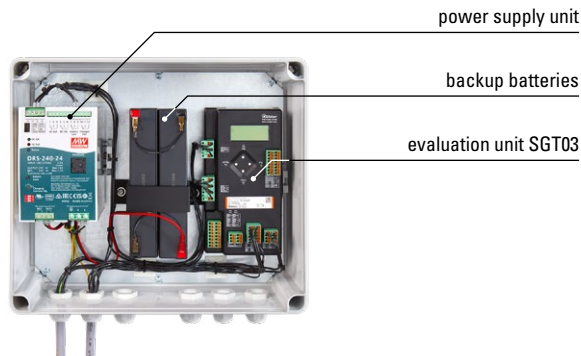


Evaluation units for shaft copying systems

System solution for modernization projects as an electronic overspeed governor with intelligent safety gear management

MODBOX.SGT03



Can be combined with electromechanical safety gear

The SGT03 evaluation unit is used in combination with the Ants LES03 sensor to trigger and monitor the electromechanical safety gear.
The MODBOX.SGT03 version includes two backup batteries and a power supply unit suitable for the selected electromechanical safety gear **a** in addition to the evaluation unit in the plastic housing.

CANopen
LIFT **SSI** RS485

SIL3
Functional Safety
EN 81

Order code MODBOX.SGT03

MODBOX . SGT03 . XXX . AA . X . A 1 2 . XX 1 . 1111
Type **a** **b** **c** **e** **f** **g**

a Safety device (safety gear, see table)

Safety chain + elektromechanical safety gear

- 1 = **Wittur** – mechanical reset (via counter-movement)
left/right at the same time
- 2 = **Dynatech** – electronic reset (magnetic field, coil)
left/right at the same time
- 3 = **Cobianchi** – electronic reset (motor)
left/right at the same time
- 4 = **Dynatech** – electronic reset (motor)
left/right at the same time
- 5 = **Dynatech** – electronic reset (magnetic field, coil)
left/right one after another → reduces the maximum current, thereby allowing smaller power supplies to be used if necessary

b Voltage safety chain

- 1 = 24 ... 60 V DC (±10%)
- 2 = 100 ... 130 V AC (±10%)
- 3 = 220 ... 240 V AC (±10%)

c Safety gear direction

- 1 = upwards and downwards
- 2 = downwards

e Limit switch / Retardation limit switch

- 1 = included
- 2 = not included

f Language menu navigation

- 2 = EN – English (can be changed to DE, FR, IT, ES via menu)

g Interface / Interface profile

(adjustable termination resistor, default = off)

- 22 = CANopen Lift
- 31 = CANopen Lift + RS485 (9 Byte, 24 Bit position data)
- 41 = CANopen Lift + SSI, Gray (25 Bit)

The parameters **a** and **f** can be changed to one of the specified options via the display.

Producer	Product	Safety device direction	Type of reset (When indenting, always combined with a counter-movement)	a	Safety gear dir. c	Order code MODBOX.SGT03
Wittur	ESG-xxBS	mechanically via counter-movement		1	1 ↓ ↑	MODBOX.SGT03.1x1.AAx.A1x.xx1
	ESG-25U	mechanically via counter-movement		1	2 ↓	MODBOX.SGT03.1x2.AAx.A1x.xx1
Dynatech	eASG xx UD	electronic (magnetic field, coil), left/right at the same time		2	1 ↓ ↑	MODBOX.SGT03.2x1.AAx.A1x.xx1
		electronic (magnetic field, coil), left/right one after another		5	1 ↓ ↑	MODBOX.SGT03.5x1.AAx.A1x.xx1
	eASG xx	electronic (magnetic field, coil), left/right at the same time		2	2 ↓	MODBOX.SGT03.2x2.AAx.A1x.xx1
		electronic (magnetic field, coil), left/right one after another		5	2 ↓	MODBOX.SGT03.5x2.AAx.A1x.xx1
	eASG xx EVO UD	electronic (magnetic field, coil), left/right at the same time		2	1 ↓ ↑	MODBOX.SGT03.2x1.AAx.A1x.xx1
		electronic (magnetic field, coil), left/right one after another		5	1 ↓ ↑	MODBOX.SGT03.5x1.AAx.A1x.xx1
	eASG xx EVO	electronic (magnetic field, coil), left/right at the same time		2	2 ↓	MODBOX.SGT03.2x2AAx.A1x.xx1
		electronic (magnetic field, coil), left/right one after another		5	2 ↓	MODBOX.SGT03.5x2.AAx.A1x.xx1
Cobianchi	eASG xx EVO II UD	electronic (motor), left/right at the same time		4	1 ↓ ↑	MODBOX.SGT03.4x1.AAx.A1x.xx1
Cobianchi	PC xx GAXEA	electronic (motor), left/right at the same time		3	1 ↓ ↑	MODBOX.SGT03.3x1.AAx.A1x.xx1
	PC xx G0xEA	electronic (motor), left/right at the same time		3	2 ↓	MODBOX.SGT03.3x2.AAx.A1x.xx1

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Technical data MODBOX – Housing

Material	ABS with 45% post-industrial recycled content
Color	grey (RAL7035) / transparent
Protection	IP66
Electrical insulation class	Class II
Operating temperature	-20 °C ... +60 °C [-4 °F ... +140 °F]
Dimensions (HxWxT) / Weight	
for b = 1, 3	341 x 291 x 128 mm [13.43 x 11.46 x 5.04"] 1.45 kg [51.15 oz]
for b = 2, 4, 5	341 x 291 x 168 mm [13.43 x 11.46 x 6.61"] 1.70 kg [59.97 oz]

Technical data MODBOX – Backup battery (2 installed)

VdS certified	G106060
Connection	Faston 4.8 mm
Voltage	12 V
Capacity	2.3 Ah
Dimensions (HxWxT)	178 x 35 x 67 mm [7.01 x 1.38 x 2.64"]
Weight	0.94 kg [33.16 oz]

Technical data MODBOX – Power supply for **b** = 1, 3

Input voltage	90 ... 264 V AC / 1.3 A 127 ... 370 V DC / 0.8 A
Operating temperature	-30 °C ... +70 °C [-22 °F ... +158 °F]
Dimensions (HxWxT)	40 x 90 x 100 mm [1.57 x 3.54 x 3.94"]
Weight	0.3 kg [10.58 oz]

Technical data MODBOX – Power supply for **b** = 2, 4, 5

Input voltage	90 ... 305 V AC / 1.3 A 127 ... 431 V DC / 0.8 A
Operating temperature	-30 °C ... +70 °C [-22 °F ... +158 °F]
Dimensions (HxWxT)	86 x 125 x 129 mm [3.39 x 4.92 x 5.08"]
Weight	1.19 kg [41.98 oz]

Evaluation units for shaft copying systems

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MODBOX.SGT03

Technical data – evaluation unit

Electrical characteristics

Connection type	Push-in spring connection
Supply voltage +V	24 V DC $\pm 10\%$
Power	< 8.0 W the power ratings of the external components must be taken into account when selecting the power supply unit
Digital output (CLK)	V _{CLK} +V – 1.0 V, max. 200 mA wiring may only be carried out in acc. with the operating instructions
Digital output (BUZ)	V _{BUZ} +V – 1.0 V, max. 50 mA
ESG holding coil (SGH)	V _{SGH} +V – 1.0 V I max, min. 1,4 A (up to +50°C), 1,0 A (up to +65°C) I max, typ. 2,0 A (up to +50°C), 1,5 A (up to +65°C)
ESG reset (SGR)	V _{SGR} +V – 1.0 V, max. 6 A
Integration of safety chain (SC) potential-free contact	220 V ... 240 V AC, max. 2 A 100 V ... 130 V AC, max. 2 A 24 V DC, max. 1 A 48 V DC, max. 0,5 A 60 V DC, max. 0,48 A
Integration of safety chain / additional brake (ESA) potential-free contact	220 V ... 240 V AC, max. 2 A 100 V ... 130 V AC, max. 2 A 24 V DC, max. 1 A 48 V DC, max. 0,5 A 60 V DC, max. 0,48 A
Integration of door contacts (Door) potential-free contact	220 V ... 240 V AC, max. 2 A 100 V ... 130 V AC, max. 2 A 24 V DC, max. 1 A 48 V DC, max. 0,5 A 60 V DC, max. 0,48 A
Digital output (DO1)	V _{DO1} +V – 1.0 V, max. 50 mA
Relay output (REL1, REL2) potential-free contact	24 V AC, max. 0.1 A 24 V DC, max. 0.1 A
Digital input (DI1, DI2, DI3, DI4)	max. 30 V DC low < 2.0 V DC high > 12 V DC

Mechanical characteristics

Mounting	DIN rail mounting
Housing (material)	plastic (PC/ ABS)
Weight	390 g (without connector)
Protection acc. to EN 60529	IP20
Vibration resistance acc. to EN 60068-2-6	10... 55 Hz, ± 0.35 mm, 20 m/s ²
Shock resistance acc. to EN 60068-2-27	300 m/s ² , 11 ms (3 shocks per direction)
Continuous shock resistance acc. to EN 60068-2-27	100 m/s ² , 16 ms (1000 shocks per direction)
Dimensions L x W x H	178 x 95 x 45 mm [7.00 x 3.74 x 1.77"] with connector +16 mm [0.63"]

Environmental conditions

Humidity	< 95 % (non-condensing)
Operating temperature	-20 °C ... +65 °C [-4 °F ... +149 °F]
Storage temperature	-40 °C ... +85 °C [-40 °F ... +185 °F]
Air pressure (operating altitude)	800 ... 1013 hPa (up to 2000 m [6562 ft] above NN)

Approvals

EU type-examination certificate	TÜV-A-AT-1-25-0752-EUES
Classification	SIL3
System structure	2 channel
PFH_d value	< 10 ⁻⁷ h ⁻¹
Mission time / Proof test interval	20 years
Relevant standards	EN 81-20; EN 81-50; EN 81-21; EN 62061; EN 61508-1-7; EN 60664-1; EN 61784-3
CE compliant in accordance with	EMC Directive 2014/30/EU RoHS Directive 2011/65/EU Elevator Directive 2014/33/EU

Safety characteristics

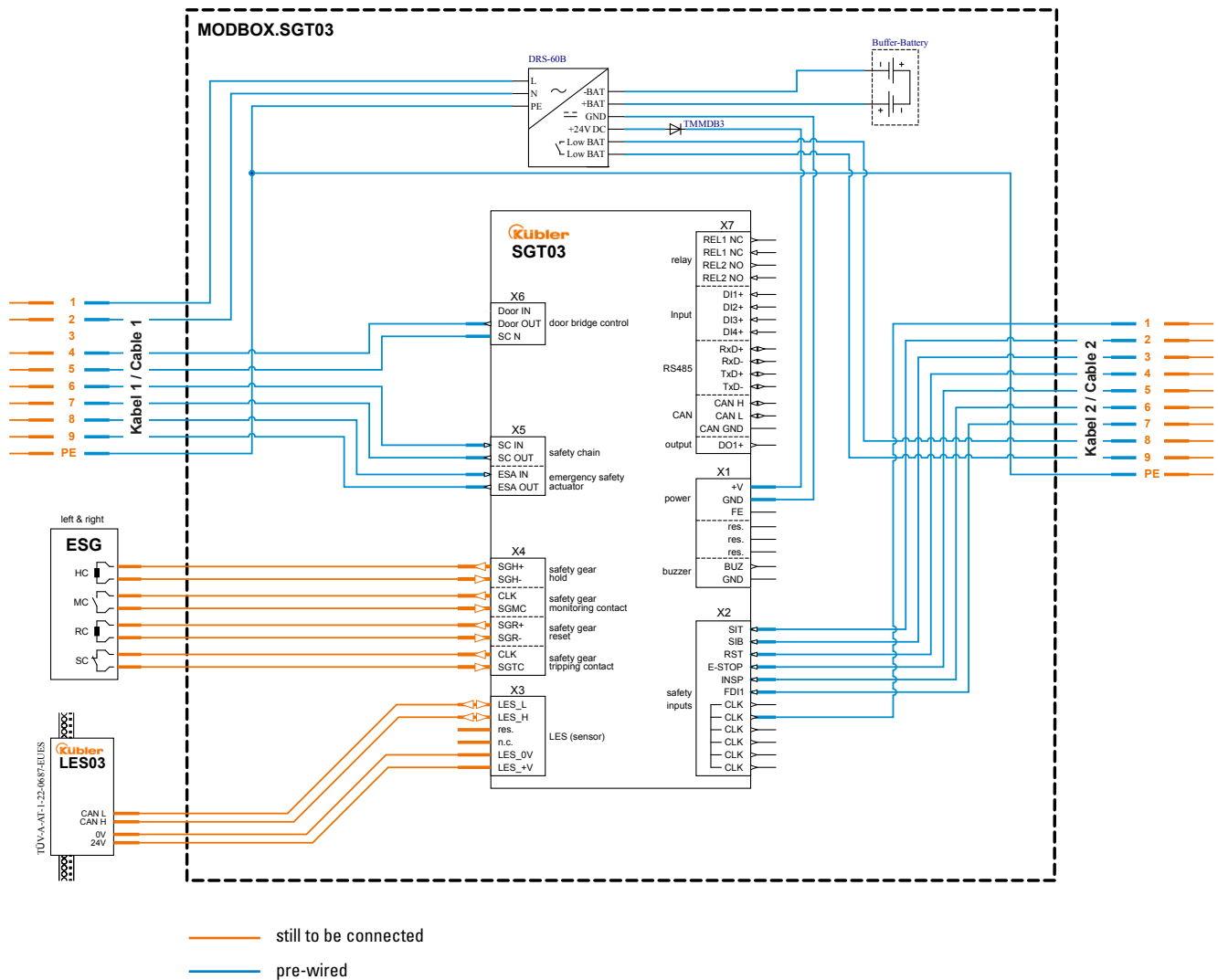
Shutdown time / system response time	< 30 ms (incl. relay switching times)
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Wiring diagram / Terminal assignment



Terminal assignment cable 1

Cable, 10 core										
Signal:	+V	0 V	SGT03 Door IN	SGT03 Door OUT	SGT03 SC N	SGT03 SC IN	SGT03 SC OUT	SGT03 ESA IN	SGT03 ESA OUT	PE
Color:	BK 1	BK 2	BK 3	BK 4	BK 5	BK 6	BK 7	BK 8	BK 9	GN/YE

Terminal assignment cable 2

Cable, 10 core										
Signal:	SGT03 CLK	SGT03 SIT	SGT03 SIB	SGT03 RST	SGT03 ESTOP	SGT03 INSP	SGT03 FDI1	power supply Low Bat	power supply Low Bat	PE
Color:	BK 1	BK 2	BK 3	BK 4	BK 5	BK 6	BK 7	BK 8	BK 9	GN/YE

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MODBOX.SGT03

Dimensions MODBOX housing

Dimensions in mm [inch]

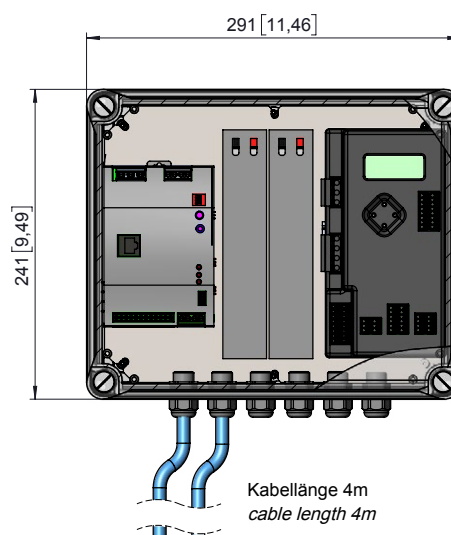
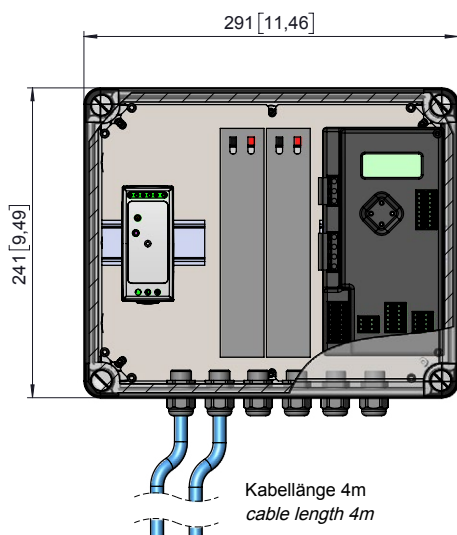
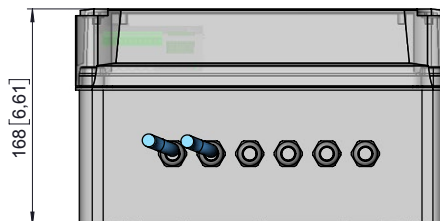
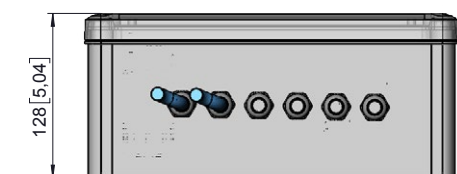
MODBOX.SGT03.1x1.AAx.A1x.xx1.1111

MODBOX.SGT03.3x1.AAx.A1x.xx1.1111

MODBOX.SGT03.2x1.AAx.A1x.xx1.1111

MODBOX.SGT03.4x1.AAx.A1x.xx1.1111

MODBOX.SGT03.5x1.AAx.A1x.xx1.1111



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MODBOX.SGT03

Dimensions SGT03

Dimensions in mm [inch]

