

Personnel winch **SECURITREUIL**

Instructions manual _____

UK



356-9.11/3

In an endeavour to improve its products, HUCHEZ reserves the right to alter the equipment featured herein and supply it, in this case, different to the illustrations or specifications of these instructions

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1 - General warning

This machine is governed by European regulations, and more specifically machine directive 2006/42/EC.

- Before using this machine, the user must read this instruction manual and comply with all the instructions in order to ensure the safe and efficient use of the equipment.
- This instruction manual must be available to all operators. The manufacturer will provide additional copies on request.
- The Securitreuil safety winch allows personnel to be lowered in complete safety. Please ensure that the operators are qualified to operate the machine in the conditions provided for in this manual. This will ensure the safety of both people and the environment.
- Never use this machine to lift anything other than people.
- Before use, the operator must always check that the machine, wires, markings, fixtures and wire/seat linkages are in good working order.
- The manufacturer shall not accept any liability for the consequences resulting from the use or installation of equipment not provided for in the present instructions or for the consequences of disassembly, modifications or replacement of original parts or components with parts or components from other sources without the written agreement of HUCHEZ.
- The Securitreuil safety winch is not intended for work on tower blocks (facade washing, mobile scaffolding, etc.).
- The nacelle working area must be in an enclosed space protected from turbulence (wind ...).
- The S curitreuil must not operate in an explosive atmosphere. *

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- **For the version with ATEX radio transmitters, only the seat and the ATEX transmitter can enter the ATEX area, the structure and electrical equipment must remain outside the ATEX area.**
- **The ATEX transmitters can only be used in areas authorized by their marking.**
- **In ATEX areas, the seat must not come into contact with: granite, aluminum, titanium, magnesium.**

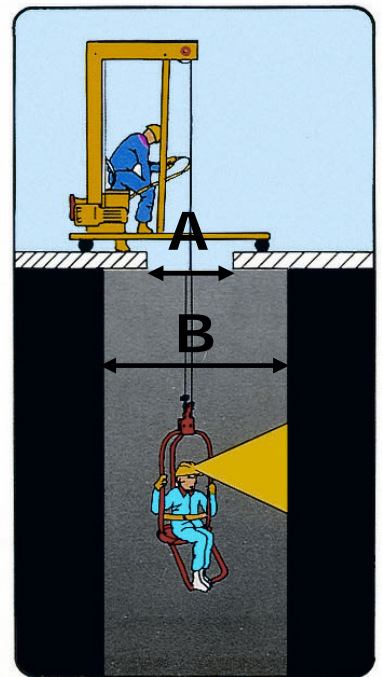
2 - Presentation of the machine

The Securitreuil safety winch allows personnel to be lowered in total safety to inspect silos, reservoirs or cells, etc.

Various models are available depending on the working height (25, 50 or 70 m) or the type of electrical control of the operator (reel or radio control (standard or ATEX)).

A, mini. recommended Ø : 800 mm

B, mini. recommended Ø : 1000 mm

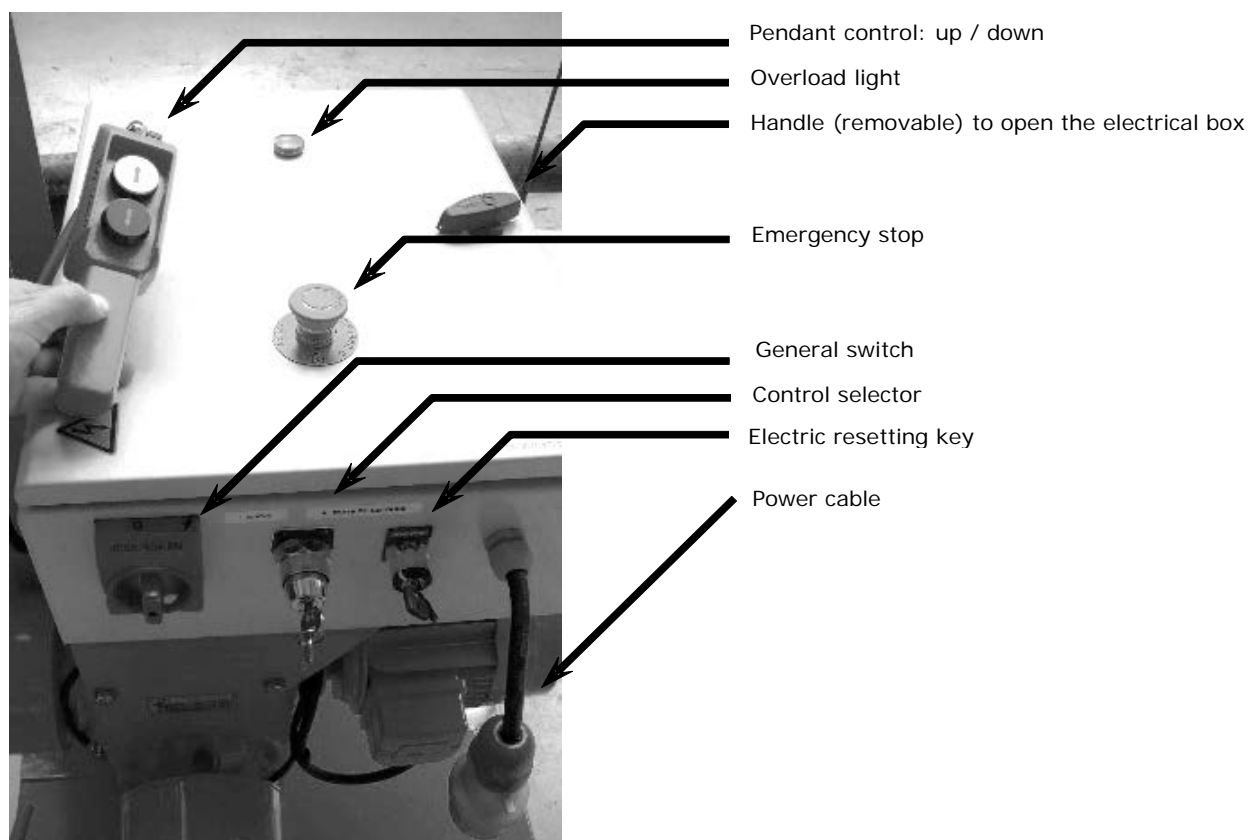


2.1. Technical description:

- Rigid, mechanically welded steel structure
- Mechanically welded steel drums
- Wormgear grease-bath reduction gearing
- Three-phase 220/380 volt 50 Hz main motor - Power 0.75 kW
- Emergency torque motor
- 24 volt DC electromagnetic brakes
- Electrical equipment in watertight housing
- Low voltage remote control
- Upper and lower limit switch
- Wire slack and breakage detector
- Upper overshoot switch
- Load limiter
- Brake release and trouble-shooting crank handle
- Handling wheels
- Levelling jacks with spirit level
- Anti-spin wires Ø 4.32 mm - 19 x 7 - breaking load 1,600 kg
- Mechanically welded steel tube seat with safety belt and removable foot rest
- Depending on the models: electric wire winder (E model) - radio control (RC model) ATEX radio control (ATEX versions).

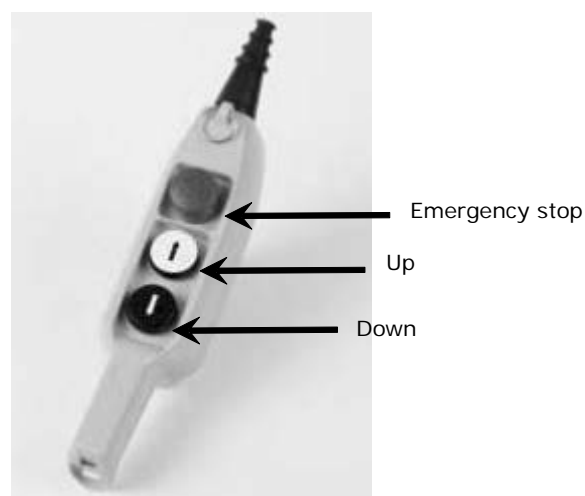
2.2. Description of the controls

Poste 1 : Operator supervising outside the machine

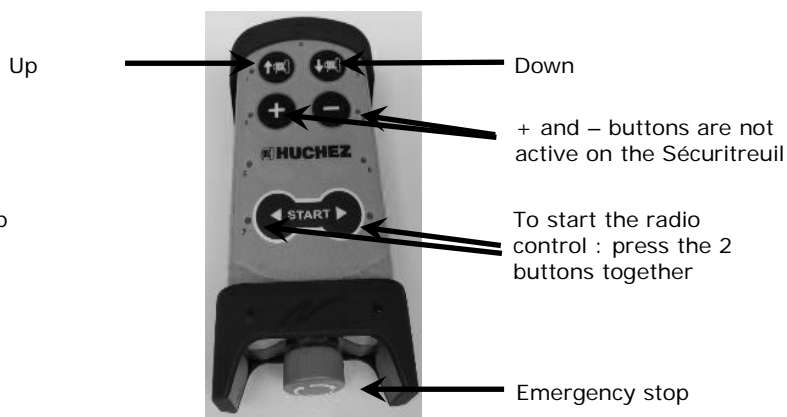


Poste 2 : Main operator sitting on the seat

Spring reeler version (SCT 25 E)



Standard radio control version (SCT 25/50/70 RC) :



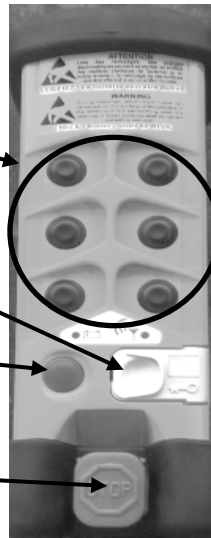
ATEX radio control version (SCT 25/50 ATEX) :

Up and down button
(1st or 2nd or 3rd depending on wiring)

Security key (containing the code associated to the receiver for the radio control)

Radio control ON button

Emergency stop



2.2. Dimensions:



2.3. Models available:

Type	Capacity kg	Speed m/min	Motor kW	Power	Lifting height m	Weight kg
SCT 25 E	125	9	0.75	3 Ph – 230/400 V	25	335
SCT 25 RC	125	9	0.75	3 Ph – 230/400 V	25	303
SCT 50 RC	125	9	0.75	3 Ph – 230/400 V	50	307
SCT 70 RC	125	9	0.75	3 Ph – 230/400 V	70	310
SCT 25 ATEX	125	9	0.75	3 Ph – 230/400 V	25	303
SCT 50 ATEX	125	9	0.75	3 Ph – 230/400 V	50	307

For the versions SCT 25 ATEX and SCT 50 ATEX, the radio control transmitter and the seat can be used in ATEX areas:

Ex II 1 GD

Ex ia IIB T5 Ga

Ex ia IIIC T100°C Da IP65

All other components of the Securitreuil must not be used in ATEX area (structure, winches, electrical equipment...)



2.4. Operating:

When the motors are connected to an electric power supply, the brakes are released and the motors begin to turn, driving the reduction gear and then the drums.

2.5. Noise

Level of weighted acoustic pressure A: 71 dB(A) +/- 2 dB

Value measured 1 m from the machine at a height of 1.60 m on a Securitreuril SCT 25 E with a load of 75 kg.

3 – Handling – Storage

When handling, it is possible to use the upper ring for vertical movement and the wheels for movement on the ground.

As with any machine involving electrical equipment, this machine must be stored in the off position, in its protective cover, protected from bad weather and at a temperature between - 10°C and + 50°C.

4- Assembly and set-up

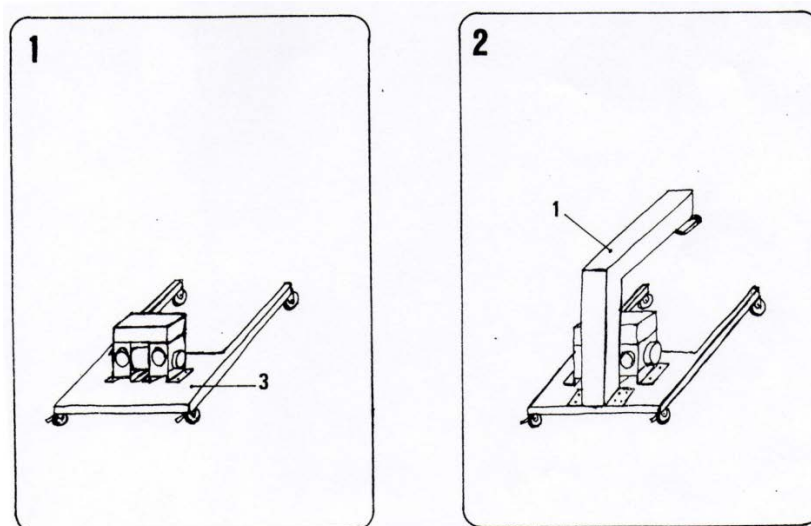
4.1. Assembly:

When the machine is delivered in separate parts, follow the instructions below while referring to the accompanying diagrams.

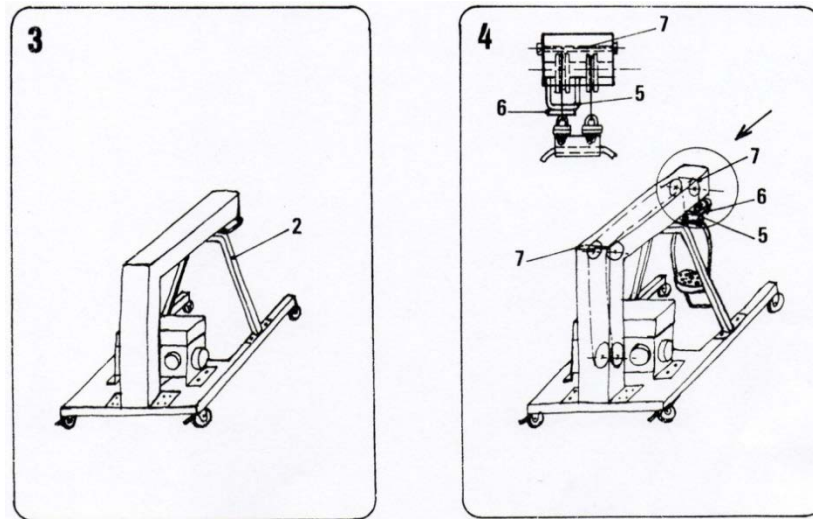
Wherever necessary, fit the wheels, taking care to position the swivelling wheels at the rear, and block them using the screws provided.

Fit parts 1 and 2 to the chassis 3.

You must use the nuts and bolts provided.



Once you have removed the anti-necking devices 7, fit the wires on their guide pulleys keeping them taut on the reels to avoid expansion. Once the main wire is positioned in the safety fork 5, fix the safety disk 6 to this wire. Attach the seat using the two fastenings. For machines fitted with a radio control, install the aerial (located in the electrical unit) on the receiver and check that the transmitter works correctly. If necessary, change the battery (9 volts).



4.2. Set-up:

VERY IMPORTANT: check that the electrical installation has a 30 mA residual current protective measure.



Make sure that the structure and the electrical equipment are not in ATEX area and that the power plug has been earthed.

The machine is intended for the three phase power supply requested when ordered. The admissible tolerance is + or - 10%.

- Check that the main switch is in the "O" position and connect to the power supply.
- Open the electrical unit and identify the phase sequence relay marked S M.

The corresponding light should come on when switched on. If not, invert the phases on the power socket until the light comes on.

In no event should you perform an operation on the motor terminals.

VERY IMPORTANT: the machine **must** be operated by two people.



In ATEX areas, the seat must not come into contact with: granite, aluminum, titanium, magnesium

- Place the Securitreuril winch on a flat, sufficiently strong surface. This surface must be able to withstand a pressure of 350 kg on each wheel.
- Put the operator in place, who will perform the work in the seat and fasten the safety belt.

VERY IMPORTANT: The restrain belt locking on the seat is mandatory throughout the time of use of the S curitreuil.

- Move the Securitreuril winch so that the seat and its occupant are above the opening to the element to be inspected.
- Block the swivel wheels by pressing the respective pedals.
- Using the manual jacks and spirit level, adjust the level of the machine.
- Connect the power supply and switch on.
- The machine is ready for use.

The seat can be raised or lowered either by the operator, using the control panel on the seat, or by the supervising operator, using the control panel on the chassis of the machine.

The winch must not be used in a location with insufficient lighting (daylight, well-lit warehouse). At worst, the supervising operator should at least be able to read the instructions on the mast. It is strongly advisable for the operator in the seat to carry a head lantern.



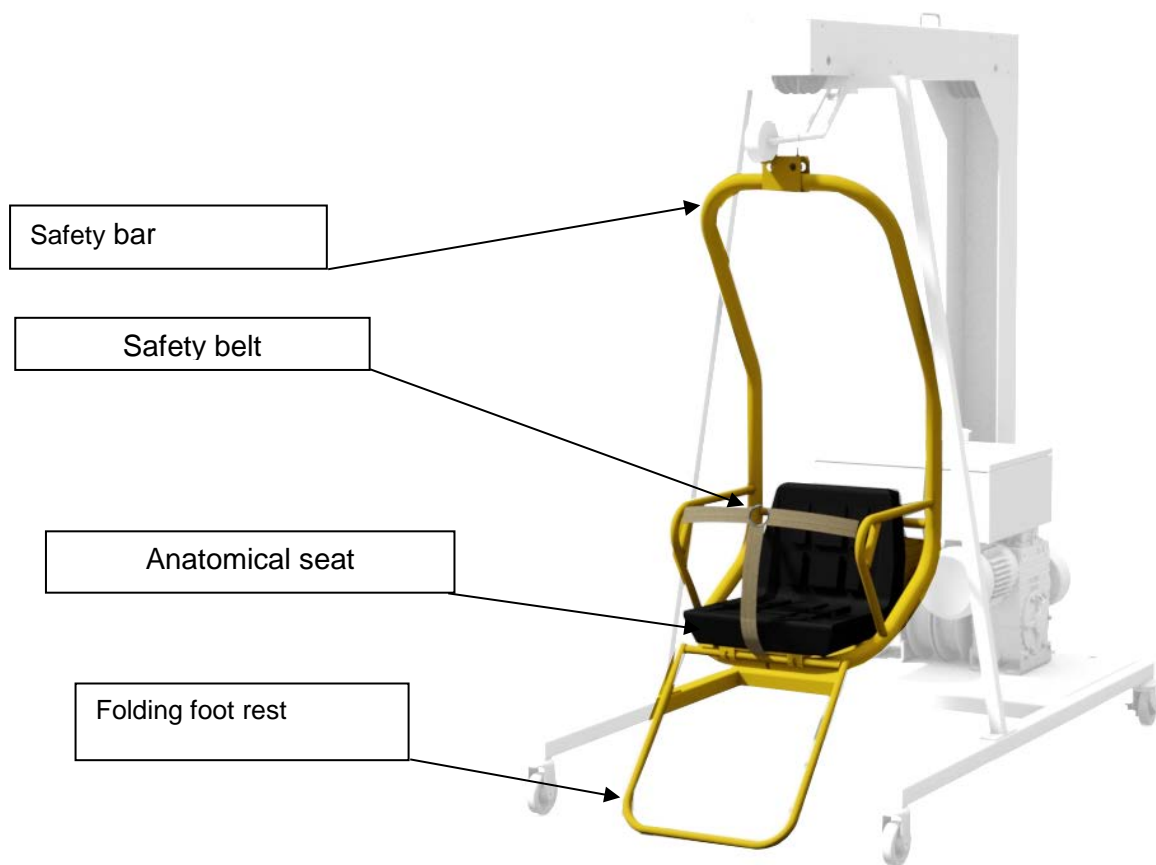
The ATEX transmitter battery can be replaced in ATEX area but must not be charged in this area.

VERY IMPORTANT: It is forbidden to leave the seat except in high position and on a secure firm ground.

4.3. Workstation

The main operator sits in the seat while the supervising operator remains beside the machine.

Description of the workstation:



4.4. Personal protective measures

Helmets are mandatory as well as belt locking once the operator is installed on the seat.

4.5. Residual risks



If the seat has to enter an ATEX area during its movement, the operator must ensure that all the equipment it carries are allowed in this area, especially the radio control, lamps, walkie-talkies, and personal effects (watch, phone...) and any other equipment capable of initiating an explosion.

Despite the safety measures taken from design to manufacture and despite all protective measures which might be taken, some risks may arise if the operators do not comply with the instructions in this manual.

Generally speaking, you must not touch any moving parts, the electrical unit or the motors. When working on these parts, the machine must not be loaded and must be switched off. Gloves shall be worn when working on the pulleys and wire.

Before use, check that the space into which the operator will be lowered has no narrow point which may cause the seat to become blocked, resulting in a machine fault which could cause serious damage.

4.6. Stability conditions

Whether in use, when handling or in storage, the machine must always be kept in a vertical position.

5 - Servicing and maintenance

5.1. Lubrication

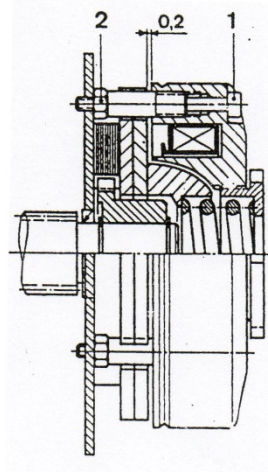
Every time the machine is used:

- Check the oil level in the reduction gearing - 3 litres
- Check the condition of the wires and wire/seat linkages
- Change the reduction gear oil every year
- Every five years, ask the manufacturer or manufacturer-approved personnel to perform a complete check of the machine.

Original oil: Mobil Glygoy LE30

5.2. Brake

From time to time, dust the brake and adjust the air gap if it exceeds 0.3 mm
To do this, use a 0.2 mm thick shim and adjust screw 1 and nut 2



5.3. Load limiter

Important: do not change the settings without informing the manufacturer.
If the load limiter is incorrectly adjusted, the default values are:

Overcurrent	M
I value	25 %
Hysteresis	15 %
Ti	0 s
Tt	1 s

If the limiter needs to be re-calibrated, place a load of 130 kg in the seat, adjust the "I Value" button by reducing the value until the system cuts out. Then make sure that the system does not cut out with a load of 125 kg.

5.4. Wires

During every service, check the condition of the wires and their fastenings.

Gloves must be used when handling the wires and pulleys.

It is virtually impossible to make a complete list of all mechanical damage the wire ropes may be subjected to.



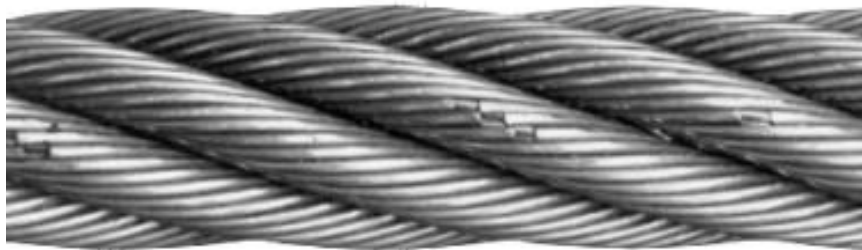
Birdcage (antispin wire rope) caused by wear on pulleys.



Protruding core caused by shocks during work under load, accumulation of twists during use, improper use of a wire rope for the application.

The above list is non-exhaustive. None of these damages are not reparable.

The wire rope also needs to be replaced if one finds a number of broken strands (fatigue failure) indicating that the wire rope has reached its fatigue limit and life expectancy.



In the case of the Sécuritreuril, the wire rope is anti-spin, has a nominal diameter of 4.32 mm, and is made of 19 strands of 7 threads each. The criteria to remove this type of wire rope is a maximum of 4 broken threads on a length of 130 mm or 2 consecutive broken threads in less than 26 mm.

Replacement procedure:

- Lift the safety fork 5 manually (Fig. 4, page 7), unwind the wires until the machine stops.
- Remove the lower limit switch cover and release the nut blocking the cut-out index.
- Finish unwinding the wire(s).
- Remove the upper drum protection and untie the wires.
- Fasten the new wire(s).
- Wind the reels three times.
- Position the lower limit switch index to cut the electrical contact and fasten the immobilisation nut.
- Fit the limit switch cover.
- Finish winding the wire(s) with the machine switched on and monitor the winding on the reel(s).

5.5. Spring Reeler (version SCT25E)

WARNING ! This product consists of a spring under stress that can suddenly loosen and cause personal injuries.

The eventual removal must be performed by a skilled operator used to this type of products.

6- Safety measures

The machine is fitted with the following measures:

- Emergency winch
- Upper limit switch
- Lower limit switch
- Upper overshoot switch
- Main wire slack switch
- Emergency manual lift with electrical safety
- Load limiter

Contact the manufacturer when replacing any of these devices

If the machine stops working during use, switch off the general power supply then perform the following operations:

Possible causes of faults	Solutions
▪ Power failure	▪ Check the power supply.
▪ Faulty fuse	▪ Identify and replace
▪ Thermal relay released	▪ Re-engage by pressing the red thermal relay button
▪ Seat blocked in top position: lowering impossible	▪ Check the upper limit switch contact, manually engage the contactor marked C.L. and press the down button at the same time. If necessary, check the lowering contactor.
▪ Seat blocked in bottom position: lifting impossible	▪ To raise the seat, lift the safety fork 5 manually (until it is horizontal) and press the up button at the same time. If necessary, check the lifting contactor. Readjust the lower limit switch (see § Replacing the wires).
▪ Main wire broken	▪ The seat must be raised manually. To do this: <ul style="list-style-type: none"> - Remove the red brake cover - Take the release handle and screw it on the brake calliper - Lift the anti-return ratchet, insert the crank handle on the shaft located at the centre of the brake and tighten the wing screw. Activate the brake handle and turn the crank handle clockwise.

6.1. Description of the safety measures

▪ Upper limit switch - wire slack

Detection by means of a sensor (fork) fitted with a cam acting on two electric contacts causing the line circuit-breakers to be cut.

▪ Emergency manual lifting

The crank handle is fitted with an non-return ratchet. Opening the access cover to this measure causes the line circuit breakers to be cut, thereby preventing any risk of the machine being started again without warning.

▪ Load limiter

An excessive load is indicated by the red warning light located on the electrical cabinet. This fault must be corrected before switching the machine on.

After this operation, switch the circuit on using the key-activated reset button.

As this safety device is adjusted and marked in the factory, any operation performed on it must be authorised by the manufacturer.

▪ Rescue operation

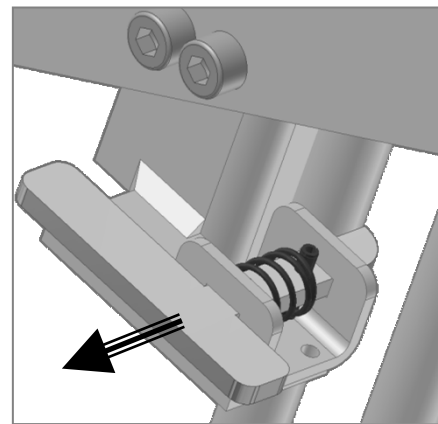
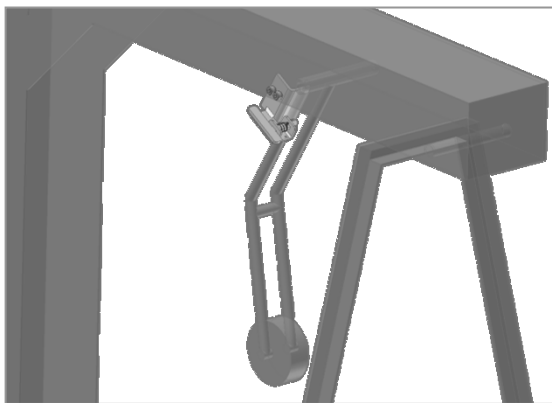
The operator in the seat is raised using the control unit located on the chassis of the machine. To do this, the supervising operator must set the control key selector to position II.

▪ wire slack blockage (or wire slack retention)

When the wire slackens suddenly, or when it breaks, the wire slack fork swings quickly to a thrust bearing fitted with a ratchet which will hold it in place.



- ➔ If the slack wire device has been triggered due to a break in the wire, the supervising operator must raise the other operator (on the seat) using the crank handle before performing any operations on the appliance.
- ➔ If the device has been triggered due to the slackening of the wire (the seat is in position), the slack wire device must be unblocked using the lever (see photos below).



7 - Counter indications for use

Before using the equipment, check that there are no causes of overloading.

All prohibited and incorrect uses or operations are presented below:

It is prohibited to:

- lift loads in excess of the weight of the nominal load indicated on the machine plate (125 kg);
- unwind the drum completely (keep 2 or 3 residual winds);
- lift or lower more than one person;
- pull at an angle;
- cause the seat to swing;
- place the machine on a gradient;
- use wires with a different diameter and texture from the specifications in this manual;
- use damaged wires or wires with splices.
- use a seat which is not the original seat;
- settle into the seat without locking at the same time the belt and throughout the duration of use of the Sécuretreuil.
- insert objects into moving parts.
- perform operations on a machine while it is working;

- perform operations on a machine while it is switched on;
- use a machine for operations other than those for which it is designed;
- fatigue the cable from the control box by unnecessary twisting (risk of the wire breaking);
- drum on the control box (overheating of the engine and electrical equipment).
- use machines at temperatures under - 10°C or over 50°C.
- use in ATEX areas unauthorized material.
- exit the seat from the Sécuritreuril except than in high position and on a secure firm ground.

8 - Obligatory regulatory checks by the user

This winch has been tested in the factory:

- in a dynamic situation, with coefficient 1.2
- in a static situation, with coefficient 1.5

A periodic maintenance check is necessary at least once every six months.

With regard to France:

Order of 1st March 2004 relating to the verification of lifting machines and accessories:

The modifications to the regulation relating to the use and verification of lifting machines and accessories, which came into effect on 1st April 2005, impose new obligations on all users:

- The suitability inspection which involves checking that the lifting machine is suitable for the work that the user intends to carry out as well as for the risks to which workers are exposed and that the intended operations are compatible with the conditions of use for the machine defined by the manufacturer.
- The assembly and installation inspection, which involves ensuring that the lifting machine is assembled and installed in a safe way in accordance with the manufacturer's instruction manual,
- The general periodic visits, which involve an inspection of the state of preservation and the operating tests.
- The set-up or renewed set-up inspections: in the event of a change in the place of use, the configuration or the conditions of use on the same site; following the disassembly and subsequent reassembly of the lifting machine; after any major replacement, repair or transformation concerning the essential components of the lifting machine; following any accident caused by the failure of an essential component of the lifting machine.
- The maintenance booklet (Order of 2nd March 2004 applicable from 1st April 2005) which must be used to record the maintenance operations carried out in accordance with the recommendations of the manufacturer of the machine as well as any other inspection, maintenance operation, repair, replacement or modification carried out on the machine. For each operation, it is essential to record the date of the work, the names of the people and, where appropriate, the companies which carried out the work, the nature of the operation and, if it is a periodic operation, the frequency. If the operations involve the replacement of certain components of the machine, the references of these components are indicated. The English version of the maintenance booklet for our lifting winches can be downloaded from our website www.huchez.fr/ uk under the heading "After sales services". A copy is however proposed in the annexes of this manual.

The inspections must be carried out in accordance with a protocol and are intended to ensure preventive maintenance aimed at detecting any damage or defectiveness liable to result in a danger.

9 – Taking out of use

If the equipment is in a state of disrepair liable to cause risks, the user is obliged to ensure that the equipment is eliminated, i.e.: prevent it from operating and possible disassembly.

10 - Ordering spare parts

When ordering any spare parts, to ensure satisfaction in the shortest possible time and to guarantee the best possible service:

Please indicate the following elements when placing an order:

- the type and capacity of the machine (indicated on the nameplate).
- the number and year of manufacture (indicated on the nameplate).
- the number or designation of the desired parts (exploded view).
- in particular for the worm screw and the cylindrical worm wheel of the reduction gearing: the ratio etched on these parts,
- in certain cases, for reduction gearing, the number of gear teeth.

The seals are only supplied as a full set.

11. Declaration of EC conformity

CE



DECLARATION OF CONFORMITY

R03.27 - UK

We hereby declare that the design and manufacture of the machinery referred to below comply with the relevant requirements of Directive 2006/42/CE on Machinery and the EMC Directive 2004/108/EC and meets all relevant provisions of the annex at the end of Title I of Book II of 4th part of the Labor Code.
The machinery's technical file has been put together by the signatory of this declaration.
This declaration shall become null and void in the event it is changed or if any item is added without our prior consent.
Moreover, this declaration shall become null and void if the machinery is not used in accordance with its instruction for use and if it is not inspected regularly.

Type of device: **Personnel lifting machine**

Model: _____

Force: _____

Serial n°: _____

Function: ☐ Personnel lifting

Quality assurance: ISO 9001 (certificate registration no.: FQR-9911492)

Examination certificate of CE type issued by 0060 APARVE - 13 à 17, rue Salverre - 75854 Paris Cedex 17 (France)
Certificate n°: 0060 / 5360 / 760 / 10/15 / 0003

Equipment delivered: ☐ with cable ☐ lifting height 25 m
☐ lifting height 50 m
☐ lifting height 70 m

☐ with spooler 25 m

☐ radiocontrolled 25 m

☐ with radio control transmitter complying with Directive ATX 94/9/CE

☒ H 1 GD
Ex ia IIB T5 Ga
Ex ia IIC T120°C Da IP65

☐ radiocontrolled 70 m

☐ radiocontrolled 50 m

☐ with radio control transmitter complying with Directive ATX 94/9/CE

☒ H 1 GD
Ex ia IIB T5 Ga
Ex ia IIC T120°C Da IP65

and with instructions for use.

Issued in Penrith on: _____

Antoine HUCHEZ,
President

www.huchez.fr









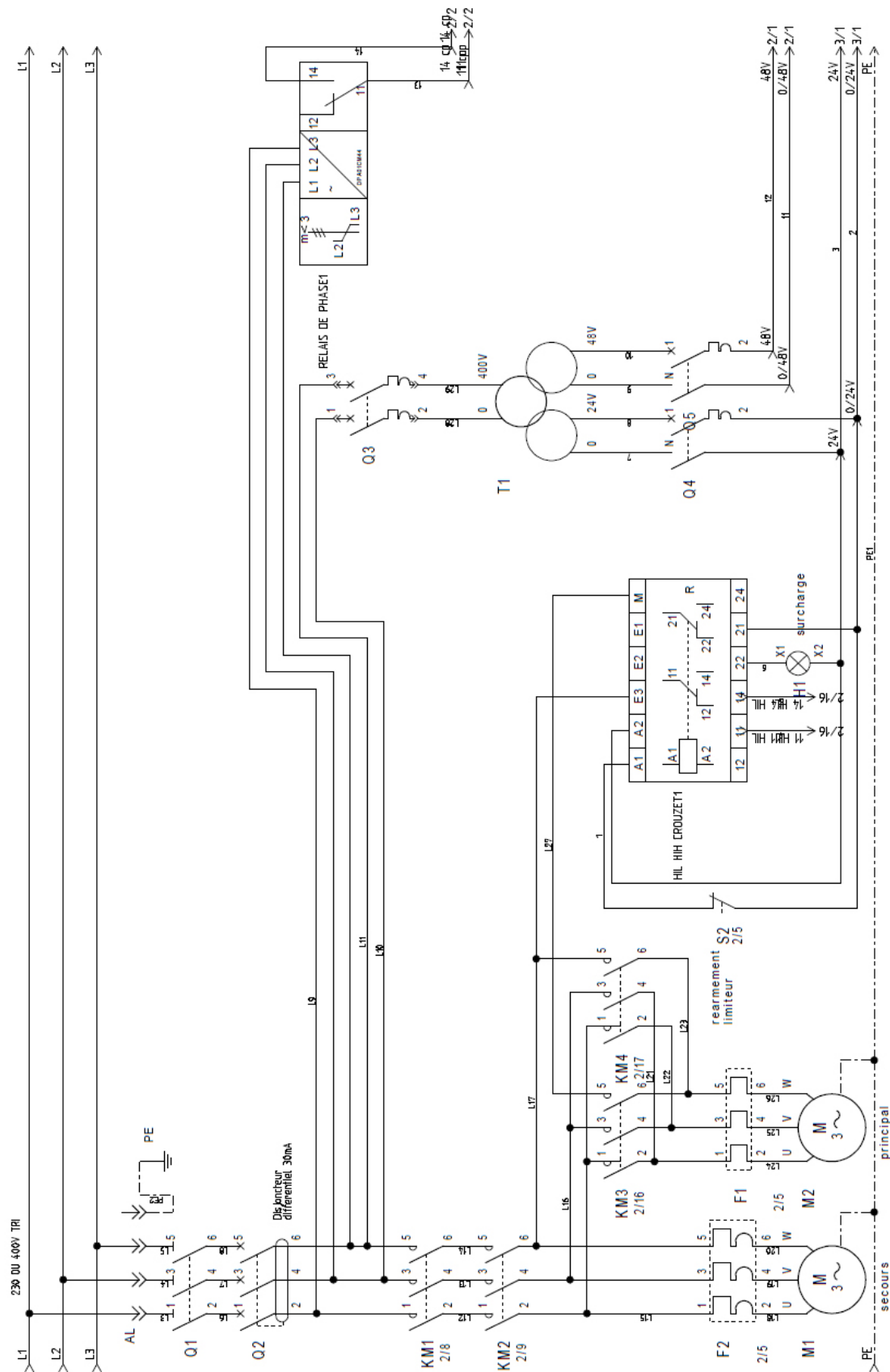


12. Appendices

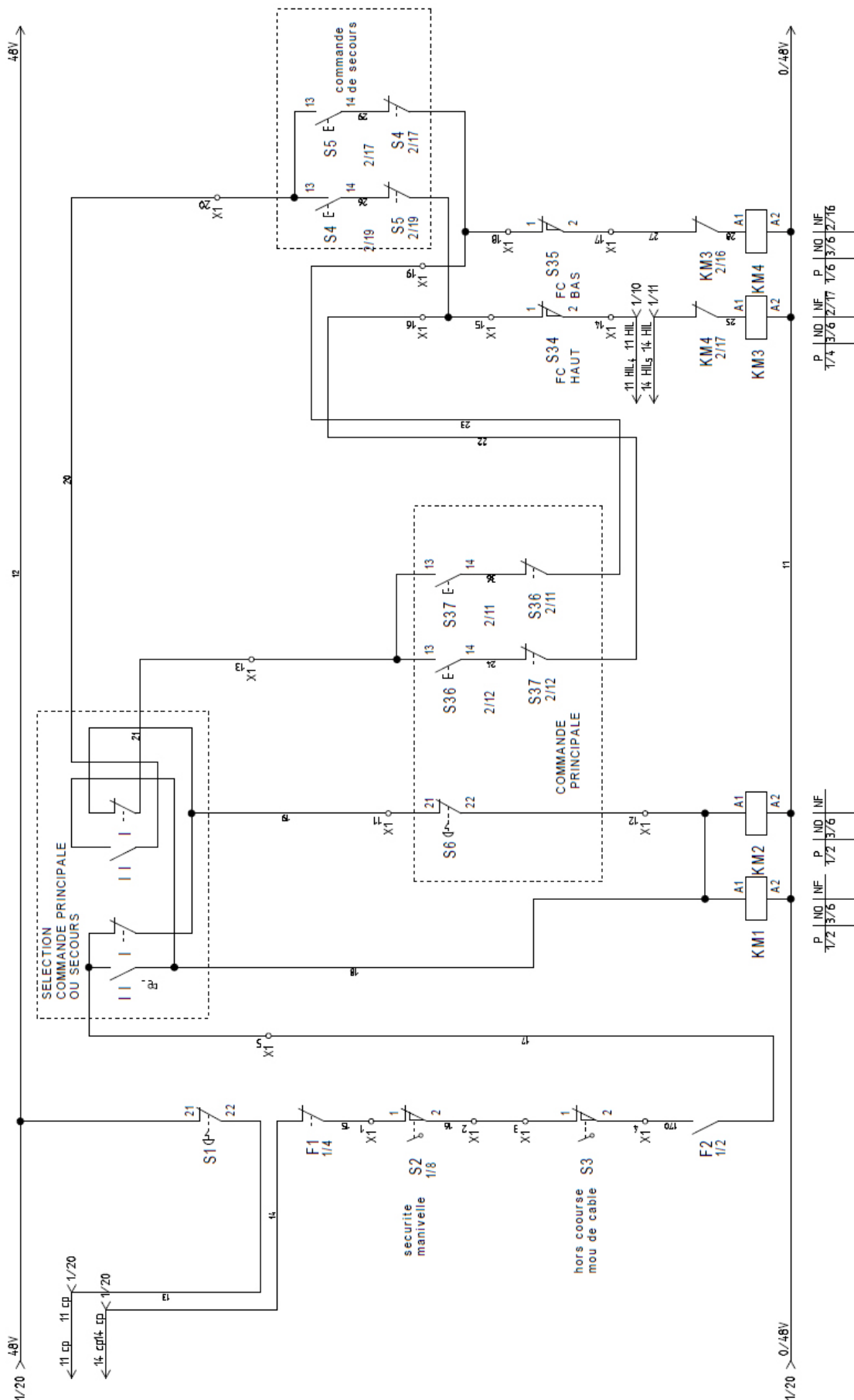
A – Electrical diagrams

B – Part references

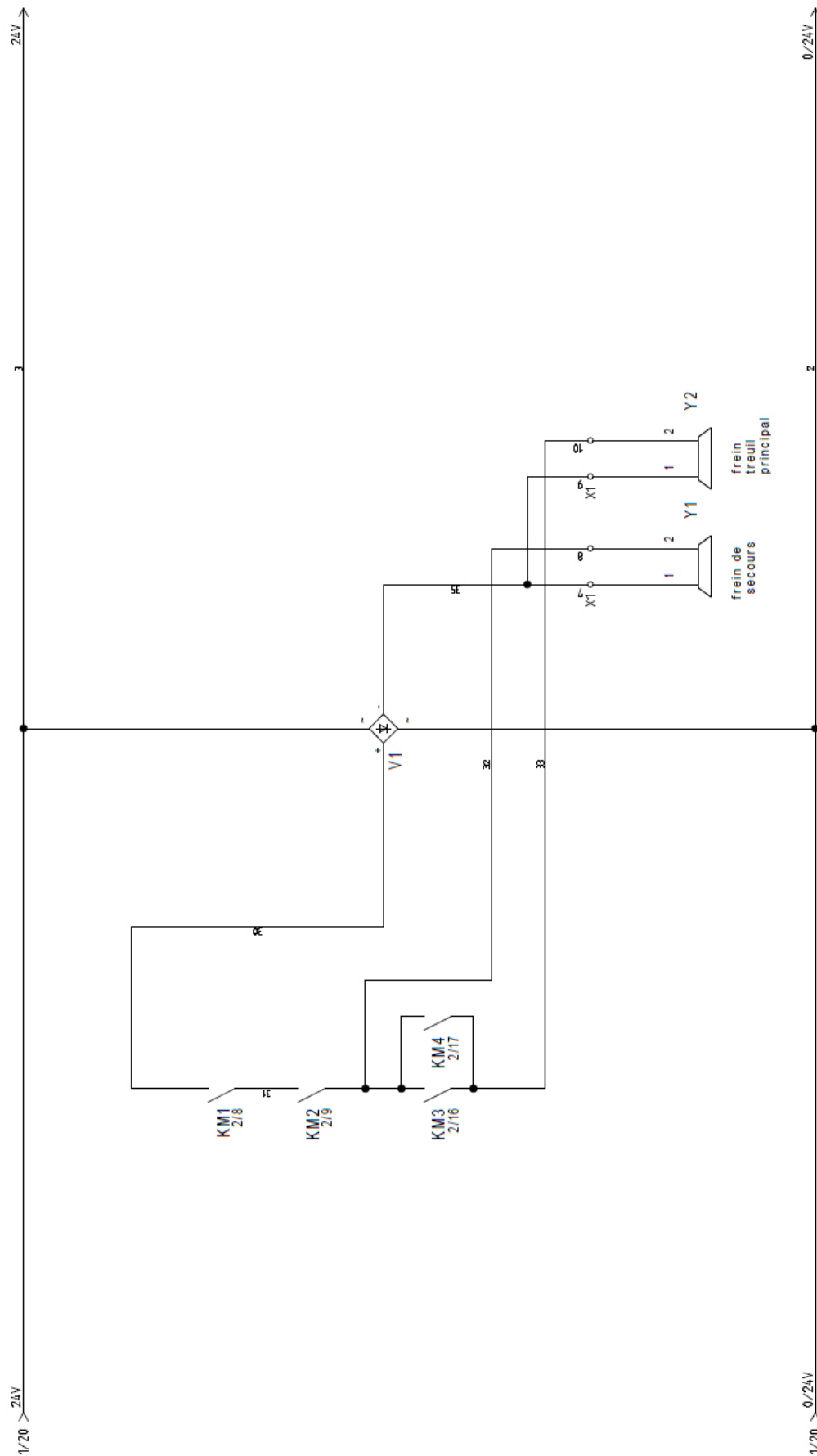
Spring reeler version (1/3)



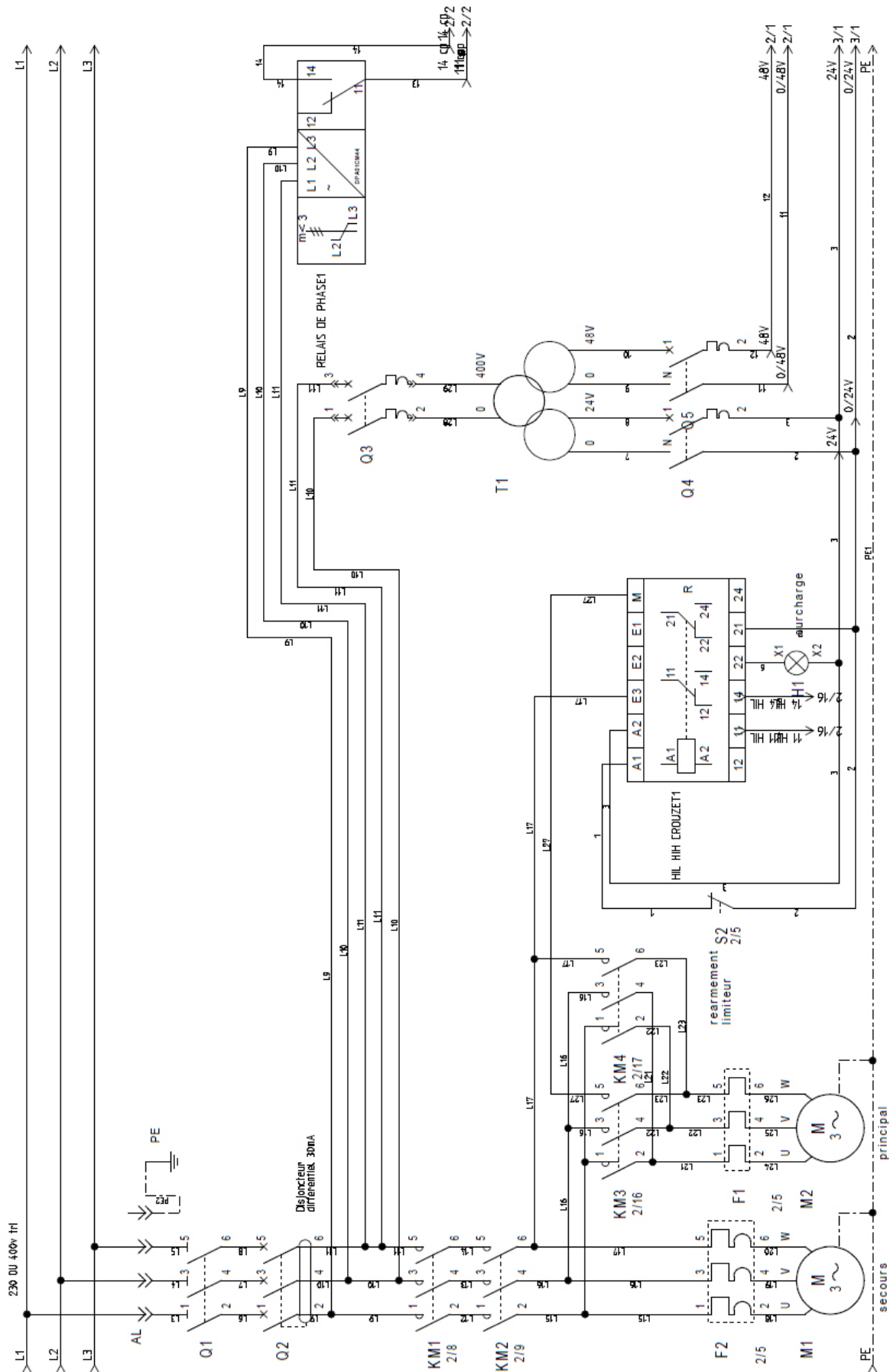
Spring reeler version (2/3)



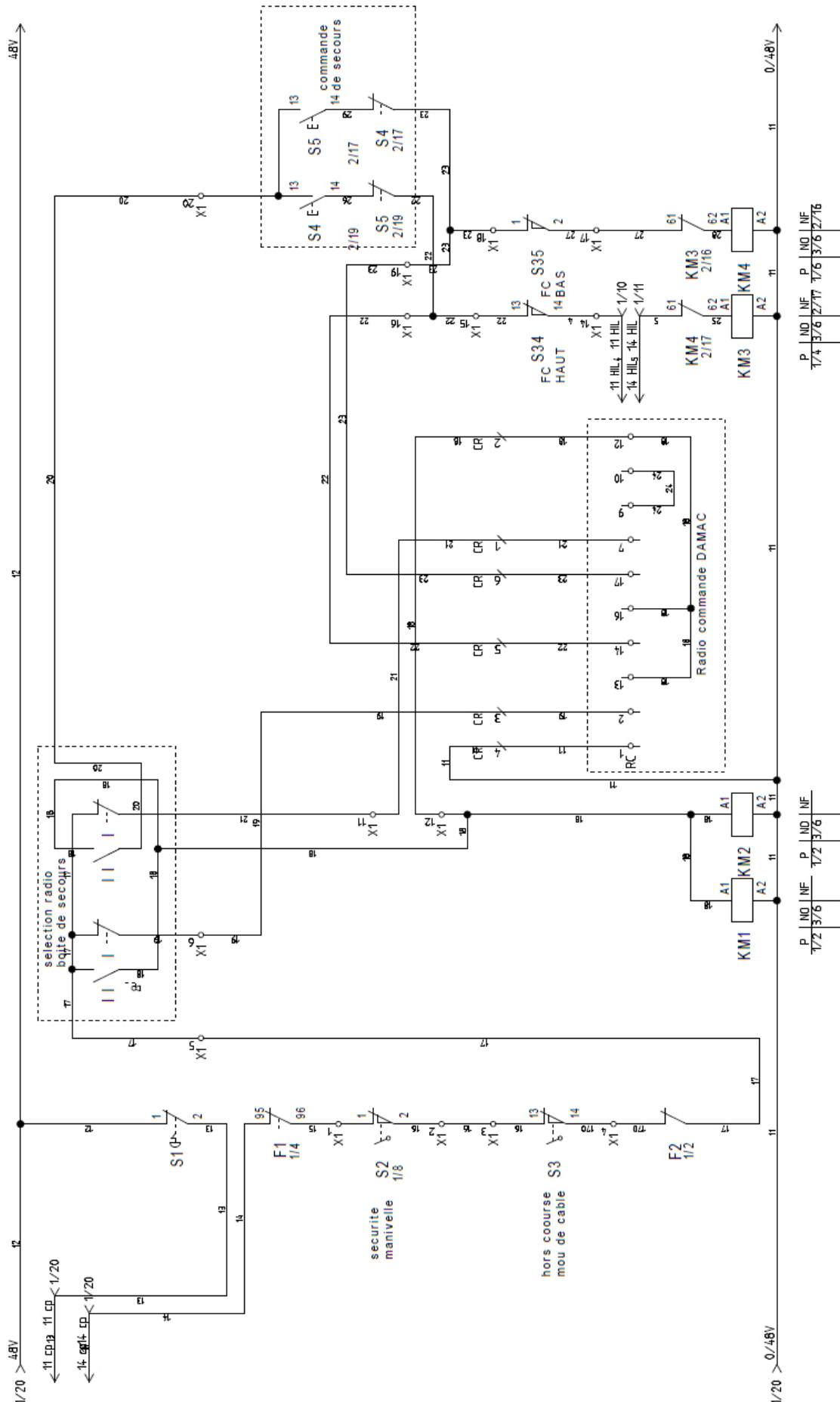
Spring reeler version (3/3)



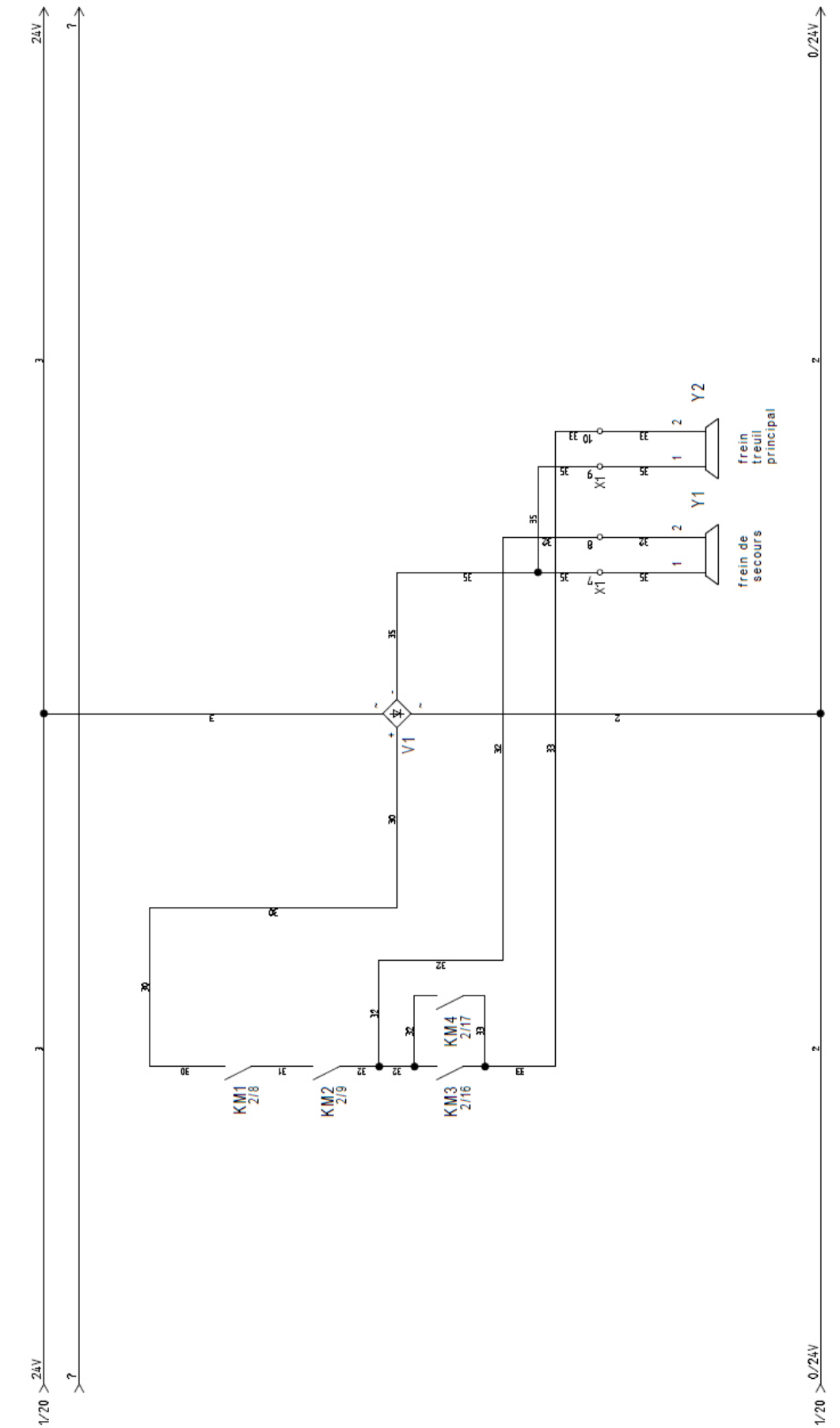
Standard radio version (1/3)



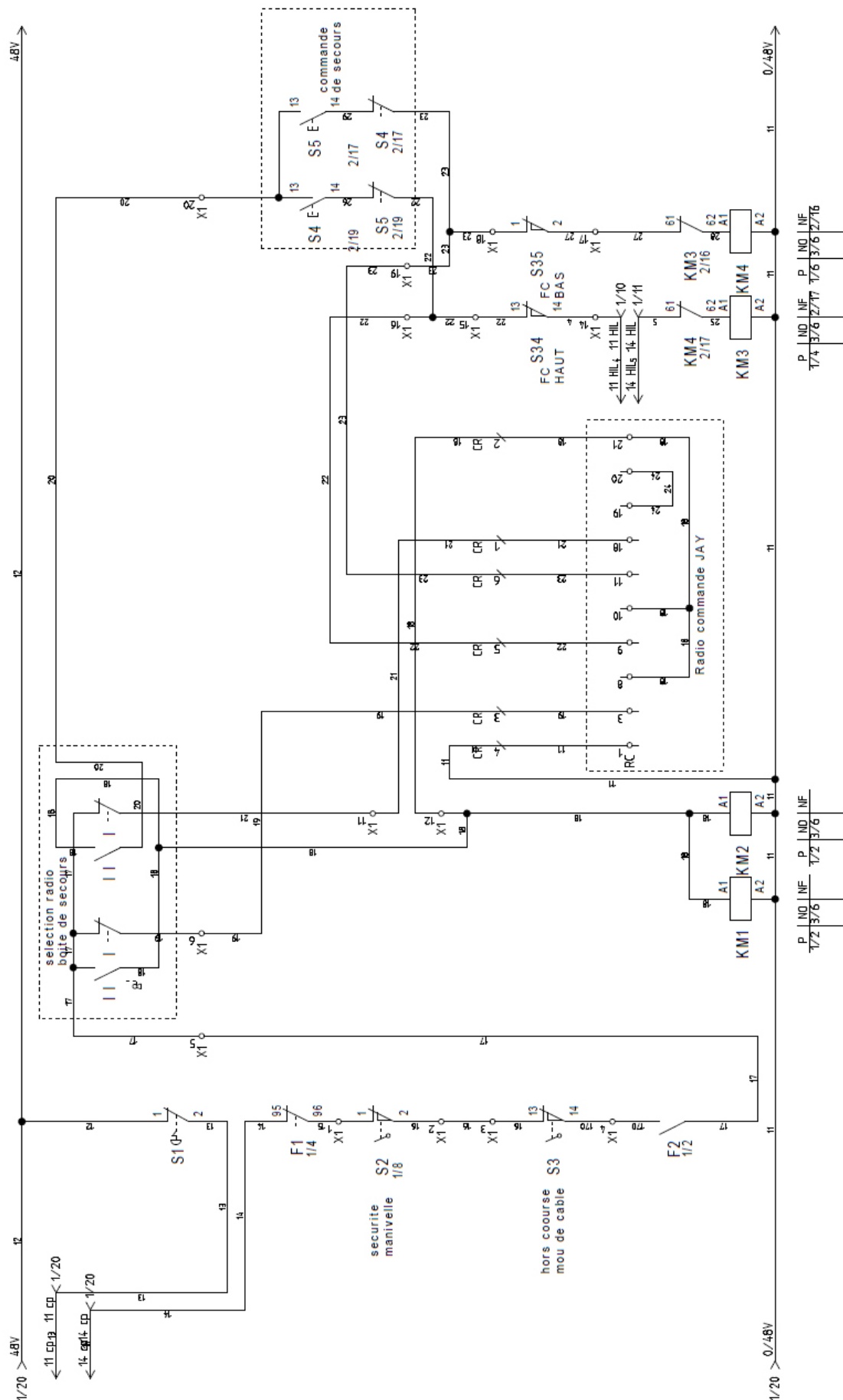
Standard radio version (2/3)



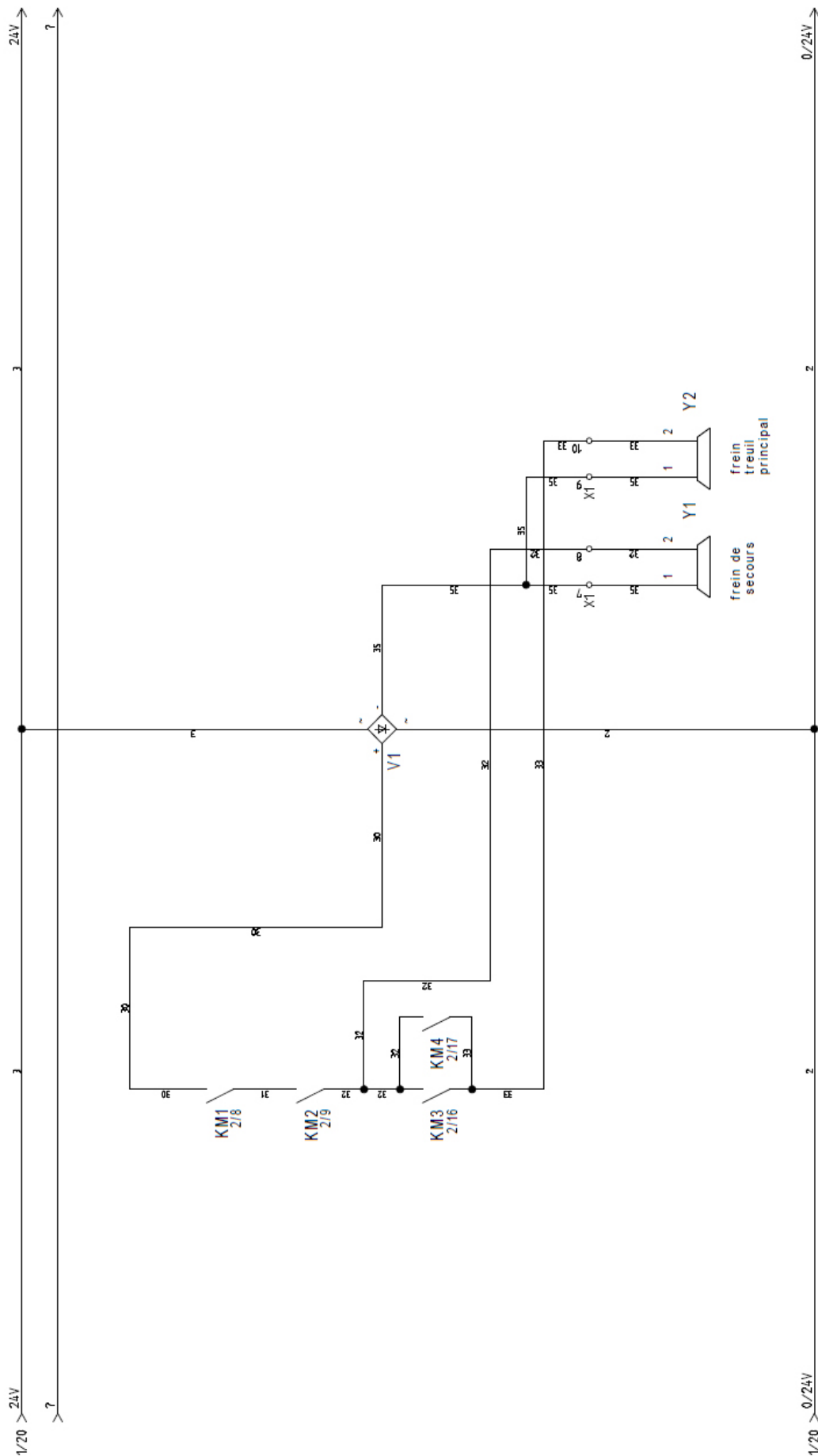
Standard radio version (3/3)



ATEX special radio (2/3)

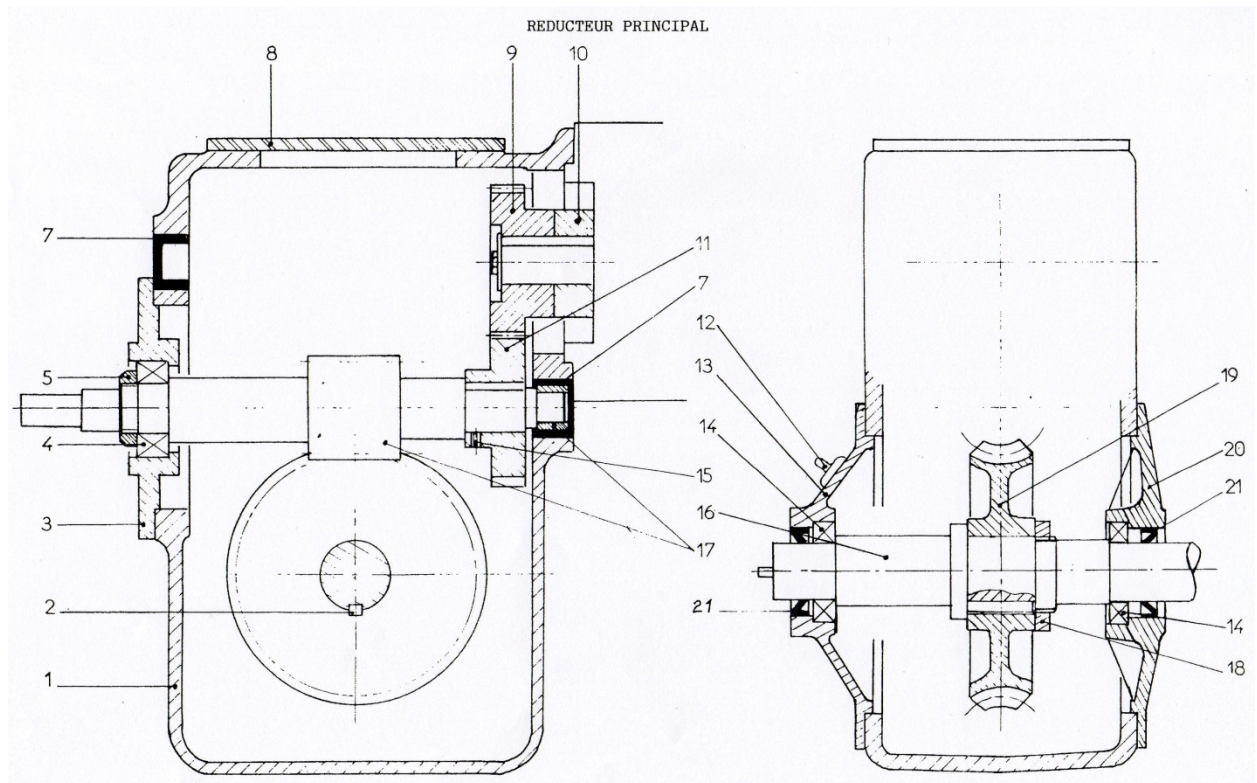


ATEX special radio (3/3)



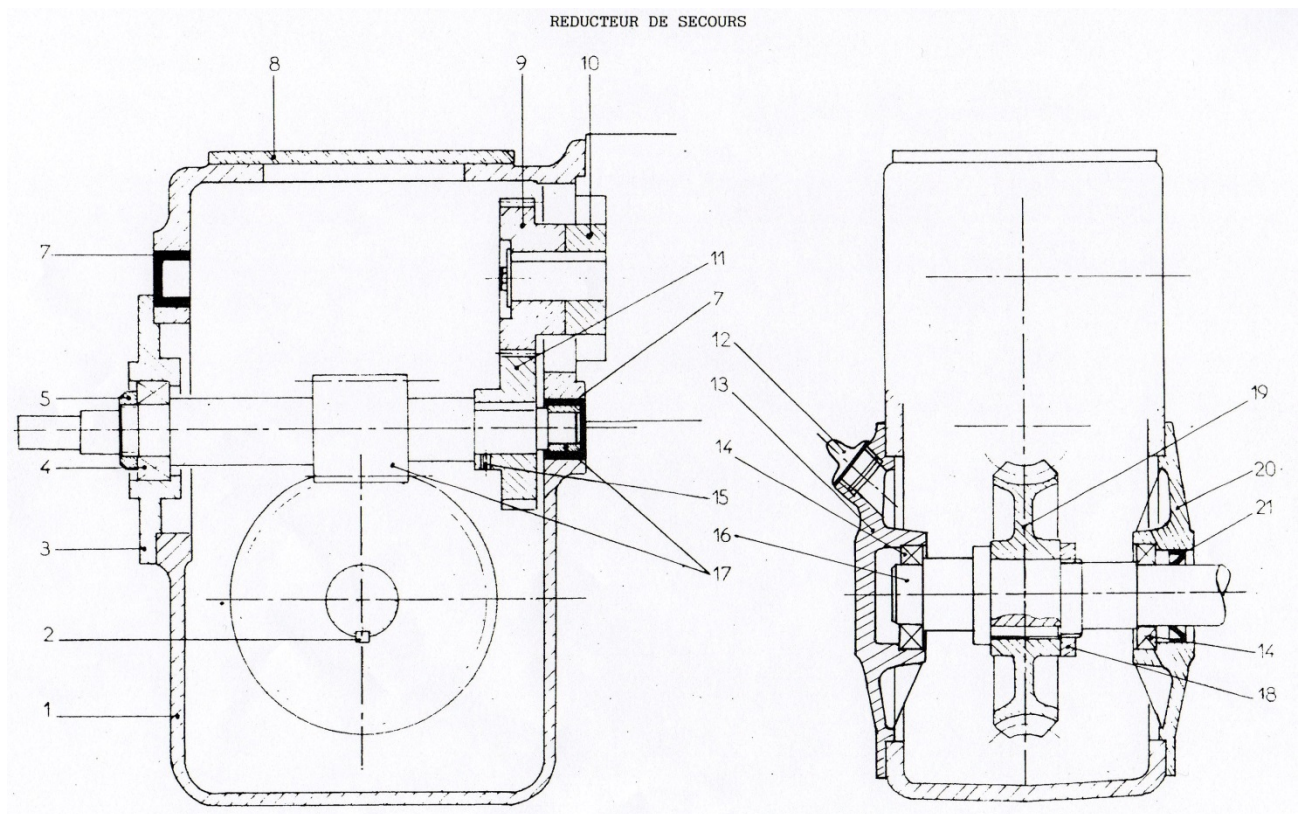
B – Part references

Main reduction gearing



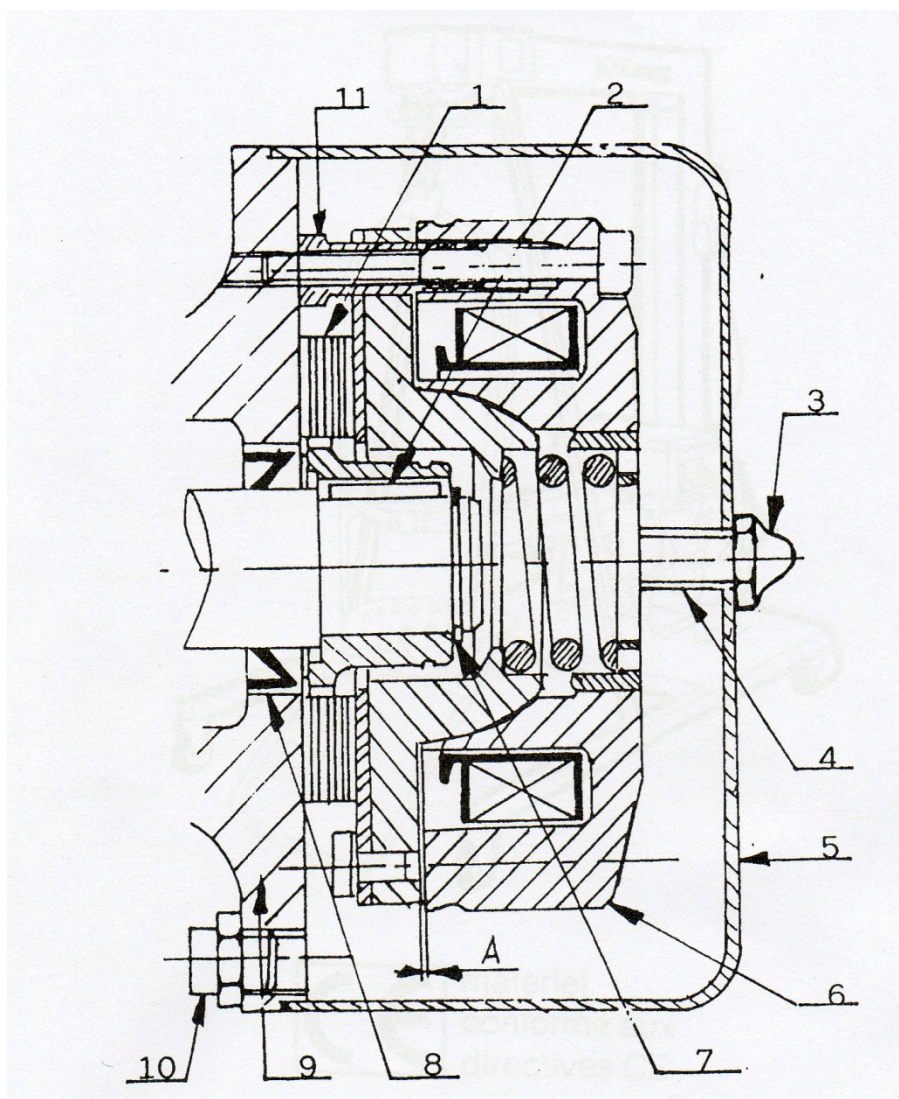
Keys	Numbers	Name
1	2815-130 S	Casing
2	13230	Key 8 x 7 x 35
3	2815-18 F	Flange
4	6305	Bearing
5	60 MH 25	Brake nut
7	DLF 22x16	Nadella bush
8	3000-49	Cover
9	4623	26-tooth motor sprocket wheel
10	3807	Spacer
11	4624	49-tooth sprocket wheel
12	10103	Filler cap
13	4650	Flange
14	6007	Bearing
15	13164	8 x 16 socket set screw
16	4626	Cylindrical worm wheel shaft
17	3655-50	Worm screw
18	60 MCR 45	Brake nut
19	4631-50	Cylindrical worm wheel
20	4629	Flange
21	3047	Watertight ring 35/47 x 7

Emergency reduction gearing



Keys	Numbers	Name
1	2815-130 S	Casing
2	13230	Key 8 x 7 x 35
3	2815-18 F	Flange
4	6305	Bearing
5	60 MH 25	Brake nut
7	DLF 22x16	Nadella bush
8	3000-49	Cover
9	4621	26-tooth motor sprocket wheel
10	3807	Spacer
11	4622	49-tooth sprocket wheel
12	10103	Filler cap
13	4630	Flange
14	6007	Bearing
15	13164	8 x 16 socket set screw
16	4628	Cylindrical worm wheel shaft
17	4618	Worm screw
18	60 MCR 45	Brake nut
19	4631-10	Cylindrical worm wheel
20	4629	Flange
21	3047	Watertight ring 35/47 x 7

Brake (type 04)



Keys	Numbers	Name
1	04.210	Trim
2	13223	Key 5 x 5 x 19
3	13012	M6 cap nut
4	3384	Tie
5	3635	Cover
6	04.11	24 V coil
7	13043	E 15 retaining ring
8	3043	Watertight ring, 22 x 40 x 8
9	3584	Flange
10	3289	Gland sleeve no. 9

C – Maintenance booklet



The English version of the maintenance booklet for our lifting winches can be downloaded from our website **www.huchez.fr/uk** under the heading "After sales services".

Date	Person In charge		Nature of the operation	References of replaced parts	Frequency if appropriate	Signature

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