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AT88T

ELECTROMECHANICAL EQUIPMENT

Istallation instructions

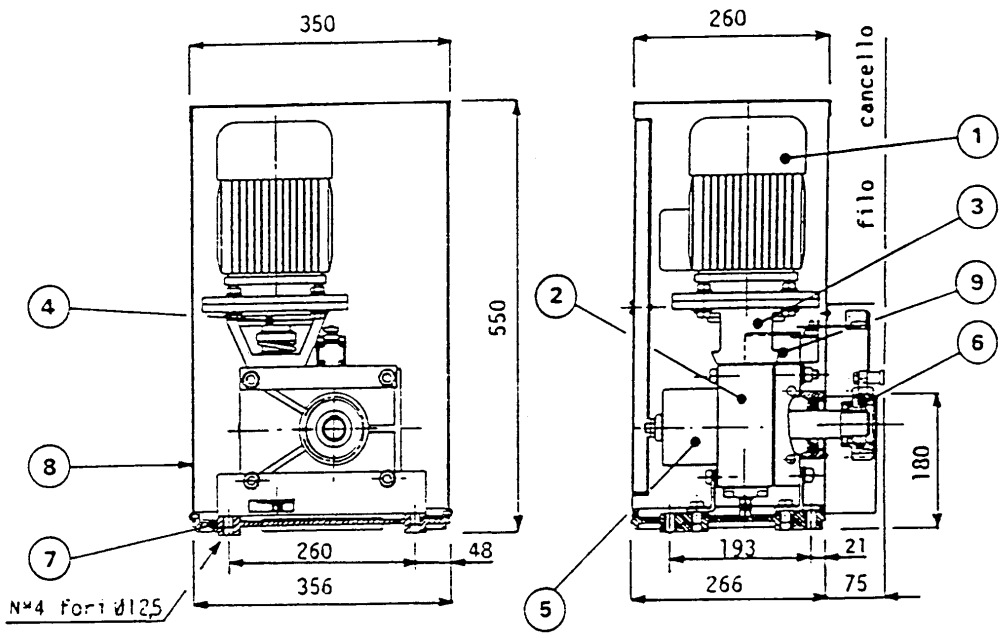
INSTALLATION INSTRUCTIONS

IMPORTANT :
Before starting the installation, read carefully the directions enclosed in the booklet, which constitute, with the present instructions, an integrant and essential part of the product, and will have to be dedicated to the user . The electromechanical equipment, type AT 88T is assigned to the opening and closing movements of gates, doors or main doors. “Any other use is to be considered improper and dangerous. The installation has to be effected complying with the norms in force, or according to the constructor instructions and by qualified staff.

TECHNICAL CHARACTERISTICS

Feeding	Three phase 220/380 V ~50Hz
Max power supply	0,96 Kw
Max consumption	2,6 A (to 380V)
Working temperature	From –15°C to + 60°C
Lubrification	IP ATHESIA GREASE EPO
Number of revolution Motor/pinion g/1’	1400/33 min/l
Pinion module mm	4 mm
Motoring speed m/min	9 m/min
Max weight of the gate	4000 Kg

The electromechanical equipment is .constituted of :
three phase induction motor totally enclosed fan cooled (1), worm reduction unit (2) install on ball and load bearings and on thrust bearing, with a bell type coupling between the motor and the reduction unit (3) an adjustable single disk dry clutch (4) a release device leaned to the reduction unit with a closed drum and a rotating lever at 90° (5), a drive gear (6) an ancillary support, anchorage for basement (7) a protection box (8), a mechanical end-of-stroke with operating lever (9).



PREARRANGEMENT OF THE GATE

The gate or the main door, constructed in conformity with the UNI 8612 norms; must be installed on a perfectly rectilinear and horizontal guide; must have sliding wheels bringing an appropriate diameter; the wheels must be on lubrificable ball bearings or must be watertight and protected against the derailment.

ANCHORAGE

The unit basement has to be anchored on the floor, on a suitable concrete plintht using the appropriated raw bolts following these indications.
a) it is advisable to keep the basement winched from the floor level of at least 2 cm
b) before the plinth casting forecast one or more flexible sheathings from a diameter of at least 25 mm for the electric cables passage.
c) Do in a such way that the concrete casting results united with the one of the inferior guide's anchorage.
d) before fixing definitively the unit, make sure that it is perfectly horizontal.

RACK FIXING

SOLUTION A
A1) Fix to each rack element the support pegs in correspondence of the three slotted holes, by means of the blocking screws, making sure to place them in the inferior part of the slot (2a and 2b).
A2) Anchor by means of electrowelding the rack support pegs to the gate's structure, respecting the distance between the head of the rack teeth and the anchor plate (see .Fig.3a & 3b).
NB : To place correctly the successive rack elements, it is advisable to set against the both successive elements a third element, as shown in Fig.4.

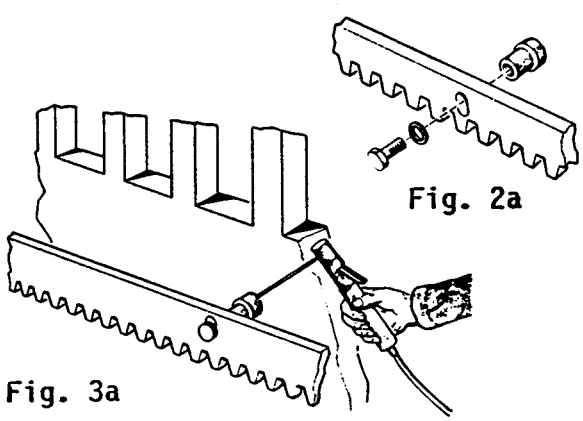


Fig. 3a

Fig. 2a

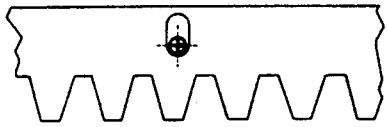


Fig. 2b

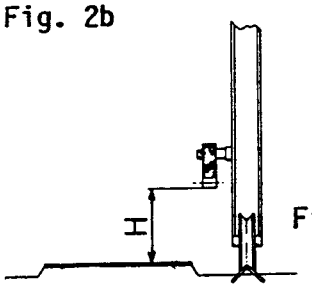


Fig. 3b

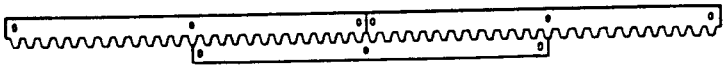


Fig. 4

Control that the various elements of the rack are perfectly aligned.
Control that the alignment right line of the rack is parallel to the rail. In order to do this, slide manually the gate and make sure that the distance between the different rack elements and a fix landmark as regards the floor, is always the same (if they are not, operate with suitable shims between the rack and the pegs).

SOLUTION B
In alternative to what specificated in Al & A2, it is possible, if you have a moto reduction available, to :
B1) Fix the motor reduction to the anchor plate, position it in a such way that the distance between the gate and the sprocket is approximatively 18 mm.
B2) Fix to each rack element the support pegs in correspondence of the slotted holes, making sure to position them in the central part of the slotted plate.
B3) Lean the rack element to the toothed sprocket of the R motor reduction and also, spot-weld the B central peg to the gate structure adeguately strenghtened. Move manually the gate (until positioning the C pegs in correspondence of gearwheel (Fig.5), and so spot-weld the C peg. Effect the same operation for the A peg, after having placed it in correspondence of the R wheel.

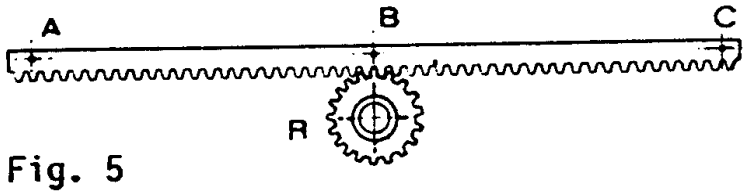


Fig. 5

Under request, the rack can be provided premounted on angle iront which can be welded directly to the gate socle. Should this be the case proceed to fix in the same manner as indicated on points B1 and B3 by welding directly the angle to the gate.

NB : To render such operations possible, the unit release must be in release position (See the instructions of "Emergency Operations").

At the end, after having lowered the drive unit of around 12 mm, by means of foreseen adjustment, weld definitively the angle of the rack.

ELECTRIC PLANT

The electric plant has to be installed using cables which diameter corresponds to the motor power, according to what foreseen by the norms in force. The board too and the protection devices against the incidents must be constructed and installed in conformity with the UNI 8612 norms.

END-OF-STROKE

The bidirectional end-of-stroke is installed at the interior of the box, which contains the motor reduction unit. It is operated by special raking plates, to be fixed to the rack by means of the special slotted plates. Such plates should act on the end-of-stroke lever, at the end of the opening and closing movement, with a certain advance, in order to compensate the inevitable gate inertia.
To facilitate this operation, the release of the unit must be in release position (See the instructions of "Emergency operations").

NB : For packing requirements, the end-of-stroke lever has to be mounted on the relative operator, returned inside and turned at 90° .
Therefore it is necessary to slew it to 90°, and get it slided towards the exterior, in order that it results aligned to the end-of-stroke, at a such distance that it can be intercepted by the racking plates.
Also, tighten thorougly in the definitive position and mount the protection at the exterior of the box.

STARTING

1) Move manually the gate, until the mid way.
2) Insert the ENGAGEMENT-RELEASE device, which prearranges the gate to the electric operation (See "Emergency operations")
3) Insert the main switch and make sure that the required voltage is available at the terminal.
4) Place the board commutator in the normal position or semi-automatic (if it exists).
5) Give an opening push and make sure that the gate is moving in the opening position however, before the complete end of the way, act manually on the end-of-stroke lever, to verify if it is really synchronised with the gate movement. Failing, break off current before the gate arrives at the end of its way and invert the connections on the motor, on the end-of-strokes or on the push button panel,

second the needs, and repeat the check operation here above.
6) Adjust the clutch, which one is inserted between the motor and the reduction, in order that it does not slip under the motor starting-point. Remember that the clutch is not programmed to function as a limitating torque as the UNI 8612 norms wanted. The adjustment is effected acting on the autoblocking ring nut and maintaining in the same time firm the splined outrigger motor reduction's worm screw. Compressing the spring. you tighten the clutch. by a contrary movement. you release it.
7) Control that during the electric operations, the gate remains at the desired end-of-stroke position. If not. it will be necessary to effect an adjustment by anticipating or defering the end-of-stroke intervention. acting on the end-of-stroke pegs. previously to the releasing and successively to the definitive blocking position of the fastening screws. After a first practice period. it would be advisable to adjust the end-of-stroke. N.B. However it is necessary to foresee mechanical stops with eventual rubber buffers interposed. in order to limitate the opening and closing gate way.

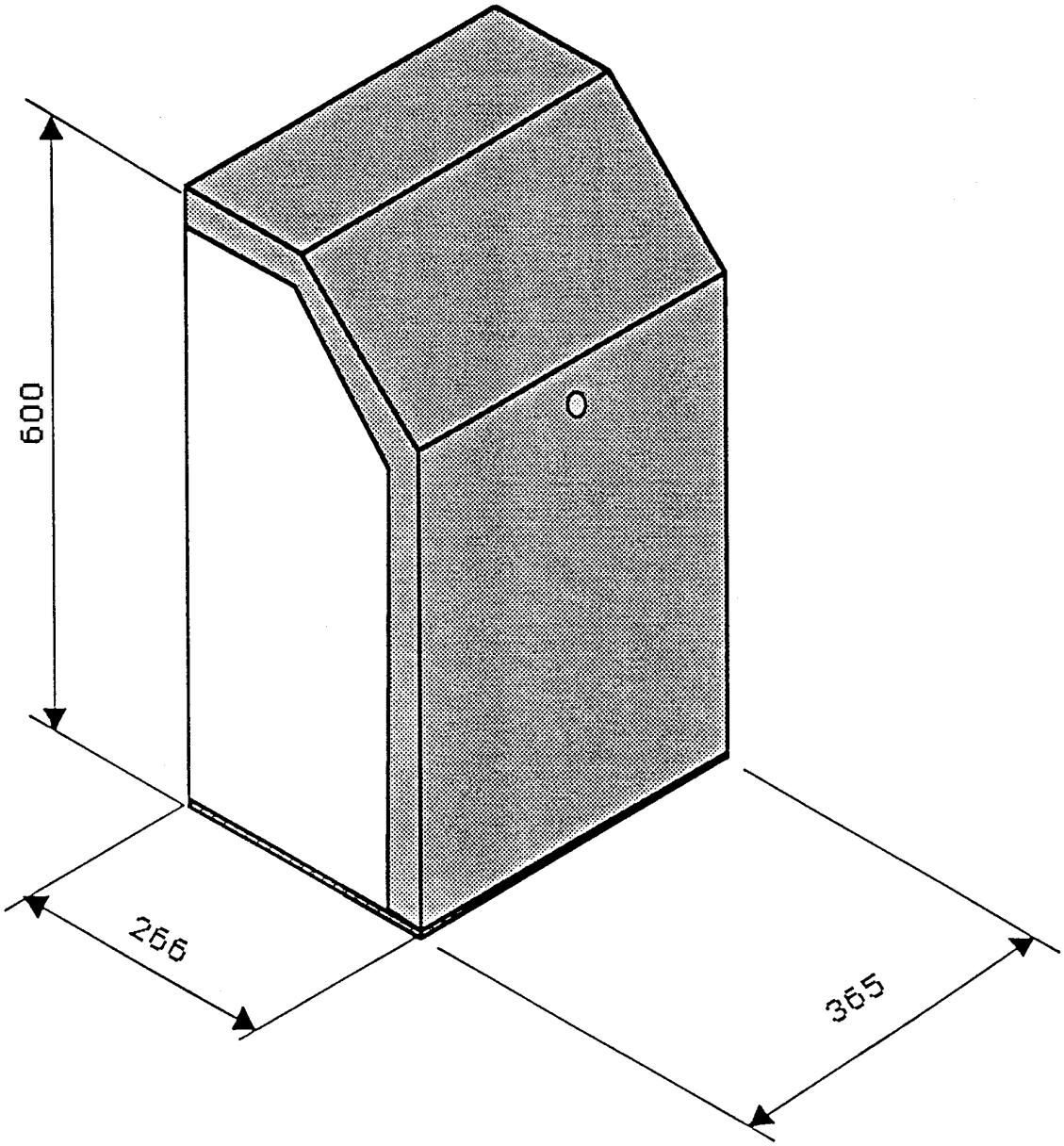
EMERGENCY OPERATIONS

In case of troubles or lack of current. you can operate the gate by a manual push. after having acted on the appropriated ENGAGEMENT-RELEASE device. as follows :
a) Open the line switch.
b) By means of the suitable key. open the box door, which contains the motor reduction unit.
c) Turn of around 90° the lever, which is fixed on the drum mounted on the motor reduction slow shaft. until the first release. By this way, the motor reduction slow shaft frees itself from the drive shaft.
d) To bring back into a normal use, act on the lever in the contrary sense in order to get the drum turned in the normal position.
e) Close the box door.
f) Close the line switch.

MAINTENANCE

1) Clean and grease periodically the rack gear kinematic motion, after having opened the line switch.
2) The motor reduction is greased with ATHESIA GREASE EPO and it is not necessary to change it periodically. However it is advisable to verify once a year the level and eventually to fill it up.
3) Control periodically (at least once every 6 months), the sensivity of the clutch. For eventual adjustment, see the point 6) "STARTING". Verify the wear state of the friction ring too. eliminating if it is necessary the greasy trail of the contact surface.

The operation above have to be effected exclusively by the qualified staff or by an authorised assistance center.



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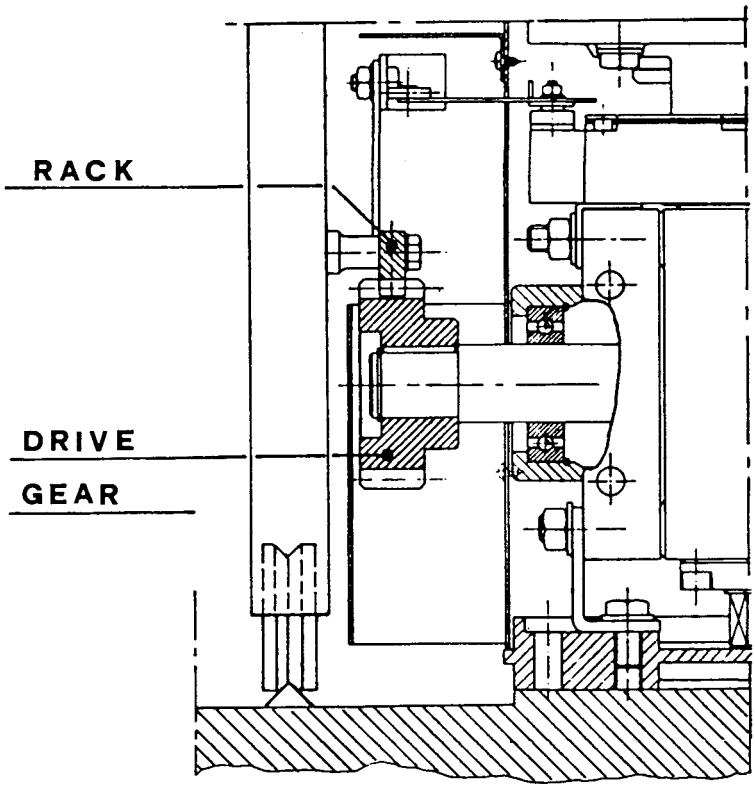
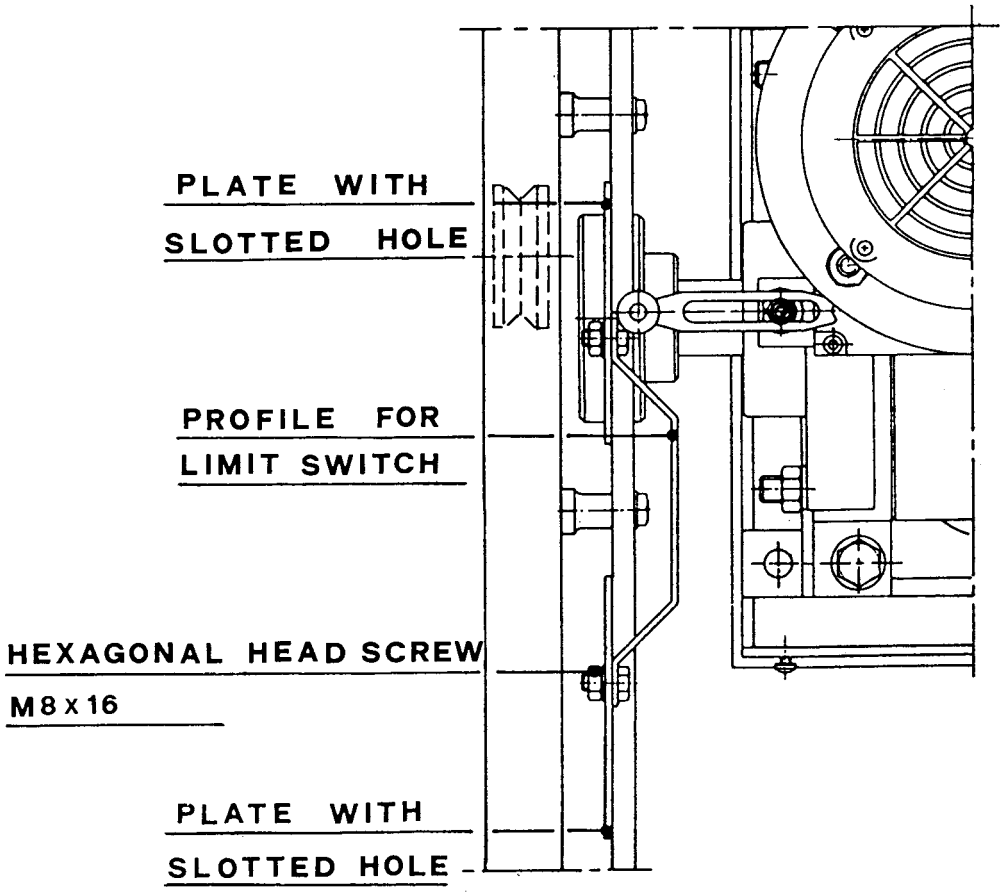
INSTALLING OF THE PROFILES FOR LIMIT SWITCH





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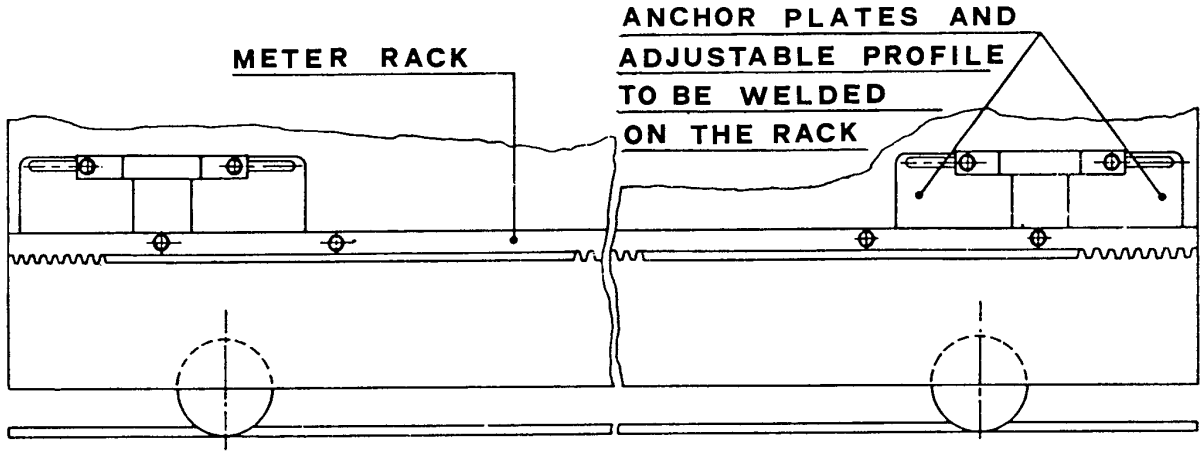

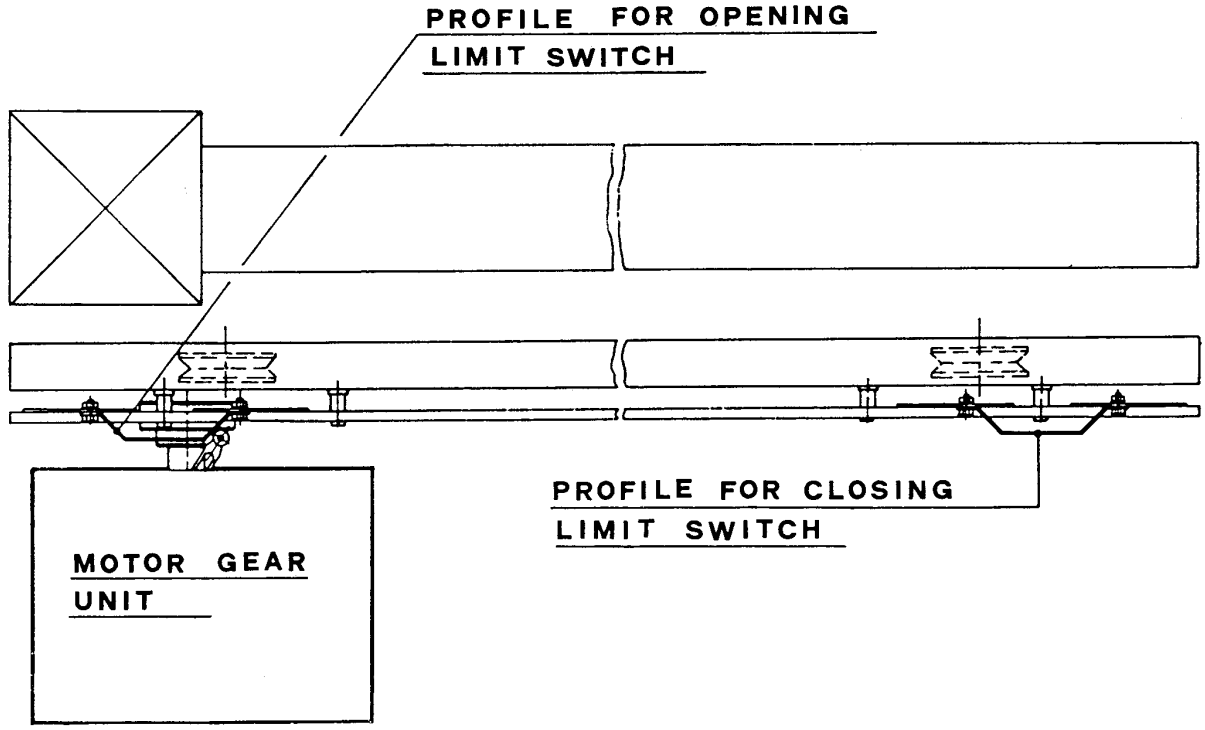

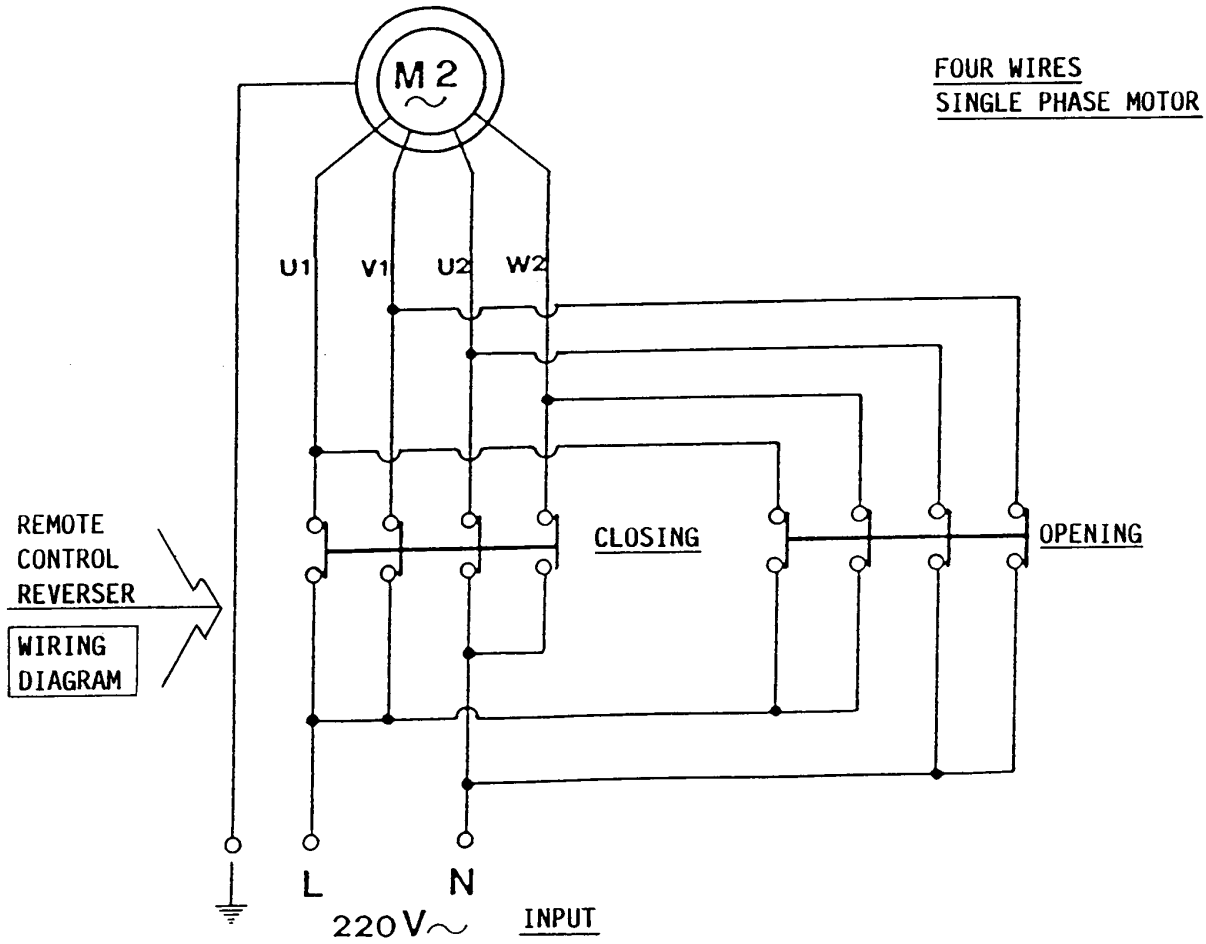

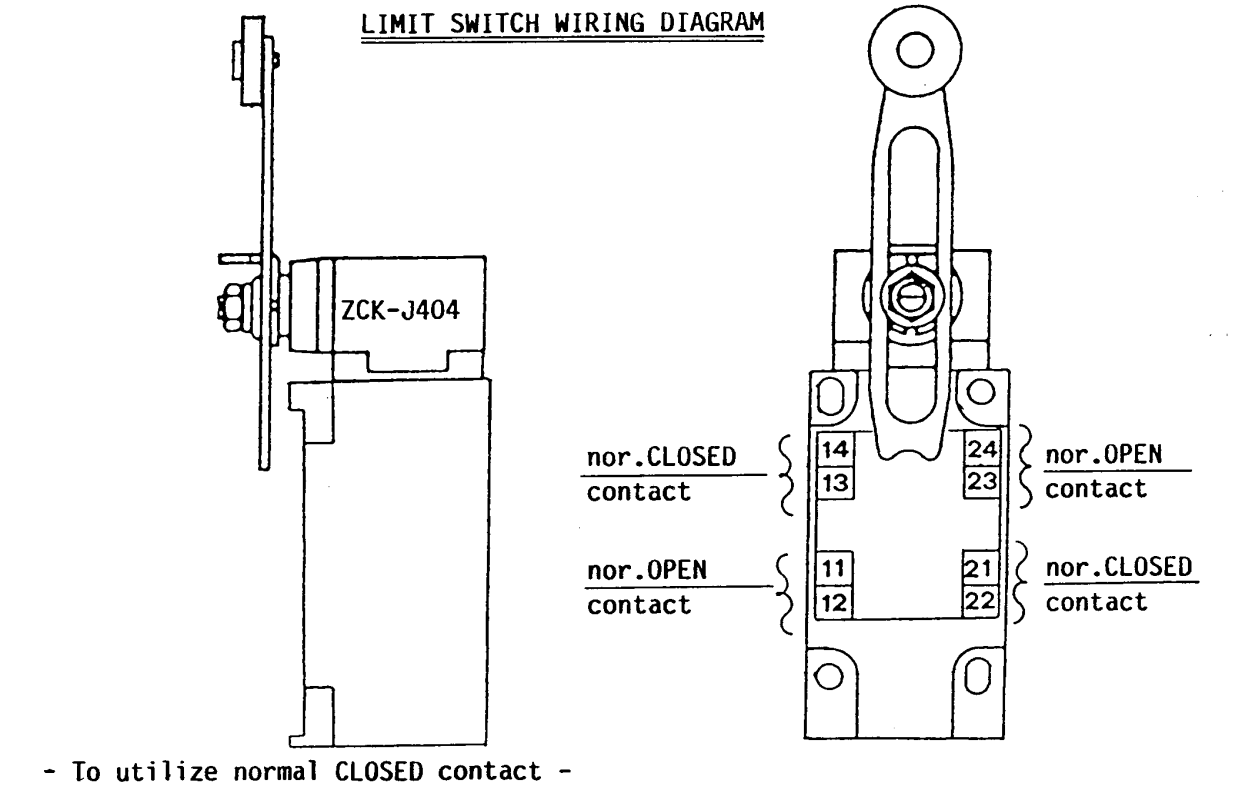

- To utilize normal CLOSED contact -