Trasformatore di tensione per reti bassa tensione Misura e Protezione

Voltage transformer for low-voltage network Measure and Protection

BTV6

Trasformatore monofase di tensione
INSERZIONE FASE-FASE
Tensione primaria: 100...690V
Tensione secondaria: 100V
Prestazione nominale:
6VA (cl.0,5) – 9VA(cl.1) – 20VA(cl.3P)
INSERZIONE FASE-NEUTRO
Tensione primaria: 100:√3...690:√3V
Tensione secondaria: 100:√3V
Prestazione nominale:
3VA (cl.0,5) – 4VA(cl.1) – 10VA(cl.3P)

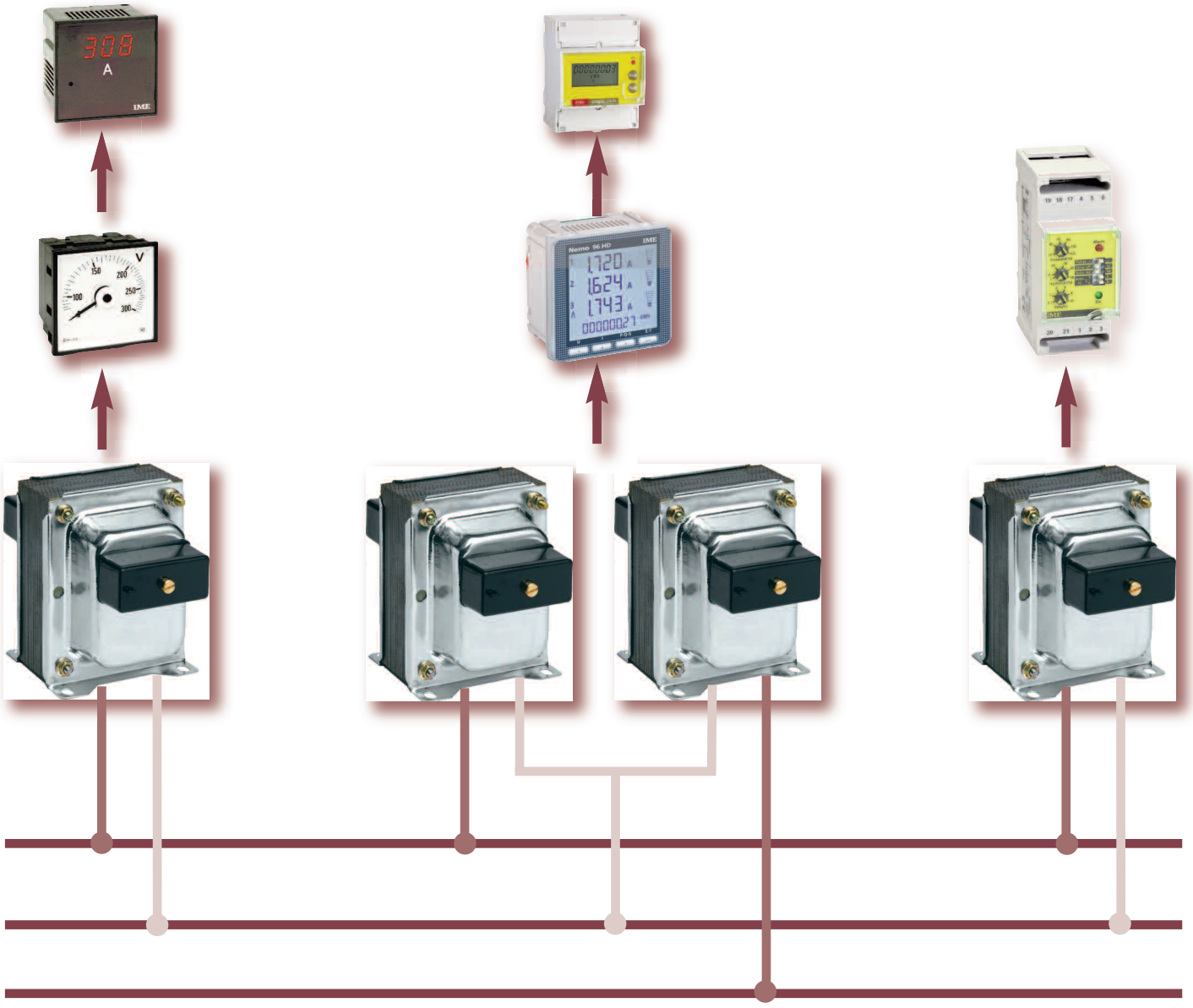
Single-phase voltage transformer
PHASE-PHASE CONNECTION
Primary voltage: 100...690V
Secondary voltage: 100V
Rated burden:
6VA (cl.0,5) – 9VA(cl.1) – 20VA(cl.3P)
PHASE-NEUTRAL CONNECTION
Primary voltage: 100:√3...690:√3V
Secondary voltage: 100:√3V
Rated burden:
3VA (cl.0,5) – 4VA(cl.1) – 10VA(cl.3P)

Indicatori
Meters

Mutifunzione
Multifunction

Contatori
Static energy meters

Relè
Relays



CODICE ORDINAZIONE / *ORDER CODE*		Tensione primaria *Primary voltage*	CL. 0,5	CL. 1	CL. 3P
Secondario / *Secondary*					
100V	100: √3V	V	VA	VA	VA
TVVBC100C100		100	6	9	20
TVVBC110C100		110	6	9	20
TVVBC115C100		115	6	9	20
TVVBC230C100		230	6	9	20
TVVBC240C100		240	6	9	20
TVVBC400C100		400	6	9	20
TVVBC440C100		440	6	9	20
TVVBC450C100		450	6	9	20
TVVBC500C100		500	6	9	20
TVVBC600C100		600	6	9	20
TVVBC660C100		660	6	9	20
TVVBC690C100		690	6	9	20
	TVVBG100G100	100: √3V	3	4	10
	TVVBG110G100	110: √3V	3	4	10
	TVVBG115G100	115: √3V	3	4	10
	TVVBG230G100	230: √3V	3	4	10
	TVVBG240G100	240: √3V	3	4	10
	TVVBG400G100	400: √3V	3	4	10
	TVVBG440G100	440: √3V	3	4	10
	TVVBG450G100	450: √3V	3	4	10
	TVVBG500G100	500: √3V	3	4	10
	TVVBG600G100	600: √3V	3	4	10
	TVVBG660G100	660: √3V	3	4	10
	TVVBG690G100	690: √3V	3	4	10
ATVCOP01	* Coprimorsetti sigillabili primario / secondario - *Primary / secondary sealable terminal cover*				

NORME DI RIFERIMENTO

EN/IEC61869-1, EN/IEC61869-3

REFERENCE STANDARDS

EN/IEC61869-1, EN/IEC61869-3

CARATTERISTICHE TECNICHE

INSERZIONE FASE-FASE

Tensione nominale primaria U_{pr}: 100...690V

Tensione nominale secondaria U_{sr}: 100V

INSERZIONE FASE-NEUTRO

Tensione nominale primaria U_{pr}: 100:√3...690:√3V

Tensione nominale secondaria U_{sr}: 100:√3V

Frequenza nominale: 50Hz

Frequenza di funzionamento: 47...63Hz

Opzione: frequenza nominale 400Hz (prestazioni da definire)

Prestazione nominale: vedi tabella

Classe di precisione: cl. 0,5 – 1 (misura) – 3P (protezione)

FATTORE DI TENSIONE NOMINALE (tensione per prova riscaldamento)

Durata nominale continua: $1,2U_{pr}$

Durata nominale 8 ore: $1,9U_{pr}$ (inserzione fase-neutro e primario U_{pr}:√3)

Massima potenza dissipata[1]: ≤ 7W

[1]Per il dimensionamento termico dei quadri

SPECIFICATIONS

PHASE-PHASE CONNECTION

Rated primary voltage U_{pr}: *100...690V*

Rated secondary voltage U_{sr}: *100V*

PHASE-NEUTRAL CONNECTION

Rated primary voltage U_{pr}: *100:√3...690:√3V*

Rated secondary voltage U_{sr}: *100:√3V*

Rated frequency: *50Hz*

Working frequency: *47...63Hz*

Option: *rated frequency 400Hz (burdens to the advised)*

Rated burden: *see table*

Accuracy class: *cl.0,5 – 1 (measuring) – 3P (protective)*

RATED VOLTAGE FACTOR *(for voltage heating test)*

Continuous rated time: *$1,2U_{pr}$*

8 hours rated time: *$1,9U_{pr}$ (phase-neutral and primary U_{pr}:√3 connection)*

Max. power dissipation[1]: *≤ 7W*

[1]*For switchboard thermal calculation*

PRESCRIZIONI RELATIVE ALL'ISOLAMENTO

Trasformatore a secco, isolamento in aria

Classe di isolamento (EN/IEC61869-1): B

INSULATION REQUIREMENTS

Dry transformer, air insulation

Class of insulation (EN/IEC61869-1): *B*

Tensione nominale primaria U_{pn} *Rated primary voltage U_{pn}*	≤ 600V	> 600V
Tensione massima di riferimento per l'isolamento Um *Highest voltage for equipment Um*	0,72kV valore efficace / *r.m.s.*	1,2kV valore efficace / *r.m.s.*
Livello di isolamento nominale *Rated insulation level*	3kV valore efficace / *r.m.s.* 50Hz / 1min	6kV valore efficace / *r.m.s.* 50Hz / 1min

CONDIZIONI AMBIENTALI

Installazione in situazione non esposta (EN/IEC61869-1)

Temperatura di riferimento: 23°C ± 1°C

Temperatura di impiego: -25…50°C

Temperatura media giornaliera: ≤ 30°C

Temperatura di magazzinaggio: -40…85°C

Umidità relativa: ≤ 85%

Adatto all'utilizzo in clima tropicale

ENVIRONMENTAL CONDITIONS

Non-exposed installation (EN/IEC61869-1)

Reference temperature: *23°C ± 1°C*

Nominal temperature range: *-25…50°C*

Daily mean temperature: *≤ 30°C*

Limit temperature range for storage: *-40…85°C*

Relative humidity: *≤ 85%*

Suitable for tropical climates

LIMITI DELL'ERRORE DI TENSIONE E DELL'ERRORE D'ANGOLO

(EN/IEC61869-3)

LIMITS OF VOLTAGE ERROR AND PHASE DISPLACEMENT

(EN/IEC61869-3)

Classe di precisione *Accuracy class*	Errore di tensione (rapporto) in percentuale ± *Percentage voltage (ratio) error ±*	Errore d'angolo ± / *Phase displacement ±*	
		Minuti *Minutes*	Centiradianti *Centiradians*
	80...120%Un	80...120%Un	80...120%Un
0,5	0,5	20	0,6
1	1,0	40	1,2

L'errore di tensione e l'errore d'angolo a frequenza nominale non devono superare i valori indicati in tabella, ad ogni tensione compresa tra l'80% e il 120% della tensione nominale e con prestazione compresa tra il 0% e il 100% della prestazione nominale (per TV con prestazione < 10VA) o tra il 25% e il 100% della prestazione nominale (per TV con prestazione ≥ 10VA) a fattore di potenza di 0,8 in ritardo.

The voltage error and phase displacement at rated frequency shall not exceed the values given in table, at any voltage between 80% and 120% of rated voltage and with burdens of between 0% and 100% of rated burden (VT with burden < 10VA) or 25% and 100% of rated burden (VT with burden ≥ 10VA) at a power factor of 0,8 lagging.

Classe di precisione *Accuracy class*	Errore di tensione (rapporto) in percentuale ± *Percentage voltage (ratio) error ±*	Errore d'angolo ± / *Phase displacement ±*	
		Minuti *Minutes*	Centiradianti *Centiradians*
	*5...100%Un x Ft	*5...100%Un x Ft	*5...100%Un x Ft
3P	3,0	120	3,5

*** Il fattore di tensione nominale (Ft), a seconda dell' inserzione del TV (fase - fase o fase - neutro), è pari a 1,2 o 1,9 volte la tensione nominale (Upn).**

L'errore di tensione e l'errore d'angolo a frequenza nominale non devono superare i valori indicati in tabella, al 5% della tensione nominale e alla tensione nominale moltiplicata per il fattore di tensione nominale (1,2 o 1,9) con prestazioni comprese tra il 25% e il 100% della prestazione nominale con fattore di potenza di 0,8 in ritardo.

Al 2% della tensione nominale, i limiti di errore di tensione e d'angolo con prestazione compresa tra il 25% e il 100% della prestazione nominale con fattore di potenza di 0,8 in ritardo sono due volte più alti di quelli dati in tabella.

**** Depending on the voltage transformer connection (phase - phase or phase - neutral), the rated voltage factor (Ft) corresponds to 1,2 or 1,9 times the rated voltage (Upn).***

The voltage error and phase displacement at rated frequency shall not exceed the values in table at 5% rated voltage and at rated voltage multiplied by the rated voltage factor (1,2 or 1,9) with burdens of between 25% and 100% of rated burden at a power factor of 0,8 lagging.

At 2% of rated voltage, the limits of error and phase displacement with burdens of between 25% and 100% of rated burden at a power factor of 0,8 lagging will be twice as high as those given in table.

CUSTODIA

Materiale custodia: metallo

Grado di protezione (EN/IEC 60529): IP00 morsetti (IP20 con coprimorsetto)

Fissaggio a vite per montaggio a parete

Peso: 2,7 kg

HOUSING

Housing material: *metal*

Protection degree (EN/IEC 60529): *IP00 terminals (IP20 with terminal cover)*

Fixing screw facility for wall mounting

Weight: *2,7 kg*

CONNESSIONI

Morsetti a vite M4 e faston 6,3x0,8mm

SIGLATURA CONNESSIONI

Primario: A – B (fase-fase) / A – N (fase-neutro)

Secondario: a – b (fase-fase) / a – n (fase-neutro)

CONNECTIONS

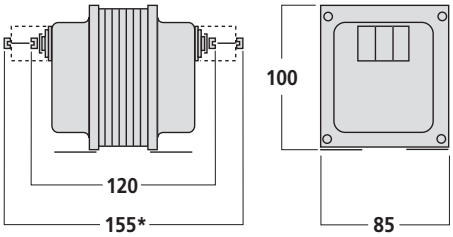
Screw terminals M4 and fast-ons 6,3x0,8mm

CONNECTIONS LABEL

Primary: *A – B (phase-phase) / A – N (phase-neutral)*

Secondary: *a – b (phase-phase) / a – n (phase-neutral)*

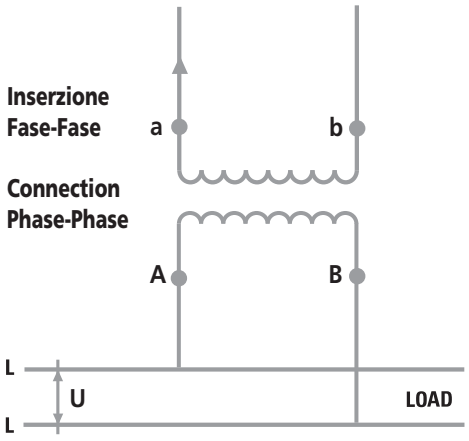
DIMENSIONI *DIMENSIONS*

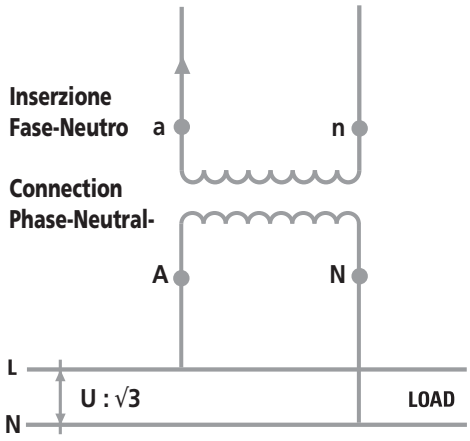


NOTA: è possibile realizzare trasformatori con più ingressi primari e/o uscite secondarie.
Caratteristiche tecniche (precisione, prestazioni, isolamento, ecc.) e dimensioni: da definire.

NOTE: it is possible to manufacture transformers with various primary inputs and/or secondary outputs.
Dimensional and technical specifications (accuracy, rated burden, insulation, etc): to be specified.

SCHEMA D'INSERZIONE *WIRING DIAGRAM*





www.imeitaly.com

BTV6

Transformateur de tension pour réseau basse tension Mesure et Protection

Transformateur de tension monophasé
RACCORDEMENT PHASE - PHASE
Tension primaire: 100...690V
Tension secondaire: 100V
Prestation nominale:
6VA (cl.0,5) – 9VA(cl.1) – 20VA(cl.3P)
RACCORDEMENT PHASE-NEUTRE
Tension primaire: 100:√3...690:√3V
Tension secondaire: 100:√3V
Prestation nominale:
3VA (cl.0,5) – 4VA(cl.1) – 10VA(cl.3P)

Voltage transformer for low-voltage network Measure and Protection

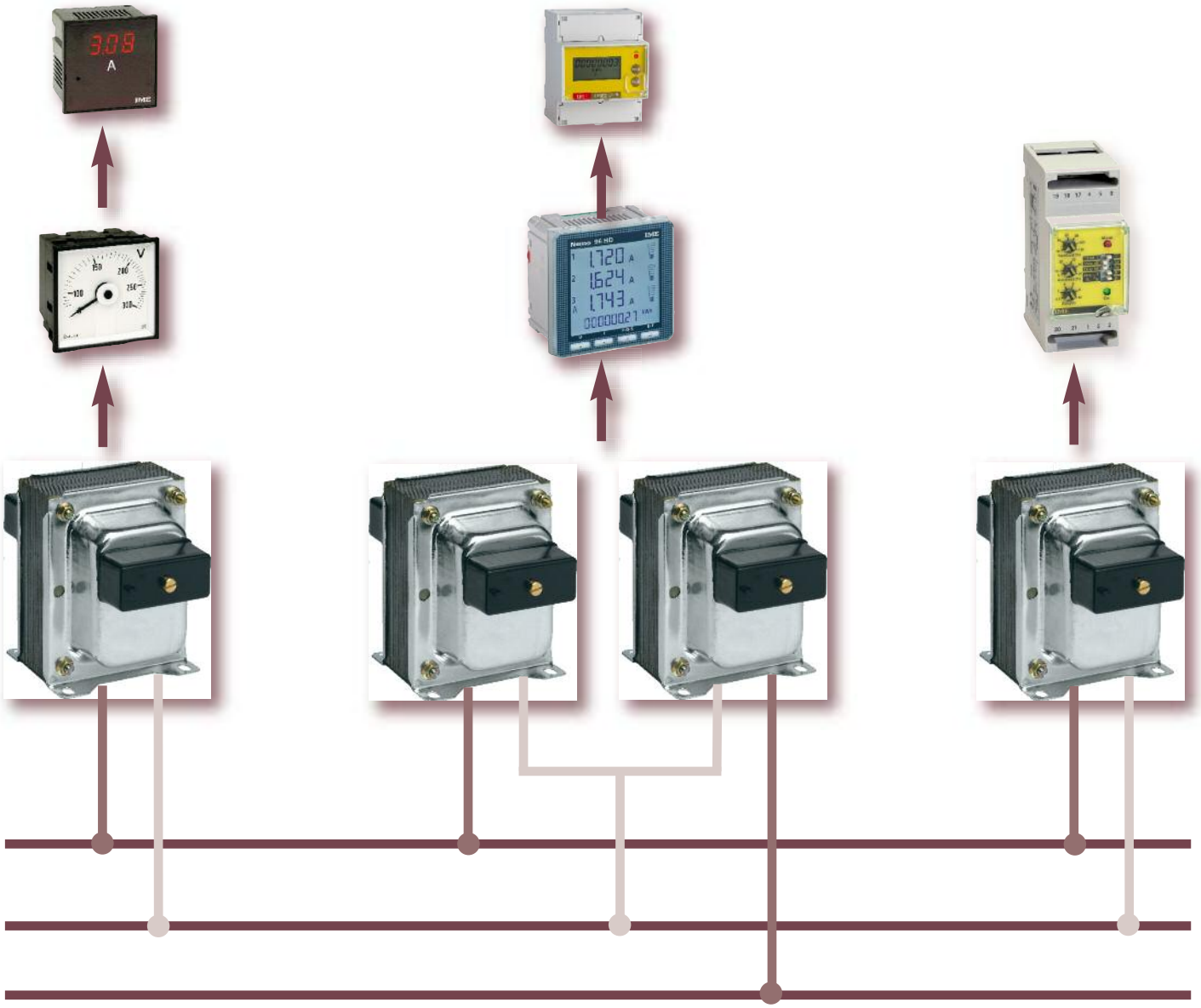
Single-phase voltage transformer
PHASE-PHASE CONNECTION
Primary voltage: 100...690V
Secondary voltage: 100V
Rated burden:
6VA (cl.0,5) – 9VA(cl.1) – 20VA(cl.3P)
PHASE-NEUTRAL CONNECTION
Primary voltage: 100:√3...690:√3V
Secondary voltage: 100:√3V
Rated burden:
3VA (cl.0,5) – 4VA(cl.1) – 10VA(cl.3P)

Indicateurs *Meters*

Centrales de mesure *Multifunction*

Compteurs d'énergie *Static energy meters*

Relais *Relays*



REFERENCE / *ORDER CODE*		Tension primaire *Primary voltage*	CL. 0,5	CL. 1	CL. 3P
Secondaire / Secondary					
100V	100: √3V	V	VA	VA	VA
3013 0610		100	6	9	20
3013 0611		110	6	9	20
3013 0612		115	6	9	20
3013 0620		230	6	9	20
3013 0622		240	6	9	20
3013 0630		400	6	9	20
3013 0640		440	6	9	20
3013 0645		450	6	9	20
3013 0650		500	6	9	20
3013 0660		600	6	9	20
☎		660	6	9	20
☎		690	6	9	20
	3013 0673	100: √3V	3	4	10
	3013 0674	110: √3V	3	4	10
	3013 0675	115: √3V	3	4	10
	3013 0677	230: √3V	3	4	10
	3013 0678	240: √3V	3	4	10
	3013 0680	400: √3V	3	4	10
	3013 0681	440: √3V	3	4	10
	3013 0682	450: √3V	3	4	10
	3013 0683	500: √3V	3	4	10
	3013 0684	600: √3V	3	4	10
	☎	660: √3V	3	4	10
	☎	690: √3V	3	4	10
3020 0011	Cache-bornes primaires / secondaires plombable - *Primary / secondary sealable terminal cover*				

NORME DE REFERENCE

EN/IEC61869-1, EN/IEC61869-3

REFERENCE STANDARDS

EN/IEC61869-1, EN/IEC61869-3

CARACTERISTIQUES TECHNIQUES

RACCORDEMENT PHASE-PHASE

Tension nominale primaire U_{pr}: 100...690V

Tension nominale secondaire U_{sr}: 100V

RACCORDEMENT PHASE-NEUTRE

Tension nominale primaire U_{pr}: 100:√3...690:√3V

Tension nominale secondaire U_{sr}: 100:√3V

Fréquence nominale: 50Hz

Fréquence de fonctionnement: 47...63Hz

Option: fréquence nominale 400Hz (prestations à définir)

Prestation nominale: voir tableau

Classe de précision: 0,5 – 1 (mesure) – 3P (protection)

FACTEUR DE TENSION NOMINALE (pour test d'échauffement)

Durée nominale continue: $1,2U_{pr}$

Durée nominale 8 heures: $1,9U_{pr}$ (raccordement phase-neutre et primaire Upr √3)

Puissance max. dissipée²: ≤ 7W

²Pour le dimensionnement therrmique du coffret

SPECIFICATIONS

PHASE-PHASE CONNECTION

Rated primary voltage U_{pr}: *100...690V*

Rated secondary voltage U_{sr}: *100V*

PHASE-NEUTRAL CONNECTION

Rated primary voltage U_{pr}: *100:√3...690:√3V*

Rated secondary voltage U_{sr}: *100:√3V*

Rated frequency: *50Hz*

Working frequency: *47...63Hz*

Option: *rated frequency 400Hz (burdens to the advised)*

Rated burden: *see table*

Accuracy class: *0,5 – 1 (measuring) – 3P (protective)*

RATED VOLTAGE FACTOR *(for voltage heating test)*

Continuous rated time: *$1,2U_{pr}$*

8 hours rated time: *$1,9U_{pr}$ (phase-neutral and primary U_{pr} √3 connection)*

Max. power dissipation²: *≤ 7W*

²For switchboard thermal calculation

PRESCRIPTIONS RELATIVES À L'ISOLEMENT

Transformateur sec, isolé dans l'air

Classe de l'isolement (EN/IEC61869-1): B

INSULATION REQUIREMENTS

Dry transformer, air insulation

Class of insulation (EN/IEC61869-1): *B*

Tension nominale primaire U_{pn} *Rated primary voltage U_{pn}*	≤ 600V	> 600V
Tension max. de référence pour l'isolement Um *Highest voltage for equipment Um*	0,72kV valeur efficace / r.m.s.	1,2kV valeur efficace / r.m.s.
Niveau de l'isolement nominal *Rated insulation level*	**3kV valeur efficace / r.m.s.** *50Hz / 1min*	6kV valeur efficace / r.m.s. 50Hz / 1min

CONDITIONS D'UTILISATION

Installation non exposée (EN/IEC61869-1)

Température de référence: 23°C ± 1°C

Température d'utilisation: -25…50°C

Température moyenne journalière: ≤ 30°C

Température de stockage: -40…85°C

Humidité relative: ≤ 85%

Adapté pour l'utilisation en climat tropical

ENVIRONMENTAL CONDITIONS

Non-exposed installation (EN/IEC61869-1)

Reference temperature: *23°C ± 1°C*

Nominal temperature range: *-25…50°C*

Daily mean temperature: *≤ 30°C*

Limit temperature range for storage: *-40…85°C*

Relative humidity: *≤ 85%*

Suitable for tropical climates

LIMITE DES ERREURS DE COURANT ET DEPLACEMENT DE PHASE

(EN/IEC61869-3)

LIMITS OF VOLTAGE ERROR AND PHASE DISPLACEMENT

(EN/IEC61869-3)

Classe de précision *Accuracy class*	Erreur de tension (rapport) en pourcentage *Percentage voltage (ratio) error* ±	Déplacement de phase *Phase displacement* ±	
		Minutes *Minutes*	Centiradiants *Centiradians*
	80...120%Un	80...120%Un	80...120%Un
0,5	0,5	20	0,6
1	1,0	40	1,2

L'erreur de tension à la fréquence nominale ne doit pas dépasser les valeurs indiquées dans le tableau. Toute tension comprise entre 80% et 120% de la tension nominale et avec des prestations comprises entre 0% et 100% de la prestation nominale (TT avec prestation <10VA) ou 25% et 100% de la prestation nominale (TT avec prestation ≥ 10VA) à un facteur de puissance de 0, 8 en retard.

The voltage error and phase displacement at rated frequency shall not exceed the values given in table, at any voltage between 80% and 120% of rated voltage and with burdens of between 0% and 100% of rated burden (VT with burden <10VA) or 25% and 100% or rated burden (VT with burden ≥ 10VA) at a power factor of 0,8 lagging.

Classe de précision *Accuracy class*	Erreur de tension (rapport) en pourcentage *Percentage voltage (ratio) error* ±	Déplacement de phase *Phase displacement* ±	
		Minutes *Minutes*	Centiradiants *Centiradians*
	*5...100% Un x Ft	*5...100% Un x Ft	*5...100% Un x Ft
3P	3,0	120	3,5

*en fonction du raccordement du transformateur de tension, le facteur de tension nominale (Ft) correspond à 1,2 ou 1,9 fois la tension nominale (Upn).

L'erreur de tension à la fréquence nominale ne doit pas dépasser les valeurs indiquées dans le tableau, à 5% de la tension nominale et à une tension nominale multipliée par le facteur de tension (1,2 ou 1,9) avec des prestations comprises entre 25% et 100% de la prestation nominale à un facteur de puissance de 0,8 en retard. A 2% de la tension nominale, les limites d'erreurs avec des prestations comprises entre 25% et 100% de la prestation nominale à un facteur de puissance de 0,8 en retard seront deux fois plus élevées que celles indiquées dans le tableau.

**Depending on the voltage transformer connection (phase - phase or phase - neutral), the rated voltage factor (Ft) corresponds to 1,2 or 1,9 times the rated voltage (Upn).*

The voltage error and phase displacement at rated frequency shall not exceed the values in table at 5% rated voltage and at rated voltage multiplied by the rated voltage factor (1,2 or 1,9) with burdens of between 25% and 100% of rated burden at a power factor of 0,8 lagging.

At 2% of rated voltage, the limits of error and phase displacement with burdens of between 25% and 100% of rated burden at a power factor of 0,8 lagging will be twice as high as those given in table.

BOITIER

Matériau du boîtier: métal

Degré de protection (EN/IEC 60529): IP00 bornes (IP20 avec cache borne)

Facilité de fixation pour montage en saillie

Poids: 2,7 kg

HOUSING

Housing material: *metal*

Protection degree (EN/IEC 60529): *IP00 terminals (IP20 with terminal cover)*

Fixing screw facility for wall mounting

Weight: *2,7 kg*

RACCORDEMENT

Primaire - secondaire : par vis M4 et faston 6,3 x 0,8mm

ETIQUETTES DE RACCORDEMENT

Primaire: A – B (phase-phase) / A – N (phase-neutre)

Secondaire: a – b (phase-phase) / a – n (phase-neutre)

CONNECTIONS

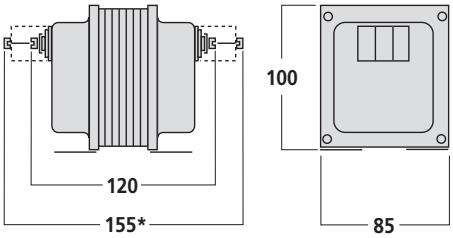
Screw terminals M4 and fast-ons 6,3x0,8mm

CONNECTIONS LABEL

Primary: *A – B (phase-phase) / A – N (phase-neutral)*

Secondary: *a – b (phase-phase) / a – n (phase-neutral)*

DIMENSIONS *DIMENSIONS*



NOTE: il est possible de fabriquer des transformateurs avec diverses entrées primaires et / ou sorties secondaires.
Dimensions et spécifications techniques (précision, prestation, isolement, etc): à préciser.

NOTE: it is possible to manufacture transformers with various primary inputs and/or secondary outputs.
Dimensional and technical specifications (accuracy, rated burden, insulation, etc): to be specified.

SCHEMA DE RACCORDEMENT *WIRING DIAGRAM*