



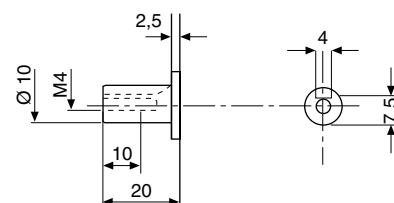
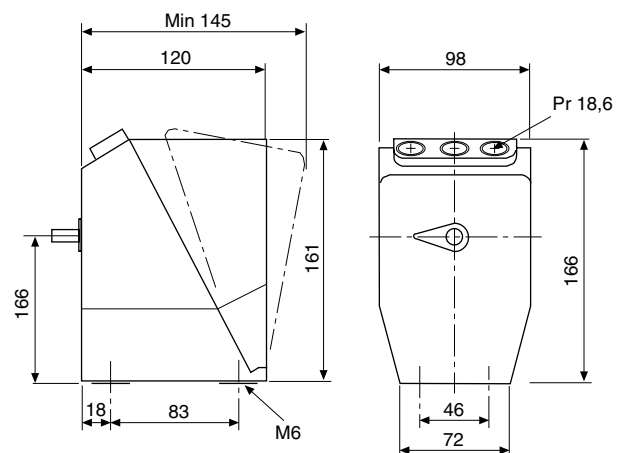
The actuators of the M5 or M15 type are designed for the control of dampers, sliding valves, plug valves, butterfly valves etc.

For use in other applications, please consult your nearest TAC representative.

The actuators are controlled with a 24 V or 220 V AC increase/decrease signal.

TECHNICAL DATA

Item numbers see table
 Supply voltage 24 V alt 220 V AC $\pm 10\%$, 50-60Hz
 Power consumption 12 VA
 Duty factor 10%
 Torque and running time for 180° :
 M5 10 Nm 80 s
 M15 15 Nm 300 s
 Operating range:
 Standard 90° , 160° , 180°
 Potentiometer 400 ohm, 4 W, (1,6 ohm/ $^\circ$)
 Extra end position switch 6 A, 220 V, non-inductive load
 Ambient temperature:
 Operation min -20°C , max 50°C
 Storage min -40°C
 Enclosure rating IP 54
 Material:
 Housing poly-amide-plastic, red
 Cover ABS-plastic, black
 Weight 2,3 kg



DESIGN AND FUNCTION

DESIGNATION	ITEM NO	DESIGN
M5CP/24 V/180°	831-4100-000	Actuator without a mounting kit for plug valves, equipped with 1 potentiometer.
M5PPBB/24 V/90°	830-4535-000	Actuator without mounting kit for butterfly valves. Equipped with 2 potentiometer and 2 extra switches.
M5CPPBB/24 V/180°	831-4500-000	Actuator without a mounting kit for plug valves, equipped with 2 potentiometers and 2 extra switches.
M5PPBB/220 V/180°/1	830-3501-000	Actuator with mounting kit for slide valves, equipped with 2 potentiometers and 2 extra switches.
M5CPPBB/220 V/180°	831-3500-000	Actuator without a mounting kit for plug valves, equipped with 2 potentiometers and 2 extra switches.
M15/24 V/180°	830-8005-000	Actuator without a mounting kit for plug valves.
M15/24 V/180°/1	830-8001-000	Actuator with mounting kit for slide valves.
M15C/24 V/180°	831-8000-000	Actuator without a mounting kit for plug valves.
M15PPBB/24 V/90°	830-8535-000	Actuator without mounting kit for butterfly valves, equipped with 2 potentiometers and 2 extra switches.
M15PPBB/24 V/180°/1	830-8501-000	Actuator with mounting kit for slide valves, equipped with 2 potentiometers and 2 extra switches.
M15CPPBB/24 V/180°	831-8500-000	Actuator without a mounting kit for plug valves, equipped with 2 potentiometers and 2 extra switches.
M15 PPBB/220 V/180°/1	830-7501-000	Actuator with mounting kit for slide valves. Equipped with 2 potentiometers and 2 extra switches.
M15CPPBB/220 V/180°	831-7500-000	Actuator without a mounting kit for plugvalves, equipped with 2 potentiometers and 2 extra switches.

The actuator consists of a reversible asynchronous motor with gear train designed for a plastic enclosure.

Some variations are also equipped with a potentiometer and an extra switch.

The operating range is limited by end position switches, the cams of which can be adjusted.

The electric motor and gear train are of permanent lubrication

type and ensure a maintenance-free motor for normal operation.

C function

Actuators type M5C, M15C contain a gear train equipped with a rotor with integral spring-loaded disc brake.

After pressing a push-button the valve can manually be operated to a required position.

When the push-button is released the motor will be re-engaged.

MOUNTING KITS

M5, M15

Designation suffix: 180°/1.

Actuator including mounting kit for slide valve, operating range 180°.

Manual operation of the valve is done with the trip lever.

M5C, M15C

Actuators for operating range 180° can be provided with mounting kits for 20, 30, 40 and 50 mm valve lifts and spring package for 280, 400, 600, 750 and 1200 Nm.

MOUNTING KITS

Connection to plug and piston valves

Actuator type M5C and M15C with operating range 180° . See table.

Plug valve can be supplied with an actuator mounted, if nothing else is mentioned in the order.

See ordering example a) below

Mounting kits:

911-1750-240 for 15 mm valve lift

911-1070-275 for 20 mm valve lift

911-1070-375 for 30 mm valve lift

911-1070-460 for 40 mm valve lift

911-1070-540 for 50 mm valve lift

For valve types: STL, V260, V280, V290, V380 and V390 series.

Piston stroke	Maximum thrust:	
	M5C	M15C
50 mm	400	750 Nm
40 mm	600	750 Nm
30 mm	750	750 or 1200 Nm
20 mm	750	750 or 1200 Nm

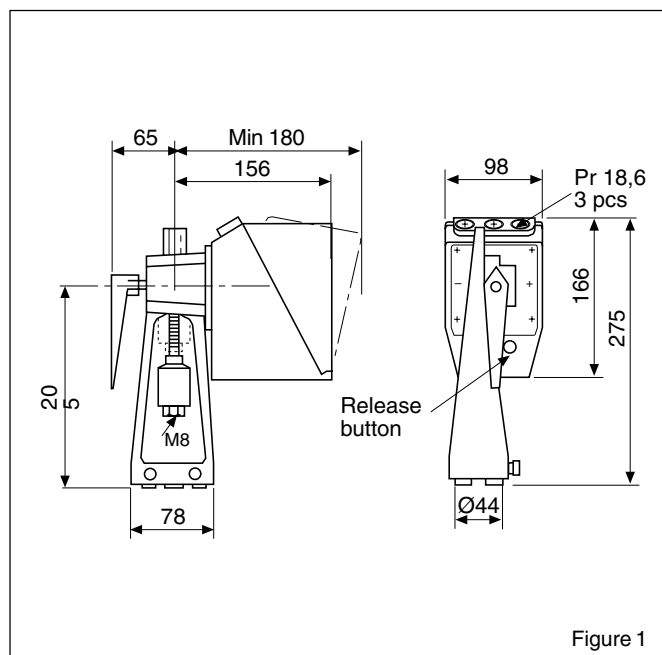


Figure 1

Connection to butterfly valves

Actuator type M5 and M15 with operating range 90° .

Actuator and mounting kit are supplied separately according to the order example b) below

Mounting kit for direct coupling to butterfly valve:
Item No: 911-1250-000.

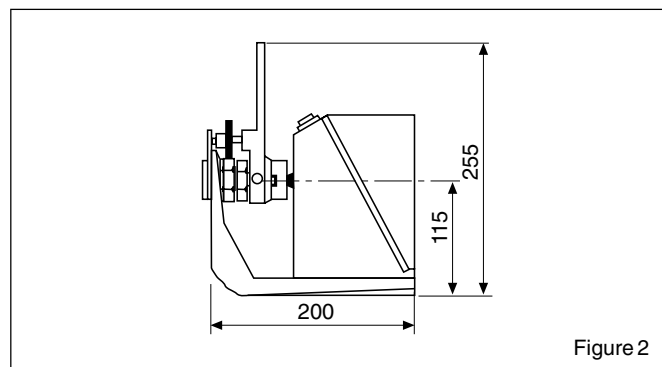


Figure 2

Connection to damper

Actuator type M5 and M15 with operating range 160° .

The actuator is supplied with damper arm and shelf. The shelf is for packing reasons not mounted.

Separate mounting kit: Item No: 911- 1020-000.

As a guide line of the controlled damper size, a 3 m² damper needs a 10 Nm torque on the damper axis. The required actuator torque depends on how the installation is carried out.

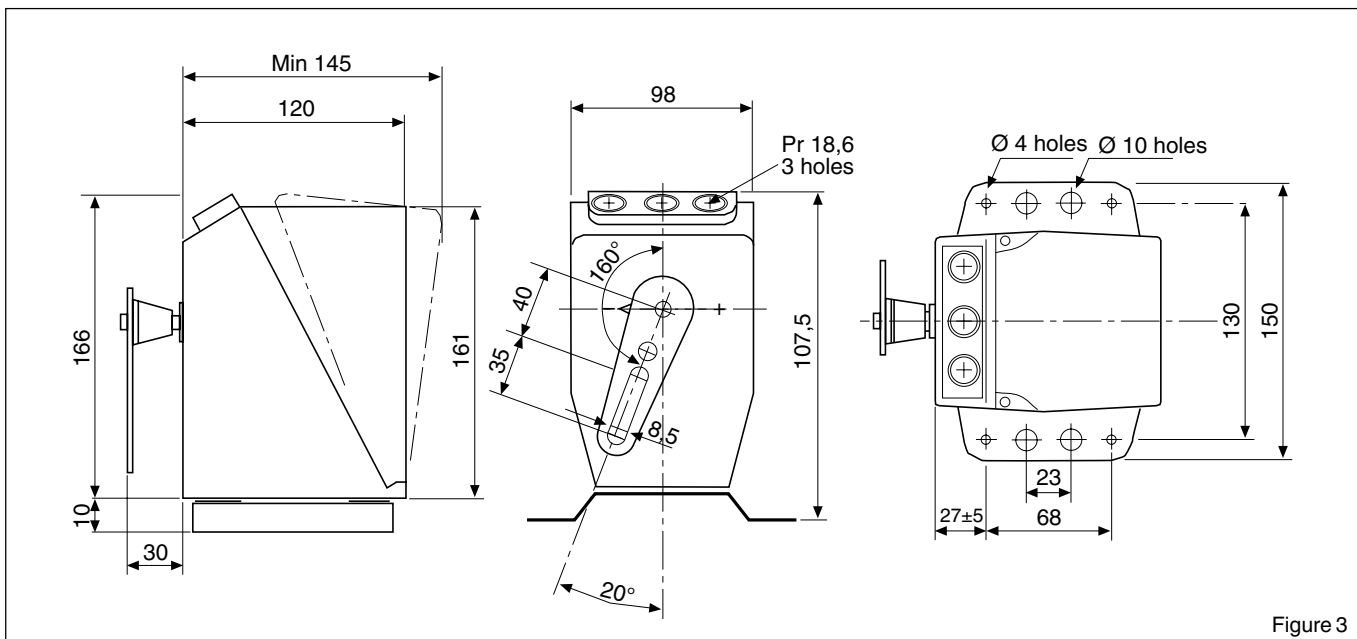


Figure 3

ORDER EXAMPLE

- a) Control device (actuator + valve) **M5CP/24 V/180°/V295/DN40/kvs 16**
 Actuator designation _____
 Valve designation _____

Actuator + valve are mounted and adjusted upon delivery.

- b) Actuator + valve + mounting kit
 M5CP/24 V/180°item No: 831-4100-000
 V295/DN40/kvs 16item No: 721-9543-000
 Mounting kititem No: 911-1070-375

Each product is supplied separately. Installation manual is enclosed.

WIRING

Connection to the terminal connection block

24 V AC, 220 V AC, 50-60 Hz
 24 V AC, 220 V AC, towards the positive end position
 24 V AC, 220 V AC, towards the negative end position

- 1 }
 2 } Potentiometer 1
 3 }
 4 } End position switch, positive pos.
 5 } End position switch, negative pos.
 6 }
 7 } Extra switch, negative position
 8 }
 9 }
 10 } Extra switch, positive position
 11 }
 12 } Potentiometer 2
 13 }
 14 }

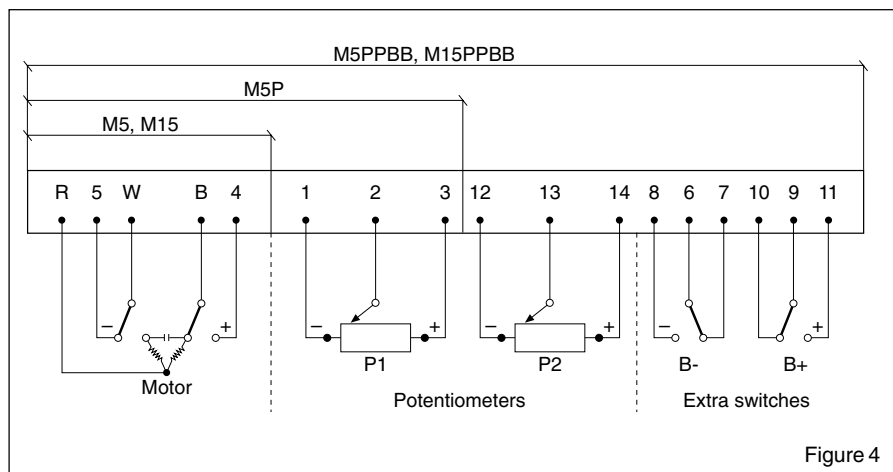


Figure 4

Length of cables

Max. 100 m, area 1,5 mm².

The actuator has 3 conduit entries for Pr.18,6 connection.

MOUNTING

Mounting of M5 and M15 on dampers and swivel slide valves is carried out according to 0FL-3105-000, which is enclosed with the actuator.

M5C and M15C are normally supplied adjusted and mounted on the valve. Therefore, the actuator and valve should not be separated upon installation.

Mounting is carried out according to 0FL- 3106-000, which is enclosed with the actuator.

If it is regarded as necessary to separate actuator and valve e.g. at replacement, then 0FL-3059-000 should be used.

CARE AND MAINTENANCE

Electric motor and gear box are of permanent lubrication type and ensure a maintenance-free actuator for normal operation.

The actuator must however be kept dry and externally cleaned when necessary.