

6. Under Floor Installation

With the introduction of underfloor installation in modern office environments, it is now easy to install inconspicuous power outlets, passive data connections and active installation components throughout – with minimal space requirements.

For underfloor installation we recommend using a vertical MICROSENS installation component model. These models offer optimum cabling management technology without RJ-45 cables getting in the way of neighboring installation units. The TP connector cables point directly up through the openings in the floor tank cover.







6.1. Installation Sets for Ackermann Underfloor Systems

The MS140026 and MS140027 sets are needed to install MICROSENS System 45 x 45 installation components in an OBO BETTERMANN underfloor system. Both sets can accommodate three 45 x 45 modules. Which set is required, depends on the specific device outlet in question.



Image	Remark	Art. No.
	Installation set consisting of socket (165 mm length), device support and 1x 45 mm blind cover Scope of delivery: parts pre-assembled	MS140026
	Installation set consisting of socket (208 mm length), device support, 1x 45 mm blind cover, 1x socket cover Scope of delivery: parts pre-assembled Special installation for G6 switch	MS140027-G6
	Installation set consisting of socket (208 mm length), device support, 1x 45 mm blind cover, 1x socket cover Scope of delivery: parts pre-assembled Installation set for G3-G5 switch	MS140027
	Replacement-/individual part for MS140026 consisting of device support and blind cover	MS140024
	Replacement-/individual part for MS140027 consisting of device support, 45 mm blind cover, socket cover	MS140025
	Replacement-/individual part for MS140027 consisting of one device support	MS140027-1

6.2. Ackermann Sockets

Socket	Image	Remark	Suitable MICROSENS Installation Set
GES2		For installation of MS140026 (1x)	MS140026
GES4		For installation of MS140026 (up to 2x)	MS140026
GES6		For installation of MS140026 (up to 3x)	MS140026
GESR7		For installation of MS140026 (up to 2x) and MS140027 (1x)	MS140026 MS140027
GES9		For installation of MS140027 (up to 3x)	MS140027
GRAF9		For installation of MS140027 (up to 3x)	MS140027

MICROSENS Micro Switch in OBO BETTERMANN Floor Tank



Floor tank (open)






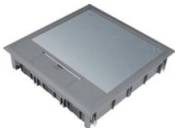

Floor tank (closed)

6.3. electraplan Supply Units


All the electraplan supply units listed below are used in combination with an MS140021-45 installation set. The casing included in the set is fitted with a 45 mm snap-on rail to which all MICROSENS installation components can be simply attached – without the need for further tools.

For older electraplan supply units ("hinged cover"), which were available until 2008, you will need to use an **MS140021-AB** set which includes a device casing specially designed to match this particular model.



Supply Unit	Image	Remark
VR10		For installation of MS140021-45 (1x)
VR12		For installation of MS140021-45 (up to 3x)
VANR12		For installation of MS140021-45 (up to 3x)
VQ12		For installation of MS140021-45 (up to 3x)
EKQ12		For installation of MS140021-45 (up to 3x)

Ordering Information

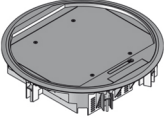
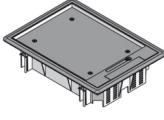
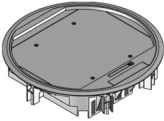
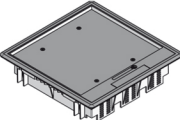

Image	Remark	Art. No.
	Installation set for Hager (electraplan), consisting of a device casing, snap-on rail and 2x 45 mm blind covers	MS140021-45

6.4. PUK Underfloor Systems


All the PUK underfloor systems listed below are used in combination with an **MS140121-KU** installation set. The set includes a casing which is fitted with a 45 mm snap-on rail to which all 45 x 45 installation components can be simply attached – without the need for further tools.



Supported Underfloor Systems

Type	Image	Remark
UEKD2-R		For installation of MS140121-KU (up to 2x)
UEBD2-R		
UEKD2-V		For installation of MS140121-KU (up to 2x)
UEBD2-V		
UEKD3-R		For installation of MS140121-KU (up to 3x)
UEBD3-R		
UEKD3-V		For installation of MS140121-KU (up to 3x)
UEBD3-V		
UEKDD-V-E		For installation of MS140121-KU (up to 3x)

Ordering Information

Image	Remark	Art. No.
	Installation set for PUK (three-part), consisting of device casing and 2x 45 mm blind cover	MS140121-KU



MS140121-KU installation set for PUK underfloor systems



Micro Switch installed in an MS140121-KU installation set

6.5. Installation Set for PUK Underfloor Systems, for Improved Heat Dissipation Performance



MICROSENS has developed a new installation set for PUK underfloor systems specially designed to achieve improved heat dissipation performance. The installation set is equipped with a 45 mm snap-on rail to which all 45 x 45 installation components can be simply attached – without the need for further tools.

The set includes a metal mounting bracket and a ½ blind cover



Micro Switch installed in an MS140121-GT

Ordering Information

Image	Remark	Art. No.
	Two-component installation set for PUK, consisting of a device support and ½ blind cover in pure white	MS140121
	Two-component installation set for PUK, consisting of a device support and ½ blind cover in graphite grey	MS140121-GT



MS140121 device support without blind cover

7. Industrial Installations

Industrial applications generally pose a special challenge when it comes to physically installing active components. MICROSENS offers a range of accessories which are ideally suited to these areas of application.

7.1. Hat Rail Installations

MICROSENS offers several different sets for installing Micro Switches in hat rail systems (e.g. in distribution panels). These are used to snap the components onto a 35 mm DIN rail. An installation set consists of an adapter plate (which varies depending on whether you are using Fast Ethernet or Gigabit Ethernet) and a plastic bracket designed for 35 mm DIN rails. The plastic brackets can be mounted at different 90° angles.

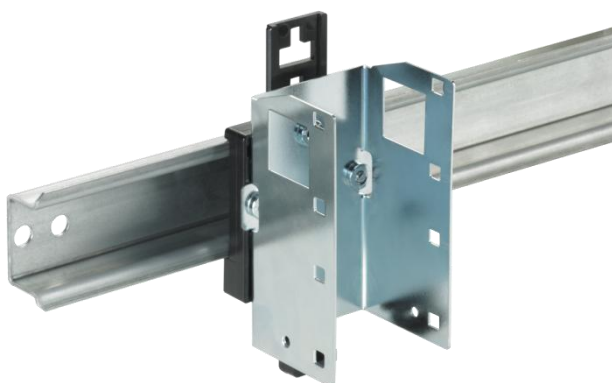




Image	Remark	Art. No.
	Hat rail bracket for 45 x 45 components (Fast Ethernet), designed for 35 mm DIN rails, can be screwed onto the device (factory assembly) *The switch is aligned parallel to the hat rail	MS140805
	Hat rail bracket for 45 x 45 components (Generation 6), designed for 35 mm DIN rails, device is snapped into place *The G6 switch can be aligned either horizontally or vertically	MS140805-G6



Horizontal switch installation on a DIN rail



Micro Switch – vertical version + MS140805-G6 – mounted on a hat rail*

*Also available in a ruggedized version to accommodate a broader range of temperatures

8. Furniture Installation

For users who do not have any wall ducts or floor tanks installed, or have no desire to install them subsequently, this category offers a wealth of solutions. Here you will find practical, easy-to-install options and attractive designs for numerous applications, including office desks, laboratories, cupboards and counter tops.





8.1. Furniture Inlet Casing

This installation set is easily built in by simply inserting it into a specially-made opening set into the surface of the respective item of furniture. This space-saving and stylish solution allows a Micro Switch to be accommodated close to the user. MICROSENS offers a choice of two models depending on the depth of the inlet: One with cable outlets at the rear and one with lateral cable outlets – both solutions provide plenty of space for accommodating the cabling. An additional fixing set is also optionally available.

Examples of different installation options: Set into a desk, cupboard or counter top.

Please refer to page 50f for a list of components which can be integrated into these additional modules.



Image	Remark	Art. No.
	Integrated furniture chassis with five System 45 x 45 spaces for fitting MICROSENS 45 x 45 installation components and/or passive power or data sockets, polished chrome-plated steel cover, cable exit on rear side, for table tops with top thickness 10...24 mm	MS140128R-5
	Integrated furniture chassis with five System 45 x 45 spaces for fitting MICROSENS 45 x 45 installation components and/or passive power or data sockets, polished chrome-plated steel cover, cable exit on the side, for table tops with top thickness 10...24 mm	MS140128S-5
	Mounting set for MS140128S/R	MS140128-FAST

*Accessories on p. 50f






MS140128R/2-5 ready-to-use desk installation

8.2. Retractable Modular Aluminum Pillar

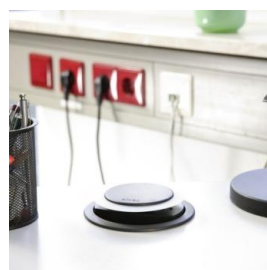
This installation set is an excellent solution for conference rooms as the whole unit, including all the active equipment, simply retracts into the table. Due to the 45 x 45 socket rail design, all MICROSENS installation components are perfectly housed in the chassis which also offers plenty of space for additional modular components, such as power outlets. The cover is available in either graphite grey or silver.

Please refer to page 50f for a list of components which can be integrated into these additional modules.



Image	Remark	Art. No.
	For up to four 45 x 45 modules, set includes chassis, 2x ½ 45-blind covers and a 45-blind cover Color: graphite grey	MS140122-GT-4
	For up to five 45 x 45 modules, set includes chassis, 2x ½ 45-blind covers and a 45-blind cover Color: graphite grey	MS140122-GT-5
	For up to six 45 x 45 modules, set includes chassis, 2x ½ 45-blind covers and a 45-blind cover Color: graphite grey	MS140122-GT-6
	For up to seven 45 x 45 modules, set includes chassis, 2x ½ 45-blind covers and a 45-blind cover Color: graphite grey	MS140122-GT-7
	Cover: graphite grey	MS140124-GT
	Cover: silver	MS140124-AL

*Accessories on p. 50f.



MS140122 pillar, retracted in table



Micro Switch installed in an MS140122-GT pillar

9. Wall Installation

It is important to distinguish between the following types of wall installation:

- **Hollow wall installation:** For a hollow wall installation the socket is inserted into an opening which has been specially drilled to size. The device support, switch and cover frame are then mounted accordingly.



- **Concealed installation:** This option involves plastering the socket into the wall whilst using a cover to protect the inside of the socket from dirt. The device support, switch and cover frame are then mounted accordingly.



- **Surface mounting:** Surface mounting includes all installations carried out on top of the actual wall surface. The big advantage of this type of installation is the low expenditure required.



9.1. Installation Set for Hollow Wall Installation

This hollow wall installation set consists of four components specially designed for compatibility with MICROSENS' System 45 x 45 and offering plenty of space for integrating MICROSENS installation components. This set is designed with a triple 45 mm frame, allowing for easy access when connecting up power and fiber optic cables. The set also includes one blind cover.

You can also install an optional locking bar to secure your Micro Switch.

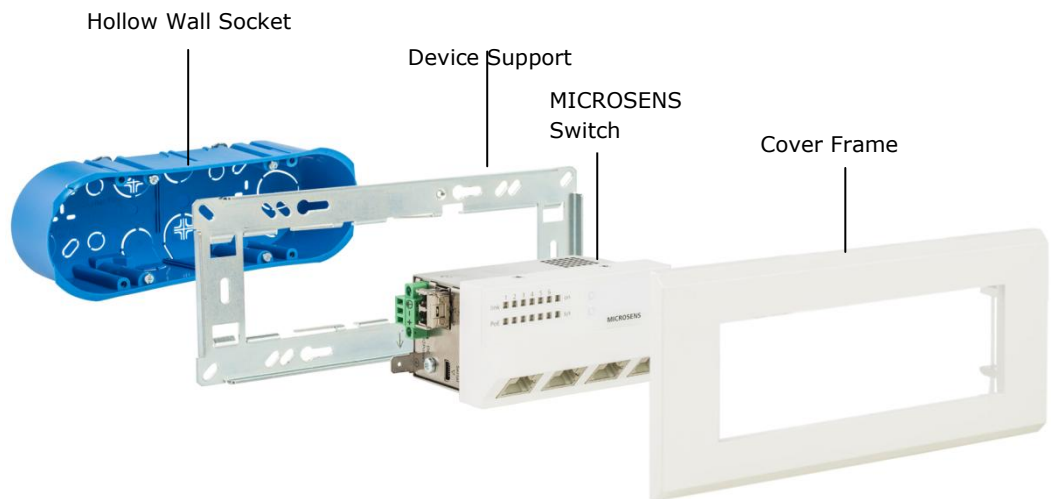




Image	Remark	Art. No.
	<p>Hollow wall socket triple, support plate, cover frame and blind cover, pure white</p> <p>Socket dimensions: 184 x 67 x 50</p>	MS140040HW2
	Locking device for MICROSENS 2-socket + 3-socket adapter consisting of one locking bar and 2 screws	MS140099



* Further colors upon request



Micro Switch with cover installed in a hollow wall socket

9.2. Installation Set for Concealed Wall Installation

This concealed wall installation set consists of four components specially designed for compatibility with MICROSENS' System 45 x 45, offering plenty of space for integrating MICROSENS installation components. This set is designed with a triple 45 mm frame, allowing for easy access when connecting up power and fiber optic cables. The set also includes one blind cover.

You can also install an optional locking bar to secure your Micro Switch.



Image	Remark	Art. No.
	Concealed Wall socket triple, support plate, cover frame and blind cover, pure white Socket dimensions: 180 x 67 x 53	MS140040UP2
	Locking device for MICROSENS 2-socket + 3-socket adapter consisting of one locking bar and 2 screws	MS140099

* Further colors upon request



Micro Switch with cover installed on a hollow wall socket

9.3. Installation Set for KAISER Device Casings

This two-component set contains an adapter plate with a 45 x 45 track which can be used to insert a Micro Switch and corresponding cover frame without the need for further tools. The adapter plate has been specially developed for KAISER device casings. An overview of matching sockets is available on the next page.

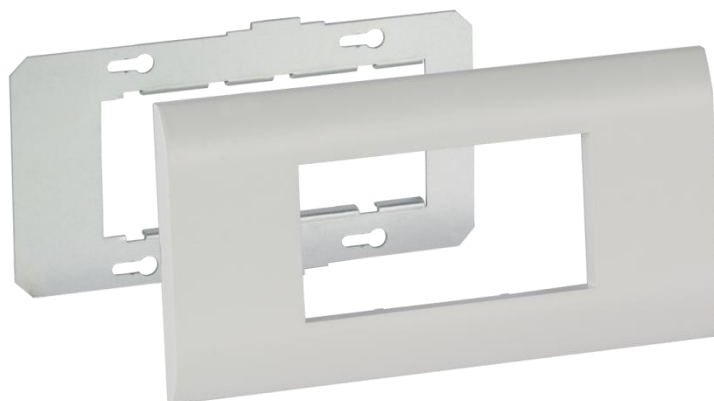



Image	Remark	Art. No.
	Installation set for KAISER device casings consisting of an adapter plate and suitable duplex cover frame	MS140045


* Further colors upon request







Micro Switch with cover installed in a hollow wall socket

9.4. Alternative Hollow Wall, Concealed and Surface-Mounted Sockets

F-tronic

Image	Type/Article No. Dimensions L x W x D (mm)	Remark	Suitable MICROSENS Installation Set
	E118 143 x 67 x 47	<ul style="list-style-type: none"> • Suited for hollow wall and concealed installation • When installing, use core cutter with edge countersink without fail • Burr hole Ø 2x 68 mm 	MS140045


KAISER

Image	Type/Article No. Dimensions L x W x D (mm)	Remark	Suitable MICROSENS Installation Set
	9062-94 143 x 67 x 75	<ul style="list-style-type: none"> • Electronic-Socket for: hollow walls and concealed installation (deep version, air-tight) • Color: orange • Burr hole Ø 2x 68 mm 	MS140045
	9062-74 143 x 67 x 75	<ul style="list-style-type: none"> • Electronic-Socket for: hollow walls and concealed installation (deep version, air-tight) • Color: white • Burr hole Ø 2x 68 mm 	MS140045
	9062-02 143 x 67 x 47	<ul style="list-style-type: none"> • Electronic-Socket for: hollow walls and concealed installation • Color: orange • Burr hole Ø 2x 68 mm 	MS140045
	9062-77 143 x 67 x 47	<ul style="list-style-type: none"> • Electronic-Socket for: hollow walls and concealed installation • Color: white • Burr hole Ø 2x 68 mm 	MS140045

9.5. Rapid 45 Surface Installation Set

The perfect set for easily installing a MICROSENS Micro Switch. This model, which is simple in design and very easy to install, offers sufficient storage space to be able to perfectly hide all the required cabling.



Image	Remark	Art. No.
	Set consisting of 45 x 45 installation duct with top and end pieces for closure, dimensions 53 x 100 x 250 mm, pure white RAL9010	MS140090
	Set consisting of 45 x 45 installation duct with top and end pieces for closure, dimensions 53 x 100 x 330 mm, pure white RAL9010	MS140090-330
	Special model designed for POE (more space for the required power supply)	

*Also available in longer version (upon request)



Micro Switch installed in MS140090

9.6. Universal Modular Aluminum Chassis

MICROSENS' versatile, modular Aluminum-chassis is the ideal solution for all workstations which cannot be supplied via a wall duct or floor tank.



Universal mounting options include:

- Wall/surface mounting
- Desk mounting (using a desk clamp)
- Mounting underneath the desk top
- Mounting in a raised floor

The chassis has been specially designed for compatibility with MICROSENS' System 45 x 45 and can be accessed from the front and both sides. Various lengths are available, in steps corresponding to the 45 modules. Please refer to page 50f for details on matching accessories, such as cable feeders, passive module components and corresponding installation brackets.

Upon request, customer-specific configurations can be built either using MICROSENS installation components or passive power and data connection equipment.



Image	Remark	Art. No.
 MS140131-GT-x Graphite grey	For up to four 45 x 45 modules, includes chassis and 2x 45-blind cover	MS140131-GT/-4
	For up to five 45 x 45 modules, includes chassis and 2x 45-blind cover	MS140131-xx-5
	For up to six 45 x 45 modules, includes chassis and 2x 45-blind cover	MS140131-xx-6
	For up to seven 45 x 45 modules, includes chassis and 2x 45-blind cover	MS140131-xx-7
 MS140131-x pure white	For up to eight 45 x 45 modules, includes chassis and 2x 45-blind cover	MS140131-xx-8
	For up to nine 45 x 45 modules, includes chassis and 2x 45-blind cover	MS140131-xx-9
	For up to ten 45 x 45 modules, includes chassis and 2x 45-blind cover	MS140131-xx-10
	For up to eleven 45 x 45 modules, includes chassis and 2x 45-blind cover	MS140131-xx-11

*Accessories and brackets on p. 50f

Four free 45 x 45 module sockets are required to be able to install an MS700710 power supply in an MS140131-xx-xx casing. Installation in combination with a Micro Switch provides a total of at least six 45 x 45 modules. The MS700701 power supply is an exception as this only requires three free slots.



Micro Switch installed with a power supply in an MS 140131-GT-8

If the Micro Switch is installed with a downlink, this also requires one free 45 x 45 module slot in the MS140131-xx-xx casing.






Micro Switch installed with a downlink in an MS140131-GT-8






Micro Switch 230 VAC (internal power supply) installed in an MS140131-GT-5 casing with table clamp

10. System 45 x 45 Accessories





10.1. Blind Covers

Image	Remark	Article No.
	Blind cover System 45 x 45, pure white	MS140033-RW
	Blind cover System 45 x 45, graphite grey	MS140033-GT
	Blind cover System 45 x 45, Aluminum color	MS140033-AL
	Blind cover 1/2 System 45 x 45, pure white	MS140034-RW
	Blind cover 1/2 System 45 x 45, graphite grey	MS140034-GT











10.2. Power Sockets

Image	Remark	Article No.
	Schuko socket 45°, graphite grey, RAL 7021	MS140174-GT
	Schuko socket 45°, pure white	MS140174-RW
	Schuko socket 45°, Aluminum color	MS140174-AL






10.3. Cable Feeds

Image	Remark	Article No.
	Opening for miniature cable duct 20 x 20 mm, graphite	MS140162-GT
	With integrated Schuko socket, graphite	MS140150-GT
	With cable conduit 2x Ø 13 mm + 4x Ø 6 mm, graphite grey	MS140161-GT
	With cable conduit per hood, graphite grey	MS140160-GT

10.4. More System 45 x 45 Components

Image	Remark	Article No.
	Schuko plug, male, System 45 x 45	MS140150-GT
	Schuko plug, female, System 45 x 45	MS140151-GT
	Wieland-connection, male, 1/2 System 45 x 45	MS140153-GT
	Wieland-connection, female, 1/2 System 45 x 45	MS140154-GT
	Wieland snap-in connection, 1/2 System 45 x 45	MS140155-GT
	Wieland snap-in connection, System 45 x 45	MS140156-GT
	Wieland snap-in for two connections, System 45 x 45	MS140157-GT
	GEIM SCCR002/14 Wieland-connection, male	
	GEIM SCCR001/14 Wieland-connection, female	
	Device power cable GST18-3S, female, Schuko plug, 3x 2,5mm² black	MS190105

10.5. Mounting Options for MS140131

Image	Remark	Article No.
	Under table installation set	MS140142
	Intermediate set, support for two chassis	MS140143
	Screw clamp for mounting on a table	MS140144
	DIN-rail support	MS140145
	Support magnet, one piece. A minimum of two units is required.	MS140146



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