

- > Type approval EMV E1 10R-036112
- > Geared d.c. actuator motor with feedback potentiometer for swivel motion of up to 180° for the adjustment of Buschjost heating valves and ventilation flaps in commercial vehicles.



Technical features

Gearing:

Irreversible

Mounting position:

Actuator vertical on top $\pm 90^\circ$
Other mounting positions by appointment

Direction of rotation:

Right/left

Rotation angle drive shaft:

$183^\circ \pm 5^\circ / -2^\circ$

Rated speed:

$5,5 \pm 2 \text{ min}^{-1}$

Rated torque:

0,4 Nm

Start-up torque:

100 ... 250 Ncm

Load drive shaft, static:

Holding torque max. 15 Nm at room temperature
axial force 30 N
radial force 50 N

Limit stops:

Fitted to housing, unsprung

Mass:

0,125 kg

Installation:

\varnothing bolthead $\geq 8,5 \text{ mm} \leq 11 \text{ mm}$
clamping force 1 kN / bolt

Temperature range:

$-40 \dots +110^\circ\text{C}$

Material:

Housing: Polybutylenterephthalat (PBT)

Electrical features

Plug connector:

See connection table

Type of protection:

IP 6K9K with suitable power outlet (see connection table)

Rated voltage:

12 V d.c.

Operating voltage:

9 ... 15 V d.c.

Rated current:

$\leq 200 \text{ mA}$

No-load current:

$\leq 100 \text{ mA}$

Short-circuit current:

$\leq 500 \text{ mA}$

Control pulse length:

$\geq 65 \text{ ms}$

Busy period:

$\leq 30 \text{ s}$

Reverse polarity protection:

All connections on vehicle protected against reverse polarity (max. 15 V, max. 60 sec) to ground and positive operating voltage except for slider connection.

Electrostatic discharge (ESD):

No interference (passive components only)

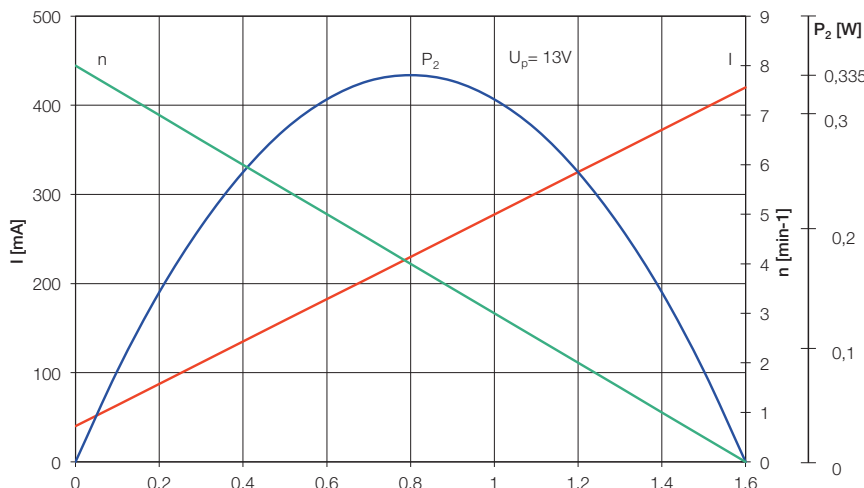
Interference immunity:

ISO7637-2 Puls 1, 2a, 2b, 3a/3b, 4 for ECE-scheme No. 10

Emitted interference:

According to ECE-Scheme No. 10

Diagram



Feedback potentiometer

Supply voltage:

UR = 5 ± 0,5 V d.c.

Voltage divider ratio:

See drawing coupling connection

Noise:

$e_{imax} / U_s < 1\%$
according to VRCI 100-A
with load resistor 100 kΩ

Resistance:

4,70 kΩ ±20%

Linearity:

3% (absolute)

Power rating P₄₀ :

0,25 W

Lifespan:

4 x 10⁸ actuations 10° by

-40 ... +110°C

Noise emission

Measuring reference DIN EN 60534-8:

Idle running 47 dB(A)

Last 50 dB(A)

Lifespan

4 x 10⁶ actuations 10° by 90°C ambient temperature

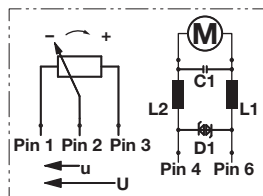
Connection table

Connector IP-class	Temperature Range	Connector Housing	Wire Size (mm ²)	Insulation diameter (mm)	Contact Finish	Contacts	Single Wire Sealing	Seal for unloaded cavities
IP 54	-40 ... +80°C	Bosch 1 928 403 095	0,5 ... 0,75	1,6 ... 1,9	gold plated	Tyco 965 906-5	Tyco 967 067-1	Tyco 967 056-1
IP6K9K	-40 ... +110°C	Tyco 2-967 616-1	0,5 ... 0,75	1,6 ... 1,9	gold plated	Tyco 965 906-5	Tyco 967 067-1	Tyco 967 056-1

The technical specifications stated describe the product in normal working order.

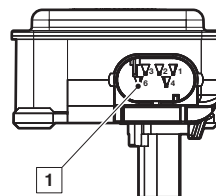
All specifications have to be checked by the user if suitable for the intended using purpose.

Contacts with diagram



CW + on Pin 4
CW - on Pin 6

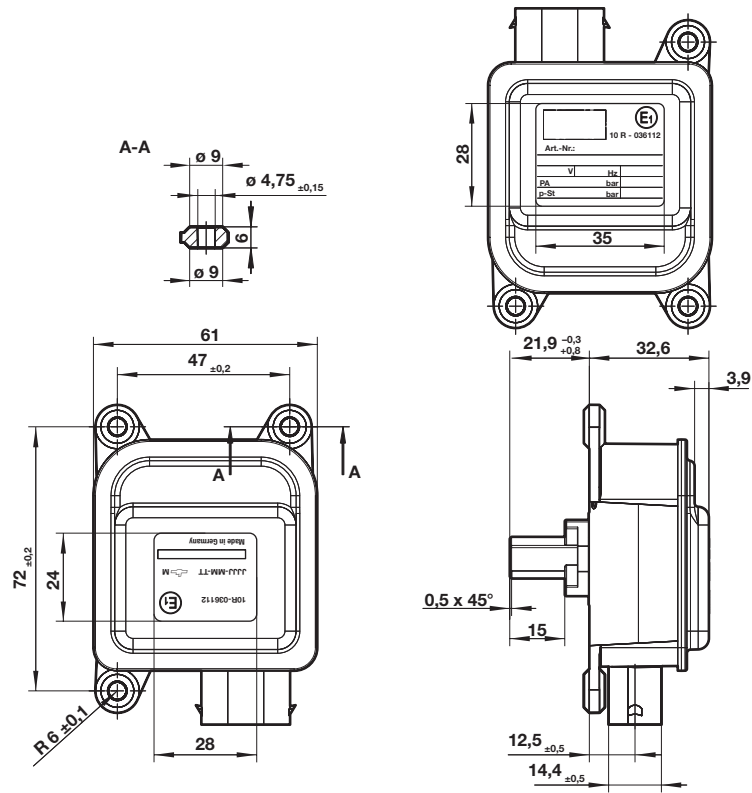
CCW + on Pin 6
CCW - on Pin 4



1 Contacts gold plated

Dimensions

Dimensions in mm
Projection/First angle



Coupling connection

Dimensions in mm
 Projection/First angle

