



**VARIATEURS TRIPHASES A
COMMANDE PROPORTIONNELLE 0 - 10V
/ THREE PHASE CONTROLLE WITH
PROPORTIONAL CONTROL 0 - 10V**

SWG8

REFERENCE	OUTPUT VOLTAGE	Puissance charge/Load	CONTROL
SWG81510	3 x 400VAC	20kWatts	0-10V
SWG82710	3 x 400VAC	27kWatts	0-10V
SWG83610	3 x 400VAC	36kWatts	0-10V
SWG84210	3 x 400VAC	42kWatts	0-10V
SWG84810	3 x 400VAC	48kWatts	0-10V
SWG86010	3 x 400VAC	60kWatts	0-10V
SWG88010	3 x 400VAC	80kWatts	0-10V

En associant un variateur monophasé à commande proportionnelle de type SG5/SW5 et des relais statiques biphasés ou triphasés standards à commande alternative, il devient possible à partir d'une entrée analogique 0-10V isolée du secteur de faire varier proportionnellement à cette entrée, le rapport cyclique de fonctionnement d'une charge résistive triphasée (AC-51).

With one analogical controller in association with AC control solid state relays, it is possible with a 0-10VDC analogical control to adjust the power of a three phase resistive load (AC-51) up to 80 Kwatts on 3 x 400VAC mains.

Caractéristiques de transfert entrée/sortie /
Input/output transfer characteristics

commande en 0-10V:

$$t/T = V_e \times 10 \text{ (} V_e \text{ en Volts - } t/T \text{ en \%)}$$

T = période t = temps de conduction

exemple :

$$V_e = 0 \text{ Volt } \quad t/T = 0\%$$

$$V_e = 5 \text{ Volts } \quad t/T = 50\%$$

$$V_e = 10 \text{ Volts } \quad t/T = 100\%$$

0-10V control:

$$t/T = V_e \times 10 \text{ (} V_e \text{ in Volts - } t/T \text{ in \%)}$$

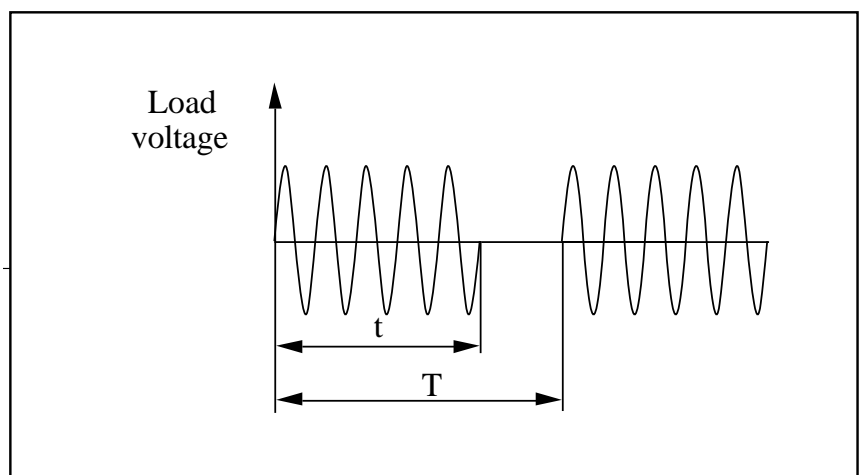
T = period t = conduction time

example :

$$V_e = 0 \text{ Volt } \quad t/T = 0\%$$

$$V_e = 5 \text{ Volts } \quad t/T = 50\%$$

$$V_e = 10 \text{ Volts } \quad t/T = 100\%$$



Proud to serve you

celduc®
r e l a i s

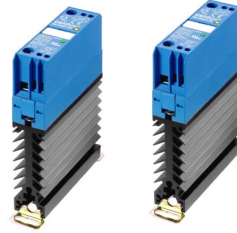
20KW

REFERENCE	OUTPUT VOLTAGE	Puissance charge/Load	CONTROL
SWG81510	3 x 400VAC	20kWatts	0-10V

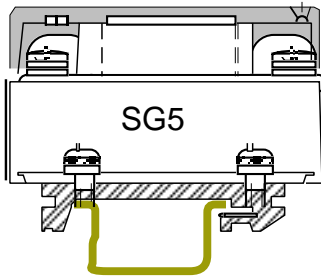


SWG50210

+

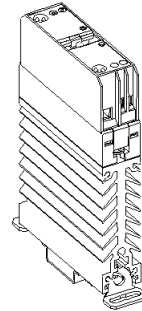
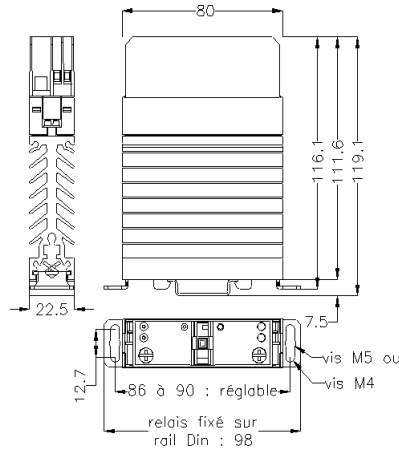


2xSIL865970

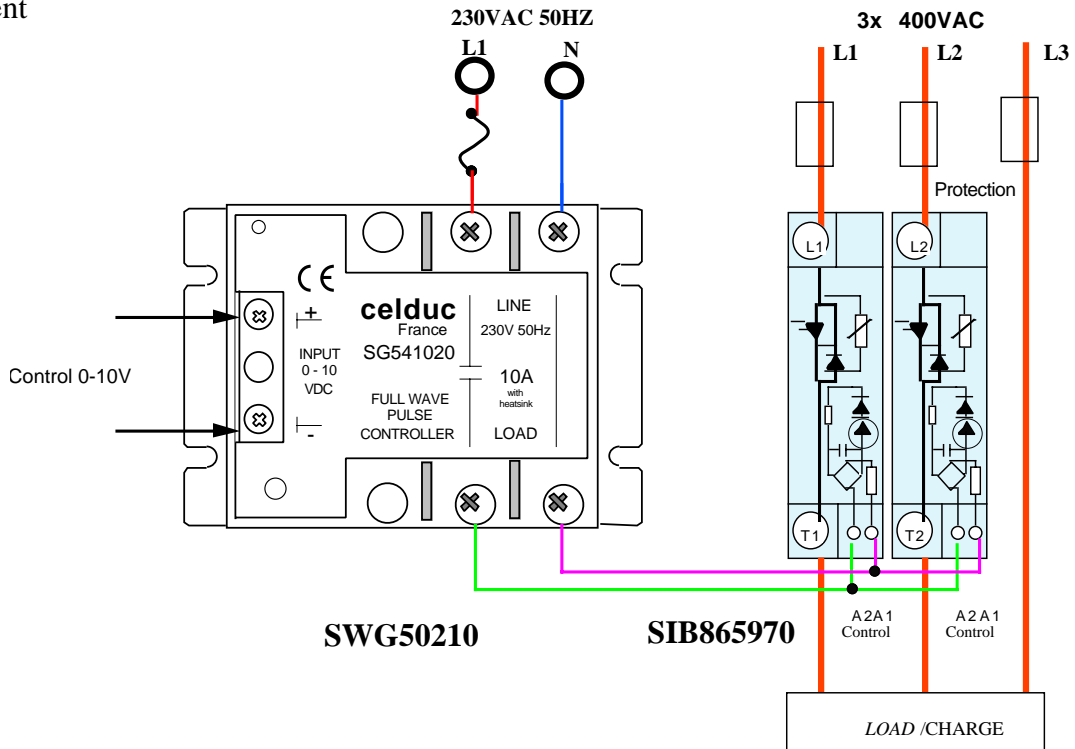


SWG50210

L= 100mm h = 74mm p = 56mm



Raccordement



ISO 9001
N° 1993/1106a

celduc[®]
r e l a i s

www.celduc.com

Rue Ampère B.P. 4 42290 SORBIERS - FRANCE E-Mail : celduc-relais@celduc.com
 Fax +33 (0) 4 77 53 85 51 Service Commercial France Tél. : +33 (0) 4 77 53 90 20
 Sales Dept.For Europe Tel. : +33 (0) 4 77 53 90 21 Sales Dept. Asia : Tél. +33 (0) 4 77 53 90 19

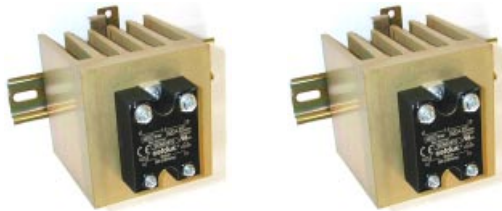
27KW

REFERENCE	OUTPUT VOLTAGE	Puissance charge/Load	CONTROL
SWG82710	3 x 400VAC	27kWatts	0-10V

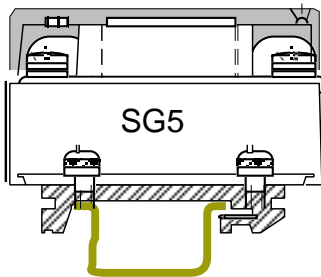


SWG50210

+

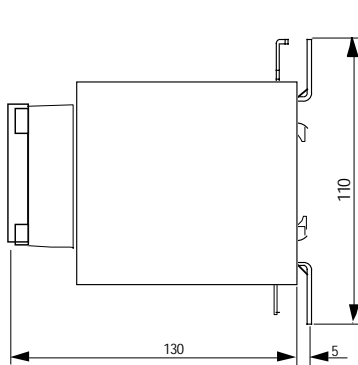


2 x SC864910 + WF131100

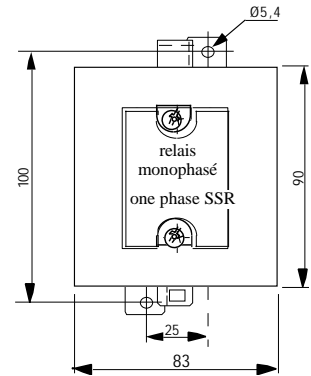


SWG50210

L= 100mm h = 74mm p = 56mm

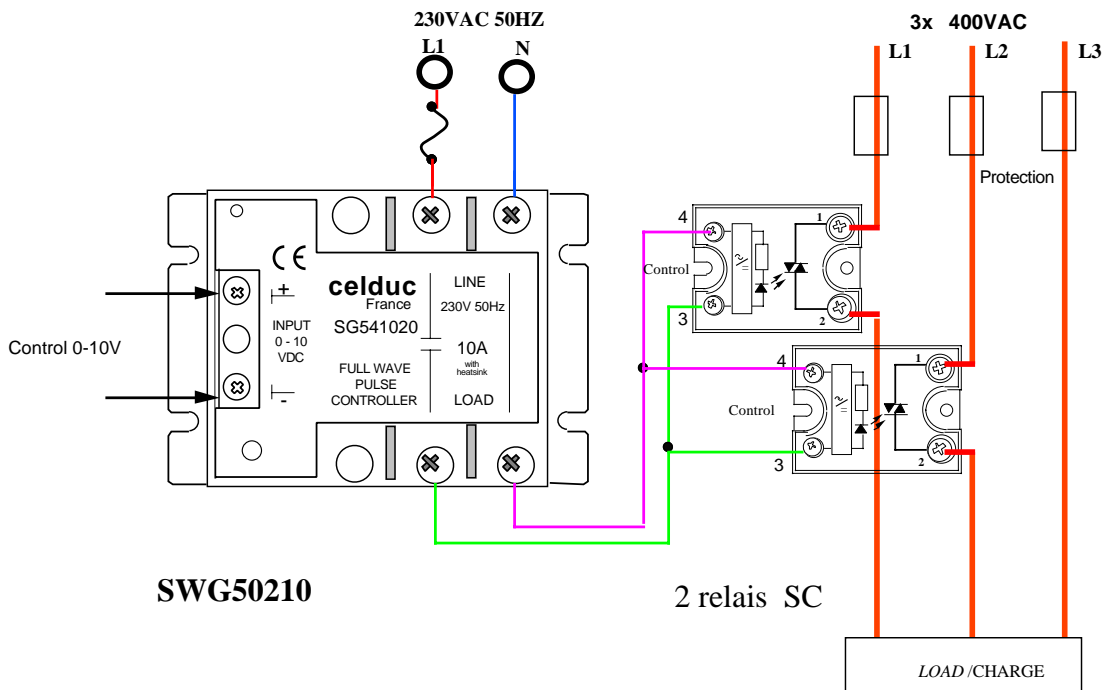


SC864910 + WF131100



L= 83mm h = 100mm p = 130mm

Raccordement



ISO 9001
N° 1993/1106a

celduc®
r e l a i s

www.celduc.com

Rue Ampère B.P. 4 42290 SORBIERS - FRANCE E-Mail : celduc-relais@celduc.com
 Fax +33 (0) 4 77 53 85 51 Service Commercial France Tél. : +33 (0) 4 77 53 90 20
 Sales Dept.For Europe Tel. : +33 (0) 4 77 53 90 21 Sales Dept. Asia : Tél. +33 (0) 4 77 53 90 19

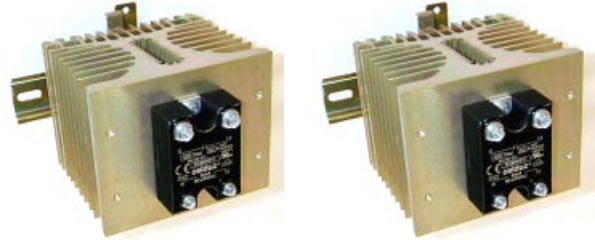
36KW
42KW
48KW

REFERENCE	OUTPUT VOLTAGE	Puissance charge/Load	CONTROL
SWG83610	3 x 400VAC	36kWatts	0-10V
SWG84210	3 x 400VAC	42kWatts	0-10V
SWG84810	3 x 400VAC	48kWatts	0-10V

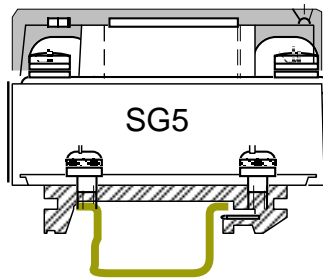


SWG50210

+

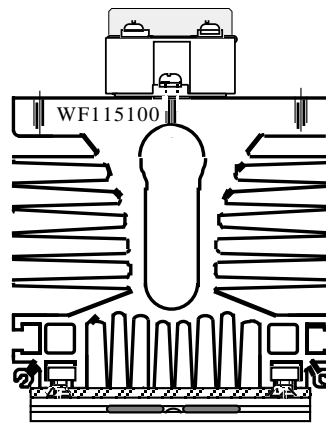


2 x SC86x910 + WF115100



SWG50210

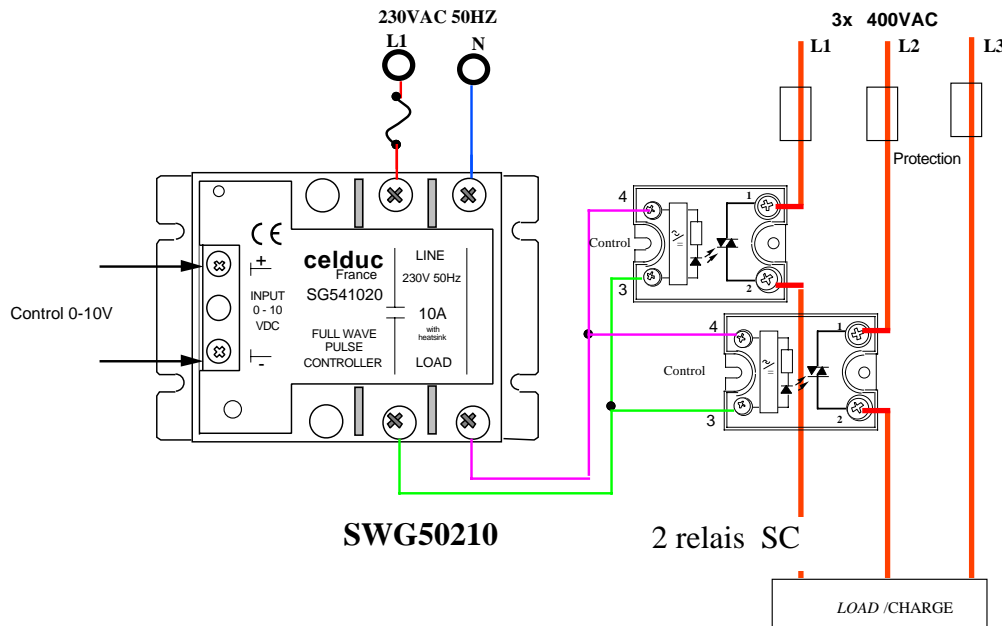
L = 100mm h = 74mm p = 56mm



L = 110mm
h = 110mm
p = 154mm

Raccordement

SWG83610	SC867910 + WF115100
SWG84210	SC868910 + WF115100
SWG84810	SC869910 + WF115100



ISO 9001
N° 1993/1106a

celduc[®]
r e l a i s

www.celduc.com

Rue Ampère B.P. 4 42290 SORBIERS - FRANCE E-Mail : celduc-relais@celduc.com
 Fax +33 (0) 4 77 53 85 51 Service Commercial France Tél. : +33 (0) 4 77 53 90 20
 Sales Dept.For Europe Tel. : +33 (0) 4 77 53 90 21 Sales Dept. Asia : Tél. +33 (0) 4 77 53 90 19

60KW

REFERENCE	OUTPUT VOLTAGE	Puissance charge/Load	CONTROL
SWG86010	3 x 400VAC	60kWatts	0-10V

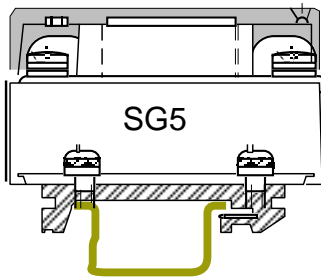


SWG50210

+

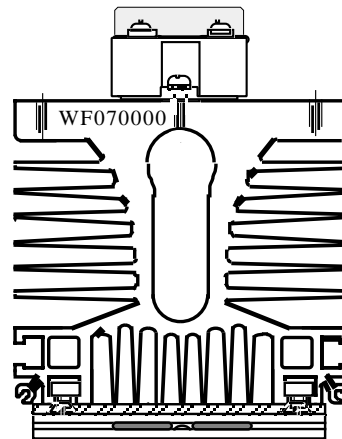


2 x SC869910 + WF070000



SWG50210

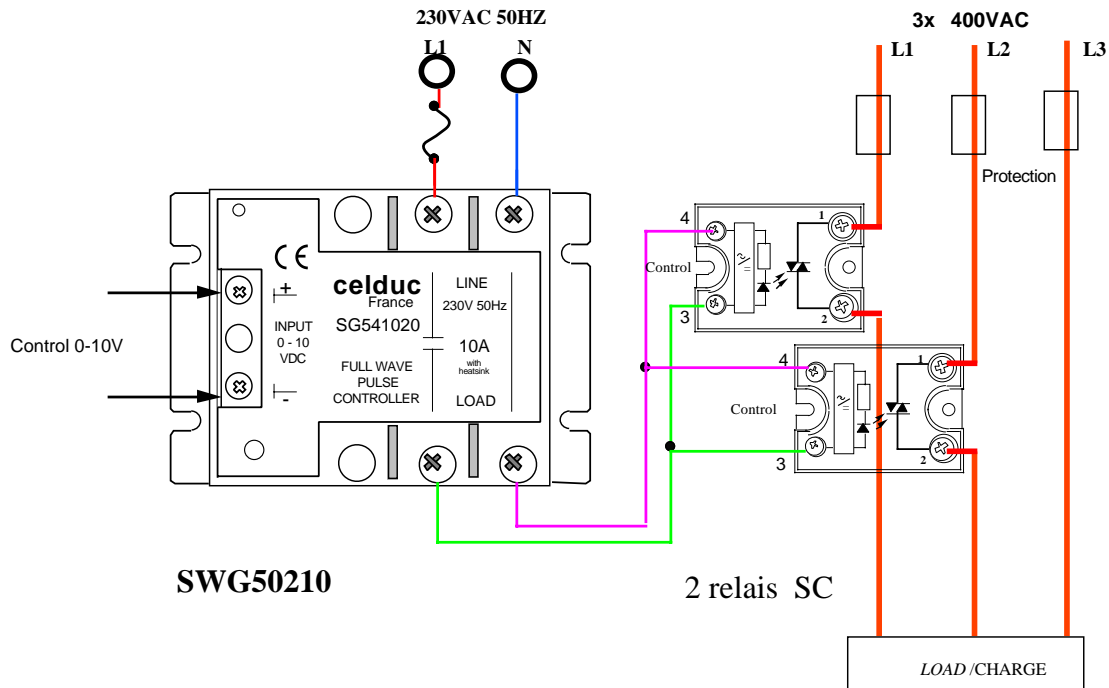
L= 100mm h = 74mm p = 56mm



L= 110mm
h = 100mm
p = 154mm

Raccordement

SC869910 + WF070000



ISO 9001
N° 1993/1106a

celduc®
r e l a i s

www.celduc.com

Rue Ampère B.P. 4 42290 SORBIERS - FRANCE E-Mail : celduc-relais@celduc.com
 Fax +33 (0) 4 77 53 85 51 Service Commercial France Tél. : +33 (0) 4 77 53 90 20
 Sales Dept.For Europe Tel. : +33 (0) 4 77 53 90 21 Sales Dept. Asia : Tél. +33 (0) 4 77 53 90 19

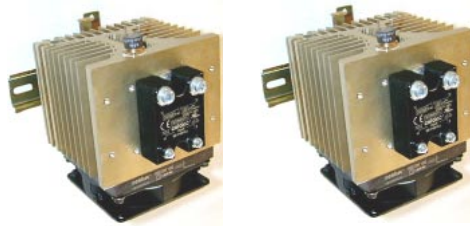
80KW

REFERENCE	OUTPUT VOLTAGE	Puissance charge/Load	CONTROL
SWG88010	3 x 400VAC	80kWatts	0-10V

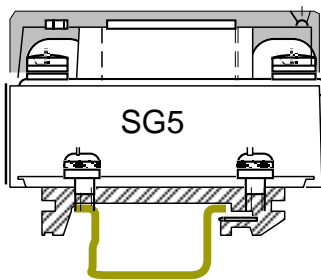


SWG50210

+



2 x SC869910 + WF031100

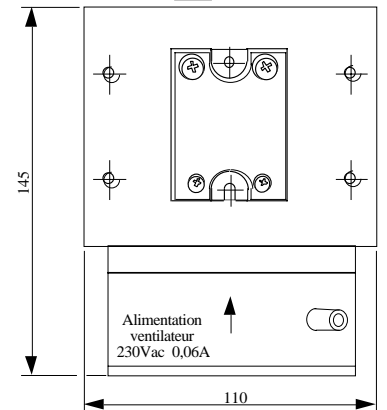
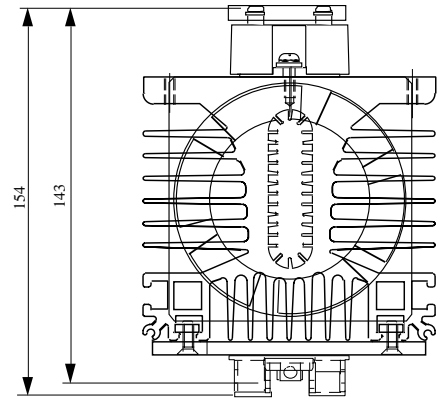


SWG50210

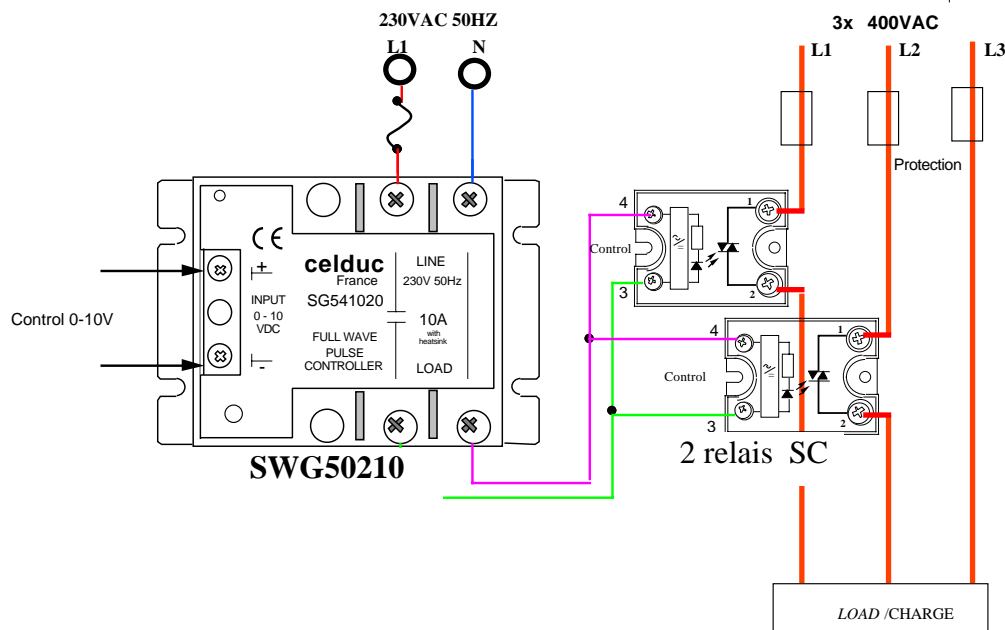
L= 100mm h = 74mm p = 56mm

**SC869910
+
WF031100**

L= 110mm
h = 145mm
p = 154mm



Raccordement



ISO 9001
N° 1993/1106a

celduc®
r e l a i s

www.celduc.com

Rue Ampère B.P. 4 42290 SORBIERS - FRANCE E-Mail : celduc-relais@celduc.com
 Fax +33 (0) 4 77 53 85 51 Service Commercial France Tél. : +33 (0) 4 77 53 90 20
 Sales Dept.For Europe Tel. : +33 (0) 4 77 53 90 21 Sales Dept. Asia : Tél. +33 (0) 4 77 53 90 19

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

Paramètre / Parameter	Symbol	INPUT	Unit
Tension de commande / Control voltage	Uc	0-10V	V
Courant de commande / Control current (@ U _c)	Ic	0,04 @10V	mA
Résistance interne / Input internal resistor fig.1	Rc	250	KΩ

Caractéristiques interface SWG5 / relais statiques (à 20°C) / Interface between controller and SSRs (at 20°C)

Plage tension de fonctionnement / Operating range	Uemin-max	115-253	VRMS
Courant alimentation sous 230VAC/ Current with 230VAC	I (230VAC)	<100mA	VRMS

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

Isolement entrée-sortie/Input-output isolation @500m	Ui	2500	VRMS
Isolement sortie-semelle/Output-case isolation @500m	Ui	2500	VRMS
Tension assignée Isolement/Rated impulse voltage	Uimp	4000	V

Caractéristiques générales / General characteristics

Paramètre / Parameter	Conditions	Symbol	Typ.	Unit
Plage de température de stockage / Storage temperature range			-40 / +100	°C
Plage de température de fonctionnement/Operating temperature range			-25 / +85	°C

Caractéristiques de sortie(à 20°C) / Output characteristics (at 20°C)

Paramètre / Parameter	Symbol	SWG81510 SWG82710	SWG83610	SWG84210	SWG84810 SWG86010 SWG88010	Unit
Tension de charge / Load voltage	Ue	400	400	400	400	V rms
Plage tension de fonctionnement / Operating range	Ue min-max	24-520	24-520	24-520	24-520	V rms
Tension crête / Peak voltage	Up	1200	1200	1200	1200	V
Niveau de synchronisation / Synchronizing level	U _{sync}	12	12	12	12	V
Tension d'amorçage / Latching voltage	Ua	10	10	10	10	V
Puissance maximale de la charge AC-51 (400VAC 50hz)/ Max AC-51 load	P (AC-51)	15 27	36	42	48 60 80	
Courant de surcharge non répétitif /Non repetitive overload current	I _{tsm}	550	1000	1500	2000	A
Chute tension directe crête/ On state voltage drop	Vd	1,3	1,3	1,3	1,3	V
Courant de fuite état bloqué/ Off state leakage current	I _{lk}	<3	<3	<3	<3	mA
Courant de charge minimum / Minimum load current	I _{e min}	5	5	5	5	mA
Temps de fermeture/ Turn on time	ton max	30	30	30	30	ms
Temps d'ouverture/ Turn off time	toff max	30	30	30	30	ms
Plage de fréquence / Operating frequency range	f	0,1-440	0,1-440	0,1-440	0,1-440	Hz
dv/dt état bloqué / Off state dv/dt	dv/dt	500	500	500	500	V/μs
dI/dt maximum non répétitif/ Maximum di/dt non repetitive	di/dt	50	50	50	50	A/μs
I ² _t (<10ms)	I ² _t	1500	5000	11000	20000	A ² s
EMC Test d'immunité conduite / Conducted immunity level		2kV criterion A				
EMC Test d'immunité conduite / Conducted immunity level		2kV crit.A with external VDR				

Caractéristiques de sortie(à 20°C) / Output characteristics (at 20°C)

Paramètre / Parameter	
Commande /control	0-10V
Temps de cycle /cycle time	2s +/- 20% so 100 cycle at 50 Hz
Précision /precision	-2 /+1 period
Linéarité /linearity	±1 period



ISO 9001
N° 1993/1106a

celduc[®]
r e l a i s

www.celduc.com

Rue Ampère B.P. 4 42290 SORBIERS - FRANCE E-Mail : celduc-relais@celduc.com
 Fax +33 (0) 4 77 53 85 51 Service Commercial France Tél. : +33 (0) 4 77 53 90 20
 Sales Dept.For Europe Tel. : +33 (0) 4 77 53 90 21 Sales Dept. Asia : Tél. +33 (0) 4 77 53 90 19