

Description

The type 8543 consumer controller works as an error-reporting device and monitors the voltage-dependent power drawn from a consumer that is supplied with AC. The failure of a consumer is indicated by an LED. After a delay period of around 5 minutes (other values are possible on request), the transmitting relay (relay output) is activated. The transmitting relay works as a quiescent current relay so that a failure of the power supply is also reported (self-monitoring).

All consumers whose power ratings are constant during error-free operation (such as points heaters) are suitable for monitoring.

Function

The type 854314 converter (sensor) records the total current drawn by the consumer. The type 854300 consumer controller measures the associated supply voltage via an internal voltage transformer when working as an error-reporting device and stores these measured values for voltage and current in non-volatile data memory. These measure values serve as a reference for the actual measurement, in which the value of the current is continuously taken as the criterion for the evaluation in accordance with the supply voltage. Thus both consumers drawing the same amount of current or different amounts of current can be monitored together. A maximum of 9 consumers can be monitored together, whereby the permissible total current may not be exceeded.

The converter can be adapted to the required tasks over a wide range by multiple plugging-through of the current-carrying cable.



Initial commissioning

Consumers drawing the same current: The number of consumers is set with the two-button selector switch on the front panel of the unit. Once you are certain that all the consumers are working in a stable way (if necessary, allow time for starting up and running in), press the "PROG" button to start a teach-in procedure. The yellow LED lights up during the teach-in procedure. The unit operates when the LED goes out.

Consumers drawing different currents: In this case the number of consumers to be set must be determined by calculation. The number to be set is derived from the total rated power of all connected consumers, divided by the lowest rated power that is connected (values with odd numbers must be rounded up or down). If the results in a value greater than 9, monitoring is only possible in such a case if the total amount of the rated power that is connected is divided by twice the number of consumers that are not more than 80% of the rated power of that of the smallest consumer.

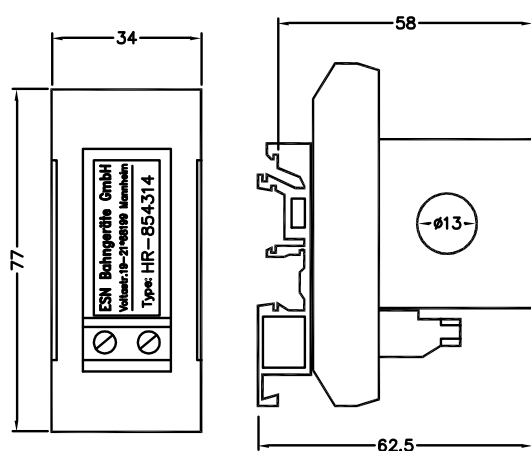
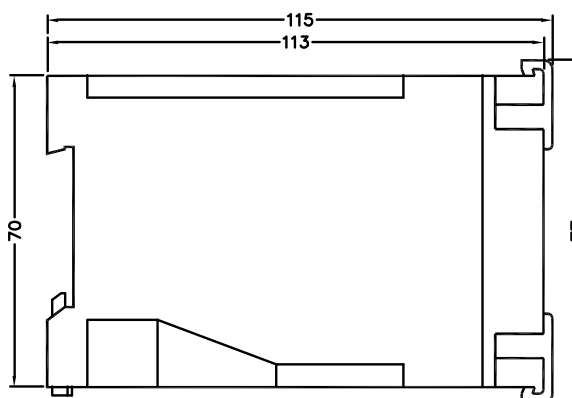
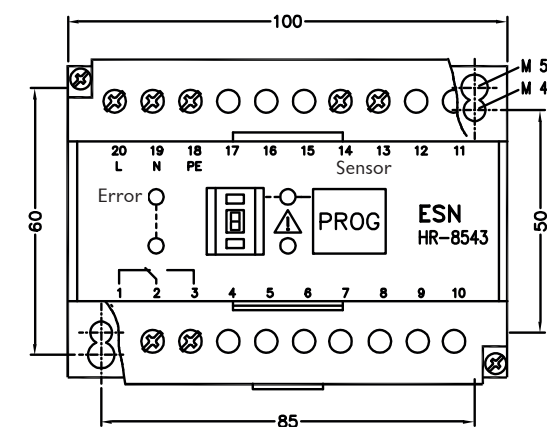
See the complete brochure folder for details of further current monitoring units, also for DC.

Ordering information

Type	Part No.
8543 00	710300
8543 14	140500

Technical data

Converter (sensor)	→ 8543 1-
Type	Lead-out converter
Dimensions	see figure, WxHxD 34x77x62.5 mm
Housing	Polyamide (PA)
Attachment	Standard carrying rail in accordance with DIN EN 50022 and DIN EN 50035
Type of protection	IP 10
Terminals	up to max. 2.5 mm ²
Current range	max. 40 A (see also the back of the unit) → 8543 14 (other values on request) → 8543 00
Consumer controller (evaluation unit)	
Dimensions	WxHxD 100/70/115 mm
Housing	ABS / polycarbonate
Attachment	2 holes to be drilled as per the drilling template, top hat rail in accordance with DIN EN 50022
Type of protection	Housing: IP 40; terminals IP: 10
Ambient temperature	-20°C to +60°C
Connections	2 X 2.5 mm ² solid as per DIN 46288 or 2 x 1.5 mm ² with sleeve
Supply voltage	Terminal 18 (PE); terminal 19 (N); terminal 20 (L) AC 230 V +10/-15 % (48 - 62 Hz)
Power drawn	approx. 3 VA
Sensor / converter	Terminals 13,14 (only for connection to current converter series type 854314)
Relay output	Terminals 1,2, 3 (1 changeover contact, zero-potential)
Trigger delay	approx. 5 minutes (other values on request)
Contact rating	AC 250 V / 4 A cosφ > 0.7 DC 120 V / 1 A ohmic load
Displays	by means of LEDs; see also the back 1 yellow LED for relays that have drawn in (normal operation) 1 yellow LED for the teach-in phase 1 red LED for errors 1 red LED for warnings
Test voltage	4 kV _{eff}

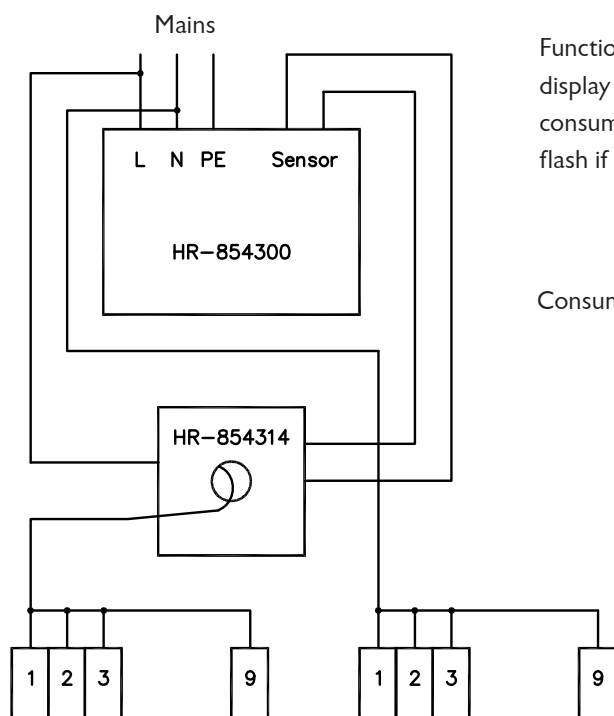


Installation on the carrying rail

LED display

permanent flashing

yellow	Error red	△ red	Prog yellow	Status
●				Error-free operation, relay drawn in
	●	●		Device is not programmed
	●	●	●	Teach-in mode active
●				Warning: Relay drawn in
	●	◐		Warning: Relay dropped out
	●	◐		Error: Relay dropped out



e.g. fuse breaker terminals

Function test: In sequence after successful programming and display of „Error-free operation“, in each separate only one consumer from the mains supply. The „Warning“ LED must flash if the setting is correct.

Consumer current: 10 ... 40A: 1 Primary winding
 5 ... 20A: 2 Primary winding
 2,5 ... 10A: 4 Primary winding
 1,25 ... 5A: 8 Primary winding

Secondary voltage: < 10V AC
 Secondary current: < 50mA