

SWMU

Measuring transducer for alternating current



The above photo of an SWMU 41.51 denotes a bus bar. This bus bar is not included in the supply of the unit.

- with or without auxiliary voltage supply
- with integrated current transformer housing unit
- for 35 mm DIN rail

Features/benefits

- measuring input: Sinus-shaped AC current (1 A ... 800 A),
- arithmetical mean value measurement, effective value calibrated
- measuring output: Unipolar output signal
- measurement principle: Rectifier process
- with integrated current transformer
- minimal wiring

Application

Measuring transducers for the transformation of sinus-shaped AC current. For an output signal a load-independent DC current / and an imprinted DC voltage signal is available, which stands proportionally to the measurement value of the input volume.

These signals can be used for display, recording, monitoring and/or control function.

The measuring transducer fulfills the requirements and regulations with regard to the electromagnetic compatibility (EMV) and security (IEC 1010 and EN 61010). This measuring transducer has been designed, produced, and tested in accordance with ISO 9001.

Technical data SWMU 41.51/52 SWMU 42.51/52

measuring input \oplus		auxiliary power $\rightarrow \circ$	
nominal frequency	f_N 50/60 Hz	AC power supply	230 V \pm 10 % (50 ... 60 Hz)
rated input current I_N		DC	24 V \pm 15 %
SWMU 41.52	1 ... 10 A	power input	\leq 1.5 W (2.5 VA)
SWMU 41.51	15 ... 800 A	accuracy	
consumption	\leq 1 VA (2.5 VA without auxiliary voltage)	reference value	output end value
overload capacity	1.5 · I_N , constant 8 · I_N , 40 sec.	accuracy class	class 0.5
measuring output \rightarrow		warming-up time	\leq 5 min.
load-independent DC current	0 ... 20 mA or 4 ... 20 mA*	protection	
max. burden resistance	\leq 500 Ω	electrocution protection	IP 40, housing (test wire, EN 60529) IP 20, connection terminals (test digit, EN 60529)
max. burden voltage	\leq 15 V	contamination class	2
current limit		test voltages	4 kV, activ circuits against housing (DIN 57411) 4 kV, auxiliary voltage against measuring output (230 V-version) 500 V, auxiliary voltage against measuring output (24 V-DC-version)
under overload	\leq 34 mA		
imprinted DC voltage	0 ... 10 V or 2 ... 10 V*		
burden resistance	\geq 10 k Ω		
max. burden voltage			
under overload	\leq 18 V		
voltage limit	\leq 18 V		
residual ripple			
of the output current	\leq 1 % p.p.		
response time	\leq 500 ms		
operating temperature range	-5 °C \leq ϑ \leq +40 °C		

*Live-Zero only with auxiliary voltage

1. Auxiliary voltage 230 V AC

Type SWMU	Primary current A	Measuring output			
		0...20 mA and 0... 10 V	4...20 mA and 0... 10 V	0...20 mA and 2... 10 V	4...20 mA and 2... 10 V
41.52	1	61006	62006	63006	64006
	5	61007	62007	63007	64007
	10	61008	62008	63008	64008
	special*	61100	62100	63100	64100
41.51	15	61009	62009	63009	64009
	20	61010	62010	63010	64010
	25	61011	62011	63011	64011
	30	61012	62012	63012	64012
	40	61013	62013	63013	64013
	50	61014	62014	63014	64014
	60	61015	62015	63015	64015
	75	61016	62016	63016	64016
	100	61017	62017	63017	64017
	150	61018	62018	63018	64018
	200	61019	62019	63019	64019
	250	61020	62020	63020	64020
	300	61021	62021	63021	64021
	400	61022	62022	63022	64022
	500	61023	62023	63023	64023
	600	61024	62024	63024	64024
750	61025	62025	63025	64025	
800	61026	62026	63026	64026	
special*	61200	62200	63200	64200	

measuring frequency 50/60 Hz

weight 350 g

* measuring range defined by customer

2. Auxiliary voltage 24 V DC

Type SWMU	Primary current A	Measuring output			
		0...20 mA and 0... 10 V	4...20 mA and 0... 10 V	0...20 mA and 2... 10 V	4...20 mA and 2... 10 V
41.52	1	65006	66006	67006	68006
	5	65007	66007	67007	68007
	10	65008	66008	67008	68008
	special*	65100	66100	67100	68100
41.51	15	65009	66009	67009	68009
	20	65010	66010	67010	68010
	25	65011	66011	67011	68011
	30	65012	66012	67012	68012
	40	65013	66013	67013	68013
	50	65014	66014	67014	68014
	60	65015	66015	67015	68015
	75	65016	66016	67016	68016
	100	65017	66017	67017	68017
	150	65018	66018	67018	68018
	200	65019	66019	67019	68019
	250	65020	66020	67020	68020
	300	65021	66021	67021	68021
	400	65022	66022	67022	68022
	500	65023	66023	67023	68023
	600	65024	66024	67024	68024
750	65025	66025	67025	68025	
800	65026	66026	67026	68026	
special*	65200	66200	67200	68200	

measuring frequency 50/60 Hz

weight 250 g

* measuring range defined by customer



3. Without auxiliary voltage supply

Type SWMU	Primary current A	Measuring output
		0... 20 mA and 0... 10 V
42.52	1	69006
	5	69007
	special*	69100
42.51	40	69013
	50	69014
	60	69015
	75	69016
	100	69017
	150	69018
	200	69019
	250	69020
	300	69021
	400	69022
	500	69023
	600	69024
750	69025	
800	69026	
special*	69200	

power requirements $P_E \geq 2.5 \text{ VA}$!

measuring frequency 50/60 Hz

weight 600 g

operating range 15...120 % I_N

* measuring range defined by customer