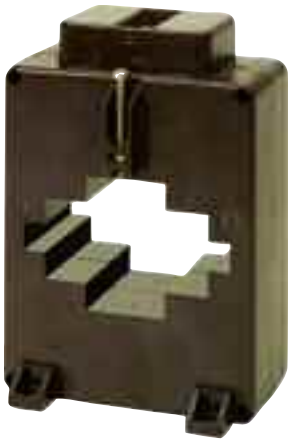
Trasformatore di corrente per reti bassa tensione Misura

Current transformers for low-voltage network Measure

TAS81

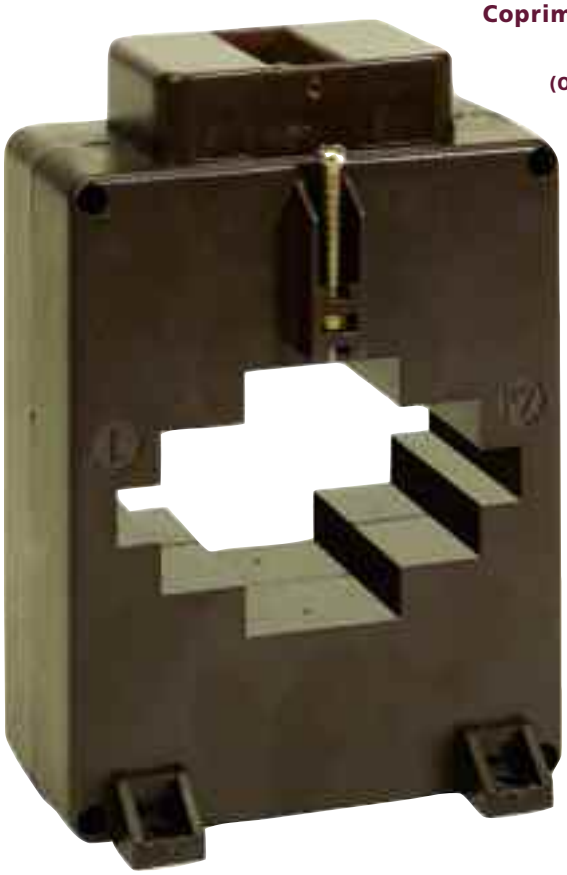
Trasformatore monofase di corrente
Primario a sbarra passante
Corrente primaria 400...2500A
Corrente secondaria 1 - 5A
Classi di precisione: cl.0,5 - 1
Prestazione nominale 2...12VA

Single-phase current transformer
Passing bus bar primary
Primary current 400...2500A
Secondary current 1 - 5A
Accuracy class: cl.0,5 - 1
Rated burden 2...12VA



FINESTRA *WINDOW*

Coprimorsetto sigillabile
Sealable terminal cover
(Opzione Option)



CODICE ORDINAZIONE / *ORDER CODE*		Corrente primaria *Primary current*	CL. 0,5	CL. 1
Secondario / *Secondary*				
5A	1A	A	VA	VA
TASN50C400	TASN10C400	400	-	2
TASN50C500	TASN10C500	500	2	4
TASN50C600	TASN10C600	600	3	5
TASN50C700	TASN10C700	700	4	6
TASN50C750	TASN10C750	750	4	6
TASN50C800	TASN10C800	800	4	6
TASN50D100	TASN10D100	1000	6	8
TASN50D120	TASN10D120	1200	8	10
TASN50D125	TASN10D125	1250	8	10
TASN50D150	TASN10D150	1500	10	12
TASN50D160	TASN10D160	1600	10	12
TASN50D200	TASN10D200	2000	10	12
TASN50D250	TASN10D250	2500	10	12
ATACOP03	Accessorio coprimorsetto sigillabile / *Accessory sealable terminal cover*			

NORME DI RIFERIMENTO

EN/IEC 61869-1, 61869-2

CARATTERISTICHE TECNICHE

Corrente nominale primaria I_{pr}: 400…2500A

Frequenza nominale: 50Hz

Frequenza di funzionamento: 47…63Hz

Opzione: frequenza nominale 400Hz (prestazioni da definire)

Corrente termica nominale permanente I_{cth}: 100% I_{pr}

Corrente termica nominale di cortocircuito I_{th}: < 60I_{pr} (max. 90kA)

Corrente nominale dinamica I_{dyn}: 2,5I_{th}

Fattore di sicurezza (FS): ≤ 5

Corrente nominale secondaria I_{sr}: 5-1A

Prestazione nominale: 2…12VA

Classe di precisione: 0,5 – 1

Massima potenza dissipata [1]: ≤ 14,5W

[1]Per il dimensionamento termico dei quadri

Temperatura max ammissibile su cavo a barra primario: 125°C

Funzionamento garantito a secondario aperto per 1 minuto

I trasformatori di corrente non dovrebbero funzionare con l' avvolgimento secondario aperto a causa delle sovratensioni potenzialmente pericolose e dei surriscaldamenti che possono verificarsi.

Per ovviare a questo problema è possibile utilizzare l'accessorio ATAP015 (NT710) da collegare direttamente al secondario del trasformatore, in grado di rilevare costantemente la tensione ai morsetti e qualora questa raggiunga il valore di soglia (18V) a causa di una interruzione dei collegamenti o alla rimozione delle apparecchiature, provvede automaticamente alla richiusura del circuito.
Al ripristino delle condizioni normali di funzionamento si esclude automaticamente.
Collegato permanentemente al secondario del trasformatore da proteggere, non influisce minimamente sulle caratteristiche e prestazioni del TA; non necessita di alcuna alimentazione esterna (autoalimentato).

PRESCRIZIONI RELATIVE ALL'ISOLAMENTO

Trasformatore a secco, isolamento in aria

Tensione massima di riferimento per l'isolamento U_m: 0,72kV valore efficace

Livello di isolamento nominale: 3kV valore efficace 50Hz/1min

Classe di isolamento (EN/IEC 61869-1, 61869-2): B

CONDIZIONI AMBIENTALI

Installazione in situazione non esposta (EN/IEC 61869-1, 61869-2)

Temperatura di riferimento: 23°C ± 1°C

Temperatura di impiego: -25…50°C (I_{pr} ≤ 1000A) - -25...40°C (I_{pr} > 1000A)

Temperatura media giornaliera: ≤ 30°C

Temperatura di magazzinaggio: -40…85°C

REFERENCE STANDARDS

EN/IEC 61869-1, 61869-2

SPECIFICATIONS

Rated primary current I_{pr} : *400…2500A*

Rated frequency: *50Hz*

Working frequency: *47…63Hz*

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

Rated continuous thermal current I_{cth}: *100% I_{pr}*

Rated short-time thermal current I_{th}: *< 60I_{pr} (max. 90kA)*

Rated dynamic current I_{dyn} : *2,5I_{th}*

Instrument security factor (FS): *≤ 5*

Rated secondary current I_{sr} : *5 - 1A*

Rated burden: *2…12VA*

Accuracy class: *0,5 – 1*

Max. power dissipation [1]: *≤ 14,5W*

[1]For switchboard thermal calculation

The allowed max cable or busbar temp is: *125°C*

Working time guaranteed with secondary winding open for 1 minute
Current transformers should not be operated with the secondary winding open-circuited because of the potentially dangerous over-voltages and overheating which can occur.

To obviate this problem, it is possible to use ATAP015 (NT710) accessory to be directly connected with the transformer secondary winding, which is able to continuously detect the terminal voltage and, if the voltage reaches the threshold value (18V) owing to a connection breakdown or disconnection of the devices, automatically closes again the circuit.
When the normal working conditions are restored, it automatically disconnects. Continuously connected with the secondary winding of the transformer to protect, it doesn't affect at all the current transformer features or performances. It doesn't need any external supply (self-supplied).

INSULATION REQUIREMENTS

Dry transformer, air insulation

Highest voltage for equipment U_m: *0,72kV r.m.s.*

Rated insulation level: *3kV r.m.s. 50Hz/1min*

Class of insulation (EN/IEC 61869-1, 61869-2): *B*

ENVIRONMENTAL CONDITIONS

Non-exposed installation (EN/IEC 61869-1, 61869-2)

Reference temperature: *23°C ± 1°C*

Nominal temperature range: *-25…50°C (I_{pr} ≤ 1000A) - -25...40°C (I_{pr} > 1000A)*

Daily mean temperature: *≤ 30°C*

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

Umidità relativa: ≤ 85%

Adatto all'utilizzo in clima tropicale

Relative humidity: *≤ 85%*

Suitable for tropical climates

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

(EN/IEC 61869-1, 61869-2)

LIMITS OF CURRENTS ERROR AND PHASE DISPLACEMENT

(EN/IEC 61869-1, 61869-2)

Classe di precisione *Accuracy class*	Errore di corrente (rapporto) in percento (±) alla percentuale della corrente nominale sottoindicata *± Percentage current (ratio) error at percentage of rated current shown below*					Errore d'angolo(±) alla percentuale della corrente nominale sottoindicata *± Phase displacement at percentage of rated current shown below*									
						Minuti *Minutes*					Centiradianti *Centiradians*				
	5	20	50	100	120	5	20	50	100	120	5	20	50	100	120
0,5	1,5	0,75		0,5	0,5	90	45		30	30	2,7	1,35		0,9	0,9
1	3,0	1,5		1,0	1,0	180	90		60	60	5,4	2,7		1,8	1,8

L'errore di corrente e l'errore d'angolo a frequenza nominale non devono superare i valori indicati in tabella, quando la prestazione è uguale a un qualsiasi valore compreso **tra il 25% e il 100% della prestazione nominale**.

The current error and phase displacement at rated frequency shall not exceed the values given in table when the secondary burden is any value ***from 25% to 100% of the rated burden.***

CUSTODIA

Materiale custodia: policarbonato autoestinguente

Grado di protezione (EN/IEC 60529): IP40 custodia - IP00 morsetti (IP20 con coprimorsetto sigillabile)

Opzione: coprimorsetto sigillabile

Peso: 470 grammi (Max.)

HOUSING

Housing material: *self extinguishing polycarbonate*

Protection degree (EN/IEC 60529): *IP40 housing - IP00 terminals (IP20 with sealable terminal cover)*

Option*: sealable terminal cover*

Weight: *470 grams (Max.)*

CONNESSIONI

Primario: a sbarra passante

Coppia max di serraggio per le viti fissaggio barra primaria passante: 0,2Nm

Secondario: morsetti M4 con serraggio a dado

Siglatura connessioni: primario P1(K) – P2(L)
secondario s1(k) – s2(l)

CONNECTIONS

Primary winding: *passing bus bar*

Max. tightening torque for passing primary bar fixing screws: *0,2Nm*

Secondary winding: *tightening by nut M4*

Connections label: *primary winding P1(K) – P2(L)*
secondary winding s1(k) – s2(l)

Effettuando più passaggi (spire) del cavo all'interno del trasformatore, è possibile ridurre il valore della corrente primaria, mantenendo inalterati valori di corrente secondaria, prestazioni, classe di precisione.

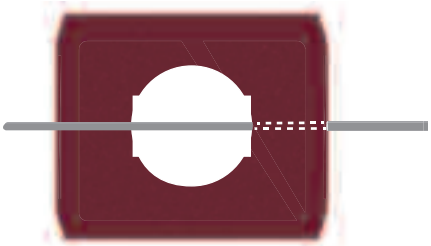
Corrente primaria effettiva = Corrente primaria nominale: Nm spire

Es.: trasformatore con rapporto = 150/5A

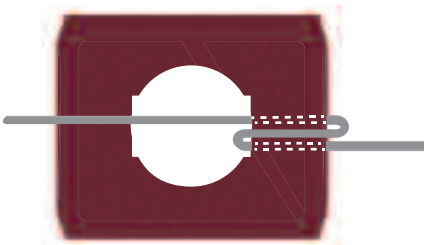
Making more cable passages (windings) inside the transformer, it is possible to reduce the primary current value, keeping unchanged the secondary current values,burden and accuracy class.

Actual primary current = rated primary current : Nm windings

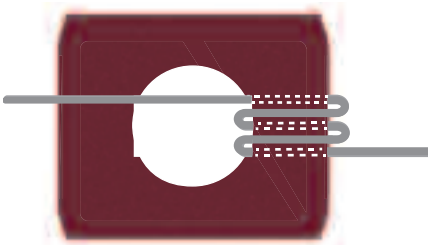
Ex.: transformer with ratio = 150/5A



1 Passaggio cavo 150/5A
1 Cable passage 150/5A

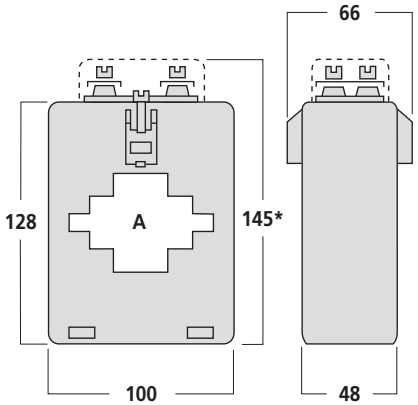


2 Passaggi cavo 75/5A
2 Cable passages 75/5A

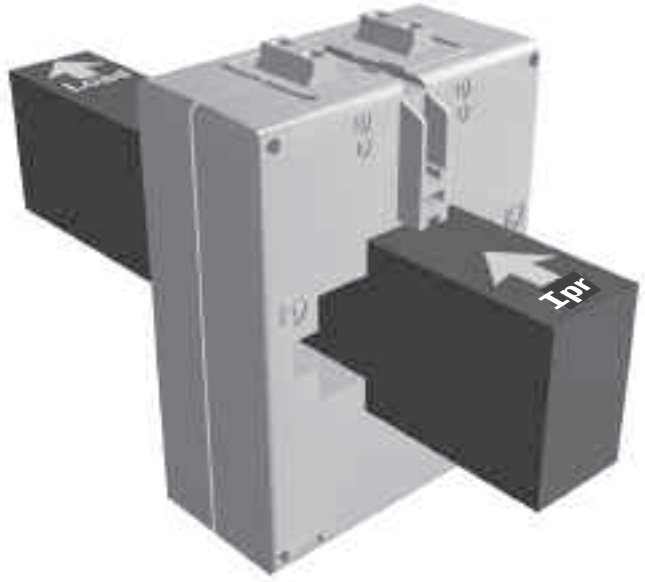


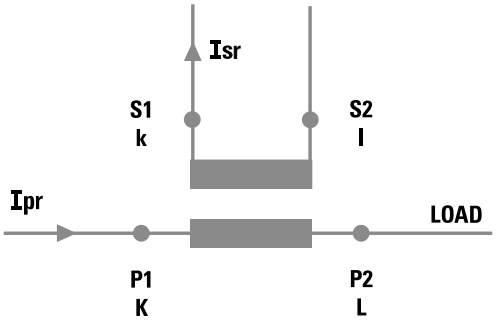
3 Passaggi cavo 50/5A
3 Cable passages 50/5A

DIMENSIONI *DIMENSIONS*



SCHEMA D'INSERZIONE *WIRING DIAGRAM*





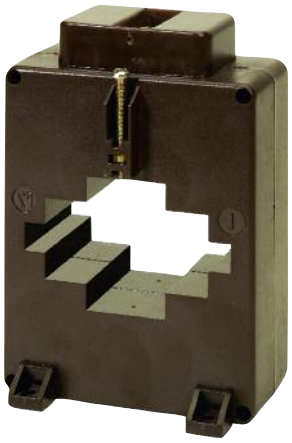
Transformateur de mesure pour réseau basse tension

Measuring transformers for low-voltage network

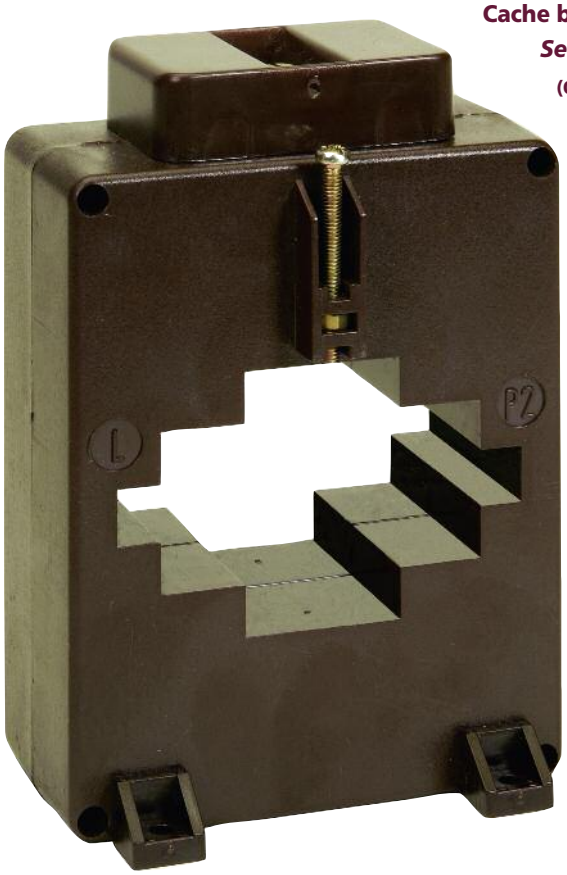
TAS81

Transformateur de courant monophasé
Primaire à barre passante
Courant primaire 400…2500A
Courant secondaire 1 - 5A
Prestation nominale 2…15VA

Single-phase current transformer
Passing bus bar primary
Primary current 400...2500A
Secondary current 1 - 5A
Rated burden 2...15VA



OUVERTURE *WINDOW*



Cache bornes plombable
Sealable terminal cover
(Option)

REFERENCE ORDER CODE		Courant primaire Primary current	CL. 0,5	CL. 1
Secondario / Secondary				
5A	1A	A	VA	VA
☎	☎	400	-	2
☎	☎	500	2	4
☎	☎	600	3	5
☎	☎	700	4	6
☎	☎	750	4	6
☎	☎	800	4	6
☎	☎	1000	6	8
☎	☎	1200	8	10
☎	☎	1250	8	10
☎	☎	1500	10	12
☎	☎	1600	10	12
☎	☎	2000	10	12
☎	☎	2500	10	12
☎	Cache bornes plombable / Accessory sealable terminal cover			

NORME DE REFERENCE

EN/IEC 61869-1, 61869-2

CARACTERISTIQUES TECHNIQUES

Courant nominal primaire I_{pr}: 400…2500A

Fréquence nominale: 50Hz

Fréquence de fonctionnement: 47…63Hz

Option: fréquence nominale 400Hz (prestation à préciser)

Courant thermique nominal continu I_{cth}: < 100% I_{pr}

Courant thermique nominal de court-circuit I_{th}: < 60I_{pr} (max. 90kA)

Courant nominal dynamique I_{dyn}: 2,5I_{th}

Facteur de sécurité (FS): ≤ 5

Courant nominal secondaire I_{sr}: 5-1A

Prestation nominale: 2…12VA

Classe de précision: 0,5 – 1

Puissance maximum dissipée [2]: ≤ 14,5W

[2] Pour le dimensionnement thermique du coffret

La température max.. admissible sur câble à barre primaire est : 125°C

Fonctionnement avec secondaire ouvert 1 minute

Les transformateurs de courant ne doivent pas fonctionner avec l'enroulement secondaire en circuit ouvert en raison du danger potentiel de surtension et la surchauffe qui peut se produire.

Pour remédier à ce problème, il est possible d'utiliser l'accessoire ATAP015 (NT710) pour être directement raccordé à l'enroulement secondaire du transformateur. Cet accessoire est en mesure de détecter en continu la tension aux bornes et, si la tension atteint la valeur seuil (18V) à cause d'une rupture de raccordement ou de déconnexion des dispositifs, l'accessoire referme automatiquement le circuit. Lorsque les conditions de travail normales sont rétablies, il se déconnecte automatiquement. Connecté en permanence avec l'enroulement secondaire du transformateur à protéger, il ne porte pas atteinte aux fonctionnalités ni aux performances du transformateur de courant. Il ne nécessite aucune alimentation externe (auto-alimenté).

REFERENCE STANDARDS

EN/IEC 61869-1, 61869-2

SPECIFICATIONS

Rated primary current I_{pr} : *400…2500A*

Rated frequency: *50Hz*

Working frequency: *47…63Hz*

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

Rated continuous thermal current I_{cth}: *< 100% I_{pr}*

Rated short-time thermal current I_{th}: *< 60I_{pr} (max. 90kA)*

Rated dynamic current I_{dyn} : *2,5I_{th}*

Instrument security factor (FS): *≤ 5*

Rated secondary current I_{sr} : *5 - 1A*

Rated burden: *2…12VA*

Accuracy class: *0,5 – 1*

Max. power dissipation [2]: *≤ 14,5W*

[2]For switchboard thermal calculation

The allowed max. cable for busbar temp is : *125°C*

Working time guaranteed with secondary winding open for 1 minute

Current transformers should not be operated with the secondary winding open-circuited because of the potentially dangerous over-voltages and overheating which can occur.

To obviate this problem, it is possible to use ATAP015 (NT710) accessory to be directly connected with the transformer secondary winding, which is able to continuously detect the terminal voltage and, if the voltage reaches the threshold value (18V) owing to a connection breakdown or disconnection of the devices, automatically closes again the circuit.

When the normal working conditions are restored, it automatically disconnects. Continuously connected with the secondary winding of the transformer to protect, it doesn't affect at all the current transformer features or performances. It doesn't need any external supply (self-supplied).

CARACTERISTIQUES D'ISOLEMENT

Transformateur sec isolé dans l'air

Tension max. de référence pour l'isolement U_m: 0,72kV valeur efficace

Niveau de tension nominale pour l'isolement: 3kV valeur efficace 50Hz/1min

Classe de l'isolement (EN/IEC 61869-1, 61869-2): B

INSULATION REQUIREMENTS

Dry transformer, air insulation

Highest voltage for equipment U_m: *0,72kV r.m.s.*

Rated insulation level: *3kV r.m.s. 50Hz/1min*

Classe de l'isolement (EN/IEC 61869-1, 61869-2): B

CONDITIONS D'UTILISATION

Installation non exposée (EN/IEC 61869-1, 61869-2)

Température de référence: 23°C ± 1°C

Température d'utilisation:-25…50°C (I_{pr} < 1000A) - -25…40°C (I_{pr} ≥ 1000A)

Température moyenne journalière: ≤ 30°C

Température de stockage: -40…85°C

ENVIRONMENTAL CONDITIONS

Non-exposed installation (EN/IEC 61869-1, 61869-2)

Reference temperature: *23°C ± 1°C*

Nominal temperature range: *-25…50°C (I_{pr} < 1000A - 25…40°C (I_{pr} ≥ 1000A)*

Daily mean temperature: *≤ 30°C*

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

Humidité relative: ≤ 85%

Adapté pour l'utilisation en climat tropical

Relative humidity: *≤ 85%*

Suitable for tropical climates

LIMITE DES ERREURS DE COURANT ET DEPLACEMENT DE PHASE

(EN/IEC 61869-1, 61869-2)

LIMITS OF CURRENTS ERROR AND PHASE DISPLACEMENT

(EN/IEC 61869-1, 61869-2)

Classe di precisione *Accuracy class*	Errore di corrente (rapporto) in percento (±) alla percentuale della corrente nominale sottoindicata *± Percentage current (ratio) error at percentage of rated current shown below*					Errore d'angolo(±) alla percentuale della corrente nominale sottoindicata *± Phase displacement at percentage of rated current shown below*									
						Minuti *Minutes*					Centiradianti *Centiradians*				
	5	20	50	100	120	5	20	50	100	120	5	20	50	100	120
0,5	1,5	0,75		0,5	0,5	90	45		30	30	2,7	1,35		0,9	0,9
1	3,0	1,5		1,0	1,0	180	90		60	60	5,4	2,7		1,8	1,8

L'erreur du courant et le déplacement de phase à la fréquence nominale ne doit pas excéder la valeur indiquée dans le tableau lorsque l'enroulement du secondaire représente une valeur de **25% à 100% de la prestation nominale**.

The current error and phase displacement at rated frequency shall not exceed the values given in table when the secondary burden is any value ***from 25% to 100% of the rated burden.***

BOITIER

Matériau du boîtier: polycarbonate autoextinguible

Indice de protection (EN / IEC 60529): IP40 boîtier, IP00 bornes (IP20 avec cache borne plombable)

Option: cache borne plombable

Poids: 470 grammes (Max.)

HOUSING

Housing material: *self extinguishing polycarbonate*

Protection degree (EN / IEC 60529): *IP40 housing, IP00 terminals (IP20 with sealable terminal cover)*

Option*: sealable terminal cover*

Weight: *470 grams (Max.)*

RACCORDEMENT

Primaire: à barre passante passante

Couple de serrage max.pour les vis de fixation de barre primaire passante: 0,2 Nm

Secondaire: par cosse, serrage par écrou M4

Repérage: primaire P1(K) – P2(L)
secondaire s1(k) – s2(l)

En effectuant plus de passage de câble (enroulements) à l'intérieur du transformateur, il est possible de réduire la valeur du courant primaire , tout en conservant les valeurs secondaires du courant, la prestation et la classe de précision.

Courant primaire effectif = courant primaire nominal: Nm enroulements

Ex. : transformateur avec rapport = 150/5A

CONNECTIONS

Primary winding: *passing bus bar*

Max. tightening torque for passing primary bar fixing screws : *0,2Nm*

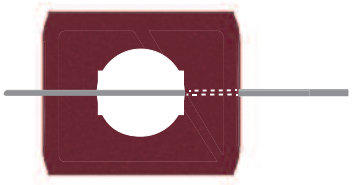
Secondary winding: *tightening by nut M4*

Connections label: *primary winding P1(K) – P2(L)*
secondary winding s1(k) – s2(l)

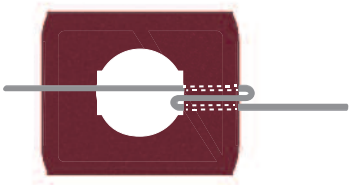
Making more cable passages (windings) inside the transformer, it is possible to reduce the primary current value, keeping unchanged the secondary current values, burden and accuracy class.

Actuel primary current = rated primary current : Nm windings

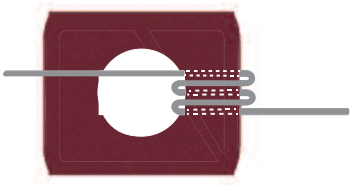
Ex. : transformer with ratio = 150/5A



1 passage de câble 150/5A
1 cable passage 150/5A

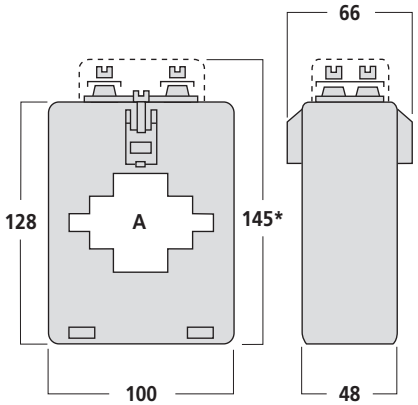


2 passages de câble 75/5A
2 cable passages 75/5A



3 passages de câble 50/5A
3 cable passages 50/5A

DIMENSIONI *DIMENSIONS*



SCHEMA D'INSERZIONE *WIRING DIAGRAM*