

Automation

AMTROBOX M

Limit Switch Box
Limit Position Indicator

Type Series Booklet



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Type Series Booklet AMTROBOX M

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Automation

Limit Switch Box

AMTROBOX M



Main applications

- Water
- Waste water
- Energy
- Industry

Operating data

Operating properties

Ambient characteristics	Value
Standard enclosure	IP65 to EN 60529
Operating temperature	-20 °C to +80 °C

Design details

Design

- AMTROBOX M is specially designed for lever type series S / SR / SP / CR / CM and manual gearbox types MA12 and MA25.
- This limit switch box is equipped with a plate for mounting various types of limit switches:
 - Electrical microswitches (also available in explosion-proof design)
 - Pneumatic microswitches
 - Inductive proximity sensors
- It is mounted directly between the valve top flange and the actuator and transmits the full actuating torque to the valve.
- Adjustable cams for open/closed position signalling ensure a maximum of reliability.
- The following configurations are available:

- One switch for OPEN
- One switch for CLOSED
- One switch for OPEN and one switch for CLOSED
- Actuating bush made of steel
- Coating:
 - AMTROBOX M for lever types S and CR/CM: polyurethane coating, film thickness 80 µm, colour: grey, RAL 7016
 - AMTROBOX M for MA manual gearbox: polyurethane coating, film thickness 80 µm, colour: black, RAL 9011

Standard variants

- AMTROBOX M for lever types S and CR/CM: R1020
- AMTROBOX M for MA manual gearbox: R1021

Product benefits

- Flat stem end for mounting of lever or MA manual gearbox provides a high degree of flexibility.
- Rugged housing made of coated light metal alloy
- Equipped with proximity sensors or mechanical switches on a metal fixing plate (various brands)
- Safe design without rotating components or dead volumes. Easy to clean.
- Electrical connection via cable gland or connector
- Polyurethane coating for high corrosion resistance
- Enclosure IP65: electric components protected against dust and splashing water

Technical data

Microswitches and inductive proximity sensors

AMTROBOX M can be equipped with various types of electrical microswitches or inductive proximity sensors for signalling open and closed positions.

Microswitches

Brand	Type	Reference	Format	Code
CROUZET	Electrical	83-186-169-FD0 with lever	V4/DIN 41635	R102.-...A111

Inductive proximity sensors

Brand	Type	Reference	Format	Code
IFM EFFECTOR	PNP	IS-3003-BPOG/IS5031 cable, 3-wire	V3/DIN 41635	R102.-...H211
	PNP	IS-3003-APOG/IS5032 NO cable, 3-wire	V3/DIN 41635	R102.-...H212
	Quadronorm	IS-2002-FROG/IS5026 cable, 2-wire	V3/DIN 41635	R102.-...HA31
IFM EFFECTOR	Quadronorm	IN-2004-ABOA/IN0081 NO cable, 2-wire	40 x 26 x 12	R102.-...JA31
BAUMER	PNP	IFFK 10P11A1 3 cable terminals	V3/DIN 41635	R102.-...H311
PEPPERL & FUCHS	PNP	NBB-V3-E2-V5 NO 3 cable terminals	V3/DIN 41635	R102.-...H312
	DC	NBN4-12GM40-Z0 cable, 2-wire	Cylindrical, Ø 12	R102.-...MA32
TELEMECANIQUE	PNP	XS512B1DAL2 NO cable, 2-wire	Cylindrical, Ø 12	R102.-...MA31

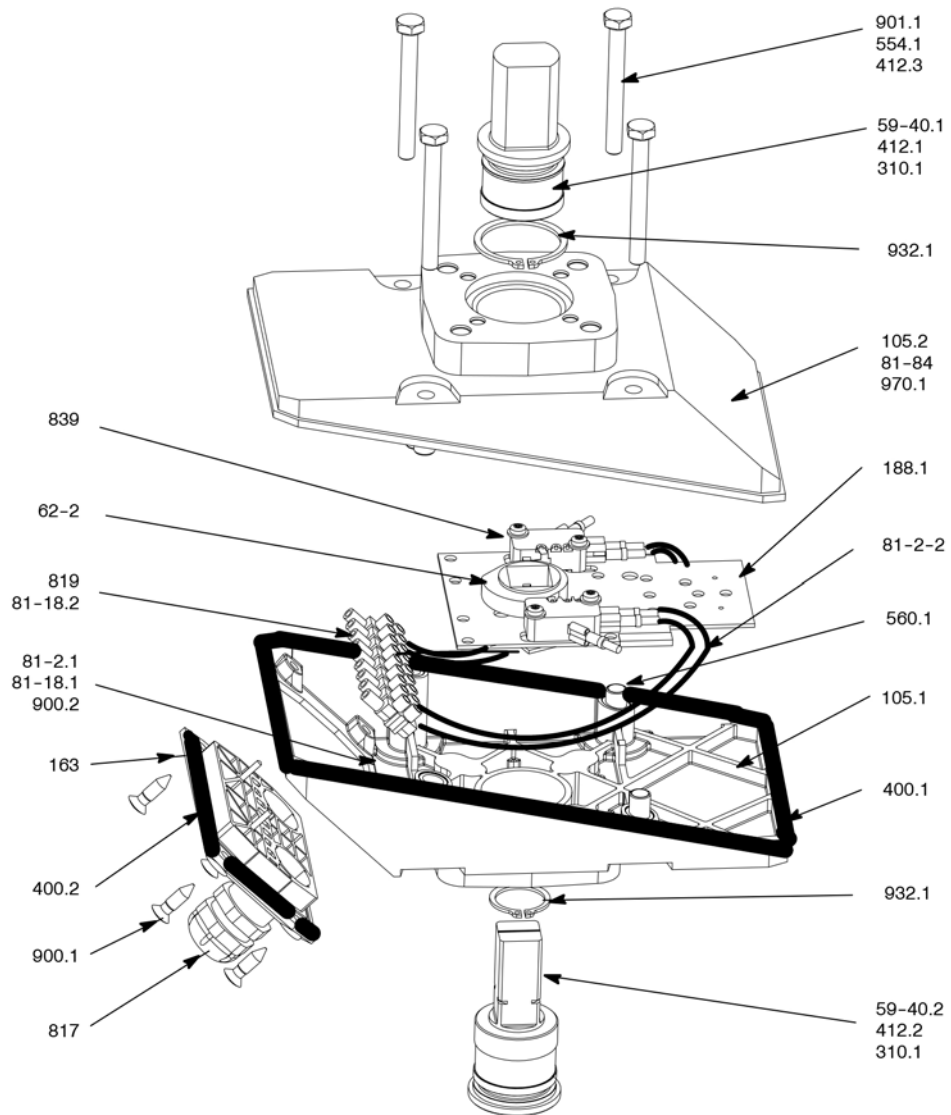
Technical component data available on request.

Other microswitches and proximity sensors on request

Electrical connection via plastic or metal M20 cable gland or connector

Materials

Sectional drawing

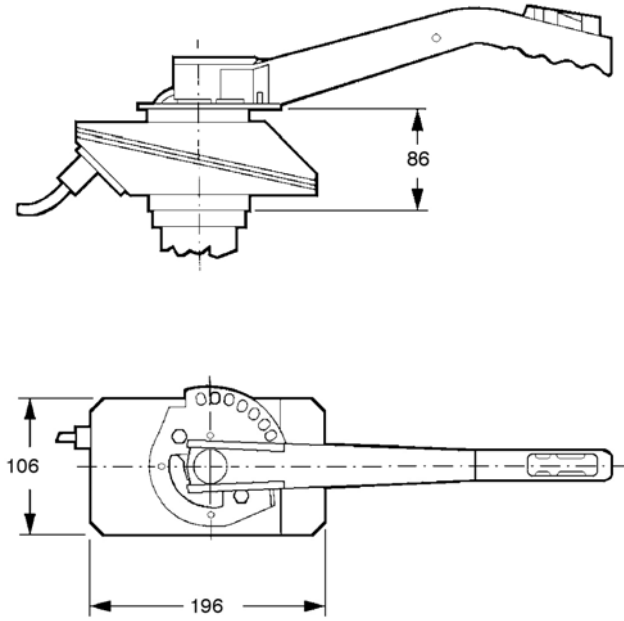


List of components

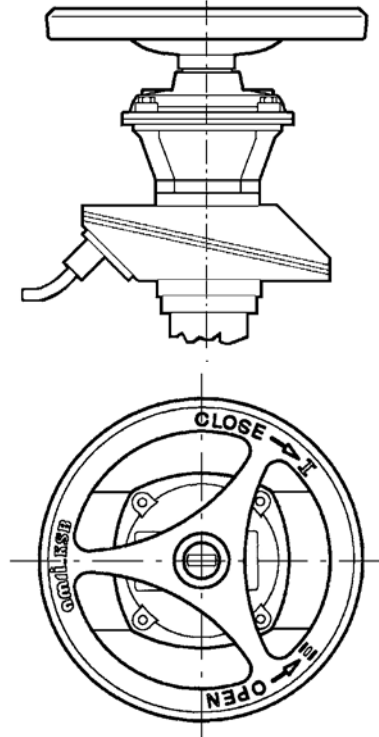
Part No.	Qty (pcs)	Description	Materials
105.1	1	Lower housing section	Light metal alloy
105.2	1	Upper housing section	Light metal alloy
163	1	Housing cover	Acetal
188.1	1	Fixing plate	Steel
310.1	2	Plain bearing	PTFE + stainless steel
400.1	1	Joint ring (housing)	Nitrile
400.2	1	Sealing element (housing cover)	Nitrile
412.1	1	O-ring	Nitrile
412.2	1	O-ring	Nitrile
412.3	4	O-ring	Nitrile
554.1	4	Washer	Stainless steel
59-40.1	1	Upper actuating bush	Tempered steel
59-40.2	1	Lower actuating bush	Tempered steel
560.1	4	Spring-type straight pin	Steel
62-2	1	Cam	Acetal
81-18.1	1	Ring-type cable terminal	-
81-18.2	6	Wire end sleeve	Brass
81-2.1	0,1 m	Earth conductor	-
81-2.2	6	Connection wire	-
817	1	Cable gland	Plastic or stainless steel
81-84	1	Circuit diagram	Adhesive polyester
819	1	Terminal strip	PVC
839	2	Microswitch or inductive proximity sensor	-
900.1	4	Screw	Stainless steel
900.2	1	Screw	Stainless steel
901.1	4	Hexagon head bolt	Steel
932.1	2	External circlip	Steel
970.1	1	Label	Adhesive paper

Dimensions

AMTROBOX M R1020
Lever type series S



AMTROBOX M R1021
Manual gearbox MA 25



AMTROBOX M: weight = 2.4 kg



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