

**Trasduttore  
di tensione alternata  
2 Moduli**

Misura del valor medio,  
taratura rapportata al valore efficace  
Ingresso diretto fino a 500V  
Uscita selezionabile in campo (7 portate)

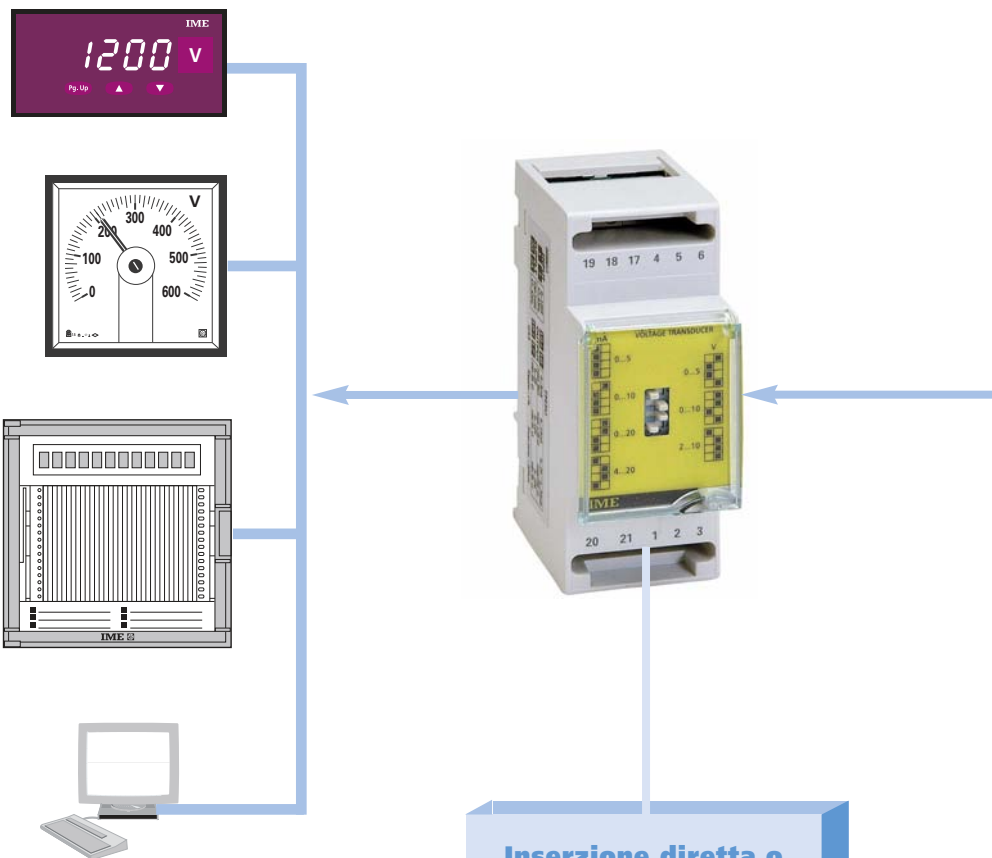
**Valori selezionabili:**  
0...5/10/20mA - 4...20mA  
0...5/10V - 2...10V

**Alternating voltage  
transducer  
2 Module**

To measure average value,  
calibration according RMS value  
Direct input up to 500V  
Output selectable on field (7 ranges)

**Selectable values:**  
0...5/10/20mA - 4...20mA  
0...5/10V - 2...10V

**Tema U4**



**Uscita Output**

**0...5mA**  
**0...10mA**  
**0...20mA**  
**4...20mA**  
**0...5V**  
**0...10V**  
**2...10V**

**Inserzione diretta o  
su TV/100V o TV/110V**  
Direct connection or  
on VT/100V or VT/110V

CODICI DI ORDINAZIONE ORDERING CODE	INGRESSO INPUT	AL. AUSILIARIA AUX. SUPPLY
TM3U210	100V	115V ca / ac
TM3U220	110V	115V ca / ac
TM3U230	120V	115V ca / ac
TM3U270	250V	115V ca / ac
TM3U290	400V	115V ca / ac
TM3U2A0	440V	115V ca / ac
TM3U2C0	500V	115V ca / ac
TM3U310	100V	230 - 240V ca / ac
TM3U320	110V	230 - 240V ca / ac
TM3U330	120V	230 - 240V ca / ac
TM3U370	250V	230 - 240V ca / ac
TM3U390	400V	230 - 240V ca / ac
TM3U3A0	440V	230 - 240V ca / ac
TM3U3C0	500V	230 - 240V ca / ac
TM3UH10	100V	20...150V cc / dc
TM3UH20	110V	20...150V cc / dc
TM3UH30	120V	20...150V cc / dc
TM3UH70	250V	20...150V cc / dc
TM3UH90	400V	20...150V cc / dc
TM3UHA0	440V	20...150V cc / dc
TM3UHC0	500V	20...150V cc / dc
TM3UL10	100V	150...250V cc / dc
TM3UL20	110V	150...250V cc / dc
TM3UL30	120V	150...250V cc / dc
TM3UL70	250V	150...250V cc / dc
TM3UL90	400V	150...250V cc / dc
TM3ULA0	440V	150...250V cc / dc
TM3ULC0	500V	150...250V cc / dc
TM3U2P0	da precisare / on request	115V ca / ac
TM3U3P0	da precisare / on request	230 - 240V ca / ac
TM3UHP0	da precisare / on request	20...150V cc / dc
TM3ULP0	da precisare / on request	150...250V cc / dc

#### INGRESSO

Tensione nominale Un: 100 - 110 - 120 - 250 - 400 - 500V

Altri valori a richiesta

Frequenza nominale fn: 50Hz

Eccedenza di breve durata (EN 60688): 2Un/1s (max 600V)

Autoconsumo: ≤ 0,5VA

#### CAMPI NOMINALI DI UTILIZZO

(EN 60688)

Frequenza: 47...63Hz (fn 50Hz)

Forma d'onda: sinusoidale, fattore di forma 1,11

#### INTERVALLO DI MISURA

Tensione: 0...120% Un

#### USCITA

Tipo: unidirezionale a zero reale, per carico d'uscita variabile

Precisione (EN 60688): classe 0,5

Ondulazione (EN 60688): ≤ 1%

Tempo di risposta (EN 60688): ≤ 300 ms

Valore nominale: selezionabile tramite dip switch (7 portate)

Valori nominali di corrente: 0...5 - 0...10 - 0...20mA - 4...20mA

Tensione disponibile: 15V

Carico di uscita: ≤ 750Ω (20mA) - ≤ 1,5kΩ (10mA) - ≤ 3kΩ (5mA)

Valori nominali di tensione: 0...5 - 0...10 - 2...10V

Carico di uscita: ≥ 5kΩ

#### INPUT

Voltage rating Un: 100 - 110 - 120 - 250 - 400 - 500V

Other values on request

Frequency rating fn: 50Hz

Excessive input of short duration (EN 60688): 2Un/1s (max 600V)

Rated burden: ≤ 0,5VA

#### NOMINAL RANGE OF USE

(EN 60688)

Frequency: 47...63Hz (fn 50Hz)

Waveform: sinusoidal, form factor 1,11

#### MEASURING RANGE

Voltage: 0...120% Un

#### OUTPUT

Type: unidirectional, real or live zero for variable output load

Accuracy (EN 60688): class 0,5

Ripple content (EN 60688): ≤ 1%

Response time (EN 60688): ≤ 300 ms

Rated value: selectable by dip switch (7 ranges)

Current rated values: 0...5 - 0...10 - 0...20mA - 4...20mA

Compliance voltage: 15V

Output load: ≤ 750Ω (20mA) - ≤ 1,5kΩ (10mA) - ≤ 3kΩ (5mA)

Voltage rated values: 0...5 - 0...10 - 2...10V

Output load: ≥ 5kΩ

## ALIMENTAZIONE AUSILIARIA

Valore nominale  $U_{aux}$  ca: 48 - 115 - 230 e 240V

Altri valori a richiesta

Variazione ammessa: 0,9...1,1 $U_{aux}$  - 40...60V ( $U_{aux}$  48V)

Frequenza nominale  $f_{aux}$ : 50Hz

Variazione ammessa: 47...63Hz

Autoconsumo:  $\leq 3VA$

Valore nominale  $U_{aux}$  cc: 20...150Vcc - 150...250Vcc

Autoconsumo:  $\leq 1,5W$

Protezione contro l'inversione di polarità

## ISOLAMENTO

(EN 60439-1, EN61010-1)

Categoria di installazione: III

Grado di inquinamento: 2

Tensione di riferimento per l'isolamento: 600V

Prova di tensione a impulso 5kV 1,2/50 $\mu$ s 0,5J

Circuiti considerati: ingresso, uscita, al. ausiliaria

Prova a tensione alternata 2,5kV valore efficace 50Hz/1min

Circuiti considerati: ingresso, uscita, al. ausiliaria

Prova a tensione alternata 4kV valore efficace 50Hz/1min

Circuiti considerati: tutti i circuiti e massa

## COMPATIBILITA' ELETTROMAGNETICA

Prove di emissione in accordo con EN 50081-1, EN 55011

Prove di immunità in accordo con EN 50082-2

Prova di disturbo ad alta frequenza, onda oscillatoria smorzata 1MHz (IEC255-4)

Tensione di prova: 2,5kV modo comune, 1kV modo serie

## CONDIZIONI AMBIENTALI

Gruppo di utilizzo: II

Temperatura di riferimento: 15...30°C

Temperatura di impiego: 0...45°C

Condizione limite di temperatura: -10...55°C

Temperatura di magazzinaggio: -25...70°C

Umidità relativa: fino a 75%

Adatto all'utilizzo in clima tropicale

Massima potenza dissipata<sup>1</sup>:  $\leq 2,6W$

<sup>1</sup>Per il dimensionamento termico dei quadri

## CUSTODIA

Dimensioni: 2 moduli DIN 43880

Connessioni: morsetti fissaggio a vite per conduttore fino a 4 mm<sup>2</sup>

Montaggio: a incastro su profilato 35mm

Tipo profilato: a cappello TH35-15 (EN60715)

Materiale custodia: makrolon autoestinguente

Grado di protezione (EN 60529): IP40 (frontale), IP20 (morsetti)

Peso: 200 grammi

## AUXILIARY SUPPLY

Rated value  $U_{aux}$  ac: 48 - 115 - 230 and 240V

Other value on request

Tolerance: 0,9...1,1 $U_{aux}$  - 40...60V ( $U_{aux}$  48V)

Rated frequency  $f_{aux}$ : 50Hz

Tolerance: 47...63Hz

Rated burden:  $\leq 3VA$

Rated value  $U_{aux}$  dc: 20...150Vdc - 150...250Vdc

Rated burden:  $\leq 1,5W$

Protected against incorrect polarity

## INSULATION

(EN 60439-1, EN61010-1)

Installation category: III

Pollution degree: 2

Insulation reference voltage: 600V

Impulse voltage test 5kV 1,2/50 $\mu$ s 0,5J

Considered circuits: input, output, aux. supply

A.C. voltage test 2,5kV r.m.s. 50Hz/1min

Considered circuits: input, output, aux. supply

A.C. voltage test 4kV r.m.s. 50Hz/1min

Considered circuits: all circuits and earth

## ELECTROMAGNETIC COMPATIBILITY

Emission tests according to EN 50081-1, EN 55011

Immunity tests according to EN 50082-2

High frequency disturbance test, 1MHz damped oscillatory wave (IEC255-4)

Test voltage: 2,5kV common mode, 1kV series mode

## ENVIRONMENTAL CONDITIONS

Usage group: II

Reference temperature: 15...30°C

Nominal temperature range: 0...45°C

Limit temperature range: -10...55°C

Limit temperature range for storage: -25...70°C

Relative humidity: up to 75%

Suitable for tropical climates

Max. power dissipation<sup>1</sup>:  $\leq 2,6W$

<sup>1</sup>For switchboard thermal calculation

## HOUSING

Dimensions: 2 module DIN 43880

Connections: screw terminals for cable up to 4 mm<sup>2</sup>

Mounting: snap-on 35mm rail

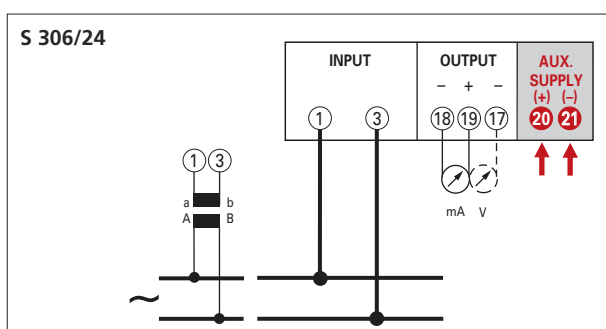
Rail type: top hat TH35-15 (EN60715)

Housing material: self-extinguishing makrolon

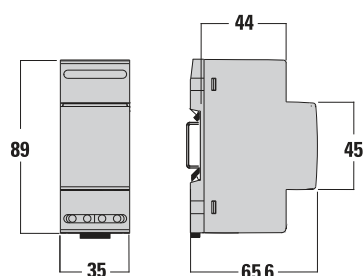
Protection degree (EN 60529): IP40 (front frame), IP20 (terminals)

Weight: 200 grams

## SCHEMA D'INSERZIONE WIRING DIAGRAM



## DIMENSIONI DIMENSIONS



**Transducteur  
de tension alternative  
2 Modules**

Mesure de la valeur moyenne,  
étalonnée par rapport à la valeur efficace  
Entrée directe jusqu'à 500V  
Sortie sélectionnable (7 calibres)

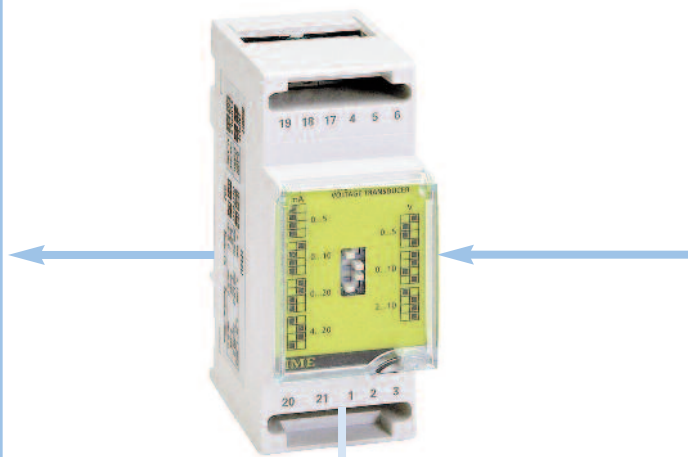
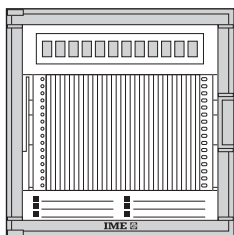
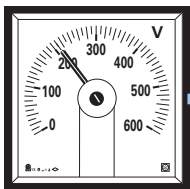
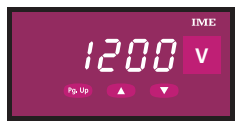
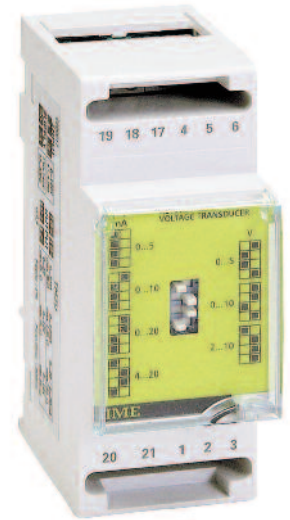
**Valeurs sélectionnables:**  
0...5/10/20mA - 4...20mA  
0...5/10V - 2...10V

**Alternating voltage  
transducer  
2 Module**

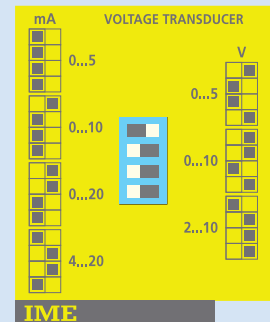
To measure average value,  
calibration according RMS value  
Direct input up to 500V  
Output selectable on field (7 ranges)

**Selectable values:**  
0...5/10/20mA - 4...20mA  
0...5/10V - 2...10V

# Tema TM3U







**Sortie Output**



- 0...5mA
- 0...10mA
- 0...20mA
- 4...20mA
- 0...5V
- 0...10V
- 2...10V

**Raccordement direct ou  
sur TT/100V ou TT/110V**

*Direct connection or  
on VT/100V or VT/110V*

REFERENCE ORDERING CODE	ENTREE INPUT	ALIM.AUX. AUX. SUPPLY
5025 4974	100V	115V ca / ac
5025 4972	110V	115V ca / ac
5025 4973	120V	115V ca / ac
5025 4975	250V	115V ca / ac
5025 4976	400V	115V ca / ac
5025 4979	440V	115V ca / ac
5025 4977	500V	115V ca / ac
5025 5074	100V	230 - 240V ca / ac
5025 5072	110V	230 - 240V ca / ac
5025 5073	120V	230 - 240V ca / ac
5025 5075	250V	230 - 240V ca / ac
5025 5076	400V	230 - 240V ca / ac
5025 5079	440V	230 - 240V ca / ac
5025 5077	500V	230 - 240V ca / ac
5025 4874	100V	20...150V cc / dc
5025 4872	110V	20...150V cc / dc
5025 4873	120V	20...150V cc / dc
5025 4875	250V	20...150V cc / dc
5025 4876	400V	20...150V cc / dc
5025 4879	440V	20...150V cc / dc
5025 4877	500V	20...150V cc / dc
5025 4774	100V	150...250V cc / dc
5025 4772	110V	150...250V cc / dc
5025 4773	120V	150...250V cc / dc
5025 4775	250V	150...250V cc / dc
5025 4776	400V	150...250V cc / dc
5025 4779	440V	150...250V cc / dc
5025 4777	500V	150...250V cc / dc
	sur demande, à préciser/ on request	115V ca / ac
	sur demande, à préciser/ on request	230 - 240V ca / ac
	sur demande, à préciser/ on request	20...150V cc / dc
	sur demande, à préciser/ on request	150...250V cc / dc

## ENTREE

Tension nominale Un: 100 - 110 - 120 - 250 - 400 - 500V

Autres valeur sur demande

Fréquence nominale fn: 50Hz

Surcharge de brève durée (EN 60688): 2Un/1s (max 600V)

Autoconsommation:  $\leq 0,5VA$

## DOMAINES D'UTILISATIONS

(EN 60688)

Fréquence: 47...63Hz (fn 50Hz)

Forme d'onde: sinusoïdale, facteur de forme 1,11

## ETENDUE DE MESURE

Tension: 0...120% Un

## SORTIE

Type: unidirectionnel à zéro normal, pour charge de sortie variable

Précision (EN 60688): classe 0,5

Ondulation (EN 60688):  $\leq 1\%$

Temps de réponse (EN 60688):  $\leq 300$  ms

Valeur nominale: sélectionnable par dip-switch (7 calibres)

Valeur nominale du courant: 0...5 - 0...10 - 0...20mA - 4...20mA

Tension disponible: 15V

Charge de sortie:  $\leq 750\Omega$  (20mA) -  $\leq 1,5k\Omega$  (10mA) -  $\leq 3k\Omega$  (5mA)

Valeur nominale de la tension: 0...5 - 0...10 - 2...10V

Charge de sortie:  $\geq 5k\Omega$

## INPUT

Voltage rating Un: 100 - 110 - 120 - 250 - 400 - 500V

Other values on request

Frequency rating fn: 50Hz

Excessive input of short duration (EN 60688): 2Un/1s (max 600V)

Rated burden:  $\leq 0,5VA$

## NOMINAL RANGE OF USE

(EN 60688)

Frequency: 47...63Hz (fn 50Hz)

Waveform: sinusoidal, form factor 1,11

## MEASURING RANGE

Voltage: 0...120% Un

## OUTPUT

Type: unidirectional, real or live zero for variable output load

Accuracy (EN 60688): class 0,5

Ripple content (EN 60688):  $\leq 1\%$

Response time (EN 60688):  $\leq 300$  ms

Rated value: selectable by dip switch (7 ranges)

Current rated values: 0...5 - 0...10 - 0...20mA - 4...20mA

Compliance voltage: 15V

Output load:  $\leq 750\Omega$  (20mA) -  $\leq 1,5k\Omega$  (10mA) -  $\leq 3k\Omega$  (5mA)

Voltage rated values: 0...5 - 0...10 - 2...10V

Output load:  $\geq 5k\Omega$

## ALIMENTATION AUXILIAIRE

Valeur nominale **Uaux**: 48 - 115 - 230 et 240V  
 Autres valeurs sur demande  
 Variation admissible: 0,9...1,1Uaux - 40...60V (Uaux 48V)  
 Fréquence nominale **faux**: 50Hz  
 Variation admissible: 47...63Hz  
 Autoconsommation:  $\leq 3VA$   
 Valeur nominale **Uaux dc** : 20...150Vdc - 150...250Vdc  
 Autoconsommation:  $\leq 1,5W$   
 Protection contre l'inversion de polarité

## ISOLEMENT

(EN 60439-1, EN 60010-1)

Catégorie d'installation: III  
 Degré de pollution: 2  
 Tension de référence pour l'isolement: 600V  
 Tension d'essai 5kV impulsion normalisée 1,2/50µs 0,5J  
 Circuits concernés: entrée, sortie, alimentation auxiliaire  
 Tension d'essai 2,5kV valeur efficace 50Hz/1 min  
 Circuits concernés: entrée, sortie, alimentation auxiliaire  
 Tension d'essai 4kV valeur efficace 50Hz/1 min  
 Circuits concernés: tous les circuits et masse

## COMPATIBILITE ELECTROMAGNETIQUE

Essai d'émission selon EN 50081-1, EN 55011  
 Essai d'immunité selon EN 50082-2  
 Essai de distorsion à hautes fréquences 1MHz, onde sinusoïdale (IEC255-4)  
 Tension d'essai: 2,5kV mode commun, 1kV mode série

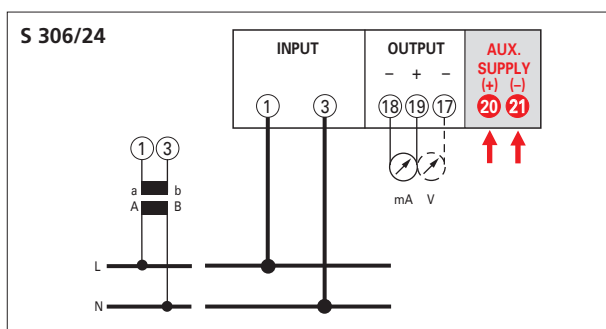
## CONDITION D'UTILISATION

Groupe d'utilisateur: II  
 Température de référence: 15...30°C  
 Température d'utilisation: 0...45°C  
 Température limite de fonctionnement: -10...55°C  
 Température de stockage: -25...70°C  
 Humidité relative: jusqu'à 75%  
 Adapté pour l'utilisation en climat tropical  
 Puissance maximum dissipée<sup>1</sup>:  $\leq 2,6W$   
<sup>1</sup>Pour le dimensionnement thermique du coffret

## BOITIER

Dimensions: 2 modules DIN 43880  
 Raccordement: par vis capacité maxi. fil rigide 4mm<sup>2</sup>  
 Fixation: rail 35mm  
 Type de profil: TH35-15 (EN60715)  
 Matériaux du boîtier: makrolon autoextinguible  
 Degré de protection (EN 60529): IP40 (face avant), IP20 (bornes)  
 Poids: 200 grammes

## SCHEMA DE RACCORDEMENT WIRING DIAGRAM



## AUXILIARY SUPPLY

Rated value **Uaux ac**: 48 - 115 - 230 and 240V  
 Other value on request  
 Tolerance: 0,9...1,1Uaux - 40...60V (Uaux 48V)  
 Rated frequency **faux**: 50Hz  
 Tolerance: 47...63Hz  
 Rated burden:  $\leq 3VA$   
 Rated value **Uaux dc**: 20...150Vdc - 150...250Vdc  
 Rated burden:  $\leq 1,5W$   
 Protected against incorrect polarity

## INSULATION

(EN 60439-1, EN61010-1)

Installation category: III  
 Pollution degree: 2  
 Insulation reference voltage: 600V  
 Impulse voltage test 5kV 1,2/50µs 0,5J  
 Considered circuits: input, output, aux. supply  
 A.C. voltage test 2,5kV r.m.s. 50Hz/1min  
 Considered circuits: input, output, aux. supply  
 A.C. voltage test 4kV r.m.s. 50Hz/1min  
 Considered circuits: all circuits and earth

## ELECTROMAGNETIC COMPATIBILITY

Emission tests according to EN 50081-1, EN 55011  
 Immunity tests according to EN 50082-2  
 High frequency disturbance test, 1MHz damped oscillatory wave (IEC255-4)  
 Test voltage: 2,5kV common mode, 1kV series mode

## ENVIRONMENTAL CONDITIONS

Usage group: II  
 Reference temperature: 15...30°C  
 Nominal temperature range: 0...45°C  
 Limit temperature range: -10...55°C  
 Limit temperature range for storage: -25...70°C  
 Relative humidity: up to 75%  
 Suitable for tropical climates  
 Max. power dissipation<sup>1</sup>:  $\leq 2,6W$   
<sup>1</sup>For switchboard thermal calculation

## HOUSING

Dimensions: 2 module DIN 43880  
 Connections: screw terminals for cable up to 4 mm<sup>2</sup>  
 Mounting: snap-on 35mm rail  
 Rail type: top hat TH35-15 (EN60715)  
 Housing material: self-extinguishing makrolon  
 Protection degree (EN 60529): IP40 (front frame), IP20 (terminals)  
 Weight: 200 grams

## DIMENSIONS DIMENSIONS

