

ASM 105L, 115L: Valve drive (SUT) with LON communication (bus) module

How energy efficiency is improved

Torque related cut-off for efficient energy use.

Areas of application

For use in a LON network with connection of active sensors, actuator, switch contact and passive temperature sensor. For actuation of air, shut-off and restrictor dampers and louvres.

Features

- 5 and 10 Nm torque and holding torque
- 24 V~/=
- 35/60/120 sec. as running time for 90° can be selected in the case of ASM 105L and 60/120 sec. in the case of ASM 115L
- Protection class IP54, horizontal
- Operating noise < 30 db(A)
- Self-centring axle adaptor
- Gearbox that can be disengaged for positioning the damper and manual adjustment
- Stepping motor with control and electronic cut-off
- Maintenance-free
- Intelligent rotation angle adaptation, incl. adaptation of feedback

Technical description

- Two-part housing made of self-extinguishing plastic, lower section black and upper section yellow
- Suitable for all installation positions
- Connecting cable 1.2 m long, 5x 0.5 mm² and 6x 0.5 mm²
- Profile as per LONMARK #8110
- LON communication bus FTT 10
- On/Off switching input
- Input temperature sensor Ni1000, -50°C to +150°C



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Type	Torque Nm	Holding torque Nm	Running time for 90° s	Power 24 V~	Weight kg
ASM 105L F132	5	5	35/60/120	24 V~	0,9
ASM 115L F132	10	10	60/120	24 V~	0,9
Valve drive:					
Power supply	24 V~	± 20%, 50...60 Hz		Ambient temp.	-20...+55 °C
Power consumption				Ambient humidity	< 95% rh without condensation
ASM 105L F132	4,6 W	8,0 VA		Degree of protection (horizontal)	IP 54 as per EN 60529
ASM 115L F132	6,1 W	10,3 VA		Protection class	III as per IEC 60730
Angle of rotation	90 °			Noise while running	< 30 dB(A)
Damper spindle	Ø 8...16 mm			Response time	200 ms
Damper spindle (hardness)	□ 6,5...12,7 mm max. 300 HV			Wiring diagram	A10141
				Dimension drawing	M10149
				Fitting instructions	MV 505863
				Declaration on materials and the environment	MD 51.024
LON module					
Technical details					
Power supply	24 V~	± 20%, 50...60 Hz		Ambient temp.	-10...+55 °C
Power consumption		2 VA		Ambient humidity	< 95% rh without condensation
Profile of valve drive as per LONMARK		# 8110		Degree of protection	IP 54 as per EN 60529
LON communication: BUS		FTT-10		Protection class	III as per IEC 60730
				Wiring diagram	A10141
				Dimension drawing	M10149
				Fitting instructions	MV 505863
Inputs					
for switch inputs	On/Off			Outputs	
for input voltage	0...10 V			for output voltage	0...10 V
for temperature sensor	Ni1000, -50...150 °C				

Accessories

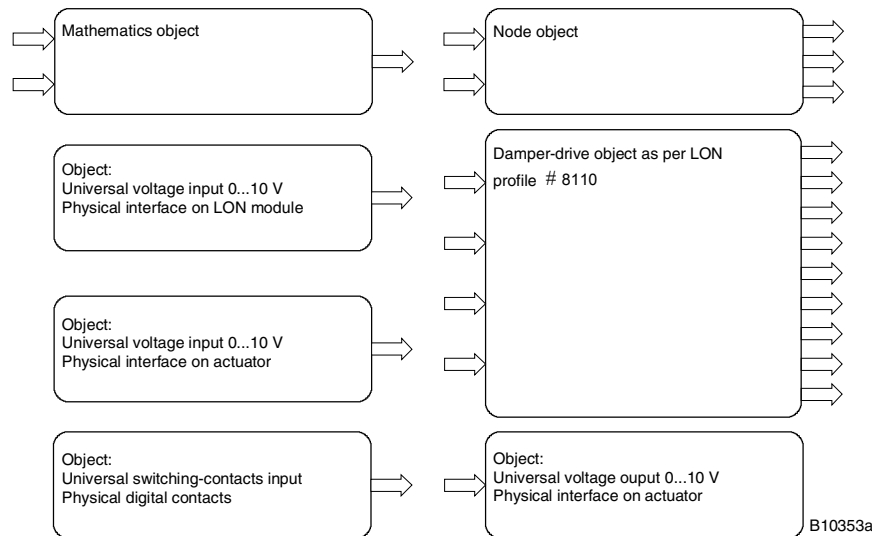
0361977 002	Assembly kit for MH32 / MH42 control valve; MV 505840
0372300 001	Anti-torsion device, long (230 mm)
0372301 001	Spindle adapter for squared end (□15 mm) tubular section (batch package of 10 pieces)
7001024 . . .	Operating manual, LON module, German, French, English

General description of operation

The node comprises 7 objects: valve drive as per LON profile #8110, two universal voltage inputs 0...10 V, a universal voltage output 0...10 V, a universal switching-contact input, a maths object and a node object.

All variables and parameters for damper-drive profile #8110 are provided. The object has also been equipped with Sauter's own parameters and variables for the following objects:-

Portrayal of objects:



Damper-drive object:-

- Volt error count (number of system starts, power failures)
- Motor runtime
- Motor runtime alarm
- Mechanical state (status of drive, initialisation, adaptation)
- Location
- Installation date
- Maintenance date
- Manufacturer date
- Flow characteristics
- Adaptation and power up
- Ni1000 preparation offset

Voltage inputs 0...10 V:-

- Installation date
- Location
- Maintenance date
- Application description
- NV type (physical size of the variables)
- Voltage filter

Voltage output 0...10 V:-

- Installation date
- Location
- Maintenance date
- Application description
- NV type (physical size of the variables)

Switching-contact input:-

- Installation date
- Location
- Maintenance date
- Application description
- NV type (physical size of the variables)

Maths object:-

- Application description
- NV type (physical size of the variables)
- Maths function (mathematical function: max., min., add, sub etc.)

Engineering and fitting notes

The combination of stepping motor and electronics allows several air dampers with different torque levels to be run in parallel, if drives of the same SUT type are used.

The drive is marked with the neuron ID and a bar code, which are printed on labels. Additional labels are supplied with the drive for use on installation plans.

The actuator can be mounted in any position (included upside down). It can be put directly onto the damper shaft and clipped onto the anti-torsion device. The self-centring spindle adaptor ensures that the damper spindles are operated smoothly. The valve drive can be dismantled very easily, without removing the anti-torsion device from the damper spindle.

The angle of rotation can be limited mechanically between 0° and 90° on the unit and set anywhere between 5° and 80°. The limit is set by means of a screw on the drive itself and with the stop on the self-centring spindle adaptor. The self-centring spindle adaptor is suitable for damper spindles of Ø 8...16 mm and □ 6,5...12,7 mm.

N.B.: The housing should not be opened.

Fitting outdoors. If the devices are fitted outdoors, we recommend that additional measures be taken to protect them against the effects of the weather.

Additional technical data

The upper part of the housing contains the stepping motor and the SUT electronics unit. The lower part contains the maintenance-free gears, the gear-release knob and the spindle adaptor.

The LON housing contains the ECHELON chip, the communication unit, the voltage input, the switching-contact input and the Ni1000 input.

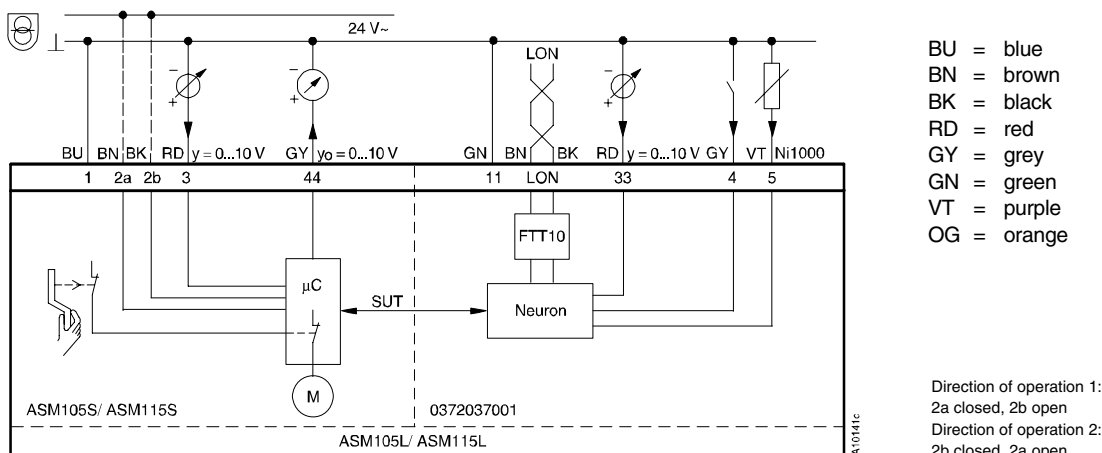
Power consumption:

Type	Running time s	Condition	active power P W	apparent power S VA
ASM 105L F132	35	Operating	4,6	8,0
ASM 115L F132	60	Operating	6,1	10,3

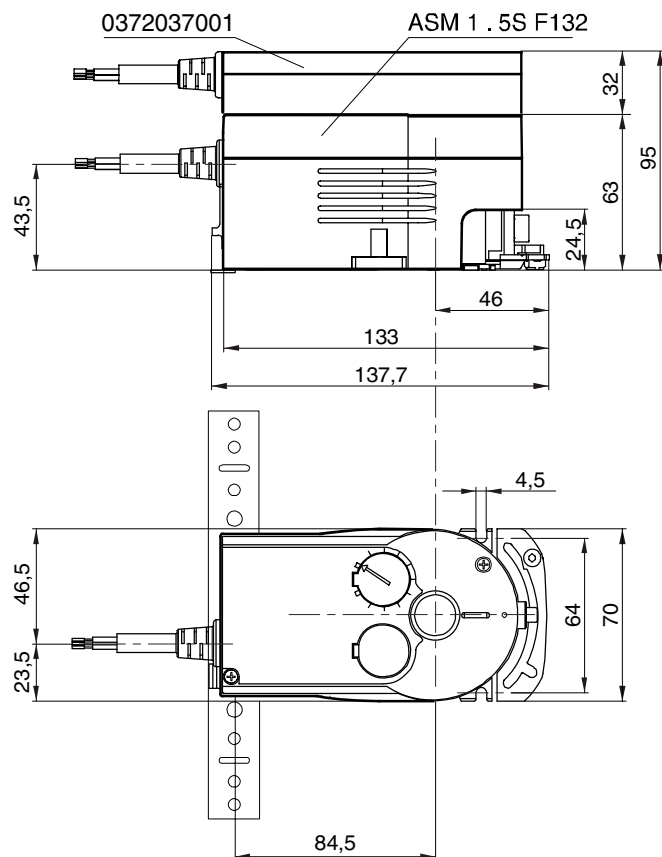
CE conformity

- EMC directive 2004/108/EC
- EN 61000-6-1
- EN 61000-6-3
- EN 61000-6-4
- Machine directive 98/37/EEC (II B)
- EN 1050

Wiring diagram



Dimension drawing



M10149a