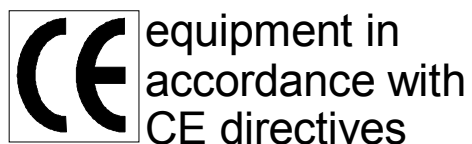
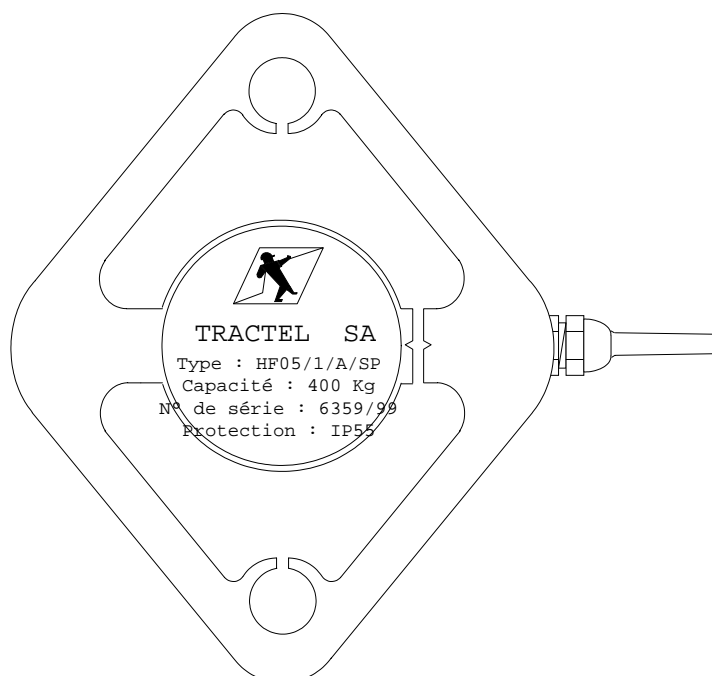




HF 05/B Mechanical Load Cell



equipment in
accordance with
CE directives

**Operating
and
maintenance
manual**

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GENERAL WARNING

- 1- Reading and fully understanding the technical data sheets relating to this equipment is essential for the best use of this high technological material that you have received . All the technical data sheets are available on request.**
- 2- Before installing and operating Dynasafe equipment it is essential for the safe and correct operation of the material that this manual be read and fully understood and that all the instructions be followed. This manual should be made available to every operator. Extra copies of this manual will be supplied on request.**
- 3- The installation and the operation Dynasafe equipment should only be carried out in accordance with the appropriate health and safety at work regulations.**
- 4- Never apply to the Dynasafe a load or an effort in excess of the working load limit, and never use it for an operation for which it is not intended.**
- 5- TRACTEL S.A.S declines any responsibility for the consequences of dismantling or altering the machine by any unauthorised person.**
- 6- Dynasafe equipment must not be used in explosive atmospheres.**
- 7- Dynasafe equipment must only be used in a system designed for lifting people after ensuring that the appropriate operating coefficients have be used in accordance with the current regulations.**
- 8- Prior to the use of Dynasafe equipment with complementary equipment relaying the signals to an operating system, the user or installer of this system should carry out a specific risk analysis of the operating functions. The appropriate measures should be taken to obviate risks identified.**

INSTALLATION OF HF 05/ B LOAD CELL

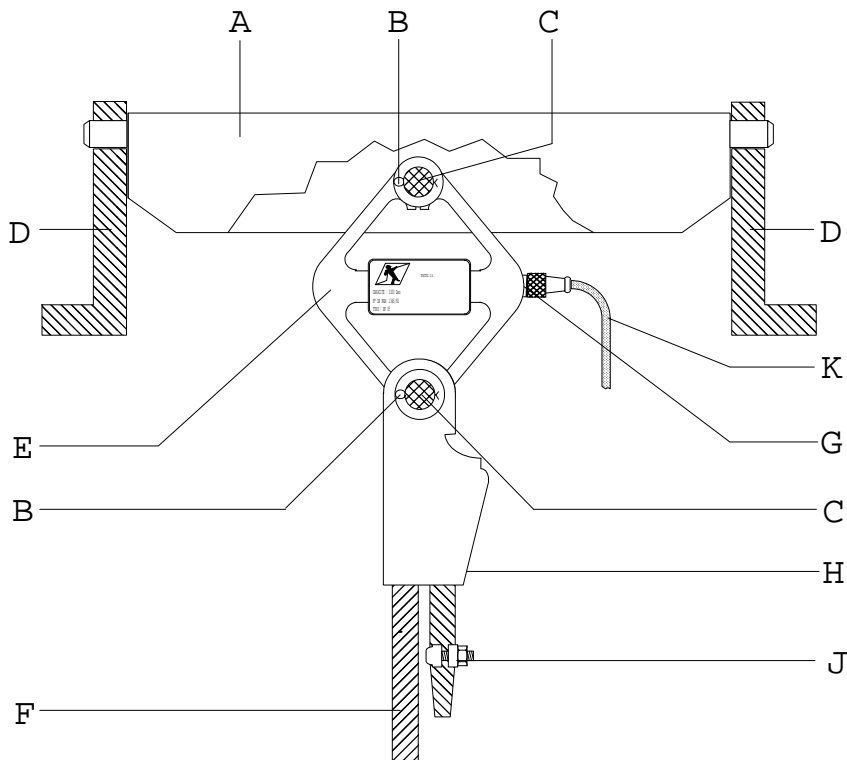


Fig. 1

Components of the load cell

A – Suspension bar	E – Adjustable screw	J – Wire rope clamp
B – Safety pin	F – Wire rope	K – Connection lead (2m)
C – Anchor pin	G – Connecting plug	
D – Bracket	H – Wedge end fitting	

Procedure for installing the load cell

- Position the load cell on the suspension bar as illustrated above. If necessary drill a new hole in the suspension bar whilst ensuring that it remains aligned with the sheaving or bottom block.
- Check that the diameter of the anchor pin used is compatible with the anchor point of the load cell. If necessary, use washers on one side and the other of the load cell to align it correctly.
- Fit a safety pin to keep the anchor pin in position .
- Fit a wedge end fitting to the end of the wire rope.
- Mount the wedge fitting to the lower anchor point of the load cell using an appropriate anchor pin.
- Operate the lifting system up to the upper limit switch and ensure that the sheaving or bottom block does not foul the wedge end fitting.(If it does, readjust the upper limit switch so that there is an appropriate distance between the wedge end fitting and the bottom block. Also ensure that when the bottom is in the upper position the load cell is correctly aligned with the wire rope and is free of any lateral contact.)
- Wire the load cell correctly into the control box. Secure the cable.

INSTALLATION AND CONNECTION OF HF 85 MONITOR

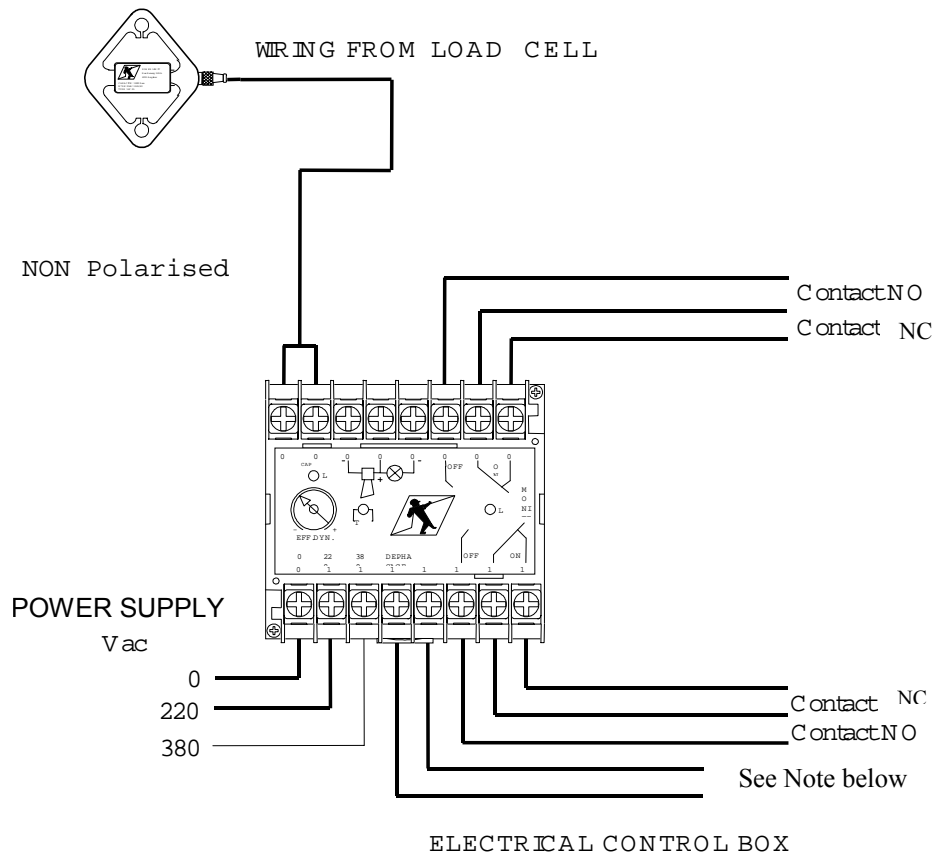


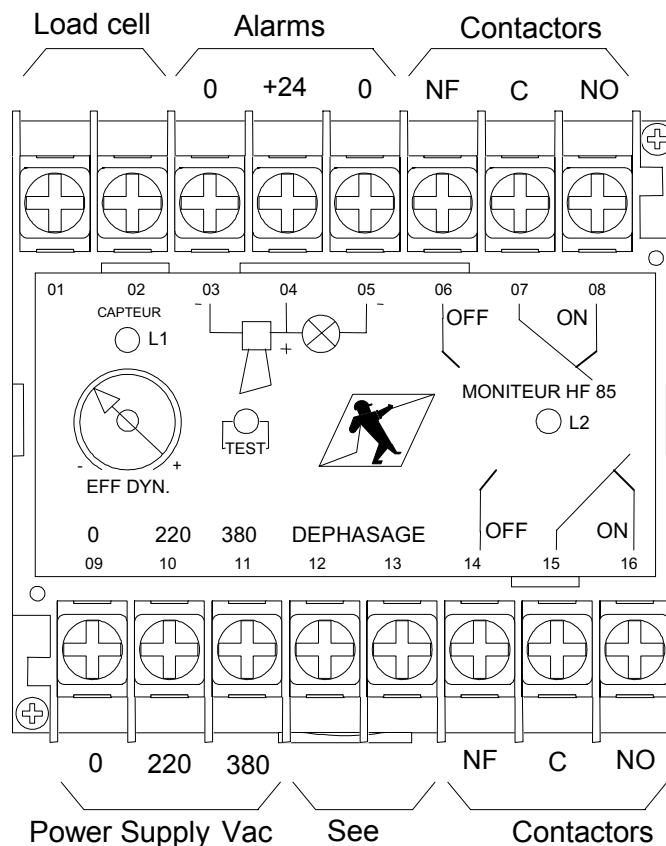
Fig. 2

Procedure for installation and connection

- Mount the HF 85 monitor to the « DIN » rail in the rail electrical control box containing the lifting controls.
- Wire the high speed lifting contactor coil in series between terminals 07 and 08.
- Wire the low speed lifting contactor coil in series between terminals 15 and 16.
- Wire the electronic alarm, HF 90/1, to terminals 03 et 04 taking care to observe the correct polarity. The alarm function is deactivated automatically 15 seconds after the detection of an overload condition.
- Wire the electronic flashing light, HF 90/2, to terminals 04 and 05. This flashing light function remains active whilst there is an overload condition.
- Connect the load cell to the monitor : white wire to terminal 01 and blue wire to terminal 02 (non-polarised).
- Connect the power supply to the monitor : 220Vac to terminals 09 and 10 or 380 Vac to terminals 09 and 11.

NOTE : Eventually, connect terminals 12 and 13 to a normally open (NO) potential free contactor on the high and low speed lowering contactor to eliminate the possibility of detecting an overload condition and therefore the triggering of the alarms during lowering. In fact, the dynamic effects in the dead end wire rope are greater on lowering than on lifting.

MISE EN SERVICE ET REGLAGES HF 05 ET HF 85



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Fig. 3

Test function

When the load cell has been fitted and the various connections have been made to the monitor, there is a test procedure to check the correct operation of the installation.

- Check that the hook of the lifting system is free of any load.
- Press the test button on the front of the monitor. (This button has the effect of simulating an overload condition).
- Once the test button has been pressed, the LED « L1 » should light up whilst the LED « L2 » will light up when the dynamic effect of the value trip point has been reached.
- When the LED « L2 » is alight the contactors of the monitor will be « OFF » (overload condition) and the auxiliary functions (alarm and flashing light) should operate.
- When the test button is released, it takes 5 seconds for the contactors of the monitor to reset themselves to the « ON » position.

OPERATION AND ADJUSTMENTS OF HF 05 ET HF 85

Adjustment of the safety trip point

Essential conditions :

- the load cell and the monitor should be correctly mounted and wired.
- The hook of the lifting system should be free of any load.
- The test operation should have been successfully carried out.

Equipment required:

- A load (« Pm ») equivalent to 100% of the load limit of the lifting system.
- An additional load equivalent to 10 % of « Pm »

	ACTION	EXPLANATION
1	Lift the two loads (100% and 10 % of « Pm ») by \pm 10 cm	The additional 10% represents the permitted overload value in accordance with the European directives. Should an overload condition be detected on the wire rope (without lifting the load) it indicates that the setting of the load cell (preset in the factory) is too low compared to the loads. Solution : release the tare screw (E- see fig. 1) (flat screw driver) by one turn at a time and restart at the beginning of point 1.
2	Adjust the safety trip point	Using the tare screw (E) and a flat screw driver. Do not forget to retighten the locking nut (O). The microswitch is normally closed (NC) so that when it opens it sets off the overload condition. Clockwise to reduce the value of trip point. Anticlockwise to increase the value of the trip point.
3	Lower the loads	
4	Remove the additional load	
5	Lift load « Pm » using slow speed lifting	No overload condition should be detected. However, should the overload condition be tripped, see point 7 : Dynamic effects filter.
6	Lift load « Pm » using slow speed lifting	No overload condition should be detected. However, should the overload condition be tripped, see point 7 : Dynamic effects filter.
7	Dynamic effects filter using potentiometer « EFF. DYN »	Under certain conditions, the dynamic effects may create an overload condition which will set off the safety system. The potentiometer on the front of the monitor acts as a filter for this phenomenon by slowing down the reaction of the relays in relation to the opening of the microswitch. The potentiometer « EFF. DYN » has an adjustment range of 0 seconds (-) to \pm 3 seconds (+).



NOTES :