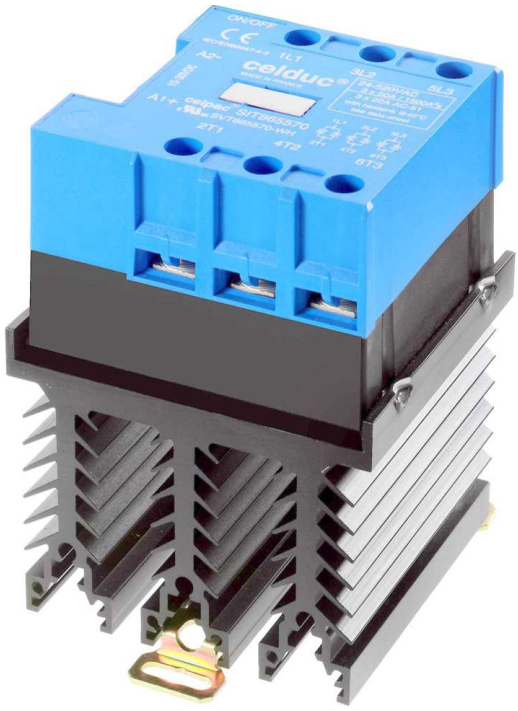
Contacteur Statique Triphasé
Power Three Phase Solid State Contactor

SIT867570

24-520 VAC
(AC-51 : 3 x 22 ARMS)
see derating curve
I^2t =7200A^2s
DC control

- ❏ Contacteur statique synchrone Triphasé prêt à l'emploi adapté aux charges résistives
  Ready to use Three phase ZeroCross Solid State Contactor designed for resistive loads.
- ❏ Sortie thyristors hautes performances technologie TMS^2 (*)
  permettant une longue durée de vie: **24 à 520VAC 75A** (I^2t > 5000A^2s)
  *New **H**igh **E**fficiency Back to back thyristors on output with TMS^2 technology(*) for a long lifetime expectancy: **24 to 520VAC 75A***
  I^2t > 5000A^2s (**)
- ❏ Tension de commande 10-30VDC
  LED de visualisation sur l'entrée de couleur verte.
  *Control range: **10-30VDC**.*
  Green LED visualization on the input.
- ❏ Protection de la tension de sortie par varistor.
  Output voltage protection by VDR
- ❏ Livré en standard avc dissipateur intégré montable sur rail DIN et protection contre le toucher IP20
  Delivered with integrated heatsink for DIN rail mounting and with IP20 protection cover.
- ❏ Construit en conformité aux normes EN60947-4-3 (IEC947-4-3) et EN60950/VDE0805 (Isolement renforcé) -UL-cUL
  Designed in conformity with EN60947-4-3 (IEC947-4-3) and EN60950/VDE0805 (Reinforced Insulation) -UL-cUL



(SVT867570)

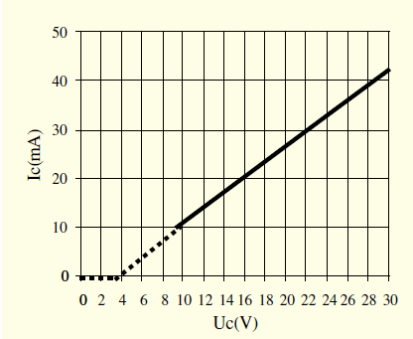
Caractéristiques de commande (à 20°C) / *Control characteristics (at 20°C)*

		DC			
Paramètre / *Parameter*	**Symbol**	**Min**	**Nom**	**Max**	**Unit**
Tension de commande / *Control voltage : DC*	Uc	10	24	30	VDC
Courant de commande / *Control current (@ Uc)*	Ic	10	32	42	mA
Tension de relachement/*Release voltage*	Uc off	4			V
Résistance interne / *Input internal resistor* fig.1	Rc		560		Ω
Tension inverse / *Reverse voltage*	Urv		30		V

Caractéristiques d'entrée-sortie (à 20°C) / *Input-output characteristics (at 20°C)*

Isolement entrée-sortie/*Input-output isolation @500m*	Ui		4000		VRMS
Isolement sortie-semelle/*Output-case isolation @500m*	Ui		3300		VRMS
Tension assignée isolement/ Rated impulse voltage	Uimp		4000		V

fig. 1 :Caractéristique d'entrée / *Control characteristic*



General characteristics

Parameter	Conditions	Symbol	Typ.	Unit
Poids/*Weight*			1000	g
Température de fonctionnement / *Ambient temperature (no icing, no condensation)*			-40 / +100	°C
Température de stockage/ *Storage temperature (no icing, no condensation)*			-40 / +80	°C

(*) : Thermo Mechanical Stress Solution

Caractéristiques de sortie / ***Output characteristics (at 25°C)***

Paramètre / ***Parameter***	**Conditions**	**Symbol**	**Min**	**Typ.**	**Max**	**Unit**
Plage de tension utilisation / *Operating voltage range*		Ue	24	400	520	V rms
Tension de crête (écrêtage VDR)/ *Peak voltage (VDR clamping)*	@ 1mA	Up	1200 (950)			V
Niveau de synchronisme / *Zero cross level*		Usync			35	V
Tension minimum amorçage / *Latching voltage*	Ie nom	Ua	10			V
Courant nominal / *nominal current* (AC-51)	***Resistance***	Ie AC-51	**3x22A (see derating curve)**			A rms
Courant nominal / *nominal current* (AC-53)	***Motor***	Ie AC-53		**12**		A rms
Courant surcharge / *Non repetitive overload current*	tp=10ms *(Fig. 3)*	Itsm	1000	1200		A
Chute directe à l'état passant / *On state voltage drop*	@ 25°C	Vt			0,9	V
Résistance dynamique / *On state dynamic resistance*		rt			12	mΩ
Puissance dissipée (max) / *Output power dissipation (max value)*		Pd	$(0,9x0,9xIe + 0,007xIe^2)*3$			W
Résistance thermique jonction/semelle *Thermal resistance between junction to case*		Rthj/c		1 leg	0,45	K/W
Courant de fuite à l'état bloqué / *Off state leakage current*	@Ue typ, 50Hz	Ilk			1	mA
Courant minimum de charge / *Minimum load current*		Iemin	5			mA
Temps de fermeture / *Turn on time*	@Ue typ, 50Hz	ton max			10	ms
Temps d'ouverture / *Turn off time*	@Ue typ, 50Hz	toff max			10	ms
Fréquence utilisation/ *Operating frequency range*	F mains	f	0,1	50-60	800	Hz
dv/dt à l'état bloqué / *Off state dv/dt*		dv/dt	500			V/µs
di/dt max / *Maximum di/dt non repetitive*		di/dt			50	A/µs
I2t (<10ms)		I^2t	5000	7200		A^2s
Immunité / *Conducted immunity level*	IEC/EN61000-4-4 (bursts)		4kV criterion A			
Immunité / *Conducted immunity level*	IEC/EN61000-4-5 (surge)		4kV criterion A			
Protection court-circuit / *Short circuit protection*	voir/see page 6	Example	Fuse Ferraz gRC 25A/32A/50A			

COURBES THERMIQUES / ***thermal curves:***

curve 1 :
with ventilation in the heatsink (> 1m/s)
(avec ventilation significative du dissipateur)
curve 2 :
working in normal conditions with a small ventilation in the cabinet (avec petite ventilation d'armoire)

curve 3 :
according with IEC60947-4-2
in a closed cabinet without any ventilation.
(absence totale de ventilation)

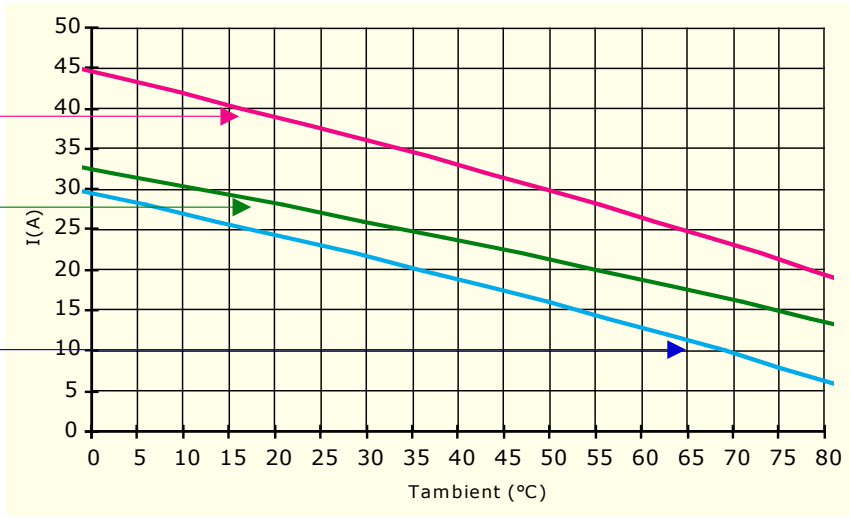
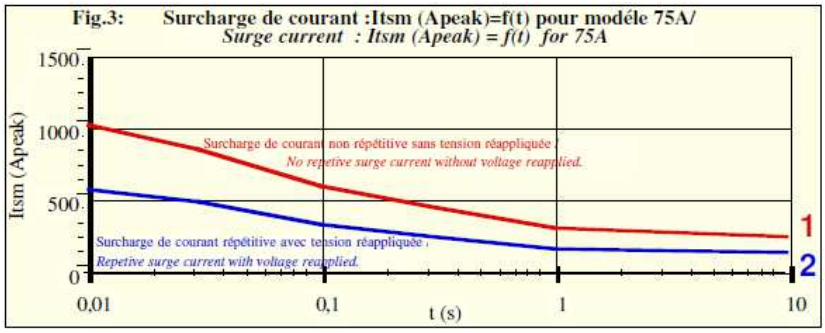
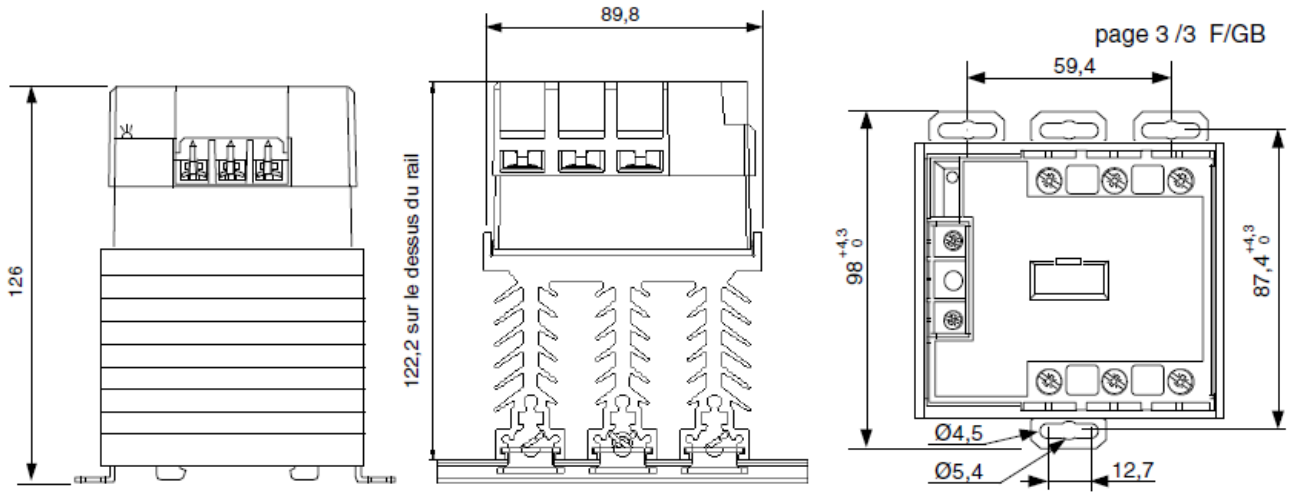


fig 3 : Courants de surcharges / *Overload currents*

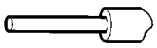
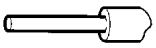
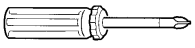
1 -Itsm non répétitif sans tension réappliquée est donné pour la détermination des protections.
1 - *No repetitive Itsm is given without voltage reapplied . This curve is used to define the protection (fuses).*

2 -Itsm répétitif est donné pour des surcharges de courant (Tj initiale=70°C).
Attention : la répétition de ces surcharges de courant diminue la durée de vie du relais.
2 - *Repetitive Itsm is given for inrush current with initial Tj = 70°C. In normal operation , this curve musn't be exceeded.*
Be careful, the repetition of the surge current decreases the life expectancy of the SSR.

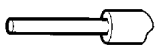
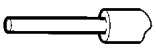
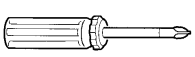




SIT/SVT — Raccordement d'entrée / Control wiring

Nombre de fils / Number of wires				Modèle de tournevis / Screwdriver type	Couple de serrage recommandé Recommended Torque
1		2			
Fil rigide (sans embout) SOLID (No ferrule)	Fil multibrins (avec embout) FINE STRANDED (With ferrule)	Fil rigide (sans embout) SOLID (No ferrule)	Fil multibrins (avec embout) FINE STRANDED (With ferrule)		M4
					N.m
0,75 ... 2,5 mm² AWG18....AWG14	0,75 ... 2,5 mm² AWG18....AWG14	0,75 ... 2,5 mm² AWG18....AWG14	0,75 ... 2,5 mm² AWG18....AWG14	POZIDRIV 2	1,2

celpac® — Raccordement de puissance / Power wiring

Nombre de fils / Number of wires				Modèle de tournevis / Screwdriver type	Couple de serrage recommandé Recommended Torque
1		2			
Fil rigide (sans embout) SOLID (No ferrule)	Fil multibrins (avec embout) FINE STRANDED (With ferrule)	Fil rigide (sans embout) SOLID (No ferrule)	Fil multibrins (avec embout) FINE STRANDED (With ferrule)		M5
					N.m
1,5 ... 10 mm² AWG16....AWG8	1,5 ... 6 mm² AWG16....AWG10	1,5 ... 10 mm² AWG16....AWG8	1,5 ... 6 mm² AWG16....AWG10	POZIDRIV 2	2

afaq ISO 9001 Qualité AFNOR CERTIFICATION

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APPLICATION TYPIQUE /
Typical application: