m	49-6023-020
Voltage Interface	
WEGA 1.2 C	51-1220-001
WEGA 2.2 C	51-2220-001
WEGA 1.2 vario	51-1300-001
Interface cable to match specific switchgear type	on request
Set of connection cables (ComPass – WEGA)	on request
Set of connection cables (SIGMA D ⁺ – WEGA)	on request
External Signal Lamp	
External signal lamp with 3 LEDs, 5 m connection cable, for permanent contact, with battery	49-0702-005
External signal lamp "bicolour" with 3 LEDs (red/green), 3 m connection cable, with battery	49-0706-001
External signal lamp "bicolour" for connection of current transformer, 1 LED (red/green), 2 m connection cable, with battery	49-0704-001
Accessories	
Wall-mount housing	on request