Brüel & Kjær
BEYOND MEASURE

Brüel & Kjær Vibro
a spectris company

spectri
Специалистите по шум и вибрации
ISO 9001:2008 BUREAU VERITAS Certification

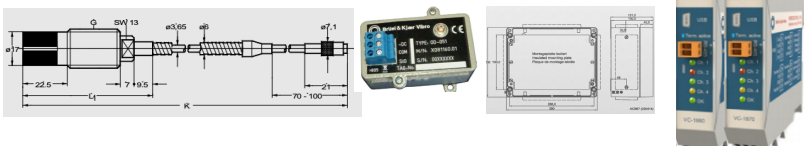
ОФЕРТА № BG-20-Б012.1/03.01.2020

Индикативно предложение по пазарна консултация № 42571

Клиент:

"АЕЦ Козлодуй" ЕАД
Управление "Търговско"
Г-н Христо Пачев
Отдел "Маркетинг и доставки"
тел. 0973 7 61 40
факс: -
e-mail: HPatchev@npp.bg

Гама: **Brüel & Kjær**



ТИП	Ваш №	Описание	бр.	лв., без ДДС	ОБЩО лв. без ДДС
	Доставка на оборудване, производство на Brüel & Kjær Vibro				
SD-161-B6-C100-D10-E1-F0-PCA1E650_FFA1E650-	***1***	- Датчик безконтактен индуктивен, L=100mm, с измервателен обхват 8 mm, вграден кабел 1 m	**9**	4105.00	**36945.00**
EC-001/40/0	***2***	- Удължителен кабел за датчика - 4 m	**10**	815.00	**8150.00**
OD-162	***3***	- Осцилатор за SD-161	**9**	4620.00	**41580.00**
AC-2106 + AC-2107/25/2	***4***	- Присъединителна кутия	**2**	2410.00	**4820.00**
EL3016	***5***	- Кабел за виброконтрол, многожилен - усукани двойки, двойно екраниран - до COMPASS шкаф	**300**	58.00	**17400.00**
VC-1870	***6***	- Модул за виброконтрол, тип VC-1870	**5**	4620.00	**23100.00**
AC-4111	***7***	- Захранващ модул към VC-1870	**5**	230.00	**1150.00**
VC-1801	***8***	- Релеен модул към система VC-1870	**5**	1600.00	**8000.00**
	-	Транспорт (куриерска доставка), застраховка	**1**	820.00	**820.00**
				ОБЩО, без ДДС	**141965.00**
					BGN

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Допълнителни данни:

1	**Обща стойност, лв. без ДДС:** 141965.00
3	**Срок за доставка/наличност:** до 40 раб. дена след поръчка/договор
3	**Условие на доставка: CPT АЕЦ - Козлодуй**
4	**Гаранционни условия** - 12 месеца от датата на доставка (не важи за механични наранявания и неправилна експлоатация). Срок за отстраняване на гаранционен дефект - до 20 раб. дена след получаване на стоката в сервиза на СПЕКТРИ ЕООД.
5	**Производител:** Brüel & Kjær Vibro GmbH. Приложено пълномощно.
6	**Условие на плащане:** до 30 дни след изпълнение
7	**Долументи придружаващи стоката:** (а) Пакетиращ лист, (б) Техническа документация на Английски език, (в) Приемо-предавателен протокол, (в) Фактура.
8	**Банкови реквизити, IBAN:** УниКредит Булбанк – София, Клон "Жолио Кюри", BIC код: UNCRBGSF, IBAN - лева: BG84 UNCR 9660 1045 1440 01
9	**ЕИК и ИН по ДДС:** 175208219 / BG175208219
10	**Телефон** 02-9630464, **факс** 02-9631074, **e-mail** spectri@spectri.net, **лице за контакти:** инж. Борис Михайлов
11	**Валидност на офертата** - 3 месеца
-	Точен адрес за кореспонденция: София-1700, ул. „Баку" № 5А, СПЕКТРИ ЕООД

03.01.2020г.
гр. София

С уважение,
инж. Борис Михайлов
Управител СПЕКТРИ ЕООД
spectri@spectri.net
www.spectri.net

Brüel & Kjær Vibro GmbH
Leydheckerstr. 10
64293 Darmstadt
Germany
Phone: +49 6151 428-0
Fax: +49 6151 428-1000
info@bkvibro.de
www.bkvibro.com

Brüel & Kjær Vibro GmbH, Leydheckerstr. 10, 64293 Darmstadt

Our Ref:
Contact: H Delannoy
Phone: +49 6151 428-2930
Fax: +49 6151 428-

To Whom it may concern

Date: 06/01/2020

Dear valued customer,

We, Brüel & Kjær Vibro GmbH, a company, organized and existing under the laws of Germany and having our business office at:

Leydheckerstraße 10
64293 Darmstadt
Germany

hereby certify that the following Bulgarian company

Spectri Ltd.
St. Teodosij Turnovski Str. 30
1421 Sofia
Bulgaria

is our authorized distributor in the Bulgarian market.

In general, Spectri Ltd. is authorized to lead our commercial efforts and provide warranty support, but in no way has the authority to bind Brüel & Kjær Vibro GmbH in any way.

This certificate is valid as long as the Distribution Agreement signed between Brüel & Kjær Vibro GmbH and Spectri Ltd. remains validly in force and effect.

Sincerely,

Заличено на основание ЗЗЛД

Marcel van Helten, Preside

Brüel & Kjær Vibro GmbH
Plant Denmark
Skodsborgvej 307 D
2850 Nærum
Denmark

Phone: +45 77 41 25 00
Fax: +45 45 80 29 37
VAT-No. DK 33 02 37 15

Registered office Darmstadt
Darmstadt Commercial Register
No. HRB 6803

Managing Director:
Mark Fleiner
Andrew Cowan
Marcel van Helten

HSBC Trinkaus & Burkhardt AG
EUR IBAN: DE24 3003 0880 0013 8640 04
USD IBAN: DE48 3003 0880 4013 8640 18
BIC: TUBDDEDD

VAT-No. DE 812 272 970
WEEE-Reg.-No. DE 69572330

Brüel & Kjær Vibro

SD - 161 / 164

Berührungslose Wegsensoren
Non-Contacting Displacement Sensors
Capteurs sans contact de déplacement

Messweg - Measuring displacement - Plage de mesure 8 mm

Anwendung

Der berührungslose Wegensor ***ist Bestandteil der Brüel & Kjær Vibro-Wegmesskette***, bestehend aus:

- Berührungslosem Wegsensor
- Verlängerungskabel
- Oszillator

Die Messkette dient zur berührungslosen Wegmessung nach dem Wirbelstrom-Messverfahren.

Application

The non-contacting displacement sensor ***is part of the Brüel & Kjær Vibro displacement measuring chain***, comprising:

- Non-contacting displacement sensor
- Extension cable
- Oscillator

The displacement measuring chain serves for non-contacting displacement measurement according to the eddy-current measuring principle.

Utilisation

Le capteur sans contact de déplacement ***fait partie de la chaîne de mesure de déplacement Brüel & Kjær Vibro*** qui comprend les éléments suivants:

- capteur sans contact de déplacement
- câble prolongateur
- oscillateur

La chaîne de mesure de déplacement sert à la mesure sans contact de déplacement d'après le principe des courants de Foucault.

Beiliegende Sicherheitshinweise für Installation, Inbetriebnahme und Entsorgung müssen berücksichtigt werden!

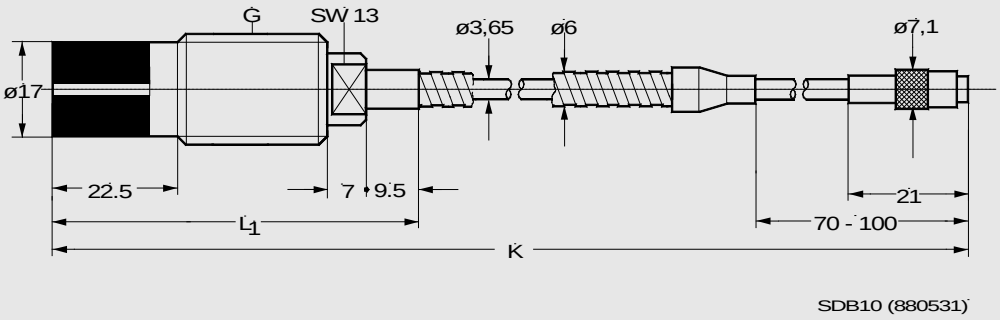
Attached safety instructions for installation, commissioning and disposal must be observed!

Les instructions de sécurité jointes concernant l'installation, la mise en route, et la dépose, doivent être strictement respectées !

Maßzeichnung SD-161

Dimensioned drawing SD-161

Design côté SD-161



Variable Abmessungen

Gewinde G
M20 x 1

Sensorlänge L_1
75 mm ... max. 255 mm

Kabellänge K
0,5 m (-0,1/+0,3)
1 m (-0,2/+0,3)
5 m (-0,6/+0,7)

Variable dimensions

Thread G
M20 x 1

Sensor length L_1
75 mm ... max. 255 mm

Cable length K
0.5 m (-0,1/+0,3)
1 m (-0,2/+0,3)
5 m (-0,6/+0,7)

Dimensions variables

Filetage G
M20 x 1

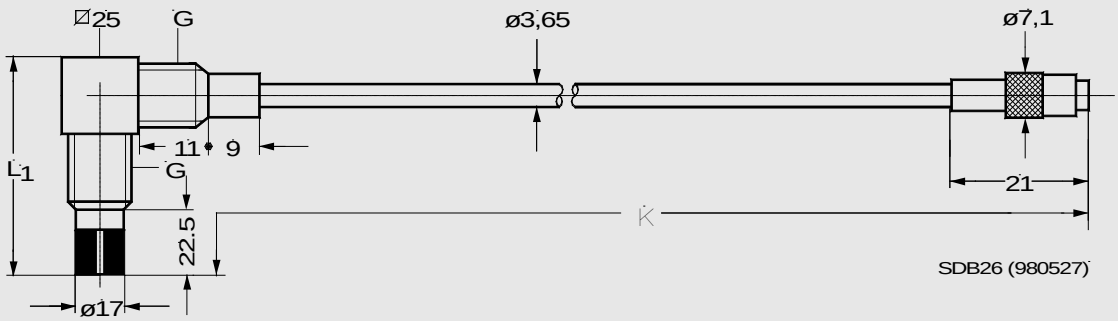
Longueur capteur L_1
75 mm ... max. 255 mm

Longueur du câble K
0,5 m (-0,1/+0,3)
1 m (-0,2/+0,3)
5 m (-0,6/+0,7)

Maßzeichnung SD-164

Dimensioned drawing SD-164

Design côté SD-164



Variable Abmessungen

Gewinde G
M20 x 1

Sensorlänge L_1
50 mm ... max. 150 mm

Kabellänge K
0,5 m (-0,1/+0,3)
1 m (-0,2/+0,3)
5 m (-0,6/+0,7)

Variable dimensions

Thread G
M20 x 1

Sensor length L_1
50 mm ... max. 150 mm

Cable length K
0.5 m (-0,1/+0,3)
1 m (-0,2/+0,3)
5 m (-0,6/+0,7)

Dimensions variables

Filetage G
M20 x 1

Longueur capteur L_1
50 mm ... max. 150 mm

Longueur du câble K
0,5 m (-0,1/+0,3)
1 m (-0,2/+0,3)
5 m (-0,6/+0,7)

Hinweis:

Das Gehäuse des Sensors ist potenzialfrei

Note:

The housing of sensor is potential free.

Nota:

Le corps du capteur est libre de potentiel.

Montagehinweise

Die Montage des Sensors muss entsprechend der „Montageanleitung für Wegmessketten" erfolgen.

Sensoren für die berührungslose Wegmessung sind vorzugsweise an solchen Maschinenteilen zu befestigen, deren Eigenschwingung das Messergebnis nicht verfälschen kann.

Mounting Instructions

The sensor must be installed according to the "Installation instructions for displacement measuring chains".

Sensors for non-contacting displacement measurement are preferrably to be fastened to such machine parts which do not falsify the measuring result by natural frequencies.

Conseils de Montage

Le montage du capteur doit être effectué conformément aux „Instruction de montage pour les chaînes de mesure de déplacement".

Les capteurs destinés à la mesure sans contact de déplacement sont à fixer de préférence sur les parties de machine dont les vibrations propres ne sont pas susceptibles d'influencer la mesure.

Freiräume und Mindestabstände für berührungslose Wegsensoren

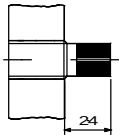
Berührungslose Wegsensoren erzeugen ein hochfrequentes elektromagnetisches Wechselfeld. Befindet sich in diesem Feld ausser dem Messobjekt elektrisch leitendes Material, wird das Messergebnis verfälscht. Daher sind beim Einbau der berührungslosen Wegsensoren nachfolgende Freiräume und Mindestabstände eingehalten:

Free space and minimum distances for non-contacting displacement sensors

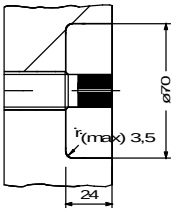
Non-contacting displacement sensors produce a high-frequency electromagnetic field. If any electrically conductive material apart from the measuring object is within this field, the measuring result will be falsified. Therefore, the following free space and minimum distances must be adhered to during installation of the non-contacting displacement sensors:

Espaces libres et écarts minimaux pour les capteurs sans contact de déplacement

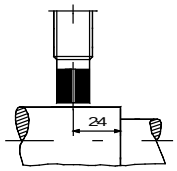
Les capteurs sans contact de déplacement créent un champ électromagnétique à haute fréquence.
La présence dans ce champ d'un élément étranger, conducteur de l'électicité, fausse les mesures. C'est pourquoi il faut respecter les espaces libres et les écarts minimaux énumérés ci-dessous:, lors du montage des capteurs sans contact:



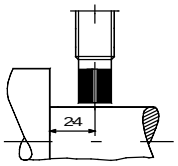
Sensorspitze überstehend
Probe tip projecting
Pointe de capteur excédante



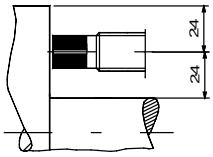
Sensorspitze bündig
Probe tip flush
Pointe de capteur à fleur



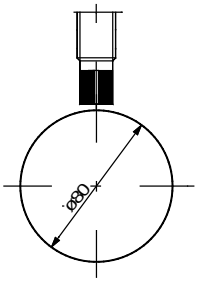
Abstand zum Wellenende
> 100 % Bedeckung
Distance to shaft end
> 100 % coverage
Distance à la fin ou
collet d'arbre
> 100 % de superposition

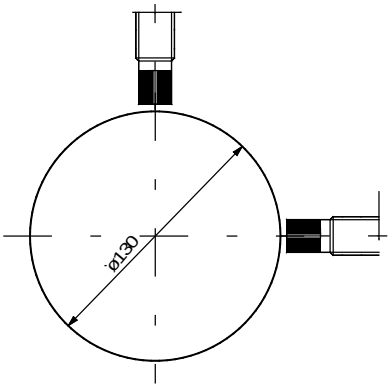


Abstand zur Wellenschulter
Sensor parallel zu elektrisch leitfähigem Material
Distance to shaft shoulder
Sensor parallel to electrically conducting material
Distance à l'épaule d'arbre
Capteur monté en parallèle à un matériel conductif

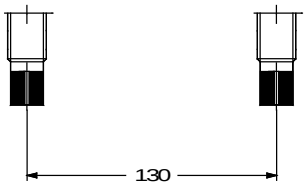


Abstand zur Wellenschulter
Distance to shaft shoulder
Distance à l'épaule d'arbre





Erforderlicher Mindestdurchmesser der Welle
Required minimum diameter of shaft
Diamètre minimal de l'arbre



parallel angeordnete Sensoren
Sensors mounted parallel
Capteurs disposés parallèlement

SD-16x (050615)

Müssen die Freiräume und Mindestabstände konstruktionsbedingt unterschritten werden, ist eine Rücksprache mit dem Hersteller erforderlich.

If minimum free spaces and distances cannot be realized by machine design, please contact the manufacturer.

Si, pour des raisons de construction, il n'est pas possible de respecter ces prescriptions, il est vivement recommandé de prendre contact avec un représentant du constructeur.

Technische Daten	Technical Data	Données Techniques
Messgröße relative Wellenschwingung relative Wellenverlagerung	**Measured variable** shaft relative vibration shaft relative displacement	**Grandeur de mesure** vibration relative d'arbres déplacement relatif d'arbres
Messprinzip Wirbelstrom-Verfahren	**Measuring principle** eddy-current principle	**Principe de mesure** capteur à courants de Foucault
Arbeitsfrequenzbereich 0 ... 10 000 Hz	**Working frequency range** 0 ... 10 000 Hz	**Plage de fréquence de travail** 0 ... 10 000 Hz
Weg-Messbereich 2,5 ... 10,5 mm	**Displacement measuring range** 2,5 ... 10,5 mm	**Plage de mesure du déplacement** 2,5 ... 10,5 mm
Material der Sensorspitze Epoxydharz	**Material of sensor tip** epoxy resin	**Matériau de la pointe de capteur** résine d'époxyde
Material der Sensorhülse SD-161 Mat.-Nr.: 1.4301 SD-164 Mat.-Nr.: 1.4541	**Material of sensor sleeve** SD-161 Mat.-No.: 1.4301 SD-164 Mat.-No.: 1.4541	**Matériau du corps de capteur** (pour SD-161) matériau n°. 1.4301 (pour SD-164) matériau n°. 1.4541
Arbeitstemperaturbereich -30 °C ... + 180 °C	**Working temperature range** -30 °C ... + 180 °C	**Plage de température de travail** -30 °C ... + 180 °C
Lagerungstemperaturbereich (in Originalverpackung) -20 °C ... + 70 °C	**Storage temperature range (in original packaging)** -20 °C ... + 70 °C	**Plage de température pour le stockage (dans l´embalage d´origine)** -20 °C ... + 70 °C
Sensor passend zu Oszillator Typ OD - 162	**Sensor suitable for oscillator** type OD - 162	**Oscillateur correspondant** type OD - 162
Gewicht ca. 170 g	**Weight** approx. 170 g	**Poids** env. 170 g

EMV

Die EMV-relevanten Daten für die gesamte Messkette, bestehend aus Wegsensor, dazu passendem Oszillator OD-... und Verlängerungskabel EC-..., finden Sie in den Datenblättern des Oszillators.

EMC

EMC-relevant data for the entire measuring chain consisting of displacement sensor fitting oscillator OD-... and extension cable EC-... are given in the data sheets of the oscillator.

CEM

Vous trouverez dans le fiche techniques de l'oscillateur toutes les donnés importantes concernant la compatibilité électromagnétique pour l'ensemble de la chaîne de mesure, comprenant un capteur de déplacement avec un oscillateur OD-... adéquat et un câble de rallonge EC-...

WEEE-Reg.-Nr. 69572330

Produktkategorie / Anwendungsbereich: 9

WEEE-Reg.-No. 69572330

product category / application area: 9

WEEE-Reg.-N°. 69572330

catégorie de produits / domaine d'application : 9

Brüel & Kjær Vibro

EU-Konformitätserklärung / *EU- Declaration of conformity*

Hiermit bescheinigt das Unternehmen / *The company*

CE

Brüel & Kjær Vibro GmbH
Leydheckerstraße 10
D-64293 Darmstadt

die Konformität des Produktes / *herewith declares conformity of the product*

Wegmesskette / Displacement measuring chain

Typ / *Type*

SD-xxx, EC-xxx und OD-xxx

mit folgenden einschlägigen Bestimmungen / *with applicable regulations below*
EU-Richtlinie / *EU-directive*

2014/30/EU EMV-Richtlinie / *EMC-Directive*

2011/65/EU Richtlinie zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten/ *EU Directive for the restriction of the use of certain hazardous substances in electrical and electronic equipment*

Angewendete harmonisierte Normen / *Harmonized standards applied*

EN 61326-1: 2013
EN 50581 : 2012

Bereich / Division
Brüel & Kjær Vibro GmbH

Unterschrift / Signature
CE-Beauftragter / *CE-Coordinator*

Ort/*Place* **Darmstadt**
Datum / *Date* **09.06.2017**

i. A.
(Niels Karg)

Brüel & Kjær Vibro

Product Specification
VIBROCONTROL 1800 Series

Features

VIBROCONTROL 1800 Series enables cost effective machine protection for all critical rotating equipment with roller element bearing as well as sleeve bearings.

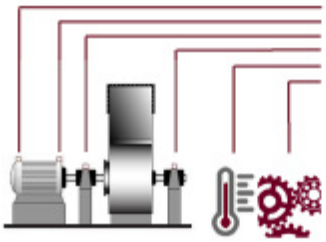
- 4-vibration channels, plus
- 2-channels process & speed
- extremely flexible with modular link concept
- time waveform recording and data storage

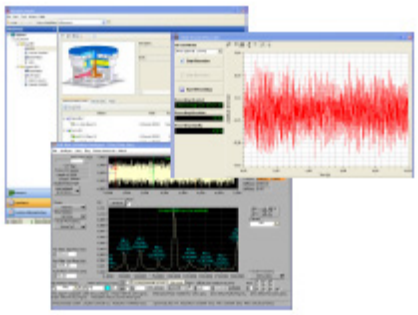
Dedicated solution via 3 types:

- **VIBROCONTROL 1850**
  Acceleration Sensors (CCS)
- **VIBROCONTROL 1860**
  Velocity Sensors
- **VIBROCONTROL 1870**
  Displacement Sensors

Applications

VIBROCONTROL 1800 Series of Vibration Monitors are machine protection devices with 4 real-time vibration input channels, 1 tacho input and 1 process input channel. These vibration monitors are combining protection with condition monitoring of roller bearing machines, by means of a variety of bearing failure detectors like Envelope, Kurtosis and Crest factor. VIBRONCONTROL 1800 offers 4-20 mA outputs, danger and alarm relays, a RS-485 and USB port for communication and time waveform recording of RAW data. Several features support the ISO/EN 13849-1 standard.





Brüel & Kjaer Vibro GmbH
Leydheckerstrasse 10
D-64293 Darmstadt

Phone: +49 6151 428-1400
Fax: +49 6151 428-1401
E-Mail: info@bkvibro.com

Technical Data

6 Input channels:

- 4 configurable vibration sensor inputs:
  VIBROCONTROL 1850 - accelerometers CCS
  VIBROCONTROL 1860 - velocity sensors
  VIBROCONTROL 1870 - displacement sensors
- 1 Input for process data, selectable analogue 4-20 mA, 0-20 mA, 0-22V
- 1 Tacho input for NPN, PNP, AC speed sensor

Sensor types:

- **VIBROCONTROL 1850**
  Accelerometers 10-500 mV/g, type CCS
  Maximum input ±5.4 Vpk
  Transducer Bias 5 mA
  Input Resistance / Impedance ≥ 450 kΩ, 10 nF
- **VIBROCONTROL 1860**
  Velocity sensors 50-100 mV/mm/s
  Maximum input ±6.0/8.0 Vpk
  Input Resistance / Impedance ≥ 450 kΩ, 5 nF
- **VIBROCONTROL 1870**
  Displacement sensors 0.8-8 V/mm
  Maximum voltage input -2 to -22 V
  Peak detector, attack time 1-1,000 ms
  Peak detector, decay time 0.1-100 s
  Input Resistance / Impedance ≥ 450 kΩ, 10 nF

6 Measurement results per vibration channel:

- **2 Overall vibration values**
  Detectors True RMS, Pk-Pk or Pk
  Sample rates 4,800 or 24,000 Hz
  Filter ranges 0.7 Hz to 10 kHz
  Measuring parameter mm/s, m/s^2, g, µm, mm
- **4 Roller bearing condition units**
  Detectors True RMS, 2 Envelope
  Filter ranges 1 - 500 Hz
  Kurtosis/Crest factor acc. VDI 3832

Configurable measuring ranges:

- Full scale vibration measuring ranges up to 1-100 mm/s,1-300 m/s^2,0.1-15 mm Pk Pk

Standard frequency ranges:

- 10 Hz – 1,000 Hz, -1 dB, 24 dB/oct.
- Selectable ranges e.g. 1-300/1,000 Hz
  or multiple filters settings 0.7-10,000 Hz
- **Filter response** High pass and low pass filters; refer to the setup part for the specific parameters for the Cut-off freq., pass band attenuation, Stop band freq. and Stopband attenuation.

Up to 4 configurable outputs:

- **4 Analogue DC outputs**
  Can be configured as 0/4 - 20 mA, 0/2-10 V, Each output can be assigned to any of the measuring parameters.
  Voltage load: min. 10 kΩ
  Current load:. max. 400 Ω

  or
- **4 Alarm relay drivers**
  Relay drivers for external coil: With break-function, can be user configured as Alert or Danger with latch function or auto reset.
  Max voltage 30 V
  Max current: 100 mA

Alarm detectors:

- Alert and Danger per each detector with adjustable alarm limits.
  Alert delay time 0 - 100 s
  Danger delay time 0 - 100 s
  Reset time for Alert and Danger 0 - 100 s

Up to 24 additional relays:

(VIBROCONTROL 1801)

- Up to 2 Relay Modules consisting of 12 galvanic isolated relays each. Alert and Danger alarms can be directed to these relays.
  Max voltage: 30 V
  Max current: 100 mA

OK relay:

- 1 galv. isolated redundant relay with break-function (power fail-safe). Danger alarms can be forwarded to this relay, when the monitor is configured as a Protection Monitor according to ISO/EN 13849-1. All system failures, like cable short, cable break and internal system failure, will automatically trip the OK- relay.

Measurement accuracy:

- **Vibration Measurement** ±3.5% of reading ±0,5% of Full Scale setup, typical, @calibration ref: 100Hz, velocity, 25℃, with current LP and HP filter setup.
- **Process Measurement** ±0.75% of reading ±0.5% of Full Scale setup
- **Speed sensors** ±0.5% of reading,
  Pulse speed 1Hz to 30kHz *(RPM depending of pulse per revolutions setup)*
- **Analogue output** ±1.5% of reading ±1% of Full Scale

Test function:
Can be activated digitally or by PC. As default the alarm relays activate and DC outputs increase to the specified test level of 102 %.

Time waveform recording:
Up to 4 input channels can record digital raw data (time waveform) simultaneously to a PC running "Commpact Analyzer". The recording can be done through:

RS-485/LAN (buffered)	Up to 10 kHz
Mini USB (real-time)	Up to 10 kHz

Time waveform recording is user activated and contains scalar values for vibration and process input data at start of recording.

Data storage:
(VIBROCONTROL 1803 /1804)
All input channels can be trended and alarms can be stored when connected to either EtherBridge or directly to a PC running “Compact Analyzer”. VIBROCONTROL 1804 EtherBridge RAM can store trends and time wave-form recordings event or timer based.

Communication:

RS-485 interface	2 screw terminals
Daisy chain, up to 255 units	
USB interface:	Mini USB/B

Remote access through EtherBridge Module (VIBROCONTROL 1803) is possible.

Link Concept modularity:
VIBROCONTRL 1800 Series –all components - Vibration Monitor, EtherBridge, Relay Module, Input and Output Modules can be interconnected by means of DIN rail bus connectors

Front panel:
5 light diodes indicate channel status (green, yellow, red) for each of the 4 vibration input channels, as well as for general system status.

Temperature:
- Operating: -10 °C to +50 °C
- Storage: -40 °C to +85 °C

Housing:
DIN rail enclosure IP20 with screw terminals
- Dimensions: H: 110, W: 23, D: 114 mm
- Weight (measuring module): 160 g

Compliance:
- CE, ISO 13849-1, ISO 10816-3, VDI 3832, API 670

Accessories:
- External Power supply (e.g. AC-4111)
  +24 V DC, ±5 %,
  max. power consumption; 10 W

Ordering Information

VIBROCONTROL 1850

Vibration monitoring unit for accelerometer input	Order Code:	VC-1850
Standard Accelerometer AS-062 (CCS)	Order Code:	AS-062

VIBROCONTROL 1860

Vibration monitoring unit for velocity sensor input	Order Code:	VC-1860
Standard velocity sensor VS-068 (horiz.) or VS-069 (vert.)	Order Code:	VS-068 VS-069

VIBROCONTROL 1870

Vibration monitoring unit for displacement sensor input	Order Code:	VC-1870

Please find alternative sensors out of B&K Vibro´s large portfolio.

Additional modules within the VIBROCONTROL 1800 series – Link Concept

VIBROCONTROL 1801 Relay Module for DIN Rail installation incl. 12 potential free relays 30V	Order Code:	VC-1801
VIBROCONTROL 1803 Ethernet-Bridge incl. RS485, shared RS485/RS232 and LAN	Order Code:	VC-1803
VIBROCONTROL 1804 Ethernet-Bridge & Data Logger incl. 4 GB RAM	Order Code:	VC-1804

Compact Commander Software for Configuration & Diagnostics

Compact Setup - Configuration Software for all VIBROCONTROL 18xx modules	included in delivery
Compact Analyzer - Analyzing Software for stored measuring data	on request

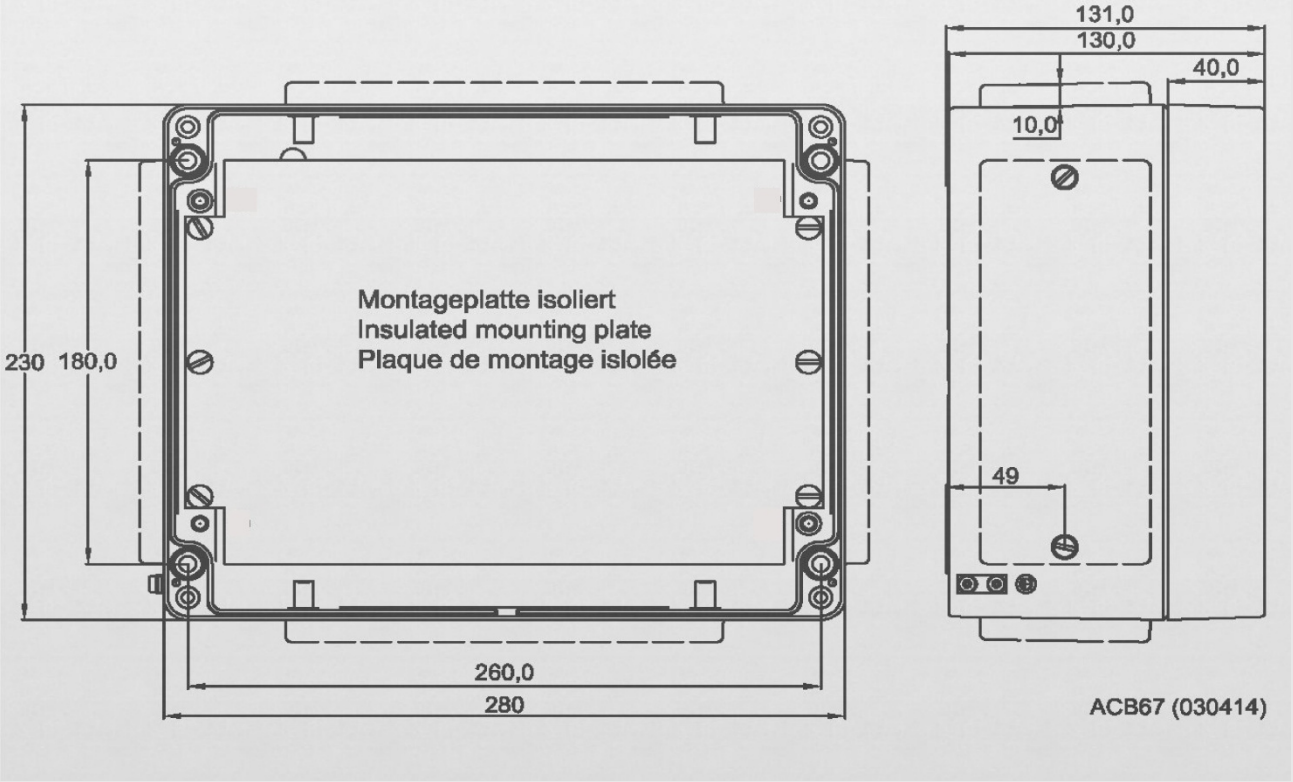
Optional: Accessories

Power Supply 24 VDC Type: DSP 10-24; 230VAC / 24 VDC, 10 W	Order Code:	AC-4111
Field Housing for VIBROCONTROL 1800 components Fibox, Polycarbonat AC-2131		on request
Field Housing for VIBROCONTROL 1800 components IP67, Aluminium AC-2132		on request
Field Housing for VIBROCONTROL 1800 components metal AC-2133		on request

Brüel & Kjær Vibro

AC – 2106

EMV - Schutzgehäuse
EMC - Protective Housing
CEM - Boîtier de protection



* Maße für Befestigungsbohrungen ∅ 7 mm

* Dimension for ∅ 7 mm mounting holes

* Gabarit de fixation ∅ 7 mm

Anwendung

Universalgehäuse zum wahlweisen Einbau von Oszillatoren, Sicherheitsbarrieren oder Reihenklemmen

Application

Universal protective housing for installation and protection of oscillators, safety barriers and terminal strips.

Utilisation

Boîtier de protection universel pour montage des oscillteurs, des barrières de sécurité ou des bornes.

Brüel & Kjaer Vibro GmbH
Leydheckerstraße 10
D-64293 Darmstadt

Tel. : +49 (0)6151 428-1400
Fax : +49 (0) 6151 428-1401
E-Mail : info@bkvibro.com

Technische Daten	Technical Data	Données Techniques
Allgemeines	**General**	**Généralités**
Schutzart	**Protection class**	**Indice de protection**
IP 66, EN 60529	IP 66, EN 60529	IP 66, EN 60529
Umgebungstemperatur	**Ambient temperature range**	**Plage de température admissible**
-55 °C ... 125 °C	-55 °C ... 125 °C	-55 °C ... 125 °C
Gehäuse	**Housing**	**Boîtier**
Werkstoff	**Material**	**Matériau**
Al Si 12, DIN 1725	Al Si 12, DIN 1725	Al Si 12, DIN 1725
Lackierung außen	**External paint colour**	**Peinture extérieure**
RAL 7032	RAL 7032	RAL 7032
Schirmdämpfung	**Shield attenuation**	**Blindage**
min. 40 dBµV bei 20 ... 900 MHz	min. 40 dBµV at 20 ... 900 MHz	min. 40 dBµV pour 20 ... 900 MHz
Gewicht ohne Seitenabdeckungen	**Weight, without side panels**	**Masse du boîtier sans les flasques**
ca. 4 kg	approx. 4 kg	env. 4 kg
Dichtung	**Sealing**	**Joint**
Neusil 1442	Neusil 1442	Neusil 1442
Montageplatte	**Mounting plate**	**Platine de montage**
Werkstoff	**Material**	**Matériau**
Hartgewebe	Laminated plastic	Résine
Größe	**Dimensions**	Dimensions
262 x 180 mm	262 x 180 mm	262 x 180 mm
Dicke	**Thickness**	**Epaisseur**
4 mm	4 mm	4 mm

Der Standard-Lieferumfang besteht aus dem Gehäusekörper mit Deckel, der Montageplatte, diversem Befestigungsmaterial sowie 2 Blind-Seitenabdeckungen und EMV-Dichtungen.

The standard extent of delivery consists of the main housing body with top cover, mounting plate, various mounting fixtures as well as 2 blind side panels and EMC sealing.

L'étendue de livraison standard comprend le boîtier; le couvercle, la platine de montage, 2 flasque aveugles, la visserie et 2 joints CEM.

Mögliche Seitenabdeckungen

Anzahl und Ausführung zusätzlicher Seitenabdeckungen sind bei der Bestellung des Schutzgehäuses unter Benutzung des jeweiligen Bestell-codes anzugeben.

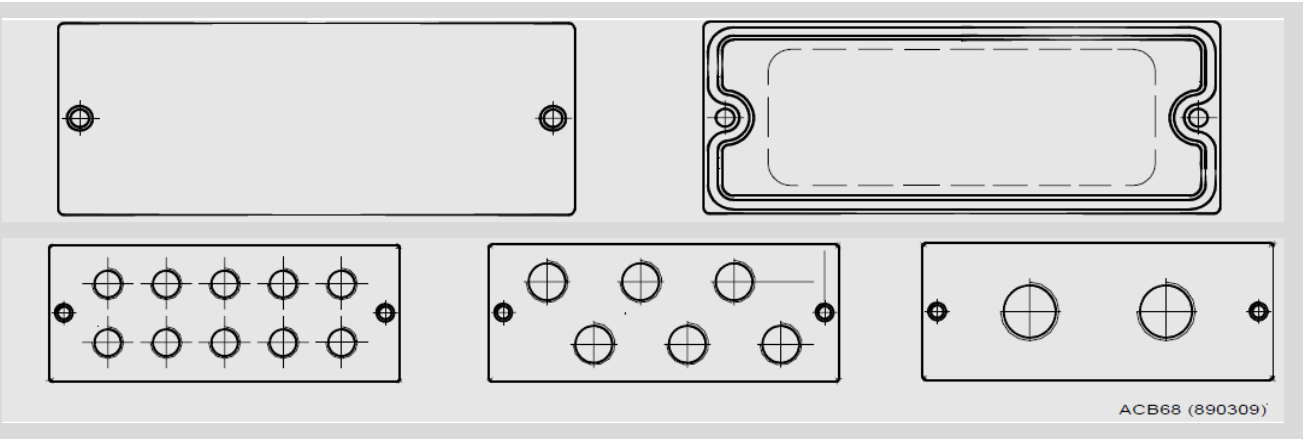
Optional side panels

The quantity and execution of side panels must be specified when ordering by using the respective order coding system.

Panneaux latéraux possibles

Le nombre t l'exécution des panneaux latéraux supplémentaires sont à indiquer dans la commande du boîtier de protection avec le code de commande respectif.

Bestellcode AC-2107/0	Order code AC-2107/0	Code de commande AC-2107/0
Blind-Seitenabdeckung zum Verschließen unbenutzter Seiten oder für kundenspezifische Sonder-bearbeitung.	Blind side panels for blanking off unused sides of the housing or for a customer-specific requirement.	Panneau latéral pour recouvrement des faces latérales non utilisées ou pour traitement spécial par le client.



Bestellcode	Order code	Code de commande
metrisch: AC-2107/16/10	**metric: AC-2107/16/10**	**Metrique : AC-2107/16/10**
Seitenabdeckung mit 10 Gewinde-bohrungen M16 x 1,5	Side panel with 10 x M16 x 1,5 threaded holes	Panneau latéral avec 10 trous taraudés M16 x 1,5
PG: AC-210 /9	**PG: AC-210 /9**	**PG: AC-210 /9**
Seitenabdeckung mit 10 Gewinde-bohrungen PG 9	Side panel with 10 x PG 9 threaded holes	Panneau latéral avec 10 trous taraudés PG 9
metrisch: AC-2107/20/06	**metric: AC-2107/20/06**	**Metrique : AC-2107/20/06**
Seitenabdeckung mit 6 Gewinde-bohrungen M20 x 1,5	Side panel with 6 x M20 x 1,5 threaded holes	Panneau latéral avec 6 trous taraudés M20 x 1,5
PG: AC-210 / 13	**PG: AC-210 / 13**	**PG: AC-210 / 13**
Seitenabdeckung mit 6 Gewinde-bohrungen PG 13,5	Side panel with 6 x PG 13.5 threaded holes	Panneau latéral avec 6 trous taraudés PG 13.5
metrisch: AC-2107/25/02	**metric: AC-2107/25/02**	**Metrique : AC-2107/25/02**
Seitenabdeckung mit 2 Gewinde-bohrungen M25 x 1,5	Side panel with 2 x M25 x 1,5 threaded holes	Panneau latéral avec 2 trous taraudés M25 x 1,5
PG: AC-210 / 21	**PG: AC-210 / 21**	**PG: AC-210 / 21**
Seitenabdeckung mit 2 Gewinde-bohrungen PG 21	Side panel with 2 x PG 21 threaded holes	Panneau latéral avec 2 trous taraudés PG 21

Bohrungen und Bestückungsmöglichkeiten der Montageplatte
Holes and internal layout options for the mounting plate
Trous et possibilités d'équipement de la plaque de montage

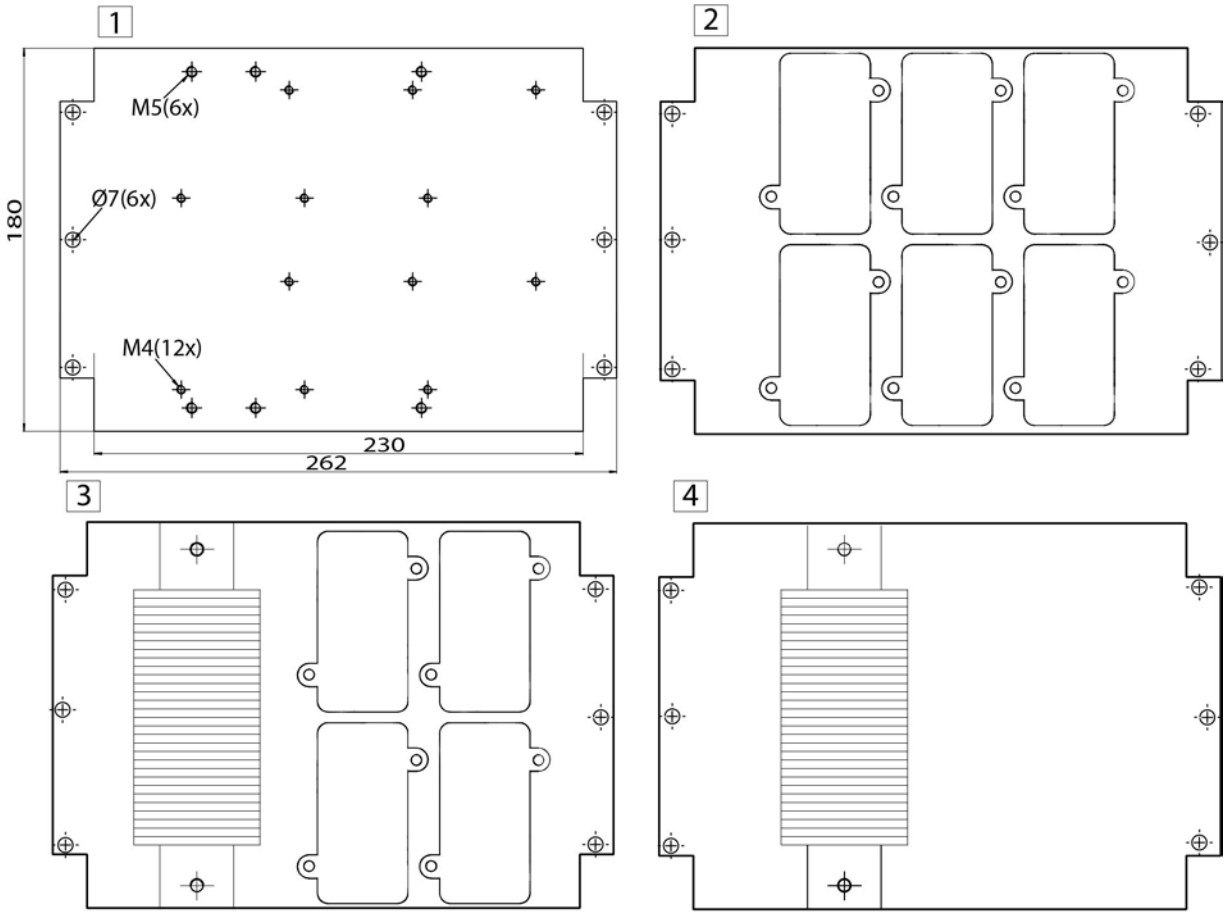


Bild 1	Standardbohrungen	Fig. 1	Standard configuration	Fig. 1	Trous standards
Bild 2	6 Oszillatoren OD-xxx	Fig. 2	6 x OD-xxx oscillators	Fig. 2	6 Oscillateurs OD-xxx
Bild 3	4 Oszillatoren OD-xxx und 1 Klemmleiste (max. 30 Reihenklemmen UK3N)	Fig. 3	4 x OD-xxx oscillators and 1 x terminal strip (max. 30 terminals UK3N)	Fig. 3	4 Oscillateurs OD-xxx et 1 Réglette à bornes (30 bornes WDU 2,5 maxi)
Bild 4	1 Klemmleiste (max. 30 Reihenklemmen UK3N)	Fig. 4	1 x terminal strip (max. 30 terminals UK3N)	Fig. 4	1 Réglette à bornes (30 bornes WDU 2,5 maxi)
ohne Bild	Sicherheitsbarrieren 2 x 3 Sätze für OD-xxx oder 2 x 5 Sätze für AS-011 oder 2 x 3 Sätze für Thermo-widerstände	no figure	Safety barriers 2 x 3 sets for OD-xxx or 2 x 5 sets for AS-011 or 2 x 3 sets for thermo-resistors	sans figure	Barrières de sécurité 2 x 3 jeux pour OD-xxx ou 2 x 5 jeux pour AS-011 ou 2 x 3 jeux pour résistances thermiques

Montage

- Teile auf Vollständigkeit prüfen
- Komponenten entsprechend Einsatzfall auf der Montageplatte montieren
- Seitenabdeckungen montieren, dabei auf exakte Lage der Dichtringe achten
- Gehäuse nicht an schwingenden Gebäude- oder Maschinenteilen befestigen
- Nicht benutzte Kabeleinführungen mit Blindverschraubungen verschließen

Assembly

- Check all components for correctness
- Mount the components on the mounting plate according to the application
- Mount the side panels, taking care of the exact positioning of the sealing rings
- The housing should not be mounted on a vibrating part of the building or machine
- Unused cable entries should be blanked off with blind screw-in plugs

Montage

- S'assurer que tous les éléments soient complets
- Monter les éléments sur la plaque de montage conformément à l'application particulière
- Monter les panneaux latéraux, veiller à ce que les joints soient positionnés correctement
- Ne pas fixer le boîtier aux parties oscillantes du bâtiment ou de la machine
- Fermer les passe-câbles non utilisés à l'aide des bouchons obturateurs

Anschluss

Der Anschluss der Komponenten oder Klemmen ist gemäß den anlagen-spezifischen Stromlauf- bzw. Verdrahtungsplänen durchzuführen.

Connection

Connection of the components or the terminals must be executed according to the wiring or circuit diagram specific to the installation.

Raccordement

Les éléments ou les bornes sont à raccorder con-formément aux schémas des connexions ou des schémas de câblage spécifiques à l'installation.

Erdung und Nullung des Gehäuses ist gemäß den Vorschriften des zuständigen EVU auszuführen.

Grounding or nulling of the housing mst be executed in accordance with the prescribed instructions of the existing EVU.

La mise à la terre et la mise au neutre sont à réaliser conformé-ment aux prescriptions de l'entreprise d'électricité locale.

Bestellcode

Schutzgehäuse
AC-2106

AC-2107/0	Blind - Seitenabdeckung
AC-2107/16/10	Seitenabdeckung 10 Gewindebohrungen M16 x 1,5
AC-2107/20/06	Seitenabdeckung 6 Gewindebohrungen M20 x 1,5
AC-2107/25/02	Seitenabdeckung 2 Gewindebohrungen M25 x 1,5
AC-210/09	Seitenabdeckung 10 Gewindebohrungen PG 9
AC-210/13	Seitenabdeckung 6 Gewindebohrungen PG 13.5
AC-210/21	Seitenabdeckung 2 Gewindebohrungen PG 21

Order code

Protective housing
AC-2106

AC-2107/0	Dummy lateral cover
AC-2107/16/10	Lateral cover 10 Threaded holes M16 x 1,5
AC-2107/20/06	Lateral cover 6 Threaded holes M20 x 1,5
AC-2107/25/02	Lateral cover 2 Threaded holes M25 x 1,5
AC-210/09	Lateral cover 10 Threaded holes PG 9
AC-210/13	Lateral cover 6 Threaded holes PG 13.5
AC-210/21	Lateral cover 2 Threaded holes PG 21

Code de commande

Boîtier de protection
AC-2106

AC-2107/0	Panneau latéral
AC-2107/16/10	Panneau latéral 10 trous taraudés M16 x 1,5
AC-2107/20/06	Panneau latéral 6 trous taraudés M20 x 1,5
AC-2107/25/02	Panneau latéral 2 trous taraudés M25 x 1,5
AC-210/09	Panneau latéral 10 trous taraudés PG 9
AC-210/13	Panneau latéral 6 trous taraudés PG 13.5
AC-210/21	Panneau latéral 2 trous taraudés PG 21

Brüel & Kjær Vibro

Product Information

Brüel & Kjær Vibro Data:

BKV Type: **EL3016**

Description: **Multi Triple Instrumentation Cable for Indoor & Outdoor**

Original Equipment Manufacturer Data:

LEONI Kerpen GmbH

OEM Type: EN50288-7

For further Information please contact: LEONI Kerpen GmbH

LEONI

ICON® Instrumentation Cable

EN 50288-7

Zero Halogen, Flame Retardant, Sunlight Resistant

90 °C / 300 V

Multi-Triple, Individual & Collective Screen, LSZH-Sheath

ICON SAFE 20100 M3 IS/COS

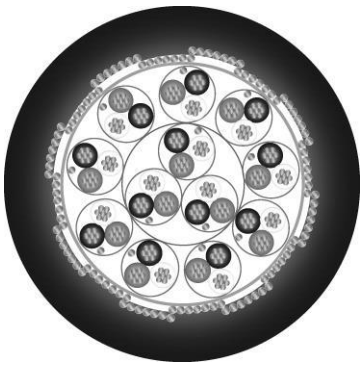
RE-2X(ST+C)H

Application

For transmission of analogue and digital signals in instrument and control systems; where people are potentially endangered in case of fire; allowed for use in zone 1 and zone 2 group II classified areas (IEC 60079-14); not allowed for direct connection to low impedance source, e.g. the public mains electricity. (Please note possible additional or special installation requirements of IEC 60079-14).
Recommended for indoor and outdoor installation, on racks, trays, in conduits, in dry and wet locations; not for direct burial. Indoor installations are allowed in areas, where the construction product regulations (CPR) acc. to EN 50575 of fire class not required. (Please note the relevant legal / local installation requirements)

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1.0 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	**yellow / red / black**, continuously numbered on yellow core (1, 2, 3..) for multi-element
Individual screen	aluminium polyester foil in contact with solid tinned copper drain wire, plastic tape under and above screen
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium polyester foil in contact with tinned copper wire braid, opt. coverage approx. 84%
Outer sheath	low smoke, zero halogen, flame retardant compound LSZH, **blue**
Cable marking	LEONI KERPEN ICON SAFE Type Code Size 300V LSZH EN 50288-7 Production Lot Code Year Length Marking



Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Smoke density	IEC 61034-2 (L.T. > 60 %)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 ° C)
Amount of halogen acid gas	IEC 60754-1 (0%)
Degree of acidity of gases	IEC 60754-2 (pH ≥ 4.3, C ≤ 10µS/mm)
Oil resistance	ICEA S-73-532*
Sunlight resistance	UL 1581 section 1200

Temperature range
-30°C up to +90°C (during operation)
-5°C up to +50°C (during installation)

Minimum bending radius
7.5 x cable diameter

Abbreviations

	ICON SAFE
IS/OS	individual screen / overall screen

Electrical Properties at 20 °C

Conductor cross-section	nom.	mm²	0.5	0.75	1.0	1.3	1.5	2.5
Conductor resistance	max.	Ω/km	36.7	25.0	18.5	14.2	12.3	7.6
Insulation resistance	min.	MΩ x km	5000					
Mutual capacitance	max.	nF/km	150	150	150	150	150	150
Inductance	max.	mH/km	1					
L/R ratio	max.	µH/Ω	25			40		60
Test voltage U_{rms} (core : core)		V	1500					
Test voltage U_{rms} (core : screen)		V	1500					
Operating voltage		V	300					

*(Test temperature + 60 °C; duration 4 h. Retention: min. 60 % of tensile strength/min. 60 % of elongation)

LEONI

ICON® Instrumentation Cable

EN 50288-7

Zero Halogen, Flame Retardant, Sunlight Resistant

90 °C / 300 V

Multi-Triple, Individual & Collective Screen, LSZH-Sheath

ICON SAFE 20100 M3 IS/COS

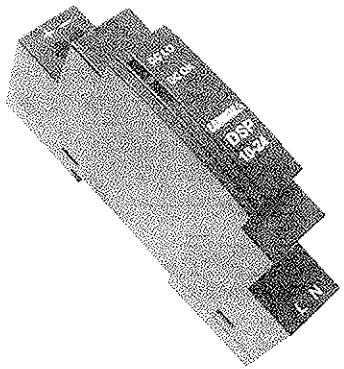
RE-2X(ST+C)H

Geometrical data					
No. of elements	**RT of insulation** min. (mm)	**RT of outer sheath** nom. (mm)	**Outer dia.** approx. (mm)	**Weight** approx. (kg/km)	**Item No.** Colour blue
0.5 mm²/7					
10	0.26	1.3	17.2	394	20

RT = Radial Thickness

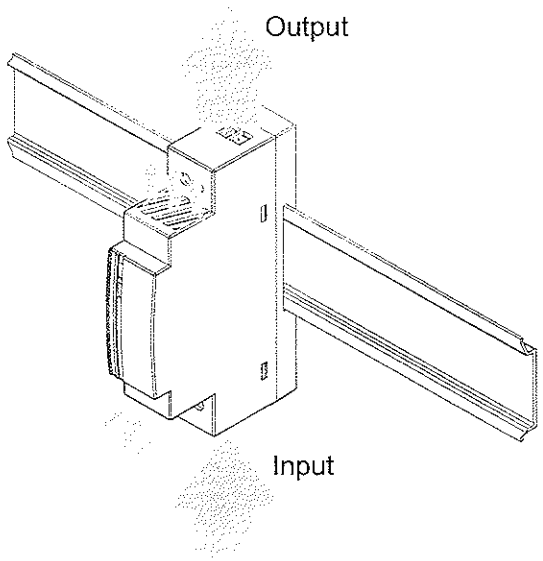
LAMBDA

DSP10 Series Din Rail Power

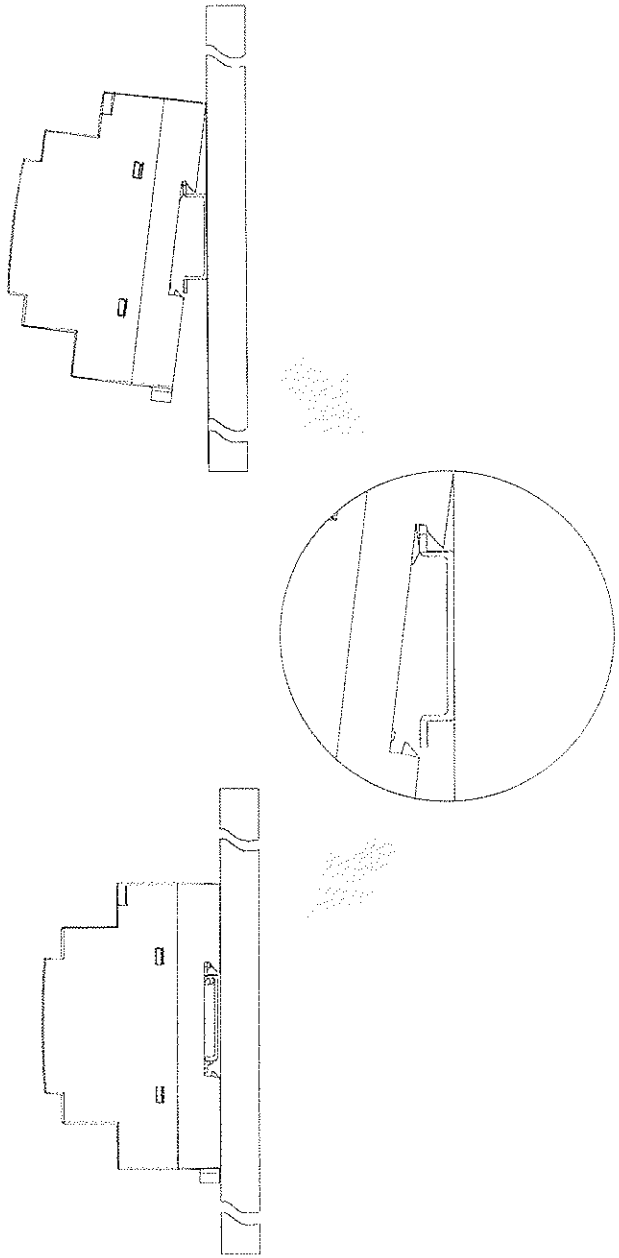


Technical Data
Installation and Operation

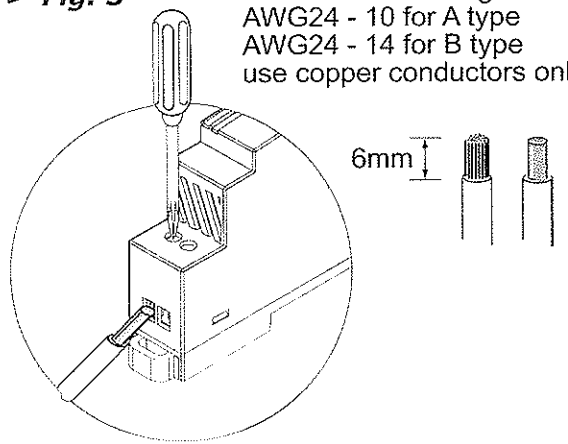
► *Fig. 1*



► *Fig. 2*

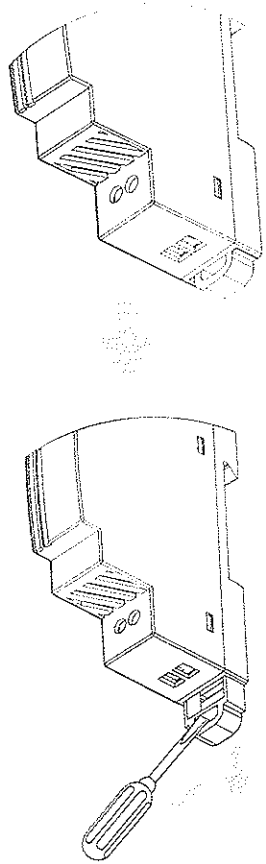


► *Fig. 3*



Connector size range
AWG24 - 10 for A type
AWG24 - 14 for B type
use copper conductors only

► *Fig. 4*



Safety notes

Read Instructions!

Before working with this unit, read these instructions carefully and completely. Make sure that you have understood all the information!
This unit complies with UL1310 for the requirements of NEC Class 2 power only.*

Disconnect system from supply network

Before any installation, maintenance or modification work: Disconnect your system from the supply network. Ensure that it cannot be re-connected inadvertently!

Before start of operation

Ensure appropriate installation

Warning! Improper installation / operation impair safety and result in operational difficulties or complete failure of the unit. The unit must be installed and put into service appropriately by qualified personnel. Compliance with the relevant regulations must be ensured. Before operation is begun the following conditions must be ensured, in particular:

- *Connection to main power supply in compliance with VDE01000 and EN50178.*
- *With stranded wires: all strands must be secured in the terminal blocks (potential danger of short circuit).*
- *Unit and power supply cables must be properly fused; if necessary a manually controlled disconnecting element must be used to disengage from supply mains.*
- *All output lines must be rated for the power supply output current and must be connected with the correct polarity.*
- *Sufficient air-cooling must be ensured.*

In operation: No modifications!

As long as the unit is in operation: do not modify the installation! The same applies also to the secondary side. Risk of electric arcs and electric shock (fatal)!

Only connect/disconnect when the power is off!

Convection cooling (See Fig. 1)

***Do not cover** any ventilation holes!*
Leave sufficient space** around the unit **for cooling!

Warning: High voltage! Store energy!

The unit contains unprotected conductors carrying a lethal high voltage, and components storing substantial amounts of energy. Improper handling may result in an electric shock or serious burn!

- *The unit must not be opened except appropriately trained personnel!*
- *Do not introduce any object into the unit!*
- *Keep away from fire and water!*

Installation

Mounting (See Fig. 1)

Permissible mounting position: keep ventilation holes clear, leave space for cooling! Recommended to have 25mm free space at all sides:

Snap on support rail (See Fig. 2)

- *Tilt the unit slightly rearwards.*
- *Fit the unit over top hat rail.*
- *Slide it downward until it hits the stop.*
- *Press against the bottom front side for locking.*
- *Shake the unit slightly to check the locking action.*

Connection (See Fig. 3)

- *Use only commercial cables designed for the indicated voltage and current values!*
- *With flexible cables: make sure that all stranded cable are secured in the terminal.*
- *Ensure proper polarity at output terminals!*

Removal from DIN Rail (See Fig. 4)

Push the slider downwards (unlock). Gently lift lower front edge of the unit (tipping) and remove.

Technical Data

All specifications are typical at nominal line, full load,25℃; Unless otherwise specified.

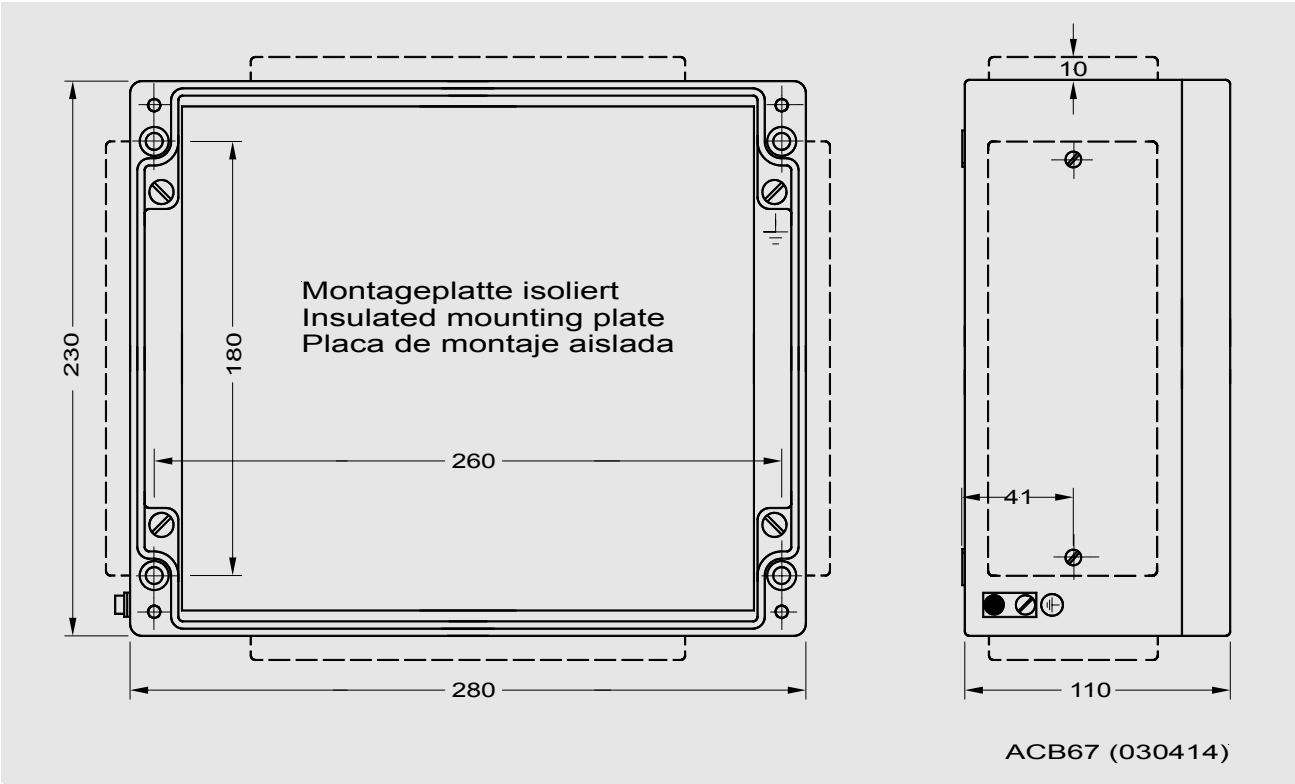
Description	Model No.			
	DSP10-05	DSP10-12	DSP10-15	DSP10-24
Input				
Rated input Voltage	100Vac ~ 240 Vac			
AC Voltage Range	90Vac ~ 264Vac			
DC Voltage Range	120-370 Vdc			
Frequency	47-63Hz			
Rated input Current (max)	300mA			
Inrush Current (115Vac/230Vac)	< 15A / < 30A			
Efficiency (Typ)	>74%	>78%	>78%	>80%
Output				
Overvoltage protection	120-145 %			
Line regulation	<1.0 %			
Load regulation	<1.0 %			
DC ON indicate(Green LED)	>3V	>9V	>11V	>20V
Ripple	<50mVp-p			
Nominal Current	1500 mA	830 mA	670 mA	420 mA
Rated over load protection	110%~160%			
Current Limit	Fold Forward (Current rises, voltage drops to maintain constant power during overload)			
Holdup Time(230Vac)	> 30ms			
General				
Temperature	Storage : -25 to + 85 ℃ , Operation : -25 to+ 71℃			
Derating (115/230 VAC)	2.5% / ℃ from 61 to 71 ℃			
Humidity	20%~90% RH			
Case	Plastic			
MAX. Required free space	25mm in all sides			
Dimensions H x W x D inches (mm)	3.58 x 0.71 x 2.19 (91 x 18 x 55.6)			
Weight	60g			
Approvals And Standard				
UL / cUL	UL508 Listed			
	UL1310 Listed Class 2 power, UL 60950-1 Recognized			
TUV	EN60950-1			
CE	EN61000-6-3, EN55022 Class B			
	EN61000-3-2, EN61000-3-3			
	EN61000-6-2, EN55024, EN61000-4-2, EN61000-4-3, EN61000-4-4			
	EN61000-4-5, EN61000-4-6, EN61000-4-8,EN61000-4-11			

* If the units are to be installed as Direct Plug-in Power Units and full compliance to UL1310 is required, the units must be installed in an airtight distributor box that conforms to the requirements of UL1310.

Brüel & Kjær Vibro

AC – 2106

EMV - Schutzgehäuse
EMC - Protective Housing
CEM - Carcasa de protección



* Maße für Befestigungsbohrungen ∅ 7 mm

* Dimension for ∅ 7 mm mounting holes

* Medidas para agujeros de fijación ∅ 7 mm

Anwendung

Universalgehäuse zum wahlweisen Einbau von Oszillatoren, Sicherheitsbarrieren oder Reihenklemmen.

Application

Universal protective housing for installation and protection of oscillators, safety barriers and terminal strips.

Aplicación

Carcasa universal de protección para el montaje de osciladores, barreras de seguridad o regletas de bornes.

Brüel & Kjaer Vibro
Leydheckerstraße 10
D-64293 Darmstadt

Tel. : +49 (0)6151 428-1400
Fax : +49 (0) 6151 428-1401
E-Mail : info@bkvibro.de

Technische Daten	Technical Data	Datos técnicos
Allgemeines	**General**	**Generalidades**
Schutzart	**Protection class**	**Tipo de protección**
IP 66, EN 60529	IP 66, EN 60529	IP 66, EN 60529
Umgebungstemperatur	**Ambient temperature range**	**Temperatura ambiente**
-55 °C ... 125 °C	-55 °C ... 125 °C	-55 °C ... 125 °C
Gehäuse	**Housing**	**Carcasa**
Werkstoff	**Material**	**Material**
Al Si 12, DIN 1725	Al Si 12, DIN 1725	Al Si 12, DIN 1725
Lackierung außen	**External paint colour**	**Color exterior**
RAL 7032	RAL 7032	RAL 7032
Schirmdämpfung	**Shield attenuation**	**Blindaje**
min. 40 dB µV bei 20 ... 900 MHz	min. 40 dB µV at 20 ... 900 MHz	min. 40 dB µV pour 20 ... 900 MHz
Gewicht ohne Seitenabdeckungen	**Weight, without side panels**	**Peso sin las cubiertas laterales**
4 kg	4 kg	4 kg
Dichtung	**Sealing**	**Junta**
Neusil 1442	Neusil 1442	Neusil 1442
Montageplatte	**Mounting plate**	**Placa de montaje**
Werkstoff	**Material**	**Material**
Hartgewebe	Laminated plastic	Tejido duro
Größe	**Dimensions**	**Dimensiones**
238 x 180 mm	238 x 180 mm	238 x 180 mm
Dicke	**Thickness**	**Espesor**
4 mm	4 mm	4 mm

Der Standard-Lieferumfang besteht aus dem Gehäusekörper mit Deckel, der Montageplatte, diversem Befestigungsmaterial sowie 2 Blind-Seitenabdeckungen und EMV-Dichtungen.

The standard extent of delivery consists of the main housing body with top cover, mounting plate, various mounting fixtures as well as 2 blind side panels and EMC sealing.

El alcance de suministro estándar consiste del cuerpo de la carcasa con tapa, de la placa de montaje, material de fijación diverso así como de dos cubiertas laterales ciegas y juntas CEM.

Mögliche Seitenabdeckungen

Anzahl und Ausführung zusätzlicher Seitenabdeckungen sind bei der Bestellung des Schutzgehäuses unter Benutzung des jeweiligen Bestell-codes anzugeben.

Optional side panels

The quantity and execution of side panels must be specified when ordering by using the respective order coding system.

Cubiertas laterales opcionales

La cantidad y ejecución de las cubiertas laterales adicionales deben ser indicadas con el pedido de la carcasa de protección utilizando el respectivo código de pedido.

Bestellcode AC-2107/0

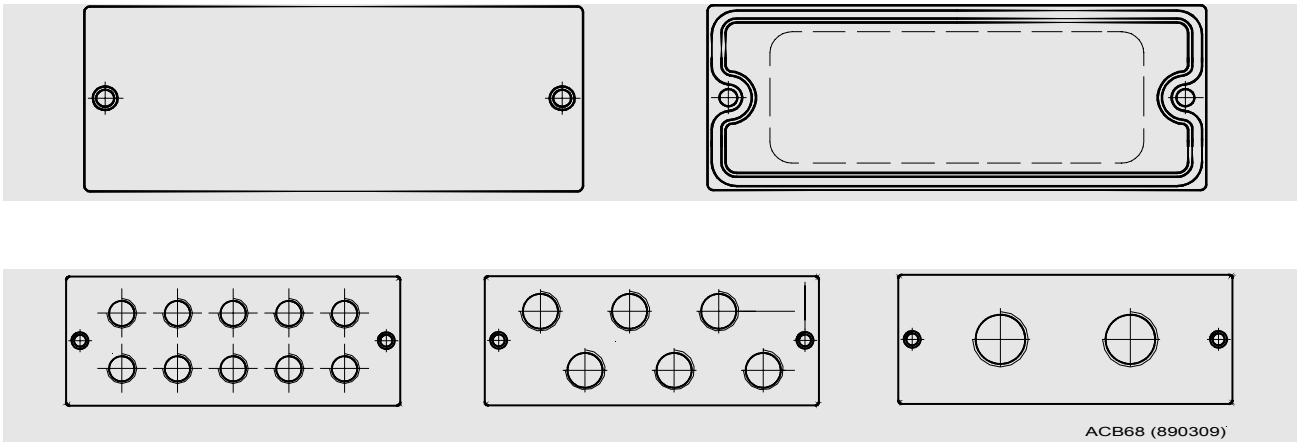
Blind-Seitenabdeckung zum Verschließen unbenutzter Seiten oder für kundenspezifische Sonderbearbeitung.

Order code AC-2107/0

Blind side panels for blanking off unused sides of the housing or for a customer-specific requirement.

Código de pedido AC-2107/0

Cubierta lateral para cierre de lados no utilizados o para requerimiento específico del cliente.



Bestellcode

metrisch: AC-2107/16/10

Seitenabdeckung mit 10 Gewindebohrungen M16 x 1,5

PG: AC-210 /9

Seitenabdeckung mit 10 Gewindebohrungen PG 9

metrisch: AC-2107/20/06

Seitenabdeckung mit 6 Gewindebohrungen M20 x 1,5

PG: AC-210 / 13

Seitenabdeckung mit 6 Gewindebohrungen PG 13,5

metrisch: AC-2107/25/02

Seitenabdeckung mit 2 Gewindebohrungen M25 x 1,5

PG: AC-210 / 21

Seitenabdeckung mit 2 Gewindebohrungen PG 21

Order code

metric: AC-2107/16/10

Side panel with 10 x M16 x 1,5 threaded holes

PG: AC-210 /9

Side panel with 10 x PG 9 threaded holes

metric: AC-2107/20/06

Side panel with 6 x M20 x 1,5 threaded holes

PG: AC-210 / 13

Side panel with 6 x PG 13.5 threaded holes

metric: AC-2107/25/02

Side panel with 2 x M25 x 1,5 threaded holes

PG: AC-210 / 21

Side panel with 2 x PG 21 threaded holes

Código de pedido

metric: AC-2107/16/10

Cubierta lateral con 10 agujeros roscados M16 x 1,5

PG: AC-210 /9

Cubierta lateral con 10 agujeros roscados PG 9

metric: AC-2107/20/06

Cubierta lateral con 6 agujeros roscados M20 x 1,5

PG: AC-210 / 13

Cubierta lateral con 6 agujeros roscados PG 13,5

metric: AC-2107/25/02

Cubierta lateral con 2 agujeros roscados M25 x 1,5

PG: AC-210 / 21

Cubierta lateral con 2 agujeros roscados PG 21

Bohrungen und Bestückungsmöglichkeiten der Montageplatte
Holes and internal layout options for the mounting plate
Perforaciones y posibilidades de equipamiento de la placa de montaje

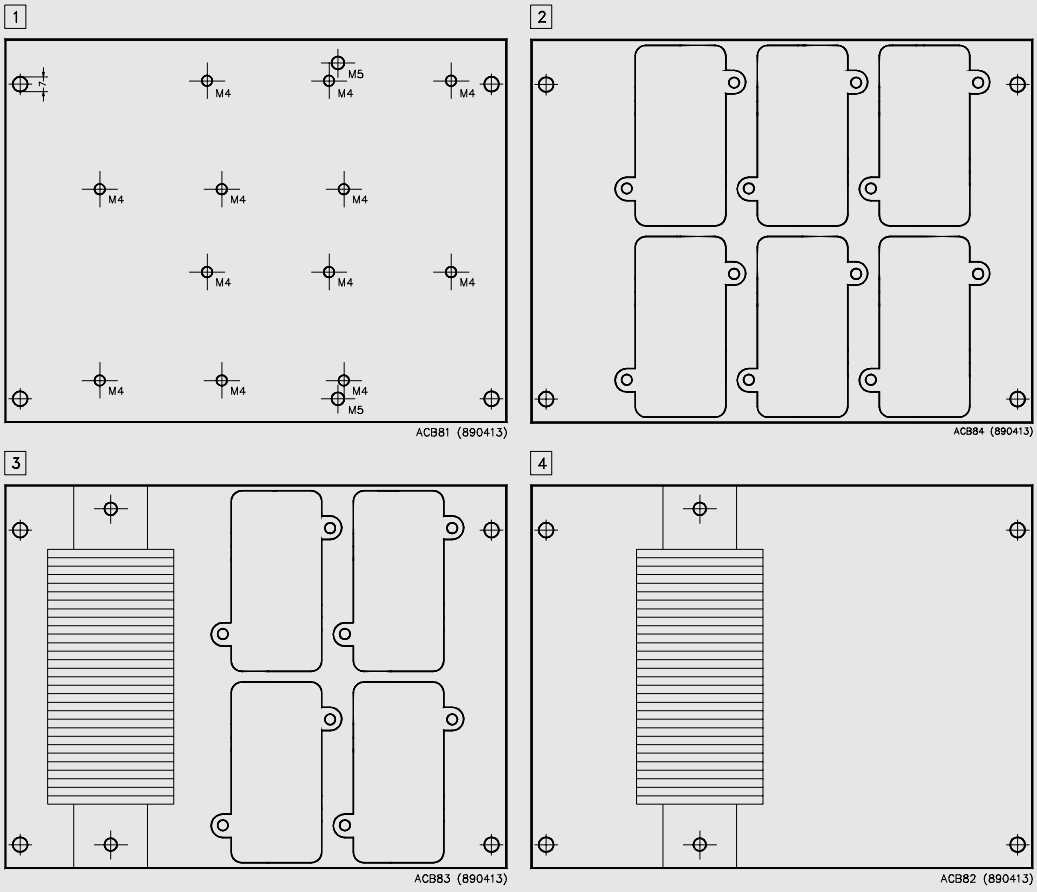


Bild 1 Standardbohrungen	Fig. 1 Standard configuration	Fig. 1 Perforaciones estándar
Bild 2 6 Oszillatoren OD-xxx	Fig. 2 6 x OD-xxx oscillators	Fig. 2 6 osciladores OD-xxx
Bild 3 4 Oszillatoren OD-xxx und 1 Klemmleiste (max. 30 Reihenklemmen UK3N)	Fig. 3 4 x OD-xxx oscillators and 1 x terminal strip (max. 30 terminals UK3N)	Fig. 3 4 osciladores OD-xxx y 1 regleta de bornes (máx. 30 bornes WDU 2,5)
Bild 4 1 Klemmleiste (max. 30 Reihenklemmen UK3N)	Fig. 4 1 x terminal strip (max. 30 terminals UK3N)	Fig. 4 1 regleta de bornes (máx. 30 bornes WDU 2,5)
ohne Bild	no figure	sin figura
Sicherheitsbarrieren 2 x 3 Sätze für OD-xxx oder 2 x 5 Sätze für AS-011 oder 2 x 3 Sätze für Thermo-widerstände	Safety barriers 2 x 3 sets for OD-xxx or 2 x 5 sets for AS-011 or 2 x 3 sets for thermo-resistors	Barreras de seguridad 2 x 3 juegos para OD-xxx ó 2 x 5 juegos para AS-011 ó 2 x 3 juegos para resistencias térmicas

Montage

- Teile auf Vollständigkeit prüfen
- Komponenten entsprechend Einsatzfall auf der Montageplatte montieren
- Seitenabdeckungen montieren, dabei auf exakte Lage der Dichtringe achten
- Gehäuse nicht an schwingenden Gebäude- oder Maschinenteilen befestigen
- Nicht benutzte Kabeleinführungen mit Blindverschraubungen verschließen

Assembly

- Check all components for correctness
- Mount the components on the mounting plate according to the application
- Mount the side panels, taking care of the exact positioning of the sealing rings
- The housing should not be mounted on a vibrating part of the building or machine
- Unused cable entries should be blanked off with blind screw-in plugs

Montaje

- Verifique que todos los componentes estén completos
- Montar los componentes sobre la placa de montaje de acuerdo a la aplicación
- Montar las cubiertas laterales, observando la correcta ubicación de los anillos de junta
- No montar la carcasa sobre partes de edificio o de máquina que vibren
- Cerrar con tapones ciegos las entradas de cables no usadas

Anschluss

Der Anschluss der Komponenten oder Klemmen ist gemäß den anlagen-spezifischen Stromlauf- bzw. Verdrahtungsplänen durchzuführen.

Connection

Connection of the components or the terminals must be executed according to the wiring or circuit diagram specific to the installation.

Conexión

La conexión de los componentes o de los bornes debe ser efectuada según los esquemas de conexión o planos de cableado específicos de la instalación.

Erdung und Nullung des Gehäuses ist gemäß den Vorschriften des zuständigen EVU auszu-führen.

Grounding or nulling of the housing mst be executed in accordance with the prescribed instructions of the existing EVU.

La puesta a tierra y la puesta a cero de la carcasa deben efectuarse de acuerdo a las prescripciones de la empresa de energía eléctrica local.

Bestellcode

Schutzgehäuse
AC- 2106

AC- 2107 / 0	Blind - Seitenabdeckung	
AC- 2107 / 16 / 10	Seitenabdeckung	10 Gewindebohrungen M16 x 1,5
AC- 2107 / 20 / 06	Seitenabdeckung	6 Gewindebohrungen M20 x 1,5
AC- 2107 / 25 / 02	Seitenabdeckung	2 Gewindebohrungen M25 x 1,5
AC- 210 / 09	Seitenabdeckung	10 Gewindebohrungen PG 9
AC- 210 / 13	Seitenabdeckung	6 Gewindebohrungen PG 13.5
AC- 210 / 21	Seitenabdeckung	2 Gewindebohrungen PG 21

AC2106 (041129)

Order code

Protective housing
AC- 2106

AC- 2107 / 0	Dummy lateral cover	
AC- 2107 / 16 / 10	Lateral cover	10 Threaded holes M16 x 1,5
AC- 2107 / 20 / 06	Lateral cover	6 Threaded holes M20 x 1,5
AC- 2107 / 25 / 02	Lateral cover	2 Threaded holes M25 x 1,5
AC- 210 / 09	Lateral cover	10 Threaded holes PG 9
AC- 210 / 13	Lateral cover	6 Threaded holes PG 13.5
AC- 210 / 21	Lateral cover	2 Threaded holes PG 21

AC2106 (041129)

Código de pedido

Carcasa de protección
AC- 2106

AC- 2107 / 0	cubierta lateral ciega	
AC- 2107 / 16 / 10	Cubierta lateral	10 Agujeros roscados M16 x 1,5
AC- 2107 / 20 / 06	Cubierta lateral	6 Agujeros roscados M20 x 1,5
AC- 2107 / 25 / 02	Cubierta lateral	2 Agujeros roscados M25 x 1,5
AC- 210 / 09	Cubierta lateral	10 Agujeros roscados PG 9
AC- 210 / 13	Cubierta lateral	6 Agujeros roscados PG 13.5
AC- 210 / 21	Cubierta lateral	2 Agujeros roscados PG 21

AC2106 (041129)