

## SWMU

Measuring transducer for alternating current



**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 ... 750 A),
- arithmetical mean value measurement, effective value calibrated
- measuring output: Unipolar output signal
- measuring 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.

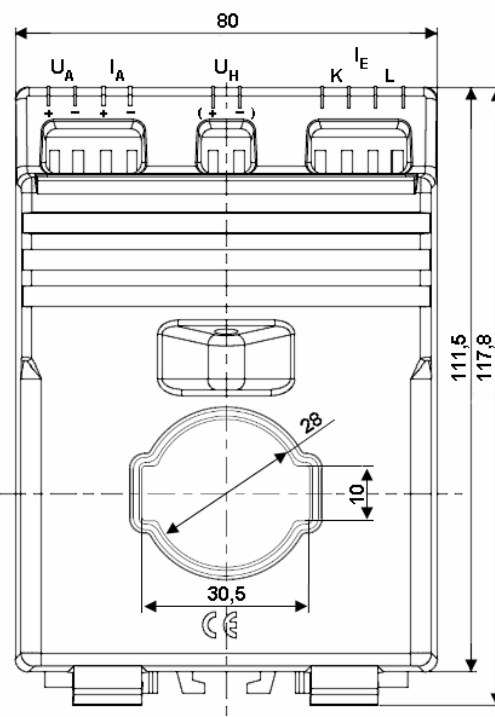
The measuring transducer fulfills the requirements and regulations with regard to the electromagnetic compatibility (EMV) and security (IEC 1010 and EN 61010). This measuring transducer has been designed, produced, and tested in accordance with ISO 9001.

### Technical data SWMU 31.51/52 SWMU 32.51/52

<b>measuring input</b>		<b>auxiliary power</b>	
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 31.52	1...10 A	power input	$\leq$ 1.5 W (2.5 VA)
SWMU 31.51	15...750 A	<b>accuracy</b>	
consumption	$\leq$ 1 VA (2.5 VA without auxiliary voltage)	reference value	output end value
overload capacity	1.5 $\cdot$ $I_N$ , constant 8 $\cdot$ $I_N$ , 40 sec.	accuracy class	class 0.5
<b>measuring output</b>		warming-up time	$\leq$ 5 min.
load-independent DC current	0...20 mA or 4...20 mA*	<b>protection</b>	
max. burden resistance	$\leq$ 500 $\Omega$	electrocution protection	IP 40, housing (test wire, EN 60529) IP 20, connection terminals (test digit, EN 60529)
max. burden voltage	$\leq$ 15V	contamination class	2
current limit under overload	$\leq$ 34 mA	test voltages (DIN 57411)	4 kV, active circuits against housing 4 kV, auxiliary voltage against measuring output (230 V AC-version) 500 V, auxiliary voltage against measuring output (24 V DC-version)
imprinted DC voltage	0...10 V or 2...10 V*		
burden resistance	$\geq$ 10 k $\Omega$		
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 $\leq$ $\delta$ $\leq$ +40° C		
		*Live-Zero only with auxiliary voltage	
		Please note: Mounting base for direct fitting without use of 35mm DIN rail included in the deliveries	

## 1. Auxiliary voltage 230 V AC

Type SWMU	Primary current [ A ]	Measuring output			
		0...20mA and 0...10V	4...20mA and 0...10V	0...20mA and 2...10V	4...20mA and 2...10V
31.52	1	31-1006	31-2006	31-3006	31-4006
	5	31-1007	31-2007	31-3007	31-4007
	10	31-1008	31-2008	31-3008	31-4008
31.51	15	31-1009	31-2009	31-3009	31-4009
	20	31-1010	31-2010	31-3010	31-4010
	25	31-1011	31-2011	31-3011	31-4011
	30	31-1012	31-2012	31-3012	31-4012
	40	31-1013	31-2013	31-3013	31-4013
	50	31-1014	31-2014	31-3014	31-4014
	60	31-1015	31-2015	31-3015	31-4015
	75	31-1016	31-2016	31-3016	31-4016
	100	31-1017	31-2017	31-3017	31-4017
	150	31-1018	31-2018	31-3018	31-4018
	200	31-1019	31-2019	31-3019	31-4019
	250	31-1020	31-2020	31-3020	31-4020
	300	31-1021	31-2021	31-3021	31-4021
	400	31-1022	31-2022	31-3022	31-4022
	500	31-1023	31-2023	31-3023	31-4023
600	31-1024	31-2024	31-3024	31-4024	
750	31-1025	31-2025	31-3025	31-4025	



measuring frequency 50/60 Hz  
weight: 350 g

## 2. Auxiliary voltage 24 V DC

Type SWMU	Primary current [ A ]	Measuring output			
		0...20mA and 0...10V	4...20mA and 0...10V	0...20mA and 2...10V	4...20mA and 2...10V
31.52	1	31-5006	31-6006	31-7006	31-8006
	5	31-5007	31-6007	31-7007	31-8007
	10	31-5008	31-6008	31-7008	31-8008
31.51	15	31-5009	31-6009	31-7009	31-8009
	20	31-5010	31-6010	31-7010	31-8010
	25	31-5011	31-6011	31-7011	31-8011
	30	31-5012	31-6012	31-7012	31-8012
	40	31-5013	31-6013	31-7013	31-8013
	50	31-5014	31-6014	31-7014	31-8014
	60	31-5015	31-6015	31-7015	31-8015
	75	31-5016	31-6016	31-7016	31-8016
	100	31-5017	31-6017	31-7017	31-8017
	150	31-5018	31-6018	31-7018	31-8018
	200	31-5019	31-6019	31-7019	31-8019
	250	31-5020	31-6020	31-7020	31-8020
	300	31-5021	31-6021	31-7021	31-8021
	400	31-5022	31-6022	31-7022	31-8022
	500	31-5023	31-6023	31-7023	31-8023
600	31-5024	31-6024	31-7024	31-8024	
750	31-5025	31-6025	31-7025	31-8025	

measuring frequency 50/60 Hz  
weight: 250 g

## 3. Without auxiliary voltage supply

Type SWMU	Primary current [ A ]	Measuring output
		0...20mA and 0...10V
32.52	1	31-9006
	5	31-9007
	10	31-9008
32.51	40	31-9013
	50	31-9014
	60	31-9015
	75	31-9016
	100	31-9017
	150	31-9018
	200	31-9019
	250	31-9020
	300	31-9021
	400	31-9022
	500	31-9023
	600	31-9024
	750	31-9025

power requirements  $P_E \geq 2,5 \text{ VA}$  !  
measuring frequency 50/60 Hz  
weight 600g  
operating range 15 ... 120 %  $I_N$