



# Transducers





Model	Tema I	Tema I4	Tema I4e
Codes	TM2I...	TM3I...	TM4I...
Ordering codes see page:	08	09	10
Measuring	single-phase alternating current	single-phase alternating current	single-phase alternating current
Measuring type, wave form	average value, calibration according to R.M.S value, sinusoidal form factor 1,11	average value, calibration according to R.M.S value, sinusoidal form factor 1,11	True R.M.S., distorted sinusoidal
A.C. auxiliary supply	selfsupplied	48 - 115 - 230 - 240Va.c.	48 - 115 - 230 - 240Va.c.
D.C. auxiliary supply		20...150 - 150...250Vd.c.	20...150 - 150...250Vd.c.
Current analogue output	0...5 - 0...10 - 0...20mA	0...5/10/20 - 4...20mA selectable	0...5/10/20 - 4...20mA selectable
Voltage analogue output	0...5 - 0...10V	0...5/10 - 2...10V selectable	0...5/10 - 2...10V selectable
Response time	≤300ms	≤300ms	≤100ms or ≤50ms (option)
Accuracy	0,5 (20...120%In)	0,5 (0...120%In)	0,5 (0...120%In)
Current input	1A - 1,2A - 5A - 6A	1A - 1,2A - 5A - 6A	1A - 1,2A - 5A - 6A
Frequency	47...63Hz	47...63Hz	47...63Hz
Dimensions	2 module DIN	2 module DIN	2 module DIN
Technical note	NT546	NT554	NT628
Price			
Extra price d.c. auxiliary supply and 48Va.c.		•	•
Extra price response time ≤ 50ms			•



Model	Tema U	Tema U4	Tema U4e
Codes	TM2U...	TM3U...	TM4U...
Ordering codes see page:	09	09 - 10	10 - 11
Measuring	single-phase alternating voltage	single-phase alternating voltage	single-phase alternating voltage
Measuring type, wave form	average value, calibration according to R.M.S value, sinusoidal form factor 1,11	average value, calibration according to R.M.S value, sinusoidal form factor 1,11	True R.M.S., distorted sinusoidal
A.C. auxiliary supply	selfsupplied	48 - 115 - 230 - 240Va.c.	48 - 115 - 230 - 240Va.c.
D.C. auxiliary supply		20...150 - 150...250Vd.c.	20...150 - 150...250Vd.c.
Current analogue output	0...5 - 0...10 - 0...20mA	0...5/10/20 - 4...20mA selectable	0...5/10/20 - 4...20mA selectable
Voltage analogue output	0...5 - 0...10V	0...5/10 - 2...10V selectable	0...5/10 - 2...10V selectable
Response time	≤ 300ms	≤ 300ms	≤ 100ms - ≤ 50ms (option)
Accuracy	0,5 (20...120%Un)	0,5 (0...120%Un)	0,5 (0...120%Un)
Voltage input	100V - 110V - 120V - 250V - 400V - 440V other value on request of 50...440V	100V - 110V - 120V - 250V - 400V - 440V - 500V other value on request of 50...500V	100V - 110V - 120V - 250V - 400V - 440V - 500V other value on request of 50...500V
Frequency	47...63Hz	47...63Hz	47...63Hz
Dimensions	2 module DIN	2 module DIN	2 module DIN
Technical note	NT547	NT555	NT629
Price			
Extra price d.c. auxiliary supply and 48Va.c.		•	•
Extra price response time ≤ 50ms			•



<b>Model</b>	<b>Tema fP</b>
<b>Codes</b>	<b>TM8P..</b>
Ordering codes see page:	11
Programmable measuring	<b>apparent-reactive-active power, power factor, phase angle, average power, frequency</b>
Line	programmable balanced/unbalanced load, 3/4 wire single-three phase
Measuring type, wave form	true R.M.S., distorted sinusoidal
A.C. auxiliary supply	115 - 230 - 240Va.c.
D.C. auxiliary supply	20...150 -150...250Vd.c.
Current analogue output	0...5/10/20 - 4...20 - $\pm$ 5/10/20mA selectable
Voltage analogue output	0...10 - $\pm$ 10 - 1...5V selectable
Output range setting	1 fully programmable measuring coupled with analogue output
Display	all measuring made on LCD display in different pages at manual scrolling
Response time	$\leq$ 300ms - $\leq$ 100ms (option)
Accuracy	0,5 (power) - 1 ( $\cos\phi$ ) - $\pm$ 0,2Hz (frequency)
Current input	1A or from C.T./1A - 5A or from C.T./5A programmable ratio
Voltage input	80...500V (phase-phase) - 50...300V (single-phase) direct or from V.T. programmable ratio
Frequency	45...65Hz
Dimensions	8 module DIN
Technical note	NT514
<b>Price</b>	
Extra price d.c. auxiliary supply	•
Extra price response time $\leq$ 100ms	•



Model	Tema DC	
Codes	TM1A...	TM1V...
Ordering codes see page:	07	07
Measuring	<b>direct current</b>	
Measuring type, wave form	average value, direct or pulsating with frequency $\geq 10\text{Hz}$	
A.C. auxiliary supply	115 - 230 - 240Va.c.	
D.C. auxiliary supply	20...30V - 40...60V - 90...140V - 180...250Vd.c.	
Current analogue output	0...20 - 4-20mA	$\pm 20\text{mA}$ - 4...20mA
Voltage analogue output	0...10V	$\pm 10\text{V}$
Response time	$\leq 300\text{ms}$	
Accuracy	0,5	
Current input	4...20mA or other values on request from 400 $\mu\text{A}$ ...1,5A (unidirectional)	values on request from 250 $\mu\text{A}$ ...750mA (bidirectional)
Voltage input		1...5V or 2...10V or other values on request from 10mV...600V (unidirectional)
		values on request from 5mV...300V (bidirectional)
Dimensions	6 module DIN	
Technical note	NT239	
Price		
Extra price d.c. auxiliary supply	•	



Model	Tema SG		
Codes	TM1G...	TM2G...	TM3G...
Ordering codes see page:	07	08	08
Measuring	direct current signal separator	direct current or voltage signal separator	direct current signal separator
Measuring type, wave form	average value, direct with $\leq 10\%$ alternating component	average value direct with $\leq 10\%$ alternating component	average value, direct with $\leq 10\%$ alternating component
A.C. auxiliary supply	selfsupplied	48 - 115 - 230 - 240Va.c.	48 - 115 - 230 - 240Va.c.
D.C. auxiliary supply		20...150 - 150...250Vd.c.	20...150 - 150...250Vd.c.
Current analogue output	0...5 - 0...10 - 0...20 - 4...20mA	0...5 - 0...10 - 0...20 - 4...20mA	0...5 - 0...20 - 4...20mA
Voltage analogue output			0...10V
Response time	$\leq 100\text{ms}$	$\leq 150\text{ms}$	$\leq 150\text{ms}$
Accuracy	0,5	0,5	0,5
Current input (unidirectional)	0...5 - 0...10 - 0...20 - 4...20mA	4...20mA or other value on request from 1...500mA	0...5 - 0...20 - 4...20mA
Voltage input (unidirectional)		0...60mV or other value on request from 50mV...400V	
Dimensions	4 module DIN	4 module DIN	4 module DIN
Technical note	NT227	NT229	NT228
Price			
Extra price d.c. auxiliary supply and 48Va.c.		•	•

## Tema DC

### Direct current transducer

6 module

Ordering code	Auxiliary supply	Input	Output	Stock	Data to be shown in addition to ordering code
TM 1 A 1 1 4	115 + 230Va.c.	0... $\mu$ A	0...20mA		unidirectional input (400...800 $\mu$ A) corresponding to output
TM 1 A 1 1 5	115 + 230Va.c.	0... $\mu$ A	4...20mA		unidirectional input (400...800 $\mu$ A) corresponding to output
TM 1 A 1 1 8	115 + 230Va.c.	0... $\mu$ A	0...10V		unidirectional input (400...800 $\mu$ A) corresponding to output
TM 1 A 1 2 4	115 + 230Va.c.	0...mA	0...20mA		unidirectional input (1...800mA) corresponding to output
TM 1 A 1 2 5	115 + 230Va.c.	0...mA	4...20mA		unidirectional input (1...800mA) corresponding to output
TM 1 A 1 2 8	115 + 230Va.c.	0...mA	0...10V		unidirectional input (1...800mA) corresponding to output
TM 1 A 1 3 4	115 + 230Va.c.	0...A	0...20mA		unidirectional input (1...1,5A) corresponding to output
TM 1 A 1 3 5	115 + 230Va.c.	0...A	4...20mA		unidirectional input (1...1,5A) corresponding to output
TM 1 A 1 3 8	115 + 230Va.c.	0...A	0...10V		unidirectional input (1...1,5A) corresponding to output
TM 1 A 1 4 4	115 + 230Va.c.	4...20mA	0...20mA		
TM 1 A 1 4 5	115 + 230Va.c.	4...20mA	4...20mA		
TM 1 A 1 4 8	115 + 230Va.c.	4...20mA	0...10V		
TM 1 A 1 5 5	115 + 230Va.c.	+ $\mu$ A	4...20mA		bidirectional input (250...800 $\mu$ A) corresponding to output
TM 1 A 1 5 E	115 + 230Va.c.	+ $\mu$ A	+20mA		bidirectional input (250...800 $\mu$ A) corresponding to output
TM 1 A 1 5 H	115 + 230Va.c.	+ $\mu$ A	+10V		bidirectional input (250...800 $\mu$ A) corresponding to output
TM 1 A 1 6 5	115 + 230Va.c.	+mA	4...20mA		bidirectional input (1...750mA) corresponding to output
TM 1 A 1 6 E	115 + 230Va.c.	+mA	+20mA		bidirectional input (1...750mA) corresponding to output
TM 1 A 1 6 H	115 + 230Va.c.	+mA	+10V		bidirectional input (1...750mA) corresponding to output

#### Other executions

TM 1 A	auxiliary supply
4	240Va.c.
C	20...30Vd.c.
D	40...60Vd.c.
E	90...140Vd.c.
F	180...250Vd.c.

## Tema DC

### Direct voltage transducer

6 module

Ordering code	Auxiliary supply	Input	Output	Stock	Data to be shown in addition to ordering code
TM 1 V 1 1 4	115 + 230Va.c.	0...mV	0...20mA		unidirectional input (10...600mV) corresponding to output
TM 1 V 1 1 5	115 + 230Va.c.	0...mV	4...20mA		unidirectional input (10...600mV) corresponding to output
TM 1 V 1 1 8	115 + 230Va.c.	0...mV	0...10V		unidirectional input (10...600mV) corresponding to output
TM 1 V 1 2 4	115 + 230Va.c.	0...V	0...20mA		unidirectional input (1...600V) corresponding to output
TM 1 V 1 2 5	115 + 230Va.c.	0...V	4...20mA		unidirectional input (1...600V) corresponding to output
TM 1 V 1 2 8	115 + 230Va.c.	0...V	0...10V		unidirectional input (1...600V) corresponding to output
TM 1 V 1 3 4	115 + 230Va.c.	1...5V	0...20mA		
TM 1 V 1 3 5	115 + 230Va.c.	1...5V	4...20mA		
TM 1 V 1 3 8	115 + 230Va.c.	1...5V	0...10V		
TM 1 V 1 4 4	115 + 230Va.c.	2...10V	0...20mA		
TM 1 V 1 4 5	115 + 230Va.c.	2...10V	4...20mA		
TM 1 V 1 4 8	115 + 230Va.c.	2...10V	0...10V		
TM 1 V 1 5 5	115 + 230Va.c.	$\pm$ mV	4...20mA		bidirectional input (5...600mV) corresponding to output
TM 1 V 1 5 E	115 + 230Va.c.	$\pm$ mV	$\pm$ 20mA		bidirectional input (5...600mV) corresponding to output
TM 1 V 1 5 H	115 + 230Va.c.	$\pm$ mV	$\pm$ 10V		bidirectional input (5...600mV) corresponding to output
TM 1 V 1 6 5	115 + 230Va.c.	$\pm$ V	4...20mA		bidirectional input (1...300V) corresponding to output
TM 1 V 1 6 E	115 + 230Va.c.	$\pm$ V	$\pm$ 20mA		bidirectional input (1...300V) corresponding to output
TM 1 V 1 6 H	115 + 230Va.c.	$\pm$ V	$\pm$ 10V		bidirectional input (1...300V) corresponding to output

#### Other executions

TM 1 V	auxiliary supply
4	240Va.c.
C	20...30Vd.c.
D	40...60Vd.c.
E	90...140Vd.c.
F	180...250Vd.c.

## Tema SG

### Selfsupplied direct current signal separator/transducer

4 module

Ordering code	Input	Output	Stock
TM 1 GA 0 0	0...5/10/20 + 4...20mA	0...5/10/20 + 4...20mA	

## Tema SG

### Direct current signal separator/transducer

4 module

Ordering code	Auxiliary supply	Input	Output	Stock		
TM3G112	115 + 230Va.c.	0...5mA	0...5mA			
TM3G114	115 + 230Va.c.	0...5mA	0...20mA			
TM3G115	115 + 230Va.c.	0...5mA	4...20mA			
TM3G118	115 + 230Va.c.	0...5mA	0...10V			
TM3G132	115 + 230Va.c.	0...20mA	0...5mA			
TM3G134	115 + 230Va.c.	0...20mA	0...20mA			
TM3G135	115 + 230Va.c.	0...20mA	4...20mA			
TM3G138	115 + 230Va.c.	0...20mA	0...10V			
TM3G142	115 + 230Va.c.	4...20mA	0...5mA			
TM3G144	115 + 230Va.c.	4...20mA	0...20mA			
TM3G145	115 + 230Va.c.	4...20mA	4...20mA			
TM3G148	115 + 230Va.c.	4...20mA	0...10V			

#### Other executions

TM3G	.....	auxiliary supply
4	←	240Va.c.
H	←	20...150Vd.c. + 48Va.c.
L	←	150...250Vd.c.

## Tema SG

### Direct current or voltage signal separator/transducer

4 module

Ordering code	Auxiliary supply	Input	Output	Stock		Data to be shown in addition to ordering code
TM2G142	115 + 230Va.c.	4...20mA	0...5mA			
TM2G144	115 + 230Va.c.	4...20mA	0...20mA			
TM2G145	115 + 230Va.c.	4...20mA	4...20mA			
TM2G152	115 + 230Va.c.	0...60mV	0...5mA			
TM2G154	115 + 230Va.c.	0...60mV	0...20mA			
TM2G155	115 + 230Va.c.	0...60mV	4...20mA			
TM2G1P2	115 + 230Va.c.	On request	0...5mA			unidirectional input (1...500mA or 50mV...400V) corresponding to output
TM2G1P4	115 + 230Va.c.	On request	0...20mA			unidirectional input (1...500mA or 50mV...400V) corresponding to output
TM2G1P5	115 + 230Va.c.	On request	4...20mA			unidirectional input (1...500mA or 50mV...400V) corresponding to output

#### Other executions

TM2G	.....	auxiliary supply
4	←	240Va.c.
H	←	20...150Vd.c. + 48Va.c.
L	←	150...250Vd.c.

## Tema I

### Selfsupplied single-phase alternating current transducer

2 module

Ordering code	Input	Output	Stock		
TM2IA12	1A	0...5mA			
TM2IA13	1A	0...10mA			
TM2IA14	1A	0...20mA	•		
TM2IA16	1A	0...5V			
TM2IA18	1A	0...10V			
TM2IA22	1,2A	0...5mA			
TM2IA23	1,2A	0...10mA			
TM2IA24	1,2A	0...20mA			
TM2IA26	1,2A	0...5V			
TM2IA28	1,2A	0...10V			
TM2IA32	5A	0...5mA	•		
TM2IA33	5A	0...10mA			
TM2IA34	5A	0...20mA	•		
TM2IA36	5A	0...5V			
TM2IA38	5A	0...10V	•		
TM2IA42	6A	0...5mA			
TM2IA43	6A	0...10mA			
TM2IA44	6A	0...20mA			
TM2IA46	6A	0...5V			
TM2IA48	6A	0...10V			



## Tema U

### Selfsupplied single-phase alternating voltage transducer

2 module

Ordering code	Input	Output	Stock	Data to be shown in addition to ordering code
TM2UA12	100V	0...5mA	•	
TM2UA13	100V	0...10mA		
TM2UA14	100V	0...20mA	•	
TM2UA16	100V	0...5V		
TM2UA18	100V	0...10V		
TM2UA22	110V	0...5mA		
TM2UA23	110V	0...10mA		
TM2UA24	110V	0...20mA		
TM2UA26	110V	0...5V		
TM2UA28	110V	0...10V		
TM2UA32	120V	0...5mA		
TM2UA33	120V	0...10mA		
TM2UA34	120V	0...20mA		
TM2UA36	120V	0...5V		
TM2UA38	120V	0...10V		
TM2UA72	250V	0...5mA		
TM2UA73	250V	0...10mA		
TM2UA74	250V	0...20mA	•	
TM2UA76	250V	0...5V		
TM2UA78	250V	0...10V		
TM2UA92	400V	0...5mA		
TM2UA93	400V	0...10mA		
TM2UA94	400V	0...20mA	•	
TM2UA96	400V	0...5V		
TM2UA98	400V	0...10V		
TM2UAA2	440V	0...5mA		
TM2UAA3	440V	0...10mA		
TM2UAA4	440V	0...20mA		
TM2UAA6	440V	0...5V		
TM2UAA8	440V	0...10V		
TM2UAP2	on request	0...5mA		input (50...440V) corresponding to output
TM2UAP3	on request	0...10mA		input (50...440V) corresponding to output
TM2UAP4	on request	0...20mA		input (50...440V) corresponding to output
TM2UAP6	on request	0...5V		input (50...440V) corresponding to output
TM2UAP8	on request	0...10V		input (50...440V) corresponding to output

## Tema I4

### Single-phase alternating current transducer

2 module

Ordering code	Auxiliary supply	Input	Stock	Data to be shown in addition to ordering code
TM3I210	115Va.c.	0...1A	•	
TM3I220	115Va.c.	0...1,2A		
TM3I230	115Va.c.	0...5A	•	
TM3I240	115Va.c.	0...6A		
TM3I310	230 + 240Va.c.	0...1A	•	
TM3I320	230 + 240Va.c.	0...1,2A		
TM3I330	230 + 240Va.c.	0...5A	•	
TM3I340	230 + 240Va.c.	0...6A		
TM3IH10	20...150Vd.c. + 48Va.c.	0...1A	•	
TM3IH20	20...150Vd.c. + 48Va.c.	0...1,2A		
TM3IH30	20...150Vd.c. + 48Va.c.	0...5A	•	
TM3IH40	20...150Vd.c. + 48Va.c.	0...6A		
TM3IL10	150...250Vd.c.	0...1A		
TM3IL20	150...250Vd.c.	0...1,2A		
TM3IL30	150...250Vd.c.	0...5A		
TM3IL40	150...250Vd.c.	0...6A		

## Tema U4

### Single-phase alternating voltage transducer

2 module

Ordering code	Auxiliary supply	Input	Stock	Data to be shown in addition to ordering code
TM3U210	115Va.c.	0...100V	•	
TM3U220	115Va.c.	0...110V	•	
TM3U230	115Va.c.	0...120V		
TM3U270	115Va.c.	0...250V	•	
TM3U290	115Va.c.	0...400V	•	
TM3U2A0	115Va.c.	0...440V		
TM3U2C0	115Va.c.	0...500V	•	

table follow ►

Ordering code	Auxiliary supply	Input	Stock	Data to be shown in addition to ordering code
TM3U2P0	115Va.c.	on request		input (50...500V) corresponding to output
TM3U310	230 + 240Va.c.	0...100V	•	
TM3U320	230 + 240Va.c.	0...110V	•	
TM3U330	230 + 240Va.c.	0...120V		
TM3U370	230 + 240Va.c.	0...250V	•	
TM3U390	230 + 240Va.c.	0...400V	•	
TM3U3A0	230 + 240Va.c.	0...440V		
TM3U3C0	230 + 240Va.c.	0...500V	•	
TM3U3P0	230 + 240Va.c.	on request		input (50...500V) corresponding to output
TM3UH10	20...150Vd.c. + 48Va.c.	0...100V	•	
TM3UH20	20...150Vd.c. + 48Va.c.	0...110V	•	
TM3UH30	20...150Vd.c. + 48Va.c.	0...120V		
TM3UH70	20...150Vd.c. + 48Va.c.	0...250V		
TM3UH90	20...150Vd.c. + 48Va.c.	0...400V	•	
TM3UHA0	20...150Vd.c. + 48Va.c.	0...440V		
TM3UHC0	20...150Vd.c. + 48Va.c.	0...500V		
TM3UHP0	20...150Vd.c. + 48Va.c.	on request		input (50...500V) corresponding to output
TM3UL10	150...250Vd.c.	0...100V		
TM3UL20	150...250Vd.c.	0...110V		
TM3UL30	150...250Vd.c.	0...120V		
TM3UL70	150...250Vd.c.	0...250V		
TM3UL90	150...250Vd.c.	0...400V		
TM3ULA0	150...250Vd.c.	0...440V		
TM3ULC0	150...250Vd.c.	0...500V		
TM3ULP0	150...250Vd.c.	on request		input (50...500V) corresponding to output

### Tema 14e

### RMS single-phase alternating current transducer

2 module

Ordering code	Auxiliary supply	Input	Response time	Stock	Data to be shown in addition to ordering code
TM4I210	115Va.c.	0...1A	100ms		
TM4I220	115Va.c.	0...1,2A	100ms		
TM4I230	115Va.c.	0...5A	100ms		
TM4I240	115Va.c.	0...6A	100ms		
TM4I310	230 + 240Va.c.	0...1A	100ms		
TM4I320	230 + 240Va.c.	0...1,2A	100ms		
TM4I330	230 + 240Va.c.	0...5A	100ms	•	
TM4I340	230 + 240Va.c.	0...6A	100ms		
TM4IH10	20...150Vd.c. + 48Va.c.	0...1A	100ms	•	
TM4IH20	20...150Vd.c. + 48Va.c.	0...1,2A	100ms		
TM4IH30	20...150Vd.c. + 48Va.c.	0...5A	100ms		
TM4IH40	20...150Vd.c. + 48Va.c.	0...6A	100ms		
TM4IL10	150...250Vd.c.	0...1A	100ms		
TM4IL20	150...250Vd.c.	0...1,2A	100ms		
TM4IL30	150...250Vd.c.	0...5A	100ms		
TM4IL40	150...250Vd.c.	0...6A	100ms		

#### Other executions

TM4I.....	Response time
2 ←	50ms

### Tema U4e

### RMS single-phase alternating voltage transducer

2 module

Ordering code	Auxiliary supply	Input	Response time	Stock	Data to be shown in addition to ordering code
TM4U210	115Va.c.	0...100V	100ms		
TM4U220	115Va.c.	0...110V	100ms		
TM4U230	115Va.c.	0...120V	100ms		
TM4U270	115Va.c.	0...250V	100ms		
TM4U290	115Va.c.	0...400V	100ms		
TM4U2A0	115Va.c.	0...440V	100ms		
TM4U2C0	115Va.c.	0...500V	100ms		
TM4U2P0	115Va.c.	on request	100ms		input (50...500V) corresponding to output
TM4U310	230 + 240Va.c.	0...100V	100ms		
TM4U320	230 + 240Va.c.	0...110V	100ms		
TM4U330	230 + 240Va.c.	0...120V	100ms		
TM4U370	230 + 240Va.c.	0...250V	100ms		
TM4U390	230 + 240Va.c.	400V	100ms		
TM4U3A0	230 + 240Va.c.	440V	100ms		

table follow ►

Ordering code	Auxiliary supply	Input	Response time	Stock	Data to be shown in addition to ordering code
TM4U3C0	230 + 240Va.c.	500V	100ms		
TM4U3P0	230 + 240Va.c.	on request	100ms		input (50...500V) corresponding to output
TM4UH10	20...150Vd.c. + 48Va.c.	0...100V	100ms		
TM4UH20	20...150Vd.c. + 48Va.c.	0...110V	100ms		
TM4UH30	20...150Vd.c. + 48Va.c.	0...120V	100ms		
TM4UH70	20...150Vd.c. + 48Va.c.	0...250V	100ms		
TM4UH90	20...150Vd.c. + 48Va.c.	0...400V	100ms		
TM4UHA0	20...150Vd.c. + 48Va.c.	0...440V	100ms		
TM4UHC0	20...150Vd.c. + 48Va.c.	0...500V	100ms		
TM4UHP0	20...150Vd.c. + 48Va.c.	on request	100ms		input (50...500V) corresponding to output
TM4UL10	150...250Vd.c.	0...100V	100ms		
TM4UL20	150...250Vd.c.	0...110V	100ms		
TM4UL30	150...250Vd.c.	0...120V	100ms		
TM4UL70	150...250Vd.c.	0...250V	100ms		
TM4UL90	150...250Vd.c.	0...400V	100ms		
TM4ULA0	150...250Vd.c.	0...440V	100ms		
TM4ULC0	150...250Vd.c.	0...500V	100ms		
TM4ULP0	150...250Vd.c.	on request	100ms		input (50...500V) corresponding to output

Other executions

TM4U.....	Response time
2	50ms

**Tema fP**

Active-reactive-apparent power, power factor, phase angle, average power, frequency programmable transducer

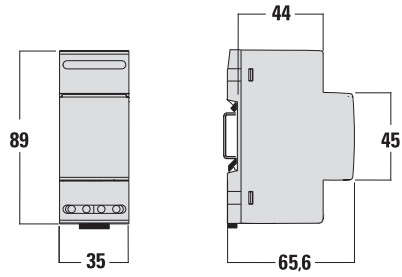
8 module

Ordering code	Auxiliary supply	Input A	Input V	Stock	
TM8P02110	115Va.c.	1A	500V		
TM8P02120	115Va.c.	5A	500V	•	
TM8P03110	230 + 240Va.c.	1A	500V		
TM8P03120	230 + 240Va.c.	5A	500V	•	
TM8P0H110	20...150Vd.c.	1A	500V	•	
TM8P0H120	20...150Vd.c.	5A	500V	•	
TM8P0L110	150...250Vd.c.	1A	500V		
TM8P0L120	150...250Vd.c.	5A	500V		

Other executions

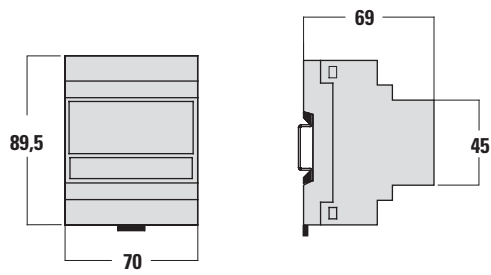
TM8P0.....	Response time
3	100ms

**Tema I / Tema I4 / Tema I4e / Tema U / Tema U4 / Tema U4e**



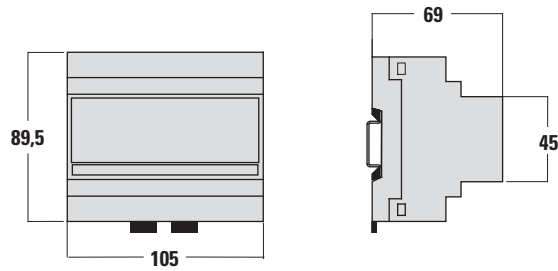
2 Module

**Tema SG**



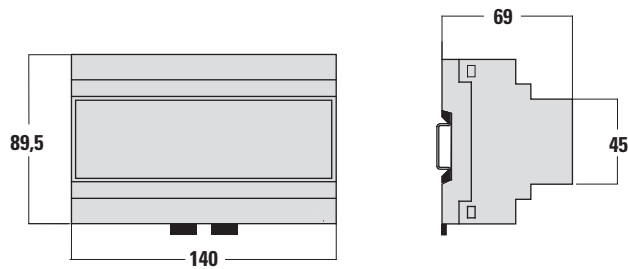
4 Module

**Tema DC**



6 Module

**Tema fP**



8 Module