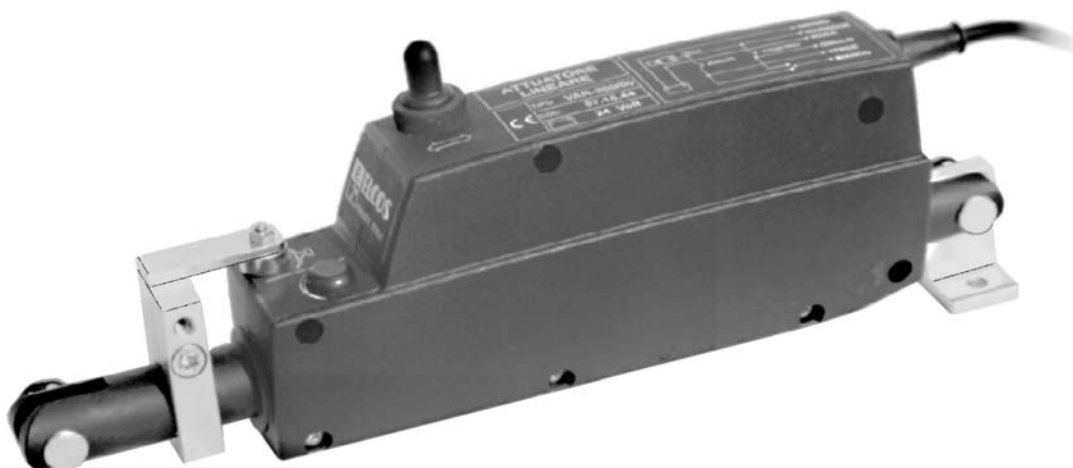


LINEAR ACTUATOR

TYPE **VAR-201**



- DASHBOARD AND REMOTE CONTROL
- VARIABLE DISTANCE

PARMA



ELCOS®

ITALY

LINEAR ACTUATOR TYPE VAR-201

Used to command a diesel engine accelerator.

NOTICES

Warning: **adhere closely to the following advice:**



- Be sure to correctly connect the conductors leaving the actuator
- When making connections always follow the enclosed circuit diagram
- Never try to open the actuator, this will have a lasting influence on the degree of protection
- Always install below any other equipment that produces or spreads heat
- Never use the battery charger for emergency start-ups; this could damage the junction box
- To safeguard persons and equipment, before connecting an external battery charger, disconnect the plant electrical terminals from the battery poles.

THIS ACTUATOR IS NOT SUITABLE FOR USE UNDER THE FOLLOWING CONDITIONS:

- where the environmental temperature is outside the limits specified in the enclosed technical sheet
- where there is danger of fire or explosions
- where the actuator could receive knocks or strong vibrations
- where pressure and temperature variations are so rapid that exceptional levels of condensation are produced
- where there are high levels of dust, smoke, vapour, and salt pollution or corrosive or radioactive particles
- where there are high levels of radiated heat due to the sun, furnaces, etc.
- where mould or small animals could attack

ELECTROMAGNETIC COMPATIBILITY

This actuator functions correctly only if inserted in plants that conform to the marking for CE norms. The actuator conforms to the immunity requirements of norm EN61326-1, but it cannot be excluded that in extreme cases in particular situations malfunctions could appear.

The installer has the task of ascertaining whether the levels of disturbance fall within the limits set out by the norm.

USE AND MAINTENANCE

The following maintenance operations should be performed every week:

- Check that the connecting bolts and screws are tight.
- Check that the terminals to which the equipment is attached are tight.
- Check the supply cable sheath.
- Check that the limit switches function.
- Check the batteries.

THIS ACTUATOR IS NOT SUITABLE TO BE USED AS A CRITICAL COMPONENT IN LIFE SUPPORT SYSTEMS FOR PERSONS OR OTHER BEINGS UNLESS OTHERWISE STATED IN A WRITTEN DECLARATION FROM US.

Any use which differs from that which is indicated in this use and instructions manual must be authorized by the manufacturer.

YOUR ELECTRICAL TECHNICIAN CAN TELEPHONE OUR TECHNICIAN
AND ASK ANYTHING ABOUT THIS ACTUATOR.

BRIEF INSTRUCTIONS

LEVER DEVIATOR
FORWARDS - BACKWARDS

ENABLED WITH KEY IN
FIRST POSITION

ELECTRONIC
LIMIT SWITCH

MAGNETIC
CAM

CONNECTIONS CABLE

PISTON

ATTACHMENT
TO ACCELERATOR

SECURING SUPPORT

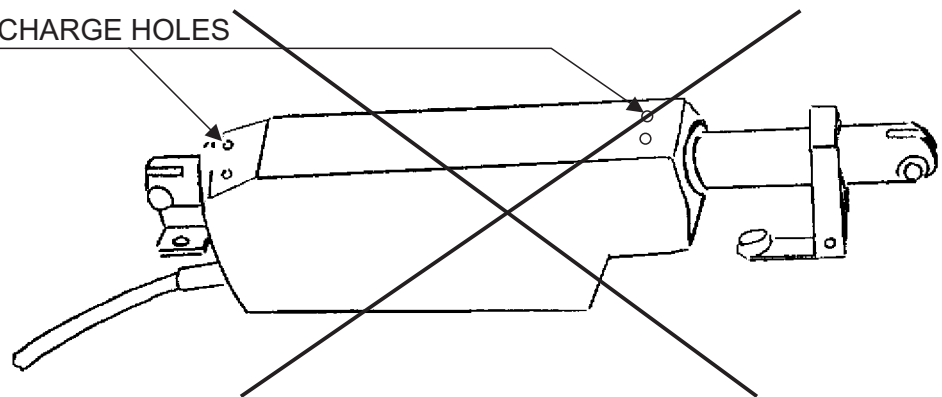
CONDENSATION DISCHARGE HOLES

GREEN LIGHT

magnetic cam
on electronic limit switch

NOTE

CONDENSATION DISCHARGE HOLES



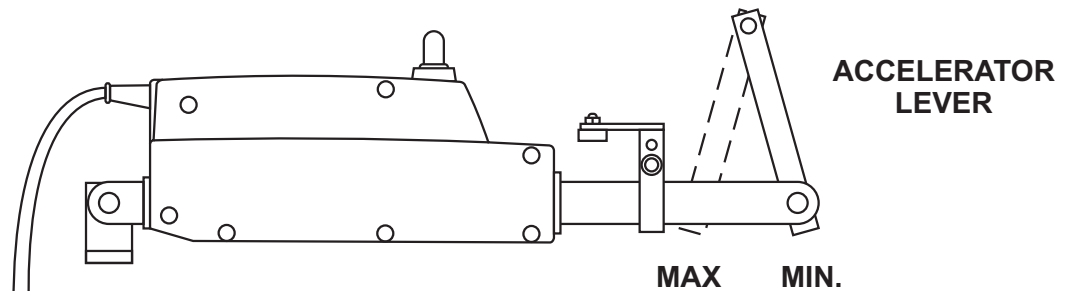
NEVER mount the actuator with the condensation discharge holes facing up or to the side, water or particles could enter.

ACCELERATION REGULATION IN TRACTION

(regulation with

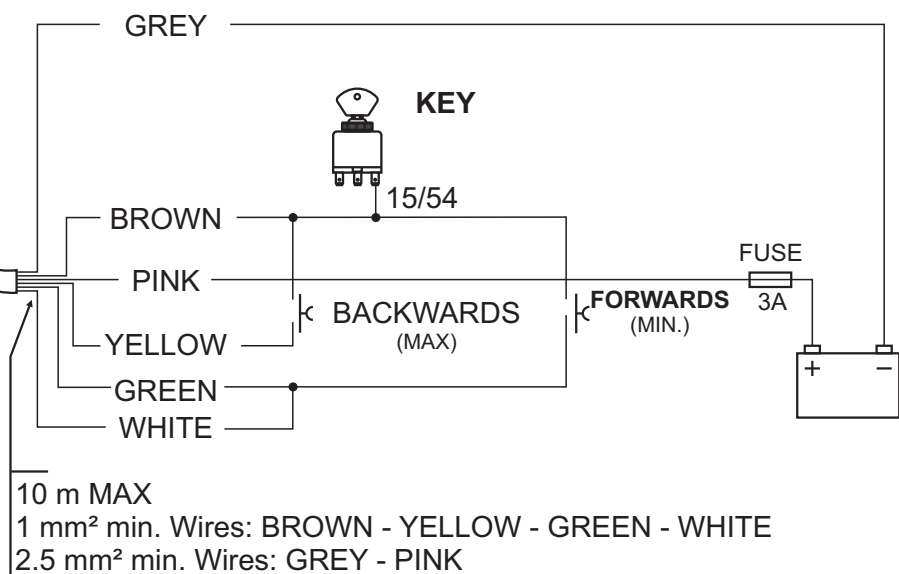
ACTUATOR IN TRACTION MOUNTING

Mount the actuator (with piston fully out), adjust min. engine revs with accelerator.



CONNECTIONS

The lever deviator control acts even if the remote control buttons are not connected.



DISTANCE SETTING

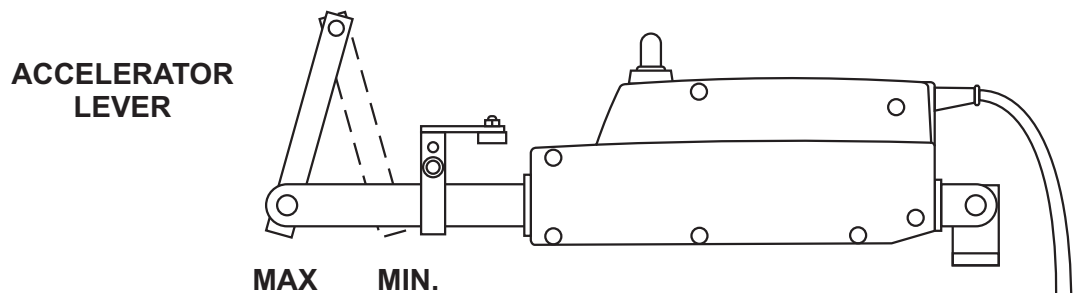
Start the engine and accelerate to desired speed (using the lever deviator or external button). Move the magnetic cam towards the electronic limit switch until the green indicator lights up, then tighten the magnetic cam screw.
By returning the ignition key to zero, the actuator will return the accelerator lever to the minimum. Repeat the operation.

OR MINIMUM REGULATION WITH ACTUATOR IN THRUST

magnetic CAM)

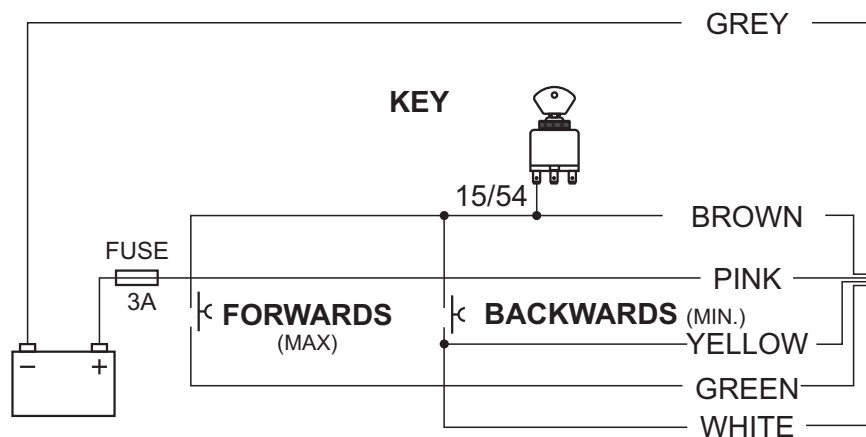
THRUST ACTUATOR MOUNTING

Start the engine and accelerate it manually (using the accelerator lever) to the desired speed. Secure the accelerator lever, then stop the engine. Mount the actuator (with the piston fully out) and then release the accelerator lever.



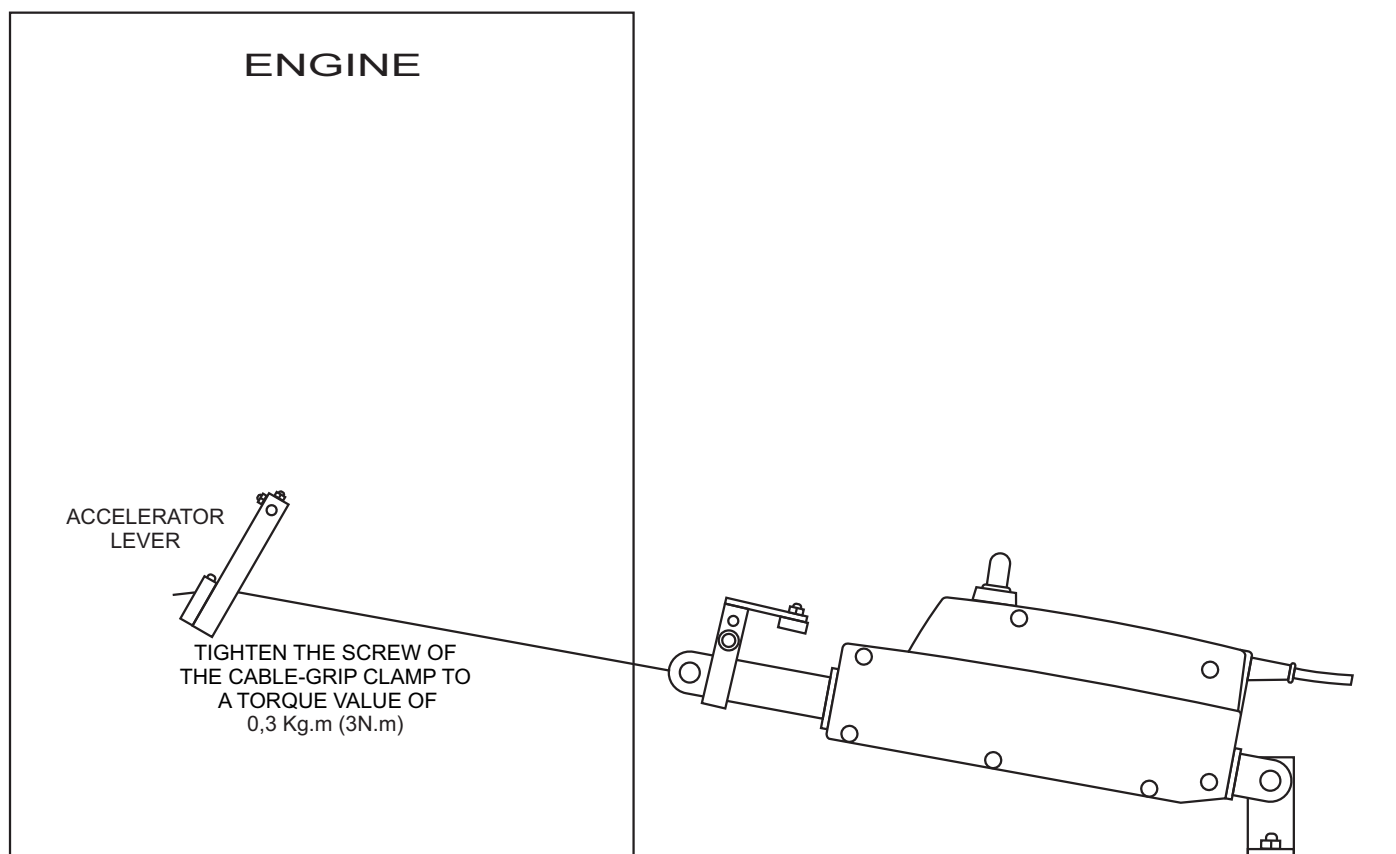
CONNECTIONS

The lever deviator control acts even if the remote control buttons are not connected.



DISTANCE SETTING

Start the engine and accelerate to minimum speed (using the lever deviator or external button). Move the magnetic cam towards the electronic limit switch until the green indicator lights up, then tighten the magnetic cam screw and reaccelerate. By returning the ignition key to zero, the actuator will return the accelerator lever to the minimum. Repeat the operation.

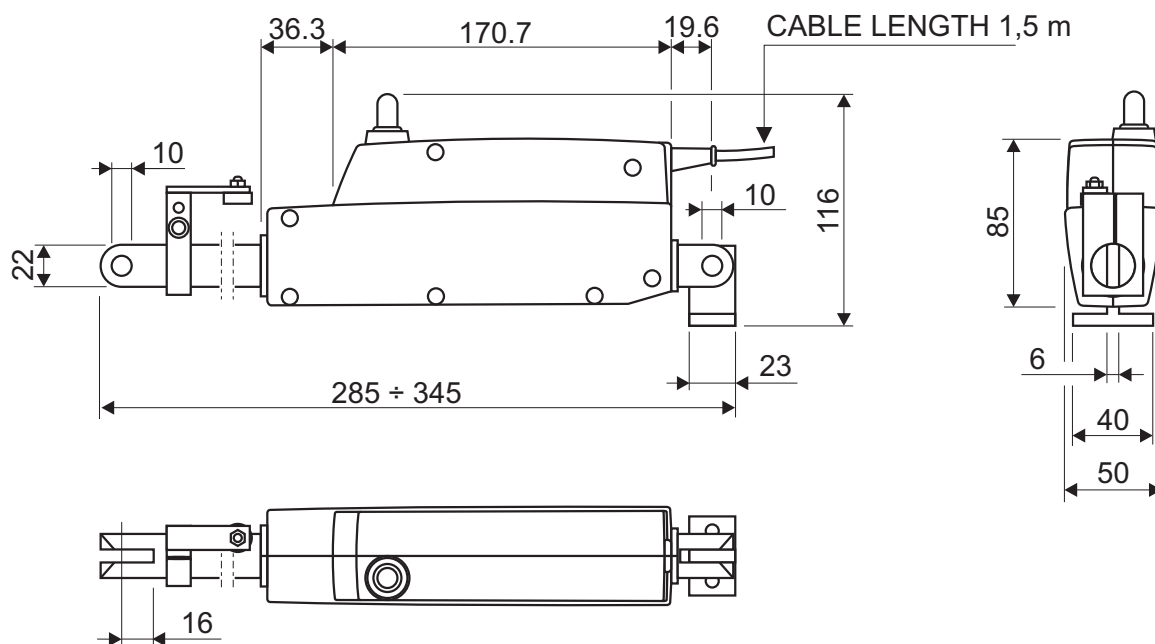


DO NOT MOUNT THE ACTUATOR WHERE IT COULD BE SUBJECTED TO KNOCKS OR STRONG VIBRATIONS. DO NOT MOUNT IN A WAY THAT COULD CREATE DANGEROUS SITUATIONS.

TECHNICAL DATA

- BATTERY SUPPLY VOLTAGE	12 VDC (MAX 16 VDC) or 24 VDC (MAX 32 VDC)
- MAX. FORCE	30 kg (300 N)
- MAX CAPACITY OF LINE SUPPLIED	30 kg (300 N)
- MAX. CORRENT ABSORPTION	12 VDC 3,4 A 24 VDC 1,5 A
- MAX. DISTANCE	60 mm
- INSERTION RATIO	20 %
- MAX. OPERATING TIME	8 min.
- TEMPERATURE RANGE	-10 ÷ +50 °C
- DEGREE OF PROTECTION	IP 32
- WEIGHT	1 150 g
- SPEED AT NOMINAL VOLTAGE	15mm/s ± 1 mm/s (60 mm in 20 SEC.)

DIMENSIONS



ORDERING DATA

Type **VAR-201 12V**
Type **VAR-201 24V**

Code **00571547**
Code **00571548**

SUPPLIED ACCESSORIES

Steel wire **VAR**

Code **40260199**

CONFORMITY DECLARATION



The company Elcos s.r.l. assumes full responsibility for declaring that the equipment:

type: **VAR-201**

Installed and used in the ways and for the purposes described in the instruction and user manual, is in conformity with the following directives:

- 2004/108/CE related to the electromagnetic compatibility and that repeals the directive 89/336/CEE,
- 2006/42/CE and later modifications 95/16/CE, concerning the safety of machinery.
- 2011/65/UE on the restriction of the use of certain hazardous substances in electrical and electronic equipment,

because it is built and functions in accordance with the harmonized Standards:

EN 61000-6-2, EN61000-6-3, EN60204-1, EN 60529.

The actuator VAR-201 is intended to be incorporated in or combined with another machine. This actuator must not be operated until the said machine has been declared to be in conformity with the requirements of the relevant Directives.

 **ELCOS**® S.r.l.
Via Naviglio Alto, 24/a
43100 PARMA ITALIA
Tel. +39 0521/772021 Fax +39 0521/270218
E-mail: info@elcos.it - [HTTP://www.elcos.it](http://www.elcos.it)

Parma, 25/3/2003
President

Walter Consigli