

OPERATION MANUAL

Flame-proof type Shutter operator

MODEL : US-600W(d) THREE-PHASE 380~480V

This operation manual describes only matters related to the operator. As for handling in a whole shutter system, please refer to instructions given by the shutter manufacturer.

- (1) This product is flame-proof type shutter operator to install the place where explosive gas exists.
- (2) The explosion-proof performance of this product is symbolized d2G4 in JIS (equal to ExdIIBT4 in IEC) Check the classification of explosively hazardous area before installation

① ATTENTION OF SECURITY

There are "WARNING" and "CAUTION" to be separated by degree of harm and damage.

⚠ WARNING : If the system is wrongly set up or handled, death or serious injury may result.

- (1) In positioning the motor-driven operator properly, carefully read the catalogue.
- (2) The shutter operator is specifically designed for motor-driven shutters. Never use the shutter operator for any other applications.
- (3) Setting up the shutter operator includes works to be done by a well-skilled, qualified electrician. Only such qualified person shall install the shutter operator.
 - Otherwise the operator may not work normally, and the shutter may damage, then an injury may result.
- (4) Use angle brackets which have enough strength to support shutter weight and fix them in position on the structural members, referring to the shutter layout (installation drawing).
 - As the angle brackets bear all shutter weight, an injury may result by damaged shutter if it is not tightly fixed.
- (5) Fix the bed support in position on the structural members, referring to the shutter layout (installation drawing).
 - Otherwise the operator may not work normally, and an injury may result by damaged shutter as the case maybe.
- (6) Install the shutter operator in a place not exposed to rain and any other water.
 - Otherwise a fire or an electrical shock may result.
- (7) Be sure to ground the shutter operator.
 - Otherwise a fire or an electrical shock may result.
- (8) Do not disassemble nor temper with the shutter operator. Nor attach any extra components than our specified options.
 - Otherwise an injury may result by abnormal operation.
- (9) Before opening and closing the shutter, make sure there is nobody and no obstacle around.

Be sure to instruct the person in charge of the shutter operator to keep this is in mind.

· Otherwise an injury may result by being caught in the shutter.

⚠ CAUTION . If the system is wrongly set up or handled, personal injury or property damage may result.

- (1) Be sure to keep the supply voltage within the shutter operator's specified range.
 - Otherwise the operator may damage, and then it may cause a fire or an electrical shock.
- (2) Make sure the shutter's weight and size are within the limit of the door's applicable ratings.
 - Otherwise the operator may not work normally, and the shutter may damage, then an injury may result.
- (3) Before using the manual short-link handchain, make sure the shutter is not moving and never use the pushbutton switches.

Be sure to instruct the person in charge of the shutter operator to keep this is in mind.

· Otherwise the manual short-link handchain will be pulled into the operator, then the operator may result in damage.

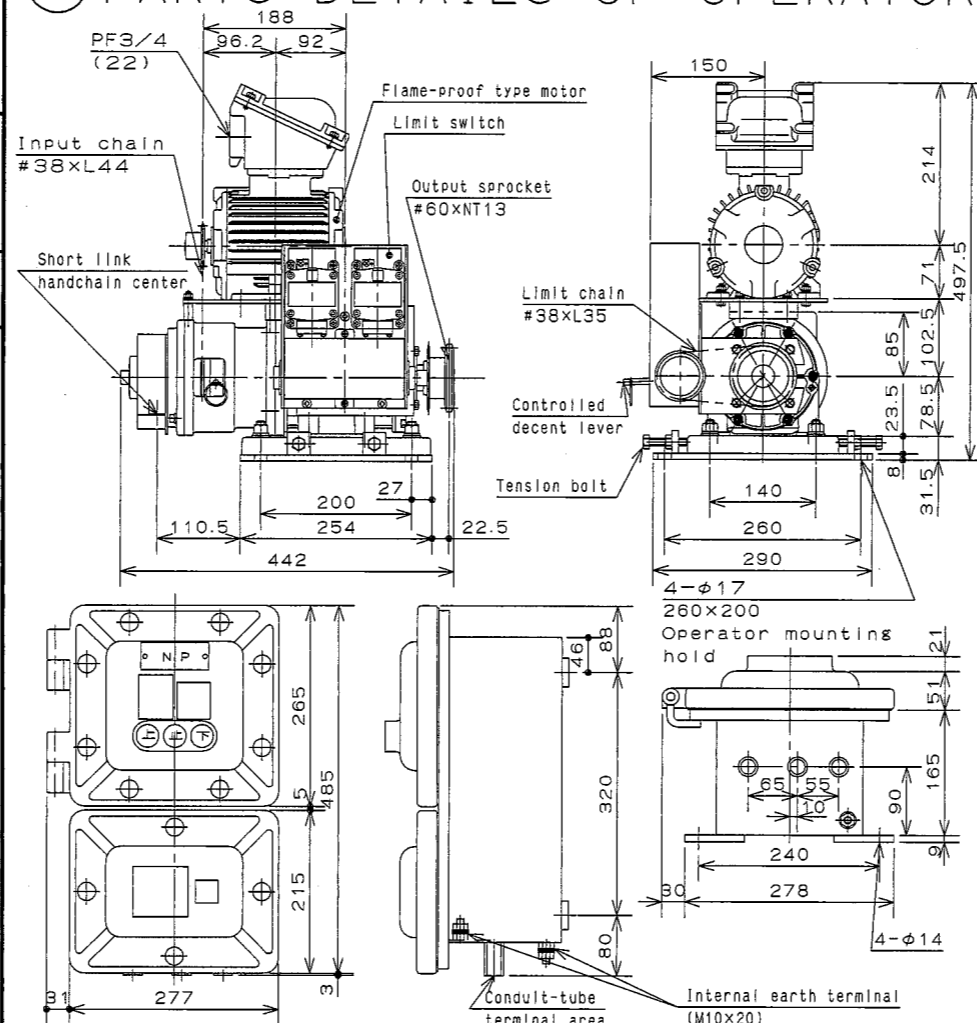
- (4) Before using the gravity fall lever, make sure the shutter is not moving and never use the pushbutton switches.

Be sure to instruct the person in charge of the shutter operator to keep this is in mind.

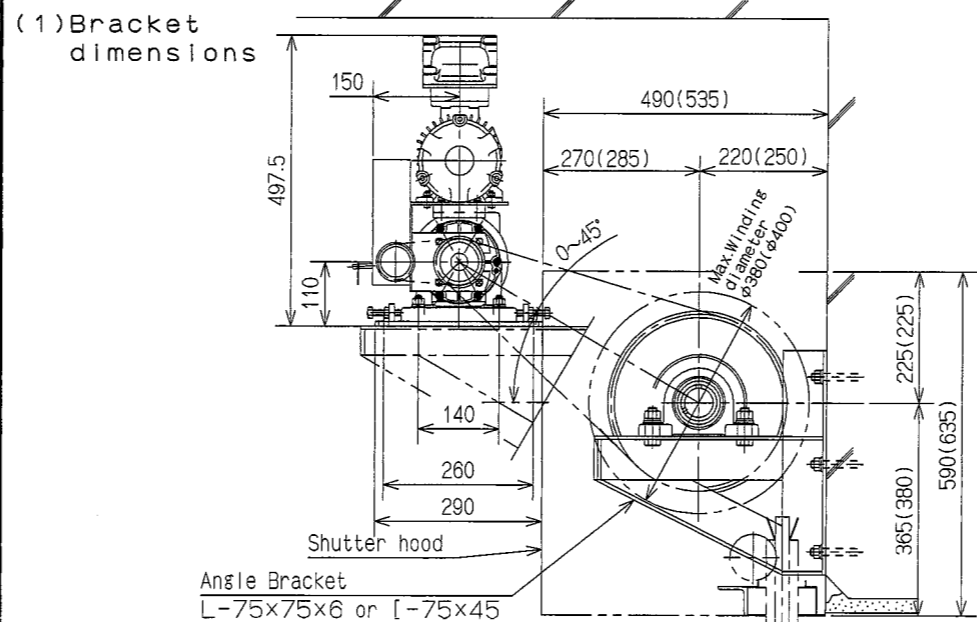
· Otherwise the operator may not work normally, then the shutter may damage.

- (5) Make proper limit switch settings. And be sure to check the stop position.
- (6) Inspect the shutter operator periodically. If anything unusual is found, repair or replace. For periodic checks, keep the number of times or period for inspection given in the INSPECTION clause on this operation manual.

② PARTS DETAILS OF OPERATOR



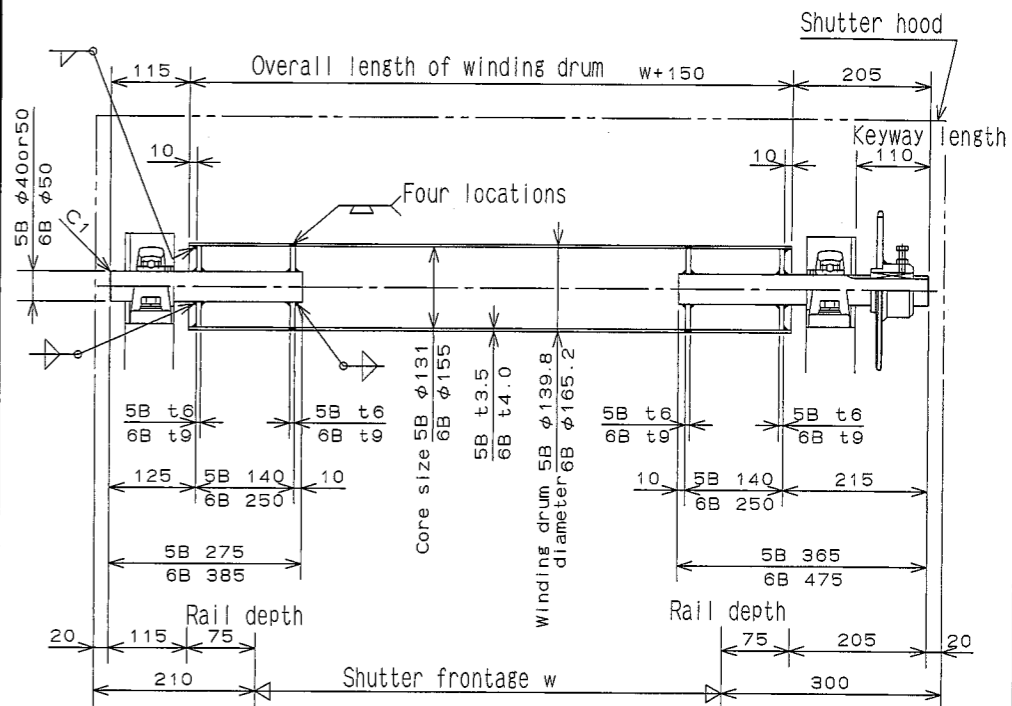
③ REFERENCE OF INSTALLATION



- *The shutter hood dimensions are for the maximum winding diameter of 380 mm. The dimensions in parentheses are referred to in the case of 440 mm diameter.
- *The operator must be installed within the region of 45 degree from the central horizon in the winding drum.

(2) Winding drum dimensions

Manufacture the winding drum in accordance with the undermentioned drawing. If the rail depth is not 75 mm, change the winding drum dimensions (W+150) in accordance with the rail depth.



④ PACKAGE CONTENTS

- The detail of each package is shown below.

Be sure any damage did not occur in transit, or any shortage was not found in the package.

(1) Operator package

- Power operator (incl. Limit switch) × 1
- Controlled descent cord : 4m(with handgrip) × 1
- Tension bolt set (hexagon head bolts M10xL50, hexagon nuts M10) × 4
- Handle(for only handle-operated type) × 1

(2) Control panel package

- Control panel(with Mounting bolts) × 1

(3) Piping equipment package

- Relay terminal box × 1
- Accessories × 1 set
- Connection nipple × 1 set
- Flexible fitting × 1 set
- Sealing fitting × 1 set
- Union coupling × 2

(4) Drum sprocket package

- Drum sprocket #60-T50 × 1

(5) Roller chain package

- Roller chain(#60-105 links, 2.0 m long), with joint link and offset link × 1

(6) Operation Manual

- × 1

