

# Sensor/actuator box - SACB-6/12-L-C SCO



1516810

<https://www.phoenixcontact.com/pc/products/1516810>

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Sensor/actuator box, application: Standard, connection method: M12-SPEEDCON-socket Metal, number of slots: 6, number of positions: 5, coding: A - standard, slot assignment: Double, status display: yes, pnp; master cable connection: Pluggable screw connection 180°, shielding: no

## Your advantages

- Safety in the field, thanks to molded housing and high degree of protection
- Convenient: increased machine availability thanks to quick and easy diagnostics
- Save space: distributor box with double occupancy for two sensors in one slot
- Save time, thanks to installation with SPEEDCON fast locking system
- Flexible: distributor box with connector hood for on-site assembly

## Commercial Data

Item number	1516810
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	BF3CCD
Catalog Page	Page 264 (C-2-2019)
GTIN	4017918967543
Weight per Piece (including packing)	312.7 g
Weight per Piece (excluding packing)	302.5 g
Customs tariff number	85366990
Country of origin	DE

# Sensor/actuator box - SACB-6/12-L-C SCO



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## Technical Data

### Notes

Note regarding documentation	For details about the PCB connectors used, refer to the technical data for MC 1,5/10-STF-3,5 (1847204)
Assembly instruction:	<b>NOTE:</b> Observe the permissible bending radii when laying conductors, since the degree of protection may be put in jeopardy if the bending forces are too high. Alleviate mechanical loads upstream of the connector, e.g. by using cable ties.
Note on application	Unused slots are to be sealed off prior to commissioning. Suitable sealing elements are to be found under "Accessories".

### Product properties

Product type	Distributor boxes with M8 to M12 slots
Number of positions	5
Application	Standard
Number of slots	6
Coding	A - standard

### Material specifications

Color	green
Flammability rating according to UL 94	V0
Material of threaded sleeve	Zinc die-cast
Material of threaded sleeve surface	Nickel-plated
Contact material	Cu alloy
Contact surface material	gold-plated
Contact carrier material	PA
Material of contact, master cable side	CU alloy
Material of the contact carrier on the master cable side	PA 6.6 V0
Material of contact surface, master cable side	gold-plated
O-ring material	NBR
Material of the moulding mass	PUR
Housing material	PBT

### Dimensions

Dimensional drawing	
Width	58 mm
Height	45 mm
Length	126 mm

## Connection data

### Pin assignment

Slot/position = Wire color or connection	1 / 4 (A) = 1 / 4
	1 / 2 (B) = 1 / 2
	2 / 4 (A) = 2 / 4
	2 / 2 (B) = 2 / 2
	3 / 4 (A) = 3 / 4
	3 / 2 (B) = 3 / 2
	4 / 4 (A) = 4 / 4
	4 / 2 (B) = 4 / 2
	5 / 4 (A) = 5 / 4
	5 / 2 (B) = 5 / 2
	6 / 4 (A) = 6 / 4
	6 / 2 (B) = 6 / 2
	1-6 / 1 (+ 24 V) = U <sub>N</sub>
	1-6 / 3 (0 V) = 0 V
1-6 / 5 (PE) = PE	

## LED signaling

Status display present	yes
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## Electrical properties

Max. operating voltage U <sub>max</sub>	30 V DC
Local diagnostics	Supply voltage per module Green LED
	Status display I/O Yellow LED
Nominal voltage U <sub>N</sub>	24 V DC
Rated current, total	10 A
	2x 8 A (For electrical isolation)
Max. current carrying capacity per path	2 A
Current carrying capacity per slot	4 A

## Cable / line

Sensor/actuator connection system	M12-SPEEDCON-socket
Connection method	Pluggable screw connection
External cable diameter	7 mm ... 12 mm
Metric conductor cross section (Signal)	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Cross section AWG (Signal)	26 ... 16
Stripping length (signal)	7 mm
Metric conductor cross section (Power)	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Cross section AWG (Power)	26 ... 16
Stripping length for sheath	50 mm (Master cable)
Tightening torque, cover screw	0.35 Nm
Tightening torque of mounting screw for fixing the housing	0.5 Nm

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Tightening torque slot sensor/actuator cable	0.4 Nm
Tightening torque, union nut	2.5 Nm

## Standards and regulations

Standards/specifications	IEC 61076-2-101
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## Ambient conditions

Degree of protection	IP65
	IP67
	IP69K
Ambient temperature (operation)	-30 °C ... 80 °C

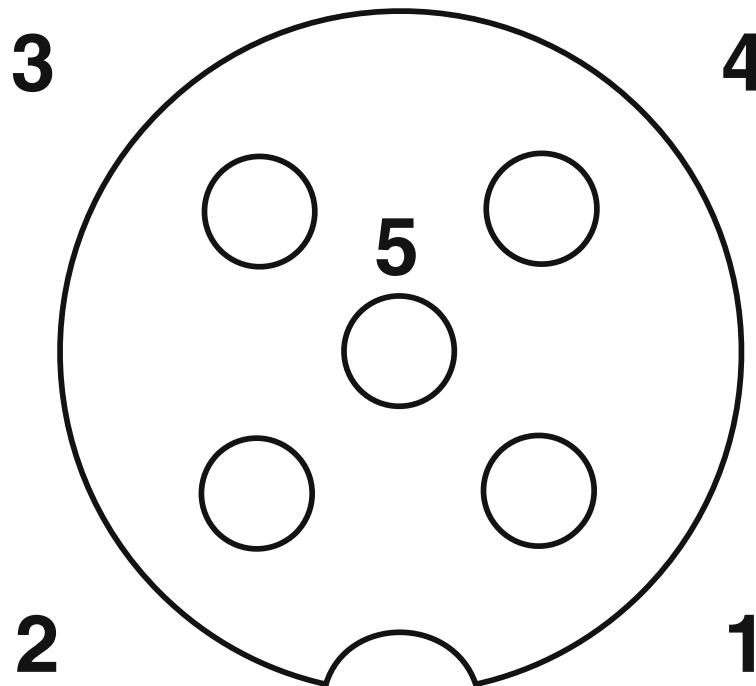
# Sensor/actuator box - SACB-6/12-L-C SCO

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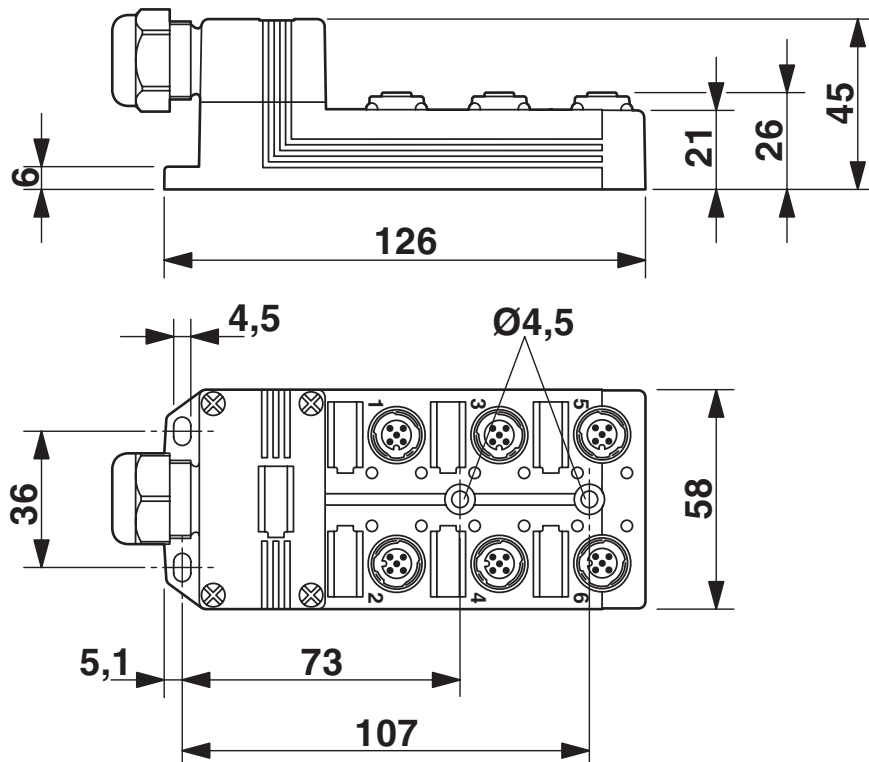
## Drawings

Schematic diagram

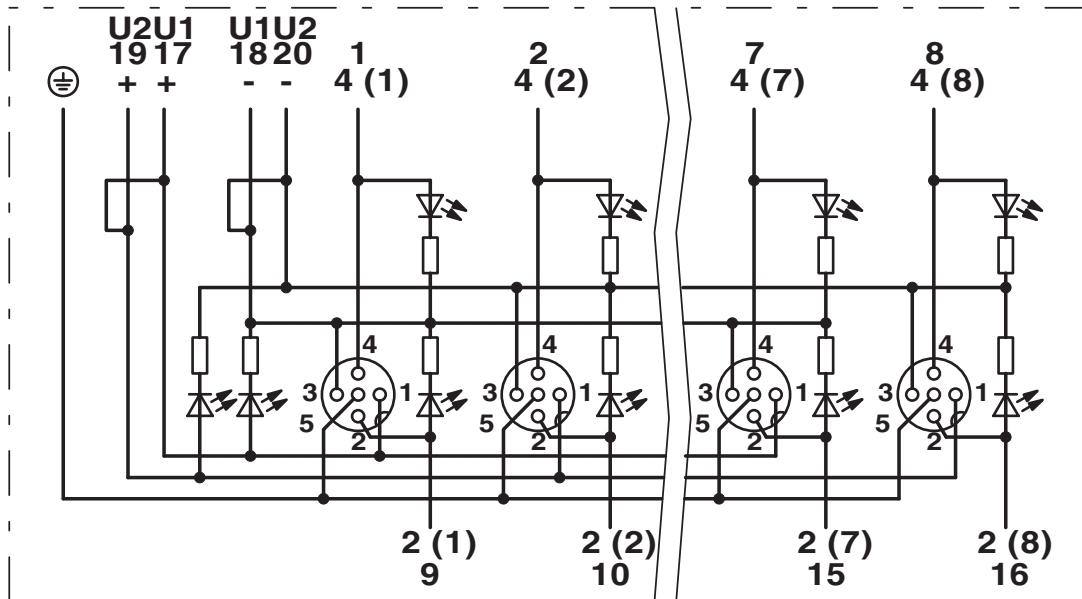


M12 slot, socket, 5-pos.

Dimensional drawing



Circuit diagram



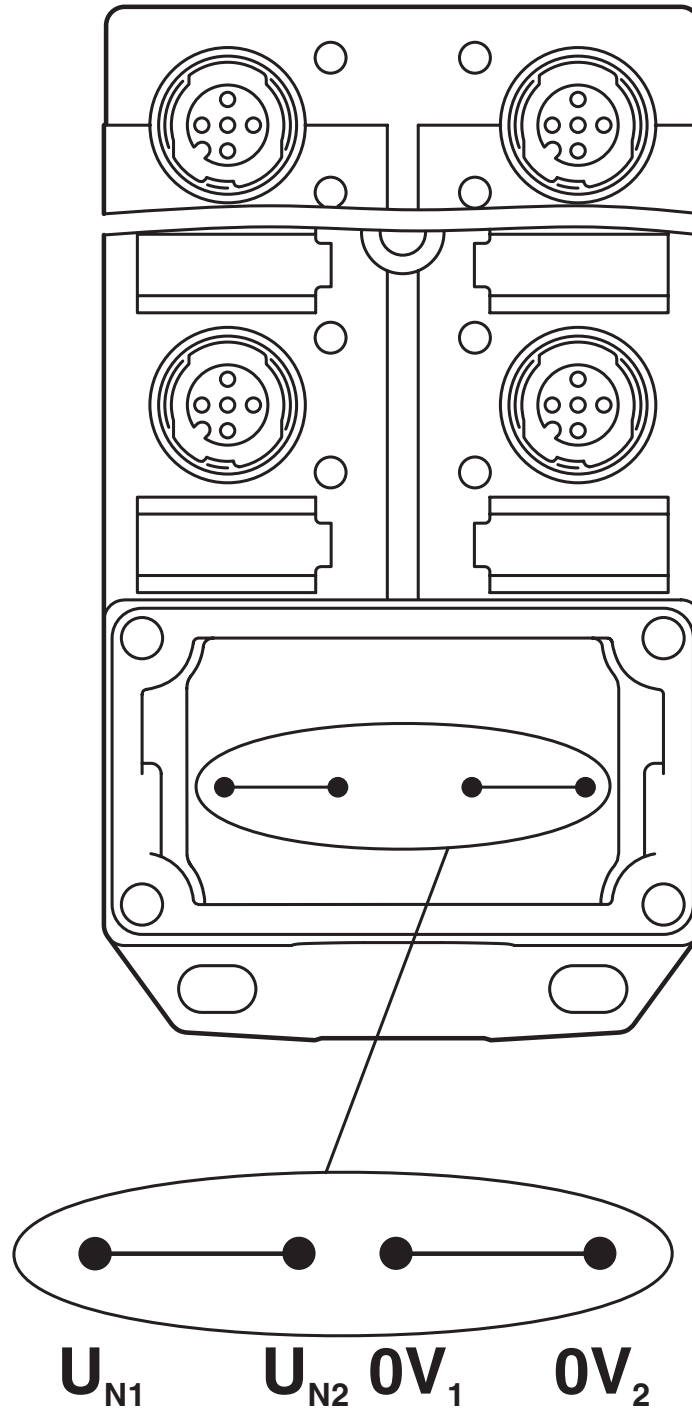
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Schematic diagram



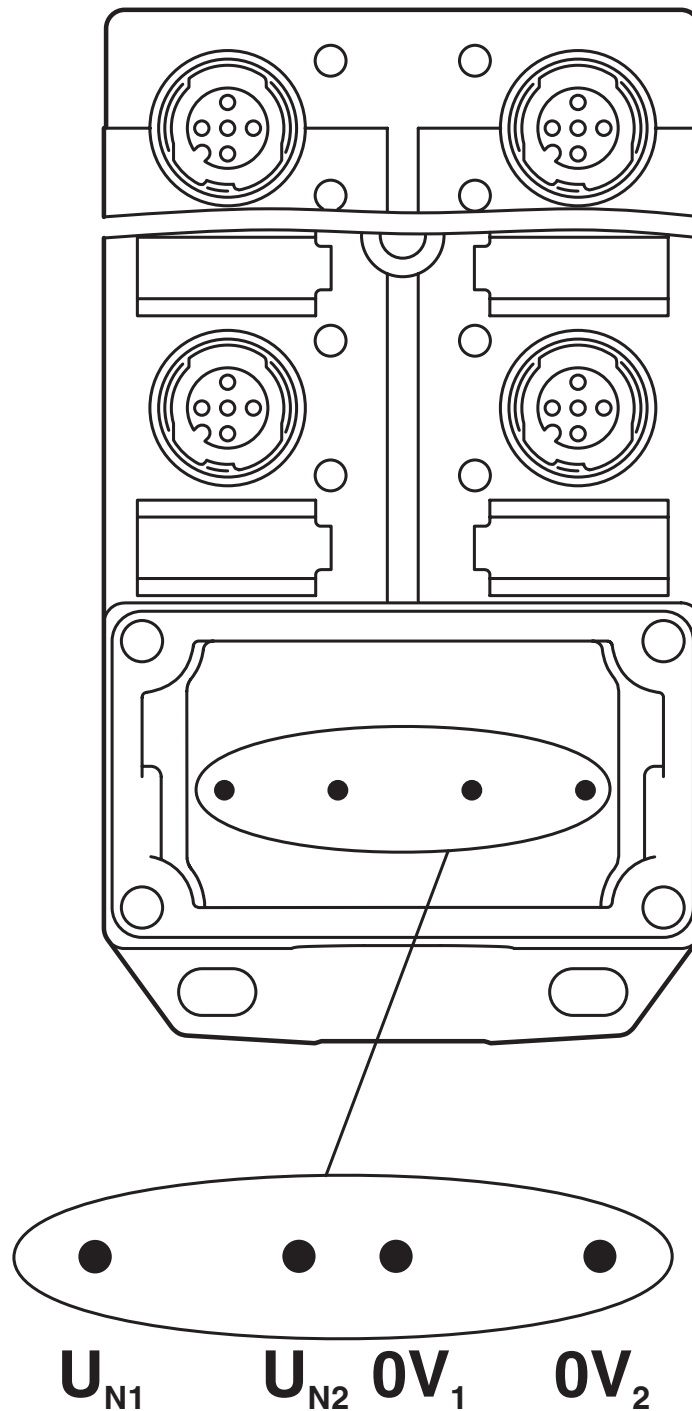
Potential  $U_{N1}$  and  $U_{N2}$  bridged. Potential assignment:  $U_{N1} = U_{N2} =$  slots 1,2,3,4,5,6.

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Schematic diagram



Electrically isolated. Potential assignment:  $U_{N1}$  = slots 1,3,5 and  $U_{N2}$  = slots 2,4,6.

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## Approvals

	<b>cUL Recognized</b> Approval ID: FILE E 118976				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$	
	24 V	3 A	-	-	

	<b>UL Recognized</b> Approval ID: FILE E 118976				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$	
	24 V	3 A	-	-	

	<b>EAC</b> Approval ID: RU C-DE.AI30.B.01102				
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	<b>EAC</b> Approval ID: EAC-Zulassung				
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	<b>EAC</b> Approval ID: RU C-DE.BL08.B.00511				
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<b>cULus Recognized</b>					
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# Sensor/actuator box - SACB-6/12-L-C SCO



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## Classifications

### ECLASS

ECLASS-9.0	27440108
ECLASS-10.0.1	27440111
ECLASS-11.0	27440111

### ETIM

ETIM 8.0	EC003558
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### UNSPSC

UNSPSC 21.0	31251500
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## Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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## Accessories

### Connector hood

Connector hood - SACB-C-H180 8/16 SCO - 1516713

<https://www.phoenixcontact.com/pc/products/1516713>



Connector hood with integrated connector with screw connection, for sensor/actuator boxes with M12 metal thread or QUICKON connection and master cable connection, for 4, 6, or 8 slots

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### Master cable ring

Master cable ring - SACB-12X0,5/ 3X1,0-50,0 PUR - 1503360

<https://www.phoenixcontact.com/pc/products/1503360>



Master cable for sensor/actuator boxes, with PE conductor, unshielded, material PUR/PVC, 15-pos., 12 x 0.50 mm<sup>2</sup> and 3 x 1.00 mm<sup>2</sup>, length: 50 m

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## Screw plug

Screw plug - PROT-MS SCO - 1553129

<https://www.phoenixcontact.com/pc/products/1553129>



M12 screw plug with fast-locking system for unoccupied M12 female connectors of sensor/actuator cables, boxes, and flush-type connectors

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## Torque screwdriver

Torque screwdriver - TSD 04 SAC - 1208429

<https://www.phoenixcontact.com/pc/products/1208429>



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

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## Torque screwdriver

Torque screwdriver - TSD-M 1,2NM - 1212224

<https://www.phoenixcontact.com/pc/products/1212224>



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

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## Adapter insert

Adapter insert - TSD-M SAC-BIT ADAPTER - 1212600

<https://www.phoenixcontact.com/pc/products/1212600>



Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

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## Tool

Tool - SAC BIT M12-D15 - 1208432

<https://www.phoenixcontact.com/pc/products/1208432>



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive

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## Tool

Tool - SACC BIT M12-D20 - 1208445

<https://www.phoenixcontact.com/pc/products/1208445>



Nut for assembling M12 connectors for assembly with a knurl diameter of 20 mm, for 4 mm hexagonal drive

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## Snap-in markers

Snap-in markers - UC-EM (17,5X9) - 0827490

<https://www.phoenixcontact.com/pc/products/0827490>



Snap-in markers, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID, BLUEMARK ID COLOR, BLUEMARK CLED, BLUEMARK LED, CMS-P1-PLOTTER, PLOTMARK, mounting type: snapped, lettering field size: 17.5 x 9 mm, Number of individual labels: 20

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## Snap-in markers

Snap-in markers - UC-EM (17,5X9) CUS - 0828238

<https://www.phoenixcontact.com/pc/products/0828238>



Snap-in markers, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snapped into marker carrier, lettering field size: 17.5 x 9 mm, Number of individual labels: 20

# Sensor/actuator box - SACB-6/12-L-C SCO

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## Snap-in markers

Snap-in markers - UCT-EM (17,5X9) - 0801491

<https://www.phoenixcontact.com/pc/products/0801491>



Snap-in markers, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped, lettering field size: 17.5 x 9 mm, Number of individual labels: 24

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## Snap-in markers

Snap-in markers - UCT-EM (17,5X9) CUS - 0801575

<https://www.phoenixcontact.com/pc/products/0801575>



UniCard sheet, for labeling devices from other manufacturers, for overview table see download area, labeled according to customer specifications

# Sensor/actuator box - SACB-6/12-L-C SCO

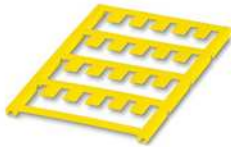
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## Snap-in markers

Snap-in markers - UC-EM (17,5X9) YE - 0827494

<https://www.phoenixcontact.com/pc/products/0827494>



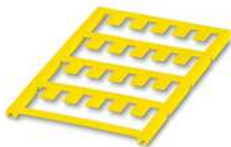
Snap-in markers, Sheet, yellow, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, lettering field size: 17.5 x 9 mm, Number of individual labels: 20

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## Snap-in markers

Snap-in markers - UC-EM (17,5X9) YE CUS - 0828239

<https://www.phoenixcontact.com/pc/products/0828239>



Snap-in markers, can be ordered: by sheet, yellow, labeled according to customer specifications, mounting type: snapped into marker carrier, lettering field size: 17.5 x 9 mm, Number of individual labels: 20

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## Snap-in markers

Snap-in markers - UCT-EM (17,5X9) YE - 0801492

<https://www.phoenixcontact.com/pc/products/0801492>



Snap-in markers, Sheet, yellow, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped, lettering field size: 17.5 x 9 mm, Number of individual labels: 24

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## Snap-in markers

Snap-in markers - UCT-EM (17,5X9) YE CUS - 0801576

<https://www.phoenixcontact.com/pc/products/0801576>



UniCard sheet, for labeling devices from other manufacturers, for overview table see download area, labeled according to customer specifications

# Sensor/actuator box - SACB-6/12-L-C SCO

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<https://www.phoenixcontact.com/pc/products/1516810>

## Screwdriver

Screwdriver - SZK PZ1 VDE - 1206450

<https://www.phoenixcontact.com/pc/products/1206450>



Screwdriver, PZ crosshead, VDE insulated, size: PZ 1 x 80 mm, 2-component grip, with non-slip grip

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## Torque screwdriver

Torque screwdriver - TSD 25 SAC - 1212315

<https://www.phoenixcontact.com/pc/products/1212315>



Torque screwdriver, with preset torque of 2.5 Nm and 4 mm hexagonal drive for the pressure nut of the connector hood

# Sensor/actuator box - SACB-6/12-L-C SCO

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<https://www.phoenixcontact.com/pc/products/1516810>

## Torque screwdriver

Torque screwdriver - TSD-M 3NM - 1212225

<https://www.phoenixcontact.com/pc/products/1212225>



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 1.2 - 3 Nm

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## Tool

Tool - SAC BIT HOOD-W 24 - 1212486

<https://www.phoenixcontact.com/pc/products/1212486>



Nut for assembling pressure nuts with 24 mm wrench size, for 4 mm hexagonal drive

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<https://www.phoenixcontact.com/pc/products/1516810>

## Screw insert

Screw insert - SF-BIT-PZ 1-50 - 1212591

<https://www.phoenixcontact.com/pc/products/1212591>



Screw bit, PZ crosshead, E6.3-1/4" drive, size: PZ 1 x 50 mm, hardened, suitable for holder according to DIN 3126-F6.3/ISO 1173

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## DIN rail adapter

DIN rail adapter - UTA 107 - 2853983

<https://www.phoenixcontact.com/pc/products/2853983>



Universal DIN rail adapter, for screwing on switchgear

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## Screwdriver

Screwdriver - SZS 0,4X2,5 VDE - 1205037

<https://www.phoenixcontact.com/pc/products/1205037>



Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

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## Screw insert

Screw insert - SF-BIT-SL 0,45X2,4-70 - 1212607

<https://www.phoenixcontact.com/pc/products/1212607>



Screw bit, slotted, E6.3-1/4" drive, size: 0.45 x 2.4 x 70 mm, hardened, suitable for holder according to DIN 3126-F6.3/ISO 1173

# Sensor/actuator box - SACB-6/12-L-C SCO



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## Screwdriver

Screwdriver - SF-M BH - 1212070

<https://www.phoenixcontact.com/pc/products/1212070>



Bit screwdriver, with 1/4" quick-action chuck, handle length 119 mm, 2-component handle, with non-slip grip, suitable for bits according to DIN 3126-C 6.3 and E 6.3/ISO 1173, magnetic

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