

SCF8C-J-AS

JOCKEY AND JACKING PUMP CONTROLLER

INSTALLATION AND OPERATION INSTRUCTIONS



INDEX

1	INTRODUCTION	4
1.1	MAIN FEATURES	4
1.2	PURPOSE OF DOCUMENT	5
1.3	LIMITED WARRANTY	5
1.4	DECLARATION CONFORMITY CE	6
2	WIRING AND INSTALLATION	7
2.1	INSTALLATION	7
2.1.1	DIMENSIONS	7
2.2	WIRING	8
2.2.1	TERMINALS	8
2.2.2	PRESSURE CONNECTION	9
2.3	ELECTRIC WIRING SCHEMATIC SCF8C-J-AS CONTROLLER INTERNAL WIRING (Direct on line)	10
3	FRONT PANEL	11
3.1	S1 ISOLATOR	11
3.2	BUZZER	11
3.3	PUSH BUTTONS	11
3.3.1	OPERATING MODE	11
3.3.2	START AND STOP	11
3.3.3	OPERATOR INTERFACE PUSH BUTTONS	11
3.4	LED LIGHTS	12
3.4.1	GENERAL LED LIGHTS	12
3.4.2	JOCKEY OR JACKING PUMP LED LIGHTS	12
3.5	DISPLAY	12
1.1.1	SCREEN N°1 SYSTEM PRESSURES	12
3.5.1	SCREEN N°2 INCOMING LINE VOLTAGE AND FREQUENCY	12
3.5.2	SCREEN N° 3 JOCKEY OR JACKING PUMP PARAMETERS	13
3.5.3	SCREEN N° 4 LAST ALARMS	13
4	GENERAL PRE-START UP AND START UP OPERATION	13
4.1	SAFETY PRECAUTIONS	13
4.2	ELECTRICAL CONNECTIONS	13
4.3	SCF8C-J-ASCONTROLLER START AND SHUT DOWN	14
4.3.1	SCF8C-J-AS CONTROLLER START UP	14
4.4	SCF8C-J-AS CONTROLLER STANDARD CONFIGURATION	14
4.5	ELECTRICAL INSPECTION INSTRUCTIONS	14
4.6	PUMP INSPECTION INSTRUCTIONS	14
4.7	CONTROL BUTTONS INSPECTION INSTRUCTIONS	15
5	OPERATION	15
5.1	AUTO MODE	15
5.2	MAN MODE	15
6	ALARMS	16
6.1	RESET ALARMS	16
6.2	ALARM LIST	16
7	CONFIGURATION	17
7.1	PRE-CONFIGURATION	17
7.2	PARAMETER CONFIGURATION	17
7.2.1	PUSH BUTTONS	17



- 7.2.2 CONFIGURATION MODE..... 17
- 7.2.3 CONFIGURATION OPTIONS..... 18
- 7.3 CONFIGURABLE PARAMETERS 18
 - 7.3.1 PARAMETERS ACCESSED BY END USER OR INSTALLER..... 18
 - 7.3.2 PARAMETERS ACCESSED ONLY BY SVECORP PERSONNEL (OEM)..... 19
- A-1 CONTROLLER COMPONENTS AND TECHNICAL JUSTIFICATION 20**
 - A-1.1 SCF8C-J-AS CONTROLLER COMPONENTS..... 20
 - A-1.2 BLOCK DIAGRAM 20
 - A-1.3 PUMP PROTECTION TECHNICAL JUSTIFICATION 21
 - A-1.3.2 JOCKEY OR JACKING PUMP PROTECTION 21
 - A-1.4 POWER ELEMENTS TECHNICAL JUSTIFICATION..... 22
 - A-1.4.1 ISOLATOR 22
 - A-1.4.2 INTERNAL WIRING..... 22
 - A-1.4.3 CONTACTORS..... 22

1 INTRODUCTION

SCF8C-J-AS

SCF8C-J-AS controllers are designed to automatically operate electric Jockey and Jacking fire pumps. SCF8C-J-AS controllers automatically start and stop the Jockey or Jacking pump depending on the system's demand. SCF8C-J-AS controllers monitor pump and system performance and inform users about any possible issues.

1.1 MAIN FEATURES

N°	STANDARD, LISTING AND APPROVAL	
01	Standard, listing and approval	AUSTRALIAN STANDARD AS 2941-2013
N°	MAINS AND PUMP MOTOR	
02	Incoming line voltage	230V AC
03	Mains frequency	50Hz / 60Hz.
04	Pump motor size	Up to 2,2 kW
N°	DESIGN FEATURES	
05	Enclosure	IP65 Protected from total dust ingress (NEMA 4)
06		Impact rating: IK10 (except for display)
07		Fireproof grade: Fire extinguishes <30s
08	Display	Transflective: Visible under direct sunlight
09	Wiring	Halogen free
10		Fireproof: RZ1 according to EN50200 (830°C for 90min)
11	Pump room temperature	20 °F to 122°F (-5°C to 55°C)
12	Isolation rating between phases	500V AC
13	Isolation rating between phases and ground	2,500V AC
14	Isolation impedance between phases and ground	2 MOhm
15	Earthing system	TT system
16	Electromagnetic environment	ECM-1
N°	PUMP PROTECTION	
17	Total system alarms	8
18	Jockey or Jacking pump protections	Circuit breaker type D curve
19		Overcurrent alarm with pump shutdown
20		Undercurrent alarm
21		Low water level alarm. Pump shutdown optional
N°	START UP METHODS FOR MAIN PUMP + JOCKEY AND JACKINGPUMP	
22	Automatic	Pressure switch: Low system pressure
22		1 Manometer system pressure (pressure sensor required with 4-20mA signal)
24	Manual	"Start" button
N°	MEASURING INSTRUMENTS	
25	General	1 Voltmeter
26		1 Mains frequency meter
27		1 Manometer system pressure (pressure sensor required with

		4-20mA signal)
28	Jockey or Jacking pump	1 Ammeter: pump current
29		1 Active power in KW
30		1 Power factor (Phi Cos)
31	Controller	1 Voltmeter: Incoming line voltage
N°	OTHER INFORMATION IN DISPLAY	
32	Jockey or Jackingpump start count	Active alarms
33	Pressure switch status	Latest pump shut downs
N°	FRONT PANEL LIGHTS AND ACOUSTIC ALARMS	
34	Operating modes	Auto
35		Manual
36	Jockey or Jackingpump status	Demand
37		Running
38	Alarm	Red led indicator lamp
39	Buzzer	80dB 1 hour autonomy
N°	COMMUNICATIONS	
40	USB	Bootloader (firmware update)
41	Potential free contacts	2 Potential free contacts: 250V AC 2A (pump running and Grouped Alarms)

1.2 PURPOSE OF DOCUMENT

The purpose of this document is to cover the majority of the aspects associated with the installation, application, operation, and maintenance of the different SCF8C-J-AS Jockey or Jacking fire pump controller models. If more information is required about a particular model's design, list of components, operation instructions, etc. please do not hesitate to contact SVE Corp. in the following e-mail address svecorp@svecorp.com

1.3 LIMITED WARRANTY

Seller (SVE Corp.) warrants to the original purchaser that for the period of 1 year the products sold shall be free from defects in material and workmanship. If buyer claims that a product violates this Limited Warranty, the seller, upon notice promptly given, will either examine the product at buyer's site, or issue shipping instructions for return to the seller at buyer's expense, transportation charges prepaid. The seller's sole obligation under this Limited Warranty shall be, at its option, to repair, replace or refund the price of any product thereof which is proved to violate this Limited Warranty. In no event, whether based on contract, indemnity, warranty, tort (including negligence), strict liability or otherwise, shall the seller be liable to the buyer for special, indirect, incidental or consequential damages whatsoever including, without limitation, loss of profit or revenue. THIS LIMITED WARRANTY IS THE BUYER'S EXCLUSIVE REMEDY AND THE SELLER HEREBY EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

The foregoing shall constitute the sole remedy of the buyer and the sole liability of the seller. This Limited Warranty shall not apply to any product or component thereof which has been repaired or altered by anyone other than the seller's authorized personnel in any manner so as, in the seller's sole judgment, to affect its serviceability, or to any product that has been subject to alteration, accident, misuse, abuse, neglect or normal wear. This Limited Warranty shall not apply to products which have been assembled or installed or used in a manner contrary to the seller's printed instructions, or due to failure to follow the seller's printed instructions for operation and maintenance. Any technical assistance provided by the seller's personnel or representatives in system design is construed to be a proposal and not a recommendation. The responsibility for determining feasibility rests with the user and should be subject to test. Only the terms expressed in this Limited Warranty shall apply and no distributor, corporation or individual is authorized to amend, modify or extend this Limited Warranty in any way on resale.

1.4 DECLARATION CONFORMITY CE

This document refers to SCF8C-J-AS electric pump controller models. It automates the operation of fire-protection installations in accordance with the following regulations:

Australian Standard AS 2941-2013

The operation and mounting instructions refer only to the standard SCF8C-J-AS models. The different variants that may be developed in response to a particular requirement for a specific installations or maintenance operations are not mentioned in this document.

This product must be installed and handled by personnel with adequate training (in accordance with EN-50-110-1)

Declaration of CE Compliance

SVE S.L. hereby declares that the SCF8C-J-AS panel conforms to the following directives:

- **Electromagnetic compatibility, Directive CE: 2004/108/CE**
- **Low voltage, Directive 2006/95/CEE**
- **Machinery Directive 2006/42/CEE**

Specific regulations applied: **EN 61000-6-2, EN 61000-6-3, EN 61439-1, EN61439-2, EN60204-1.**

19/11/2016
 Alvaro Cristóbal Otxandio
 SVE Corp CEO



Alvaro Cristóbal Otxandio
 Gerente de SVE S.L.

Avda. Guipuzcoa nº6
 20500 Mondragón
 SPAIN

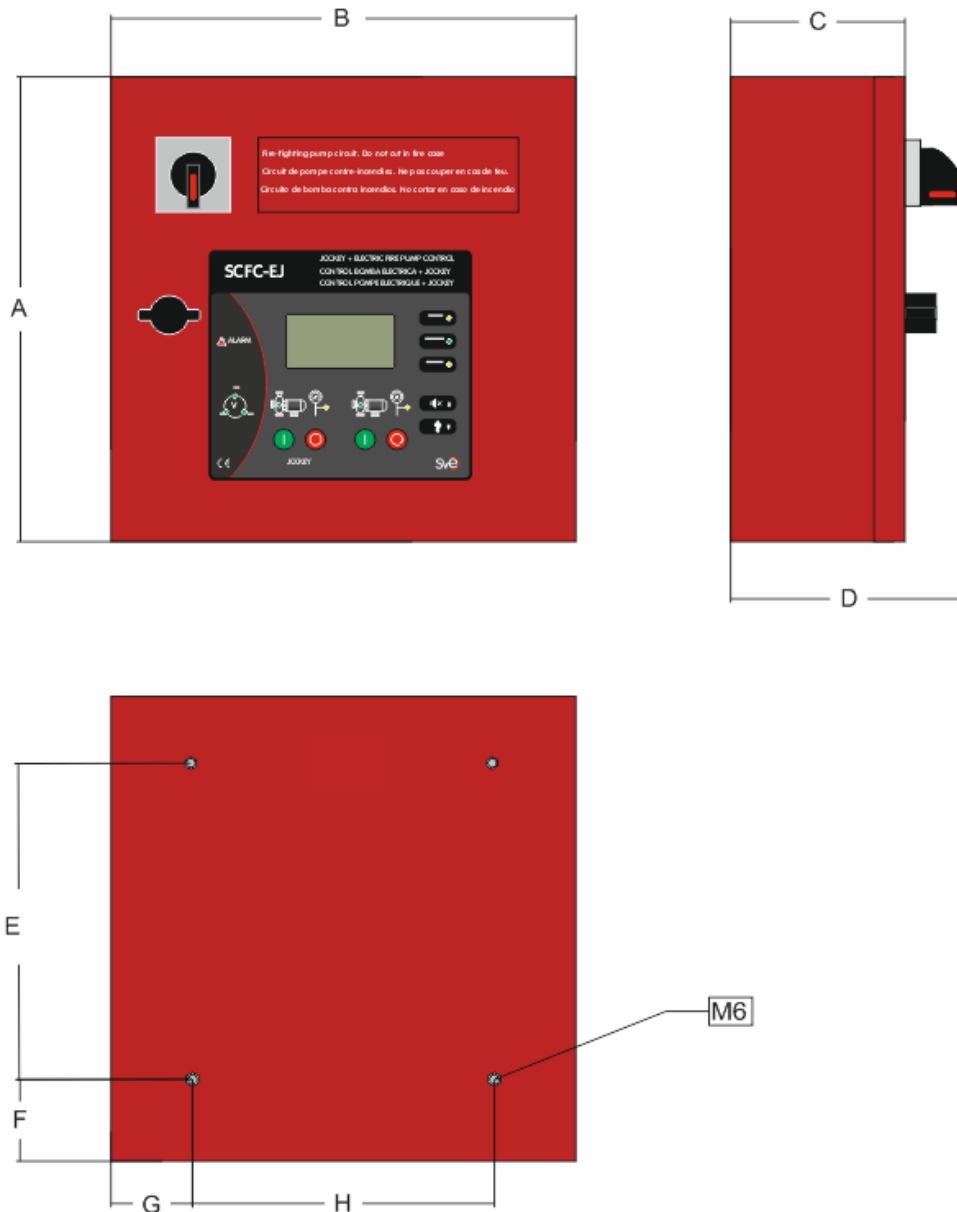
2 WIRING AND INSTALLATION

SCF8C-J-AS-AS

2.1 INSTALLATION

SCF8C-J-AS controller should be mounted as close as possible to the pump or pumps it is controlling and it should be visible for any user working around the fire pump's electric motor. SCF8C-J-AS either wall mounted or over metallic supports.

2.1.1 DIMENSIONS



DIMENSIONS (inches/mm)

N°	MODEL	A&B	C	D	E	F	G	H
T1	SCF8C-J-AS-AS	11.81/300	4.13/105	5.7/145	8.84/225	1,77"/45	1,13/28,7	9,53/242,5

2.2 WIRING

All the electrical connection must comply with the local and national codes and regulations.
 For the wires connected to the controller use 1.5mm² cross sectional wires.
 For the incoming line voltage wires use at least 6mm² cross sectional wires.

2.2.1 TERMINALS

AC INLETS AND OUTLETS		
L-N + GND	Controller incoming lines: 230V AC	
J1-J2	Jockey or Jacking pump power supply	
CONTROL INPUTS		
N°	TERMINAL NAME	DESCRIPTION
J7: 4N	GND	Ground / Reference
J7: 4	JOCKEY OR JACKING PUMP PRESS	Jockey or Jacking pump pressure
J7: 5N	GND	Ground / Reference
J:7 5	L.OW WATER RESERVE LEVEL	Low water reserve level
POTENTIAL FREE OUTLETS		
N°	TERMINAL NAME	DESCRIPTION
J8: A1/A2	PUMP RUNNING	Pump running → A1-A2
J8: B2/B3	GROUPED ALARMS	Grouped alarms /Controller failure: Indicates that any alarm is active, Alarm List, and/or that the controller is not online. → B2-B3
DIGITAL INPUTS / OUTPUTS . + PRESSURE TRANSDUCER		
J9: 6N	GND	Ground / Référence
J9: 6	Auxiliary Input	Auxiliary Input
J9: O1	Auxiliary Output	Auxiliary Output
J9: S+	Pressure transducer positive	Pressure transducer positive feeder (4-20mA)
J9: S-	Pressure transducer negative	Pressure transducer negative (4-20mA)

CONTROL TERMINALS: INPUTS / OUTPUTS	
Terminal block connections	Pluggable, screw terminal
Minimum cross sectional area for the control wires	0,5 mm ² (AWG 24)
Maximum cross sectional area for the control wires	2,5 mm ² (AWG 10)

SENSOR INPUT	
Activates at 0VDC minimum 1 sec. / Deactivates when disconnected from 0VDC	

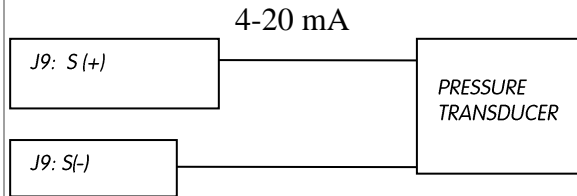
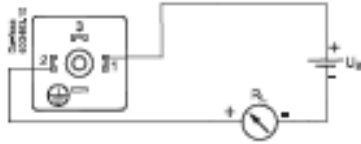
POTENTIAL FREE CONTACTS	
Maximum current	5 Amp
Maximum voltage	250V AC VAC

USB	
Micro USB type B connector (female)	

2.2.2 PRESSURE CONNECTION

The SCF8C-E(X) controller collects and display the information sent from a 4-20mA pressure transducer.

PRESSURE TRANSDUCER 4-20mA

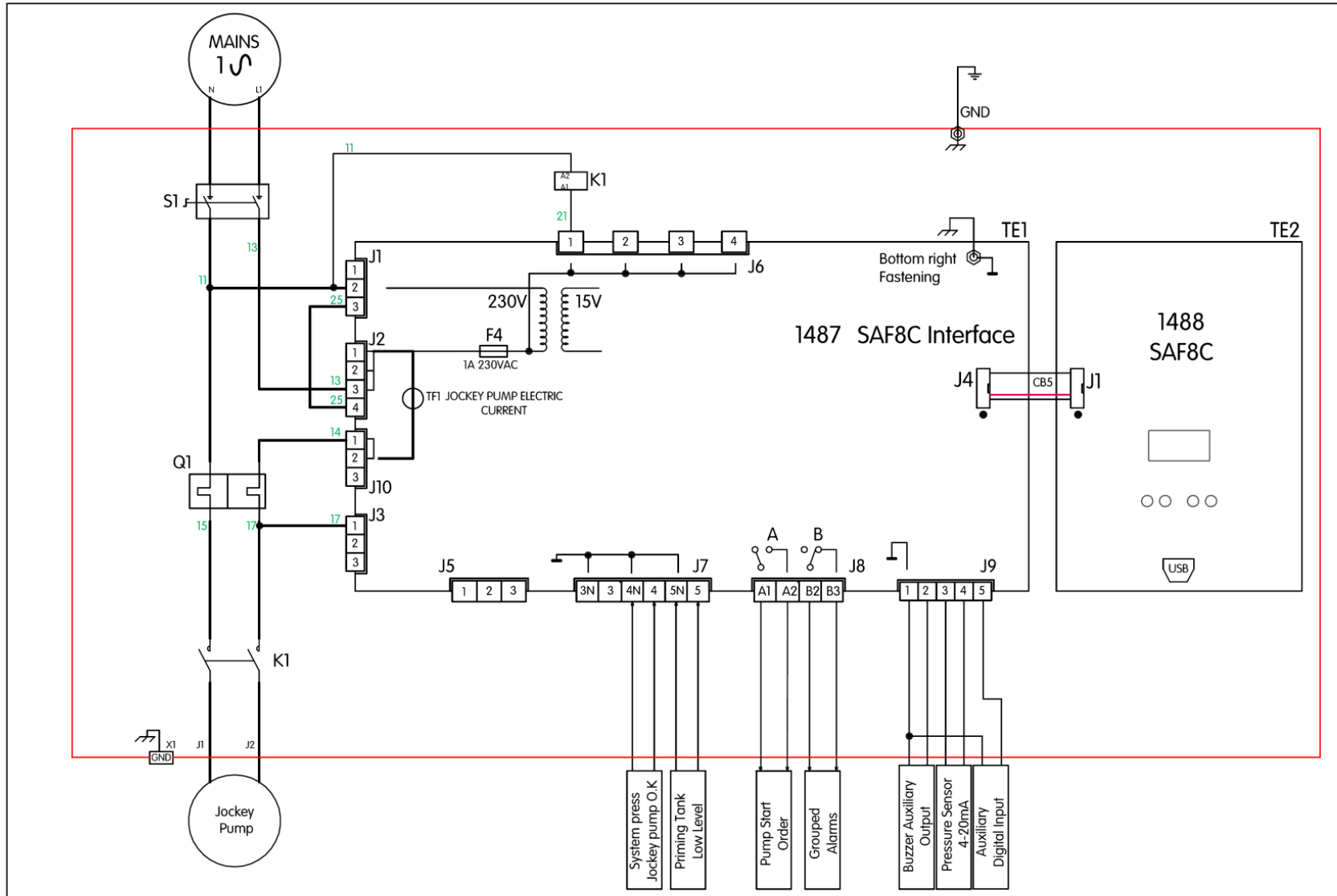


Related configuration parameters

C-3.1 Pressure Transducer connected (4-20 mA) Yes / No

C-3.2 Scaling (20 mA) of the pressure transducer (bar)

2.3 ELECTRIC WIRING SCHEMATIC SCF8C-J-AS CONTROLLER INTERNAL WIRING (Direct on line)



Sheet 1	Dossier Producto SCF8C-J-AS	Title SCF8C-J-AS-M WIRING CONNECTION SCHEMATIC SINGLE PHASE JOCKEY	Scale 1:1	 www.svecorp.com
Date 2016/11/21	File Name SCF8C-J-AS-M.dwg			

3 FRONT PANEL

SCF8C-J-AS

Several elements are located in the front panel of the SCF8C-J-AS controller to facilitate the electric pump operation and control its performance.

3.1 SI ISOLATOR

The isolating switch is used to ensure that the electrical circuit is completely de-energized for service or maintenance

3.2 BUZZER

The buzzer located in the middle of the front panel will active in the following cases:

- Active alarm detected
- System demand to start the pump
- The controller is not in AUTO mode

3.3 PUSH BUTTONS

3.3.1 OPERATING MODE

	Activates Auto mode.
	Activates the Manual mode. This mode will remain active for the time set in parameter C2.11. After this time, the control panel will return to automatic mode

3.3.2 START AND STOP

	The START push button starts the pump whenever the controller is in MAN mode.
	The STOP push button stops the pump whenever the controller is either in Manual or in Auto mode. In Auto mode the pump will only stop if there is no demand from the system.

3.3.3 OPERATOR INTERFACE PUSH BUTTONS

	<ul style="list-style-type: none"> ○ Stops the buzzer / Resets the alarms (push twice) ○ Scroll up display options
	<ul style="list-style-type: none"> ○ Test led lights ○ Scroll down display options

3.4 LED LIGHTS

3.4.1 GENERAL LED LIGHTS



POWER ON

Led light will be on as long as the incoming line voltage and frequency are within limits .



OVERLOAD

Informs about the existence of any active system alarm or pump alarm

3.4.2 JOCKEY OR JACKING PUMP LED LIGHTS



Led light on: low Jockey or Jacking pump discharge pressure.



Led light on: the Jockey or Jacking pump is powered

3.5 DISPLAY

SCF8C8-J controller has a transfective LCD graphic display (visible under direct sunlight) that shows important information about the system and the pumps.

Below the different screens displayed by the controller and the information provided by each screen:

1.1.1 SREEN N°1 SYSTEM PRESSURES

SYSTEM PRESSURE

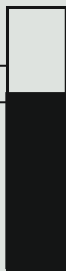
Jockey

9.5

8.5

8.75
bar

OK



Analog transducer system pressure.
This screen is displayed only when the pressure sensor (C2.8) is enabled.

Pressure setpoints: on-off for start demand

Pressure switch state

Pressure switch for start demand

3.5.1 SCREEN N°2 INCOMING LINE VOLTAGE AND FREQUENCY

MAINS VOLTAGE



V_{L-N} 230V

FR: 50.0Hz

Voltage: phase-neutral

Frequency

3.5.2 SCREEN N° 3 JOCKEY OR JACKING PUMP PARAMETERS

JOCKEY PUMP

Demands:

I: 1.9A

P: 1.2KW

PF: 0.91

⏏ 00114

Status:

- Not running
- Running (moving impeller)
- Stop timer (inside impeller)

Electric current

Power factor

Stop timer

Start count

3.5.3 SCREEN N° 4 LAST ALARMS

LAST ALARMS

NO ACTIVE ALARMS

L

AL01-VOTAGE LOSS

AL10-LOW WATER LEVEL

| RESET

Last alarms.
Active alarms are displayed in bigger font letters.
Non active alarms stay in display until they have been reset

To reset non active alarms press

twice

4 GENERAL PRE-START UP AND START UP OPERATION

SCF8C-J-AS

4.1 SAFETY PRECAUTIONS

SCF8C-J-AS is designed to protect buildings, goods, and people but it could represent a risk to the person handling the controllers since it is connected to a high voltage AC line.



COMPLETELY READ AND UNDERSTAND THE MATERIAL PRESENTED IN THIS DOCUMENT BEFORE ATTEMPTING INSTALLATION, OPERATION, OR APPLICATION OF THE EQUIPMENT. IN ADDITION, ONLY QUALIFIED PERSONS SHOULD BE PERMITTED TO PERFORM ANY WORK ASSOCIATED WITH THIS EQUIPMENT. ANY WIRING INSTRUCTIONS PRESENTED IN THIS DOCUMENT MUST BE FOLLOWED PRECISELY. FAILURE TO DO SO COULD CAUSE PERMANENT EQUIPMENT DAMAGE.

4.2 ELECTRICAL CONNECTIONS

All the electrical connections must follow the local and national electrical codes. SCF8C-J-AS controller has an IP65 (NEMA-4) type enclosure but always has to be protected from any water source. Before installing the controller check the marking and verify that the controller characteristics; electrical rating, horsepower, amperes, frequency, and so forth are appropriate for the system.

Inspect all the electrical connection and make sure there are no loose wires or any damaged component in the controller before energizing it. All controllers come with an installation manual inside the enclosure. Check the wiring schematic section of the manual to properly connect the controller to the AC power source and to the electric pump motor.

Make sure to have the appropriate tools during the installation to make the necessary holes in the grand plate for the different connections.

4.3 SCF8C-J-AS CONTROLLER START AND SHUT DOWN

4.3.1 SCF8C-J-AS CONTROLLER START UP

SCF8C-J-AS will start automatically and it will remain active as long as it is connected to an AC current source and the isolator S1 is in ON position.






When starting the controller the operating mode (AUTO/MAN) will be the last one the controller was on before it was shut down. Every time the controller starts it will check that all the led lights are working properly.

4.4 SCF8C-J-AS CONTROLLER STANDARD CONFIGURATION





SCF8C-J-AS controllers are configured in our facilities considering the needs of the majority of the systems, make sure the controller has been configured correctly for the system it is controlling. To know more about how to configure the controller go to section "7 CONFIGURATION".

4.5 ELECTRICAL INSPECTION INSTRUCTIONS

First time the controller is connected to a power source follow the instructions below:







#	ELECTRICAL INSPECTION INSTRUCTIONS	
01	Energize the SCF8C-J-AS controller.	
02	If the voltage and the frequency ar within the normal values the green led light will illuminate:	  POWER ON
03	If the green led lights will not illuminate proceed with the following steps: <ul style="list-style-type: none"> o Verify that the incoming line voltage is within the normal values o Verify that the frequency is within the normal values 	
04	To verify the motor power, current, and power factor. Select the MAN mode	 Read the values on the display and compare them to the information provided in the pump nameplate.
05	Push  to stop the pump	Leave the controller In 

4.6 PUMP INSPECTION INSTRUCTIONS

#	PUMP INSPECTION INSTRUCTIONS	
01	Make sure to follow the pump manufacturers pre-start up instructions	
02	Verify that pump suction and discharge valve are 100% opened	
03	Press  and 	
04	Check the pump's motor power (on display) , discharge flow and pump discharge and supply pressures. Verify that the values follow the pump curves provided by the manufacturer.	
05	Press  to stop the pump	Leave the controller in 

4.7 CONTROL BUTTONS INSPECTION INSTRUCTIONS


Make sure all the connections to the SCF8C-J-AS are correct and the control buttons are operative. Verify also that the controller is communicating properly with the system and the information in the display is accurate.

#	CONTROL BUTTON INSPECTION INSTRUCTIONS	
01	Check that all operating modes are working properly  	
02	Press 	Check that start  and  buttons are working properly over the main pump and the Jockey and Jackingpump
03	Press 	Check that the pressure switch is working properly and the SCF8C-J-AS controller responds to any demand from the system
04	Force and verify that all the different alarms and pump protections are working properly	




5 OPERATION

SCF8C-J-AS

5.1 AUTO MODE

Verify the  button is working properly JOCKEY PUMP AUTO MODE	
PUMP START	<p>The pump starts and remains in place as long as there is demand</p> <ul style="list-style-type: none"> Jockey pump. press (pressure switch) terminal J7:4 (type of contact: Configuration C-2.1). Or Pressure transducer: Terminals J9:S(+) and J9:S1(-) See configuration: "Press trans demand: C-2.8", "Start pressure: C-2.9", and "End demand pressure: C-2.10"
PUMP STOP	<p>The pump will stop whenever:</p> <ul style="list-style-type: none"> Jockey pump start demand disappears The jockey pump will stop after the minimum run time selected in C-2.2 expires. Alarm "AL-7 Jockey short circuit", "AL-8 Jockey overload" or "AL-10. Low water level" are active and C-2.6 is configured "Yes"

5.2 MAN MODE

Check the  mode is working properly	
PUMP START	Press the Jockey and Jacking pump  button to start the pump.
PUMP STOP	Press: 

6 ALARMS

SCF8C-J-AS

One of the main functions of the SCF8C-J-AS controller is to protect the electric pumps. The controller monitors the pump performance as well as the system pressure and acts accordingly depending on the existing alarm. The detection of a system alarm triggers the following:

A description of the alarm is shown in the display.

Potential free "Grouped alarms" contact will be activated as long as there is an active alarm. Terminals B2/B3 of the SCF8C-J-AS controller.

Buzzer goes on, as long as there is any active alarm.

6.1 RESET ALARMS

To reset the last alarms proceed with the following:

Fix the issue that generated the alarm.

Go to the alarm screen in the display and press MUTE-ESC



6.2 ALARM LIST

SCF8C-J-AS controller has 8 alarms, below a description of all the different alarms:

Nº	ALARM TYPE	DISPLAY	DESCRIPTION
AL-1	VOLTAGE LOSS	VOLTAGE LOSS	Voltage between phases outside the normal values (C-5.1.2 y C-5.1.3) Alarm activation delay: 5 sec
AL-3	NORMAL FREQUENCY LOSS	N.FREQUENCY	Frequency $\pm 10\%$ of its normal values, alarm activation delay 5 sec (C-5.1.1)
AL-7	JOCKEY OR JACKING PUMP PROTECTION TRIP SHORT CIRCUIT	S. CIRCUIT J.P	Jockey or Jacking pump protection tripped or lack of protection element in line. This alarm will trigger Jockey and Jacking pump's shut down. The alarm needs to be reset before working on the protection.
AL-8	THERMAL OVERCURRENT JOCKEY AND JACKINGPUMP	OVERLOAD J.P.	Thermal protection is an overcurrent protection for the Jockey and Jackingpump. See C-2.4 Overcurrent Jockey and Jackingpump. This alarm will trigger Jockey and Jackingpump's shut down. The generation of this alarm is inhibited 20 seconds from the start of the pump
AL-9	UNDERCURRENT JOCKEY AND JACKINGPUMP	START FAIL J.P.	The current feeding the Jockey or Jacking pump is lower than the minimum value selected in C-2.3: minimum current Jockey or Jacking pump (%). This alarm is not active for 5 seconds whenever the pump starts.
AL-10	LOW WATER LEVEL	L.O.W WATER	Low water level (terminals J7:5 and J7:5N). This alarm can shut down the Jockey or Jacking pump if desired see configuration (C-2.6)
AL-12	CONTROLLER POWER LOSS	CTRL POWER LOSS	Power feeding SAF830-E(X) (24VDC) controller lower than 20% its normal value for more than 1 seconds.
AL-15	PRESSURE TRANSDUCER SIGNAL FAIL	PRESS.TRAN.F	The 4-20mA transducer measures values out of range. transducer open or shorted. Validation delay: 1s

7 CONFIGURATION

SCF8C-J-AS

SCF8C-J-AS controller can be customized to meet the requirement of a specific system, specific engineering requirement, specific requirement by the pump manufacturer, etc....

SCF8C-J-AS controller parameters are configured in SVE corp facilities to meet the criteria of most of the fire protection systems out there and also be in compliance with the following regulations:

AS 2941-2013

SCF8C-J-AS factory setting values are shown in section 7.3.1 with a grey background and bold letter. **If the end user decides to change the factory settings, SCF8C-J-AS controller's operation might not be in compliance with the regulations above and therefore it will be the end user's sole responsibility to use these specific values to control the system. Although most of the parameters can be configured by the end user, there are certain parameters named OEM that can only be modified by SVE corp personnel.**

7.1 PRE-CONFIGURATION

To access the configuration settings the controller must:





SCF8C-J-AS controller must be energized by the main AC source

The controller must be in  operating mode

7.2 PARAMETER CONFIGURATION


7.2.1 PUSH BUTTONS

Below the push buttons that will be used during the parameter configuration and their function:

	Scrolls up to the next option or increases a given value for a parameter
	Scrolls down to the next option or decreases a given value for a parameter
	Edits and saves the changes done to a parameter
	Exits edit mode without saving the changes. Exits configuration mode.

7.2.2 CONFIGURATION MODE.

Press  and  together for 3 second.

The  mode light will start blinking.

7.2.3 CONFIGURATION OPTIONS

Once in the configuration mode the following options will show up in the screen:

#	SCREEN	CONFIGURABLE OPTIONS
1	LANGUAGE	ESPAÑOL / ENGLISH / FRANÇAIS / PORTUGUES / ITALIANO
2	CONFIG. PAREMETERS	Access to configurable parameters
3	CALIBRATION	Gives access to measurements calibration

7.3 CONFIGURABLE PARAMETERS

This chapter will cover all the parameters in the SCF8C-J-AS controller that are configurable by the end user to meet the system or regulation requirements and also those parameters that are only configurable by SVE corp employees: "OEM parameters".

The configurable parameters can be classified in the following categories

C-2	JOCKEY OR JACKING PUMP PARAMETERS
C-2	SENSORS
C-4	PASSWORD
C-5	PARAMETERS FOR MANUFACTURER ONLY (OEM)

To change the values of any of the parameters of the SCF8C-J-AS controller a password is required. By default the password is 0000 and the end user can change this password (see configuration C-3.1).

7.3.1 PARAMETERS ACCESSED BY END USER OR INSTALLER

Nº	PARAMETER	MESSAGE IN SCREEN	OPTIONS	
C-2	JOCKEY AND JACKINGPUMP			
C-2.1	Type of pressure switch connected to terminals J7:4 and J7:4N: Discharge P J Pump OK	PRESSURE SWITCH.	Open when pressure OK	Closed when pressure OK
C-2.2	Jockey or Jacking pump run time after system pressure OK	SHUT DOWN DELAY	0s	0s-99s
C-2.3	Nominal current Jockey or Jacking pump (A)	J.P CURRENT	5A	0A to 16.0A
C-2.4	Current value over the nominal current value in % (C-4.2.1) that triggers alarm AL-8 J.P Overload	OVERLOAD	120%	10% ato200%
C-2.5	Current value below the nominal current value in % (C-4.2.1) that triggers alarm AL-9 J.P Undercurrent	UNDERLOAD	0%	0% to 100%
C-2.6	Jockey or Jacking pump shut down if AL-10 Low water level active	J.P SHUT DOWN AL-10	No	Yes
C-2.8	Enable pump start through pressure transducer	PRESS.TRANS.DEMAN	No	Yes
C-2.9	Pump start pressure (if C-2.8 active)	START PRESSURE	6.0 bar	Value from 0 to C-2.10
C-2.10	Pump demand end pressuer ,	END DEMAND PRESS	8.0 bat	Value above C-2.9 and under C-3.2
C-2.11	Time to return to automatic mode	RET. TO AUTO	1 min	250 min
C-3	SENSORS			
C-3.1	Pressure transducer (4-20 mA) connected	PRESSS. TRANS. CON.	No	Yes
C-3.2	Scaling (20 mA) pressure transducer (bar)	SCALING PRES.TRAN.	16 bar	0 a 25 bar
C-4	PASSWORD			
C-4.1	Password	PASSWORD	0000	0000-9999

7.3.2	PARAMETERS ACCESSED ONLY BY SVECORP PERSONNEL (OEM)
-------	---

Below the list of OEM parameters than can only be modified by SVE Corp personnel. To modify any of these parameters please contact SVE Corp:

N°	PARAMETER	MESSAGE IN SCREEN	OPTIONS	
C-5.1	ELECTRICAL SUPPLY			
C-5.1.1	Frequency	FREQUENCY	50HZ	50/60HZ
C-5.1.2	Minimal voltage between phase and neutral to trigger AL.1: VOLTAGE LOSS	MIN.VOLTAGE	190V	00-990V
C-5.1.3	Maximum voltage between phase and neutral to trigger AL.1: VOLTAGE LOSS	V MAX.VOLTAGE	250v	00-990v
C-5.3	JOCKEY AND JACKINGPUMP			
C-5.3.1	Motor starter type	STARTER	DOL	Star-Delta
C-5.3.2	Delay to change starter connection from star to delta	DELAY STAR-DELTA	100ms	2 to-500ms
C-5.4	BATTERY – CHARGER			
C-4.4.1	Battery instaled	BATETY INSTAL.	NO	Yes

ANNEX:

A-1 CONTROLLER COMPONENTS AND TECHNICAL JUSTIFICATION

SCF8C-J-AS

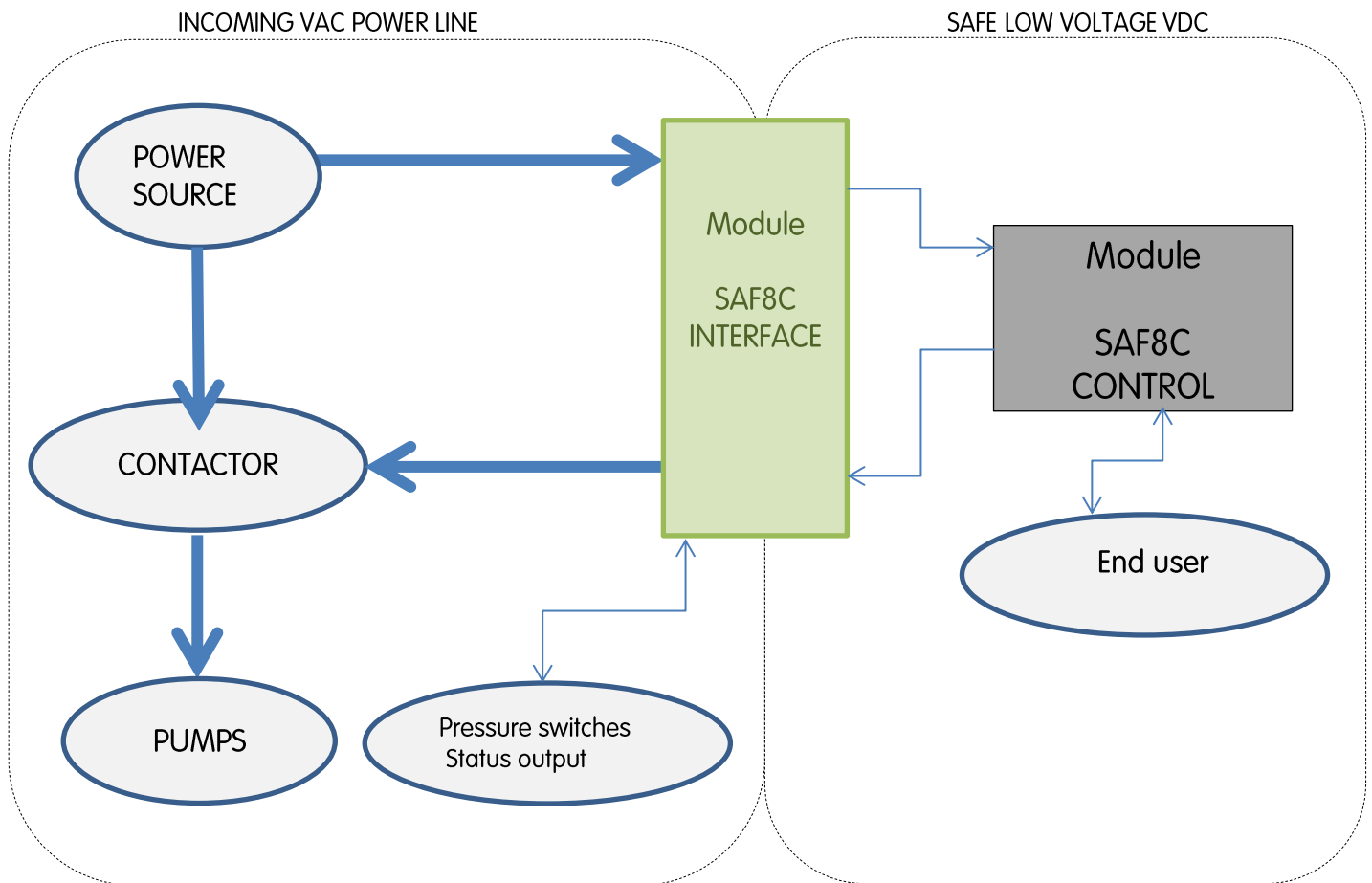
A-1.1 SCF8C-J-AS CONTROLLER COMPONENTS

Below a list of the main components in the SCF8C-J-AS controller:

N°	COMPONENT DESCRIPTION	
01	SCF8C-J-AS enclosure	ENV1
02	SAF8C-Control	MC1
03	SAF8C-Interface	TE1
04	3 Pole Isolator up to 400VAC	S1
05	3 pole contact breaker Jockey or Jacking pump	K1
06	Circuit breaker	Q1

A-1.2 BLOCK DIAGRAM

SCF8C-J-AS controller has an innovative electrical-electronic schematic that allows the controller to perform at high level. SCF8C-J-AS controller is electrically robust against variations in the incoming line voltage and has a great dielectric strength.



Module SAF8C- Interface description

SAF8C-Interface module separates the high voltage area from the SAF8C-Control module so the user can safely operate the controller. Below the main characteristics of the SAF8C-Interface:

- Impedance between any phase and ground is 2 megaohms,
- Voltage reading between phases 400v (+50%), clearance between phases 4mm and clearance between active elements and ground 8mm, in compliance with UNE-EN60950.
- Clearances, creepage distances and distances through insulations comply with UNE-EN60950
- Overvoltage protection category III.
- Jockey or Jacking pump power display up to 7,5 kW, using integrated current transformer.
- Activates the contactor with a transient low voltage activated current and offers a perfect isolation thanks to its optical coupler used between the command signal and the contactor coil operating voltages.

A-1.3 PUMP PROTECTION TECHNICAL JUSTIFICATION

A-1.3.2 JOCKEY OR JACKING PUMP PROTECTION

Given the Jockey or Jacking pump is a maintenance pump that does not have a key role during the fire it is protected by a series of alarms that will immediately shut down the pump:

AL-7 SHORT CIRCUIT J.P.

AL-08 OVERLOAD J.P. (Thermal protection)

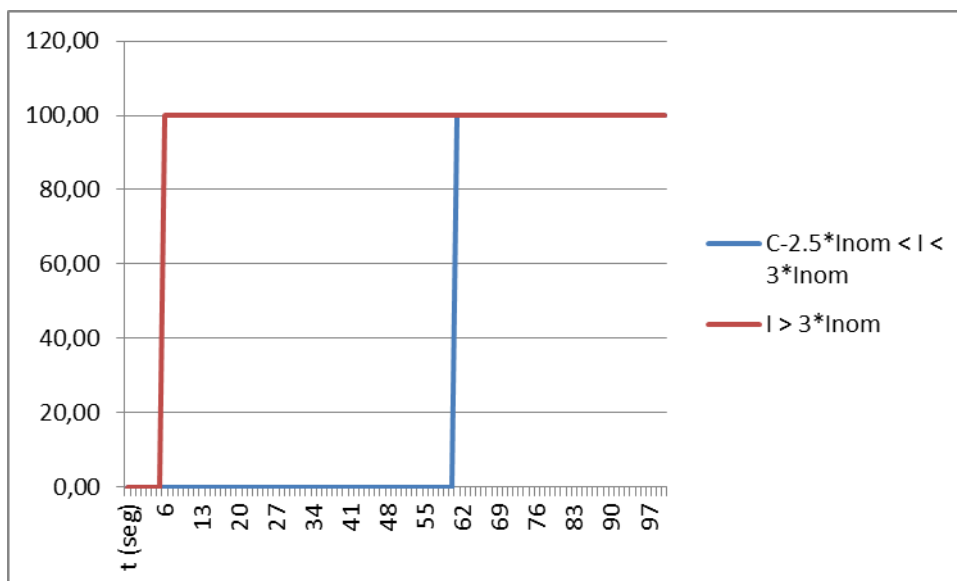
AL-10 LOW WATER → C-2.6 Configuration

JOCKEY OR JACKING PUMP OVERCURRENT OR THERMAL PROTECTION

SCF8C-J-AS measures the Jockey or Jacking pump current and depending on the values evaluates to shut down the pump or not, protecting the system from overheating:

Depending on the nominal current value selected for the Jockey or Jacking pump the system will shut down the pump and activate AL08- OVERLOAD J.P. when:

- a) The current (I) measured for at least of 60s is $>$ Configuration C-2.4 " OVERLOAD %" .
- b) The current (I) measured $>$ 3 times C-2.3 "J.P CURRENT" value for at least 5 seconds



A-1.4 POWER ELEMENTS TECHNICAL JUSTIFICATION

A-1.4.1 ISOLATOR

When selecting the right isolator for the controller the nominal current value provided by the isolator's manufacturer has to be at least 10% bigger than the maximum current needed for the system.

A-1.4.2 INTERNAL WIRING

Internal wires are sized to handle at least 110% of the motor's power at full load.

A-1.4.3 CONTACTORS

Contactors are sized to handle at least 110% of the motor's current at full load.

All our suppliers guarantee that their contactors are rated AC3 per EN 60947-1 y EN 60947-4.



WWW. SVECORP.COM