The space
you have always needed

BIG Series, based on the wide-ranging experience achieved by ILME, introduces a significant **change in the design of hoods and has been specifically designed to meet the new requirements of the wiring market**. The enclosures **integrate the existing range** and **are ideal for installations with structured and complex wiring**.

Accurate design

The **large dimensions** of these innovative enclosures have been chosen to offer customers an **adequate space to store conductors**.

The **width** of the enclosures is **greater than that of previous versions**: 66 mm compared to the 43 mm for standard enclosures. The **height** of BIG enclosures has also been **increased to 100 mm** for sizes “44.27” and “57.27” (standard versions for high models: 70 and 72mm), **and to 110 mm** for sizes “77.27” and “104.27” (standard versions for high models: 76 mm).

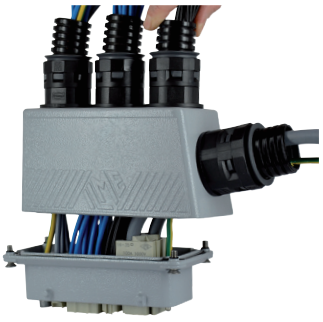
The cable compartment is now fully accessible during assembly (the connector insert is fully inserted in the lower half of the enclosure), **offering three times the space compared to standard enclosures**. This means it is possible to bend cables and pipes with greater bending radii.

Due to this important feature, the BIG enclosures are **particularly suitable for MIXO modular inserts**, being versatile and customizable, for multiple cable entries.

Each insert, differentiated according to electric power or signal, pneumatic, optical fibre or Ethernet network current, **may thus have the specific branching. One single large connector can replace what previously required two connectors**.

Ease of use

The possibility of **splitting the enclosure in two halves simplifies the installation of the insert**. It is also possible to **connect the insert with a cable and later insert it in the lower half of the enclosure** (except for the 6 pole version).



Options for the connection of control and signalling devices

All the five walls of the upper half of the enclosure have a high thickness to allow them to be drilled and threaded, even with multiple threads.

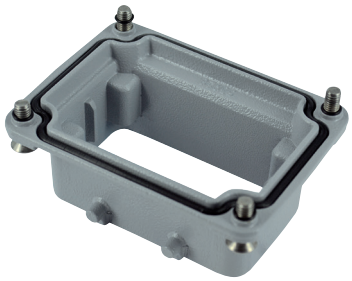
BIG enclosures enable the connection – of push – buttons, selectors, switches and signalling lamps after the necessary holes have been drilled. It is possible, for example, to enable power supplies or signalling circuits, even after the connector has been coupled.

Simplified installation

Installation operations for the hoods are simple and fast.
No special accessories, tools or expensive additional operations are required.

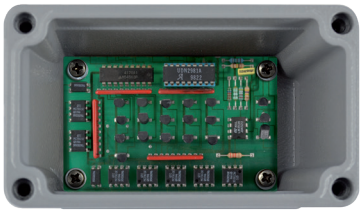
The lower half of the enclosure must be fixed to the upper half by means of the 4 screws supplied.

It is possible to prevent the fixing screws from coming loose by fitting on each screw the O-ring seal supplied with the enclosures.



Compartment for electronic boards

It is possible to install electronic boards in the upper section of enclosures with side entry. In this case, it is however necessary to order CR MBS screws separately to fix the board in place.



Greater protection

It is also possible to fix one earthing terminal in the upper half of the enclosure to provide protection against indirect contacts.

In this case, it is however necessary to order separately earthing terminal CR MBT, consisting of a fixing screws and a wire-terminal for 6 mm^2 conductors.

Range

The items are classified with the following pre-code:

- MBO for enclosures with side entry
- MBV for enclosures with one or more top entries
- MBVO for enclosures with top and side entries
- CBC for closed enclosures that can be drilled

The available versions are:

- for enclosures with size “44.27”: **single lever**
- for enclosures with sizes “57.27”, “72.27” and “104.27”: **two levers**

SUM-UP

- **The BIG enclosures are made in die-cast aluminum alloy and are fitted with cast pegs with a reinforced design, painted with epoxy-polyester powder paint. The sealing gasket in anti-aging NBR elastomer, resistant to oils and fuels, is positioned internally to guarantee a greater protection from light and atmospheric agents**
- **BIG enclosures guarantee an IP66 protection rating (EN 60529) after the connector has been coupled, and completed with appropriate cable glands; they are manufactured in compliance with standard IEC/EN 61984**
- **Ambient temperature range -40°C / +125°C**
- **Versions for class W aggressive environments are also available on request**

WARNING:

Due to the considerable weight of BIG hoods, when fitted with inserts, conductors and cable glands, we recommend to use them in combination with housings fitted with V-TYPE closing levers (C7/M7/CV/MV).

If used in combination with enclosures series CLASS, it is advisable to appropriately anchor the cables in order to prevent their weight from being applied to the closing levers.

MB wider version BIG

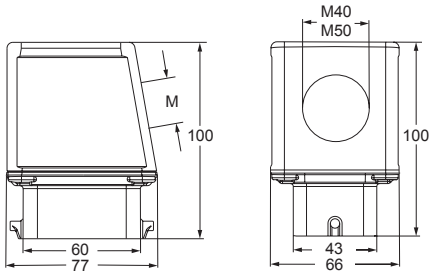
inserts		page:
CDD	24 poles + ⏚	**76**
CDS	9 poles + ⏚	**-**
CDSH	9 poles + ⏚	**86**
CDSH NC	6 poles + ⏚	**95**
CNE	6 poles + ⏚	**110**
CSE	6 poles + ⏚	**-**
CSH	6 poles + ⏚	**110**
CSH S	6 poles + ⏚	**122**
CCE	6 poles + ⏚	**130**
CSS	6 poles + ⏚	**148**
CT, CTSE (16A)	6 poles + ⏚	**160**
CQE	10 poles + ⏚	**168**
MIXO	2 modules	**262 - 317**

hoods with 2 pegs

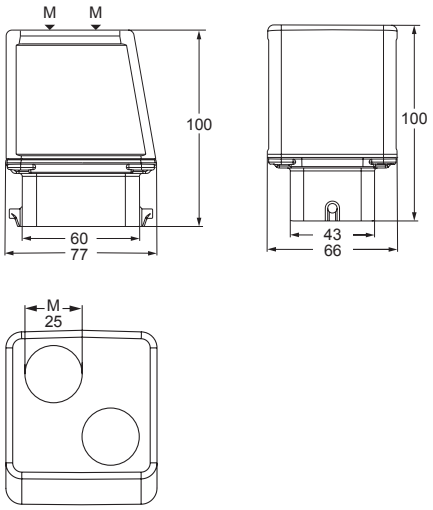
hoods with 2 pegs

description	part No.	entry M	part No.	entry M
with pegs, side entry	**MBO 06 L40**	40		
with pegs, side entry	**MBO 06 L50**	50		
with pegs, top entry	**MBV 06 L40**	40	**MBV 06 L225**	25 x 2
with pegs, top entry	**MBV 06 L50**	50	**MBV 06 L320**	20 x 3

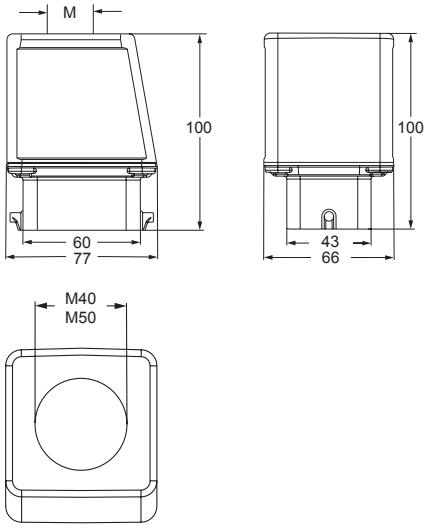
MBO 06 L



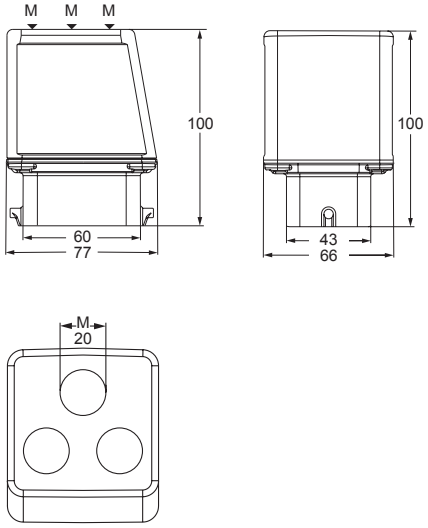
MBV 06 L225



MBV 06 L



MBV 06 L320



Housings (page 436)

Type 4/4X/12

insulating cable gland or fittings without gasket

cable gland with O-Ring gasket

dimensions shown in mm are not binding and may be changed without notice

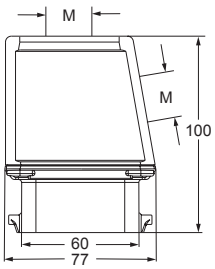
CB and MB wider version BIG

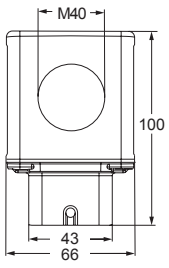
inserts		page:
CDD	24 poles + ⏚	**76**
CDS	9 poles + ⏚	**-**
CDSH	9 poles + ⏚	**86**
CDSH NC	6 poles + ⏚	**95**
CNE	6 poles + ⏚	**110**
CSE	6 poles + ⏚	**-**
CSH	6 poles + ⏚	**110**
CSH S	6 poles + ⏚	**122**
CCE	6 poles + ⏚	**130**
CSS	6 poles + ⏚	**148**
CT, CTSE (16A)	6 poles + ⏚	**160**
CQE	10 poles + ⏚	**168**
MIXO	2 modules	**262 - 317**

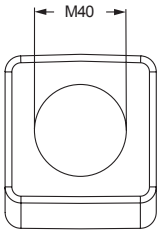
hoods with 2 pegs

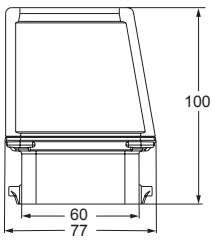
hoods with 2 pegs

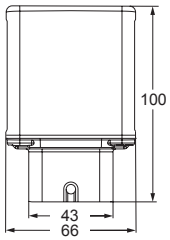
description	part No.	entry M	part No.
with pegs, side and top entries	**MBVO 06 L240**	2 x 40	
with pegs, without entries, designed to be drilled			**CBC 06 L**











Housings (page 436)

Type 4/4X/12

insulating cable gland or fittings without gasket

cable gland with O-Ring gasket

BIG

MB wider version BIG

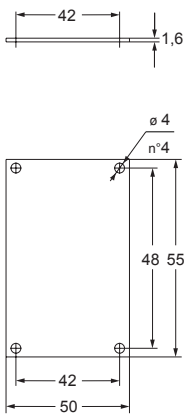
inserts		page:
CDD	42 poles + ⏚	**78**
CDS	18 poles + ⏚	**-**
CDSH	18 poles + ⏚	**87**
CNE	10 poles + ⏚	**111**
CSE	10 poles + ⏚	**-**
CSH	10 poles + ⏚	**111**
CSH S	10 poles + ⏚	**123**
CCE	10 poles + ⏚	**131**
CMSH	3+2 (aux) poles + ⏚	**136**
CMCE	3+2 (aux) poles + ⏚	**137**
CSS	10 poles + ⏚	**149**
CT, CTSE (16A)	10 poles + ⏚	**161**
CQE	18 poles + ⏚	**169**
CX	8/24 poles + ⏚	**194**
MIXO	3 modules	**262 - 317**

hoods with 4 pegs

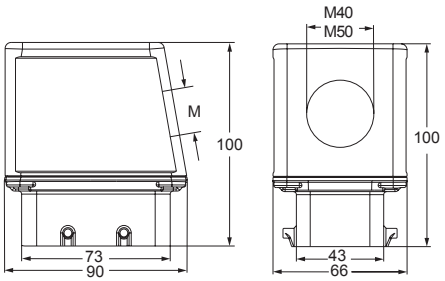
hoods with 4 pegs

description	part No.	entry M	part No.	entry M
with pegs, side entry	**MBO 10.40**	40		
with pegs, side entry	**MBO 10.50**	50		
with pegs, top entry	**MBV 10.40**	40	**MBV 10.225**	25 x 2
with pegs, top entry	**MBV 10.50**	50	**MBV 10.420**	20 x 4

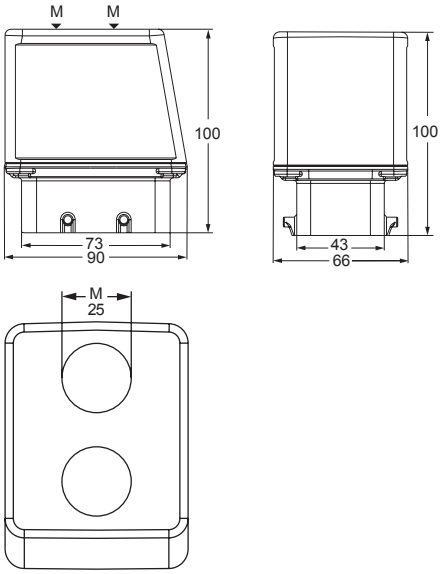
dimensions of electronic boards for MBO enclosures
side entry



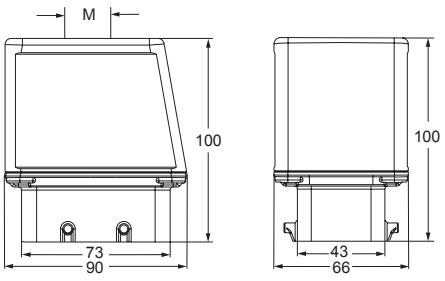
MBO 10

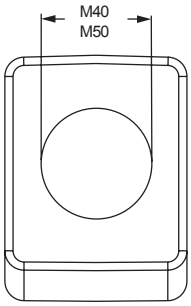


MBV 10.225

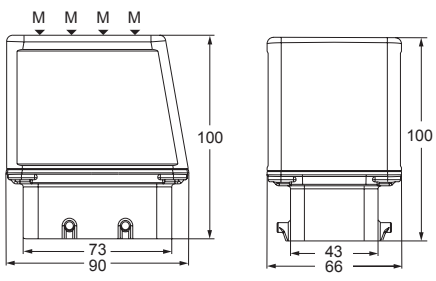


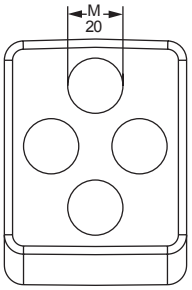
MBV 10





MBV 10.420





Housings
(page 438)

Type
4/4X/12

insulating cable gland or fittings
without gasket

cable gland
with O-Ring gasket

BIG

CB and MB wider version BIG

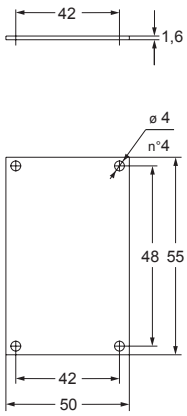
inserts		page:
CDD	42 poles + ⏚	**78**
CDS	18 poles + ⏚	**-**
CDSH	18 poles + ⏚	**87**
CNE	10 poles + ⏚	**111**
CSE	10 poles + ⏚	**-**
CSH	10 poles + ⏚	**111**
CSH S	10 poles + ⏚	**123**
CCE	10 poles + ⏚	**131**
CMSH	3+2 (aux) poles + ⏚	**136**
CMCE	3+2 (aux) poles + ⏚	**137**
CSS	10 poles + ⏚	**149**
CT, CTSE (16A)	10 poles + ⏚	**161**
CQE	18 poles + ⏚	**169**
CX	8/24 poles + ⏚	**194**
MIXO	3 modules	**262 - 317**

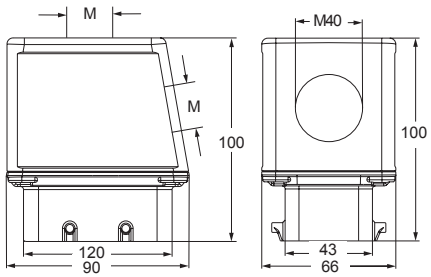
hoods with 4 pegs

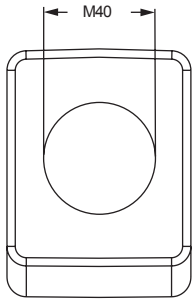
hoods with 4 pegs

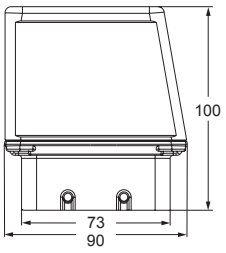
description	part No.	entry M	part No.
with pegs, side and top entries	**MBVO 10.240**	40 x 2	
with pegs, without entries, designed to be drilled			**CBC 10**

dimensions of electronic boards for CBC enclosures side entry









Housings (page 438)

Type 4/4X/12

insulating cable gland or fittings without gasket

cable gland with O-Ring gasket

MB wider version BIG

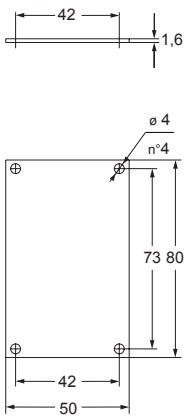
inserts		page:
CD	40 poles + ⏚	**70**
CDD	72 poles + ⏚	**79**
CDS	27 poles + ⏚	**-**
CDSH	27 poles + ⏚	**88**
CNE	16 poles + ⏚	**112**
CSE	16 poles + ⏚	**-**
CSH	16 poles + ⏚	**112**
CSH S	16 poles + ⏚	**124**
CCE	16 poles + ⏚	**132**
CMSH, CMCE	6+2 (aux) poles + ⏚	**138 - 139**
CSS	16 poles + ⏚	**150**
CT, CTSE (16A)	16 poles + ⏚	**162**
CQE	32 poles + ⏚	**170**
CQEE	40 poles + ⏚	**176**
CP	6 poles + ⏚	**178**
CX	6/12, 6/36 and 12/2 poles + ⏚	**197 - 199**
CX	4/0 and 4/2 poles + ⏚	**200 - 201**
MIXO	4 modules	**262 - 317**

hoods with 4 pegs

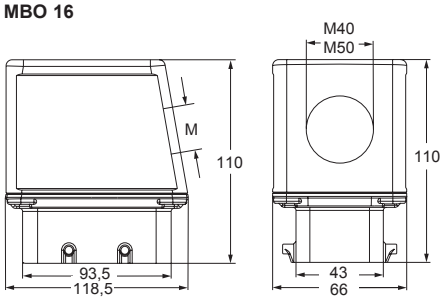
hoods with 4 pegs

description	part No.	entry M	part No.	entry M
with pegs, side entry	**MBO 16.40**	40		
with pegs, side entry	**MBO 16.50**	50		
with pegs, top entry	**MBV 16.40**	40	**MBV 16.232**	32 x 2
with pegs, top entry	**MBV 16.50**	50	**MBV 16.325**	25 x 3

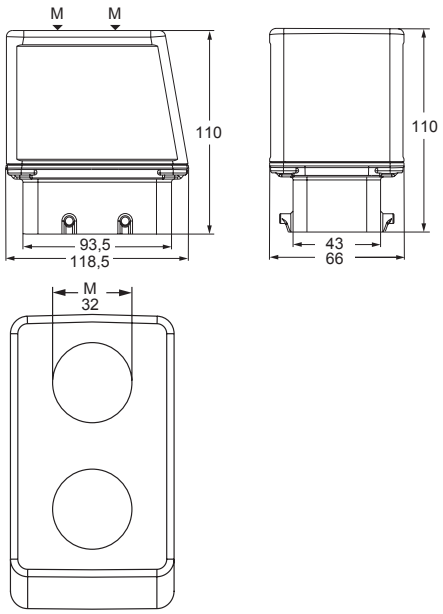
dimensions of electronic boards for MBO enclosures side entry



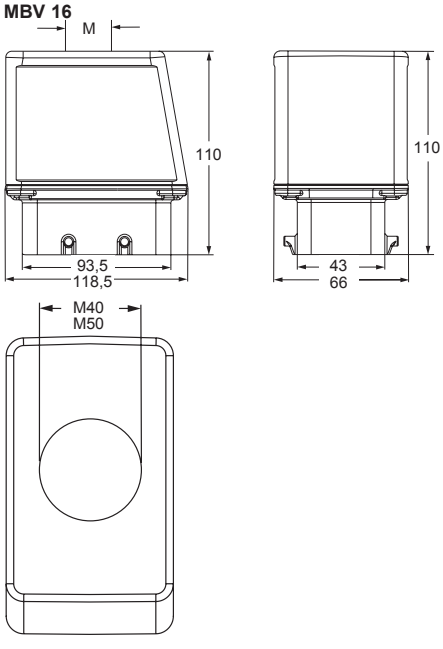
MBO 16



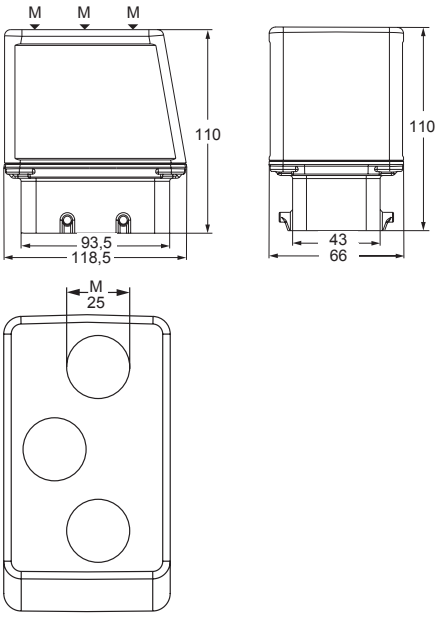
MBV 16.232



MBV 16



MBV 16.325



Housings (page 439)

Type 4/4X/12

insulating cable gland or fittings without gasket

cable gland with O-Ring gasket

dimensions shown in mm are not binding and may be changed without notice

CB and MB wider version BIG

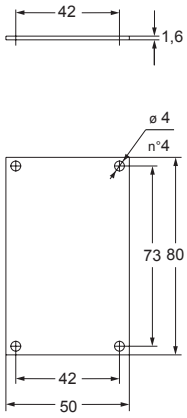
inserts		page:
CD	40 poles + ⏚	**70**
CDD	72 poles + ⏚	**79**
CDS	27 poles + ⏚	**-**
CDSH	27 poles + ⏚	**88**
CNE	16 poles + ⏚	**112**
CSE	16 poles + ⏚	**-**
CSH	16 poles + ⏚	**112**
CSH S	16 poles + ⏚	**124**
CCE	16 poles + ⏚	**132**
CMSH, CMCE	6+2 (aux) poles + ⏚	**138 - 139**
CSS	16 poles + ⏚	**150**
CT, CTSE (16A)	16 poles + ⏚	**162**
CQE	32 poles + ⏚	**170**
CQEE	40 poles + ⏚	**176**
CP	6 poles + ⏚	**178**
CX	6/12, 6/36 and 12/2 poles + ⏚	**197 - 199**
CX	4/0 and 4/2 poles + ⏚	**200 - 201**
MIXO	4 modules	**262 - 317**

hoods with 4 pegs

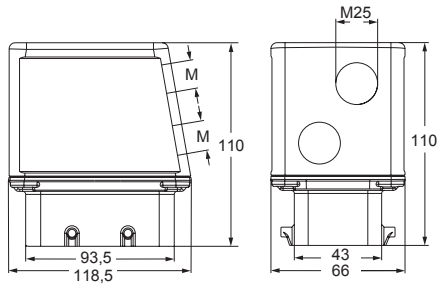
hoods with 4 pegs

description	part No.	entry M	part No.	entry M
with pegs, side entry	**MBO 16.225**	25 x 2		
with pegs, top entry	**MBV 16.620**	20 x 6		
with pegs, side and top entries			**MBVO 16.240**	40 x 2
with pegs, without entries, designed to be drilled			**CBC 16**	--

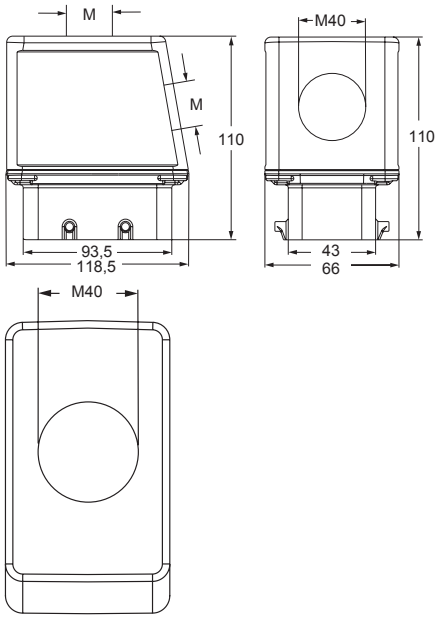
dimensions of electronic boards for MBO and CBC enclosures side entry



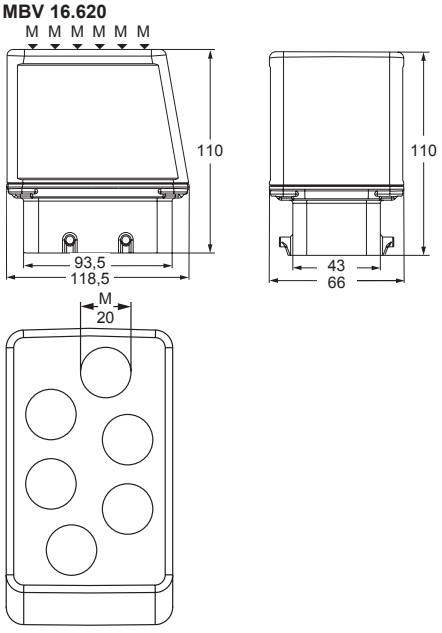
MBO 16.225



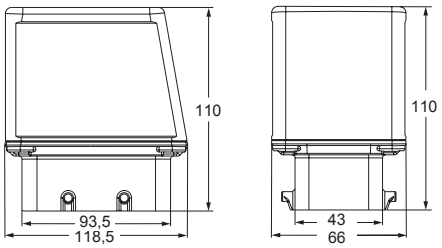
MBVO 16.240



MBV 16.620



CBC 16



Housings (page 439)

Type 4/4X/12

insulating cable gland or fittings without gasket

cable gland with O-Ring gasket

BIG

MB wider version BIG

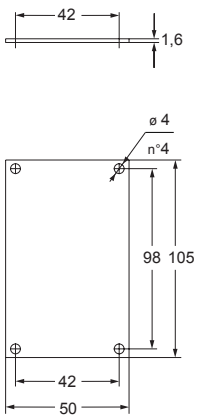
inserts		page:
CD	64 poles + ⏚	**72**
CDD	108 poles + ⏚	**81**
CDS	42 poles + ⏚	**-**
CDSH	42 poles + ⏚	**89**
CNE	24 poles + ⏚	**113**
CSE	24 poles + ⏚	**-**
CSH	24 poles + ⏚	**113**
CSH S	24 poles + ⏚	**125**
CCE	24 poles + ⏚	**133**
CMSH	10+2 (aux) poles + ⏚	**140**
CMCE	10+2 (aux) poles + ⏚	**141**
CSS	24 poles + ⏚	**151**
CT, CTSE (16A)	24 poles + ⏚	**163**
CQE	46 poles + ⏚	**171**
CQEE	64 poles + ⏚	**177**
CX	4/8 and 6/6 poles + ⏚	**204, 206**
MIXO	6 modules	**262 - 317**

hoods with 4 pegs

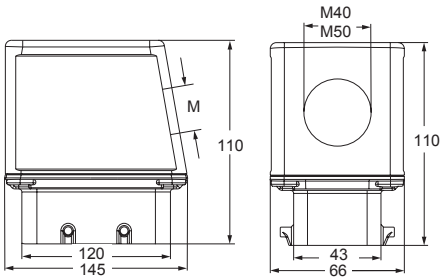
hoods with 4 pegs

description	part No.	entry M	part No.	entry M
with pegs, side entry	**MBO 24.40**	40		
with pegs, side entry	**MBO 24.50**	50		
with pegs, top entry	**MBV 24.40**	40	**MBV 24.240**	40 x 2
with pegs, top entry	**MBV 24.50**	50	**MBV 24.332**	32 x 3

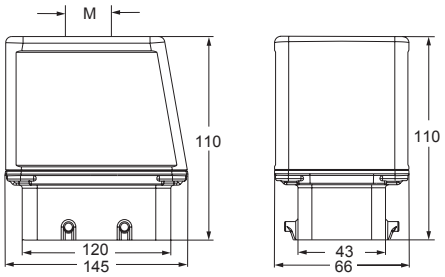
dimensions of electronic boards for MBO enclosures side entry

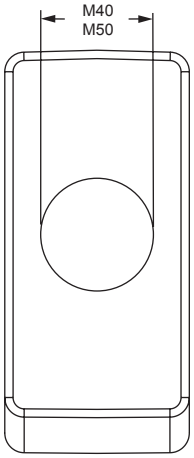


MBO 24

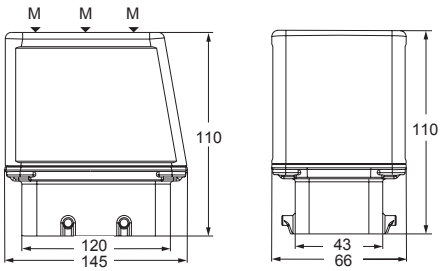


MBV 24

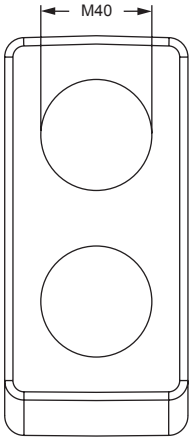




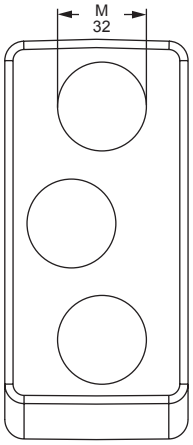
MBV 24.240 - MBV 24.332



MBV 24.240



MBV 24.332



Housings (page 441)

Type 4/4X/12

insulating cable gland or fittings without gasket

cable gland with O-Ring gasket

BIG

CB and MB wider version BIG

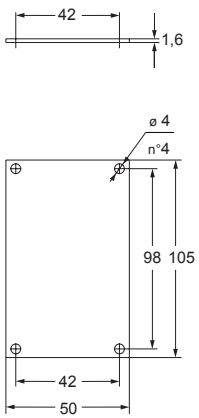
inserts		page:
CD	64 poles + ⏚	**72**
CDD	108 poles + ⏚	**81**
CDS	42 poles + ⏚	**-**
CDSH	42 poles + ⏚	**89**
CNE	24 poles + ⏚	**113**
CSE	24 poles + ⏚	**-**
CSH	24 poles + ⏚	**113**
CSH S	24 poles + ⏚	**125**
CCE	24 poles + ⏚	**133**
CMSH	10+2 (aux) poles + ⏚	**140**
CMCE	10+2 (aux) poles + ⏚	**141**
CSS	24 poles + ⏚	**151**
CT, CTSE (16A)	24 poles + ⏚	**163**
CQE	46 poles + ⏚	**171**
CQEE	64 poles + ⏚	**177**
CX	4/8 and 6/6 poles + ⏚	**204, 206**
MIXO	6 modules	**262 - 317**

hoods with 4 pegs

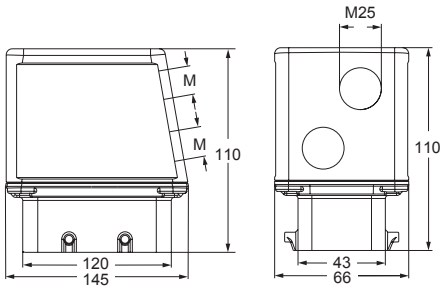
hoods with 4 pegs

description	part No.	entry M	part No.	entry M
with pegs, side entry	**MBO 24.225**	25 x 2		
with pegs, top entry	**MBV 24.425**	25 x 4		
with pegs, top entry	**MBV 24.720**	20 x 7		
with pegs, side and top entries			**MBVO 24.250**	50 x 2
with pegs, without entries, designed to be drilled			**CBC 24**	--

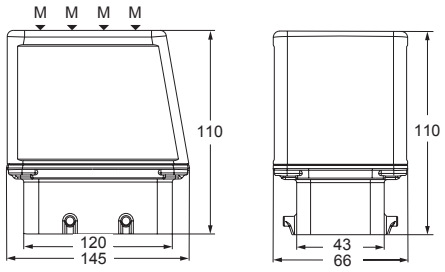
dimensions of electronic boards for MBO and CBC enclosures side entry



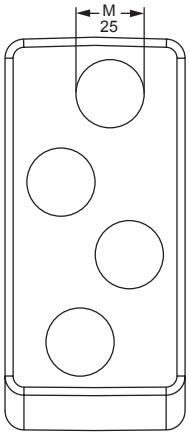
MBO 24



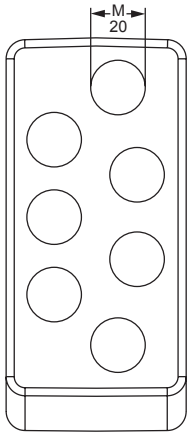
MBV 24.425 - MBV 24.720



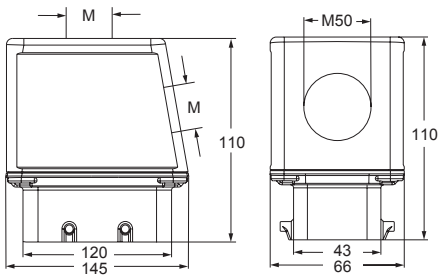
MBV 24.425

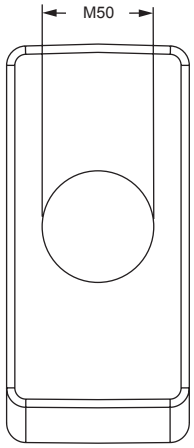


MBV 24.720

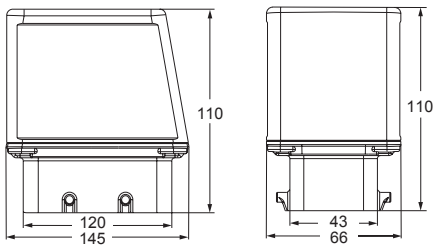


MBVO 24.250





CBC 24



Housings (page 441)

Type 4/4X/12

insulating cable gland or fittings without gasket

cable gland with O-Ring gasket

BIG

BIG HOODS WITH INTEGRATED SPECIAL SELF-CENTRING FLOATING FRAME

Size “104.27” BIG hoods
available in 2x M40 top cable entries
and 1x M40 top cable entry
with integrated special self-centring
floating frame

Find more information on our products at www.ilme.com

TECHNICAL FEATURES

MBV 24.240D, MBV 24.240DG, MBV 24.40D, MBV 24.40DG

- These **special variants of the series BIG connector enclosures** (a series which is **proprietary ILME design**), available in the largest size “104.27”, consist of two hoods, one with edge gasket, the other without, both equipped with dedicated variant of robust stainless steel special self-centring floating frame.

- They are designed to allow electrical (power and signal) connection between two pieces of equipment (both fixed, one foreseen for frequent swap), guided by a dedicated special self-centring floating frame allowing **up to ±1,5 mm off axis in both directions on a plane**, to create an internal protected space for the wiring on both sides of the connection. This is particularly handy e.g. for the rapid change of the moulds on a moulding press machine.

- Thanks to the integrated *“key and keyway”* system (two sets of facing robust pin and contact tubes, one on each short side, mounted on custom-tailored robust stainless steel plates integrated in the mating face of the size “104.27” mating hoods) the connector inserts housed inside the hoods avoid mechanical damages during mating and take advantage of the protective large wiring space of the BIG enclosures.

- Thanks to the sealing gasket on the coupling, provided sufficient tight closure is ensured by the assembly on the machine (not possible to integrate any locking), the IP degree of protection up to IP66/IP67/IP69 may be achieved.

- Generously dimensioned stainless steel parts provide suitable mechanical robustness and resistance to corrosion.

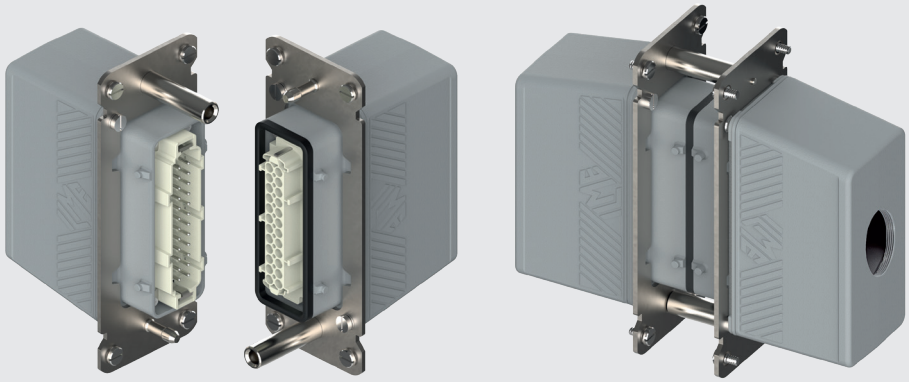
- Available parts:
  - **MBV 24.240D** size “104.27” hood series BIG with **2x M40** top cable entries and integrated special self-centring floating frame, to be exclusively mated with:
  - **MBV 24.240DG** size “104.27” hood with gasket, series BIG, with **2x M40** top cable entries and integrated special self-centring floating frame;
  - **MBV 24.40D** size “104.27” hood series BIG with **1x M40** top cable entry and integrated special self-centring floating frame, to be exclusively mated with:
  - **MBV 24.40DG** size “104.27” hood with gasket, series BIG, with **1x M40** top cable entry and integrated special self-centring floating frame.

- These BIG special hoods are deemed to be used only in combination among themselves: one part without gasket, the mating part with gasket.

- Up to 10 000 matings are achievable once used with HNM inserts with HNM series R crimp contacts as applicable and MIXO HNM frames as applicable, up to 500 matings guaranteed using standard components within these special BIG enclosures.

- Tolerance for off-axis displacement (allowed by the integral self-centring floating frame): x ± 1,5 mm, y ± 1,5 mm.

BIG special hoods with integrated special self-centring floating frame allow guided, frequent swops avoiding damages and ingress of contaminants

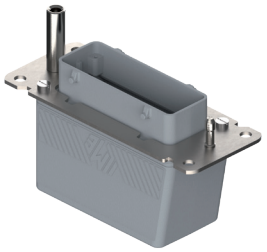


MBV BIG hoods with integrated special self-centring floating frame

inserts		pages:
CD	64 poles + ⏚	**72**
CDD	108 poles + ⏚	**81**
CDS	42 poles + ⏚	**-**
CDSH	42 poles + ⏚	**89**
CNE	24 poles + ⏚	**113**
CSE	24 poles + ⏚	**-**
CSH	24 poles + ⏚	**113**
CSH S	24 poles + ⏚	**125**
CCE	24 poles + ⏚	**133**
CMSH	10+2 (aux) poles + ⏚	**140**
CMCE	10+2 (aux) poles + ⏚	**141**
CSS	24 poles + ⏚	**151**
CT, CTSE (16A)	24 poles + ⏚	**163**
CQE	46 poles + ⏚	**171**
CQEE	64 poles + ⏚	**177**
CX	4/8 and 6/6 poles + ⏚	**204, 206**
MIXO	6 modules	**262 - 317**

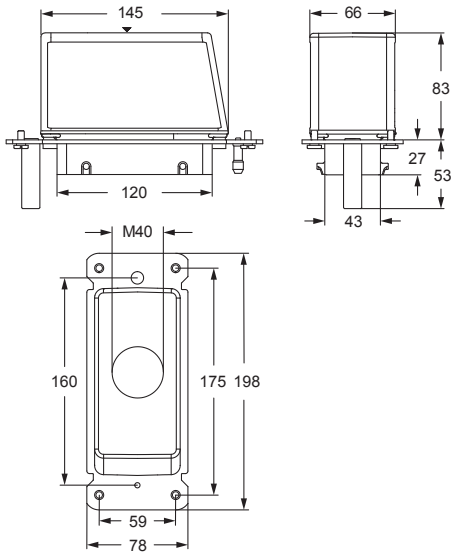
refer to CN.19 pages

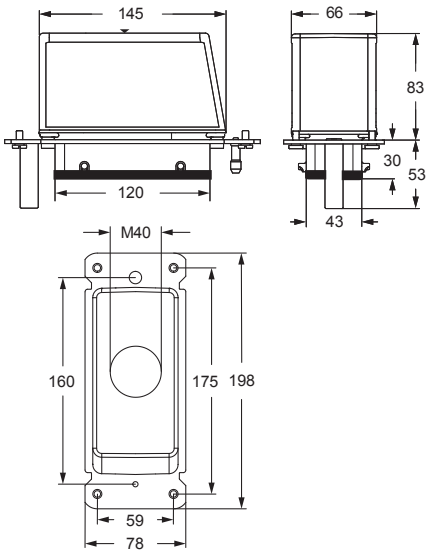
hoods with integrated special self-centring floating frame



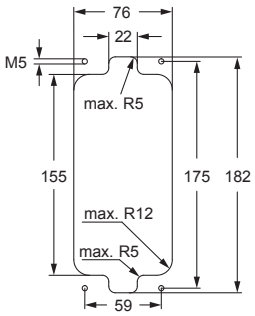
hoods with integrated special self-centring floating frame and gasket

description	part No.	entry M	part No.	entry M
1x M40 top entry	**MBV 24.40D**	40 x 1		
1x M40 top entry, with gasket			**MBV 24.40DG**	40 x 1

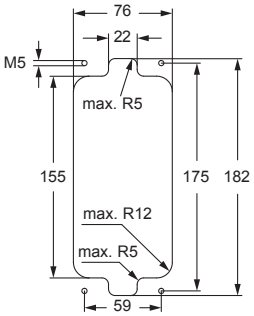




panel cut-out for enclosures



panel cut-out for enclosures



EN 60529 IP66 IP67 IP69 IEC 60529

! CAUTION: Due to the absence of locking means, the IP66/IP67/IP69 achievable degree of protection is demanded to the end-use application:

1) Suitable pressure, in order to uniformly compress the sealing gasket and keep the connector coupling tight is required: this condition is satisfied when the self-centring guide pins and contact tubes reach their end-of-run and are kept constantly in this position;
2) Suitably rated cable entry devices (e.g. cable glands) are required to maintain the desired IP degree of protection.

Protection against undue opening under load (connectors without breaking capacity) and closing under voltage is demanded to the end-use application, e.g. by suitable detection of such conditions.

MBV BIG hoods with integrated special self-centring floating frame

inserts		pages:
CD	64 poles + ⏚	**72**
CDD	108 poles + ⏚	**81**
CDS	42 poles + ⏚	**-**
CDSH	42 poles + ⏚	**89**
CNE	24 poles + ⏚	**113**
CSE	24 poles + ⏚	**-**
CSH	24 poles + ⏚	**113**
CSH S	24 poles + ⏚	**125**
CCE	24 poles + ⏚	**133**
CMSH	10+2 (aux) poles + ⏚	**140**
CMCE	10+2 (aux) poles + ⏚	**141**
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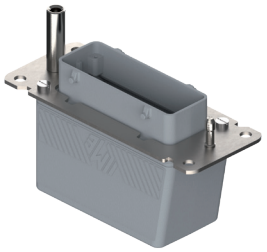
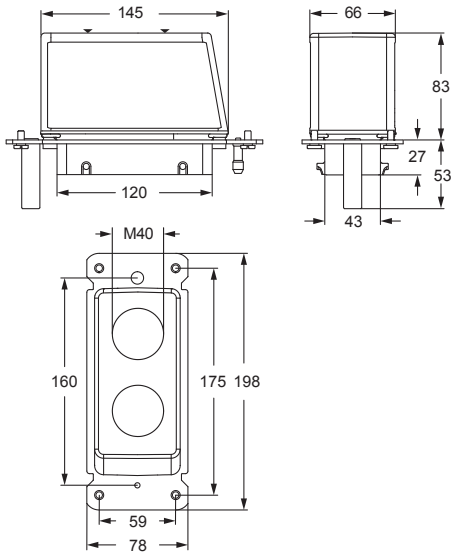
refer to CN.19 pages

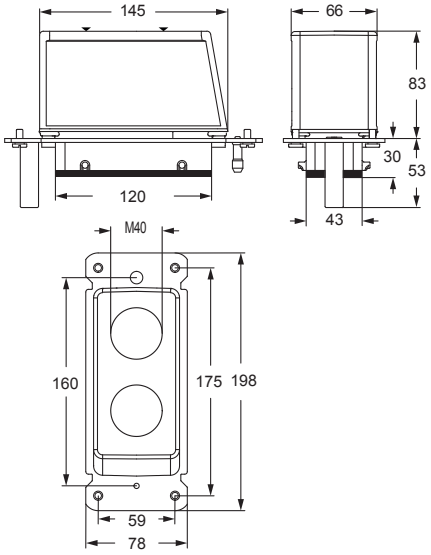
hoods with integrated special self-centring floating frame



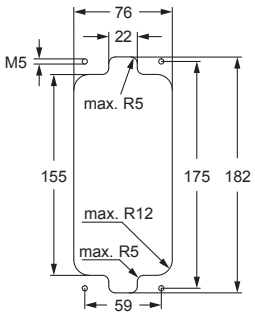
hoods with integrated special self-centring floating frame and gasket

description	part No.	entry M	part No.	entry M
2x M40 top entries	**MBV 24.240D**	40 x 2		
2x M40 top entries, with gasket			**MBV 24.240DG**	40 x 2

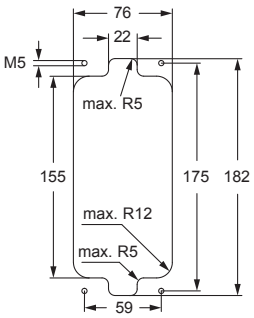




panel cut-out for enclosures



panel cut-out for enclosures



EN 60529 IP66 IP67 IP69 IEC 60529

! CAUTION: Due to the absence of locking means, the IP66/IP67/IP69 achievable degree of protection is demanded to the end-use application:

1) Suitable pressure, in order to uniformly compress the sealing gasket and keep the connector coupling tight is required: this condition is satisfied when the self-centring guide pins and contact tubes reach their end-of-run and are kept constantly in this position;
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Protection against undue opening under load (connectors without breaking capacity) and closing under voltage is demanded to the end-use application, e.g. by suitable detection of such conditions.

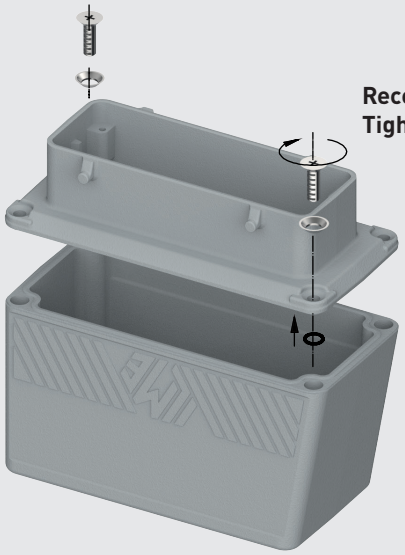
MBV BIG hoods with integrated special self-centring floating frame

ASSEMBLY INSTRUCTIONS

BIG HOODS WITH INTEGRATED SPECIAL SELF-CENTRING FLOATING FRAME

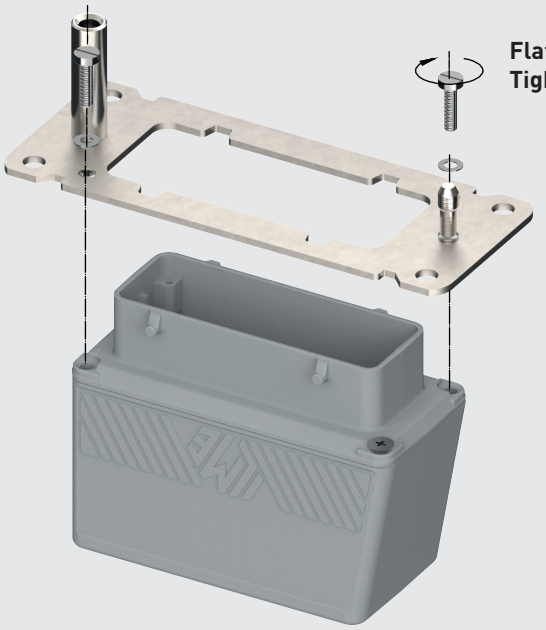
Watch our online tutorial

1 HOOD CLOSING



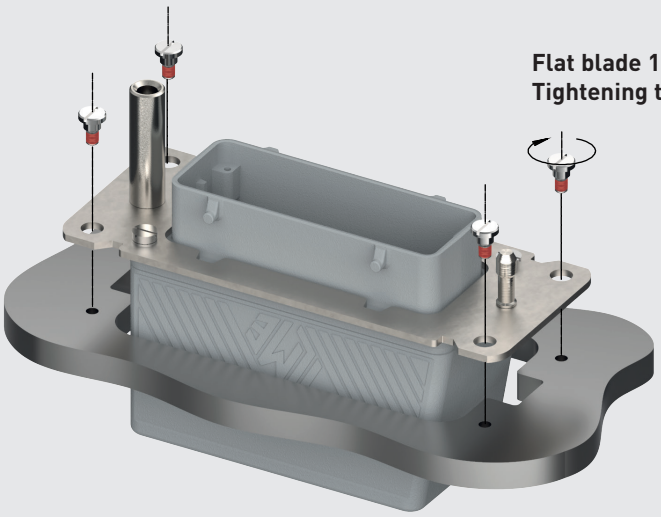
Reccommended size of screwdriver: Ph2
Tightening torque: 1,6 Nm

2 SPECIAL SELF-CENTRING FLOATING FRAME ASSEMBLY



Flat screw driver 10,0 x 1,2 mm
Tightening torque: 1,8 Nm

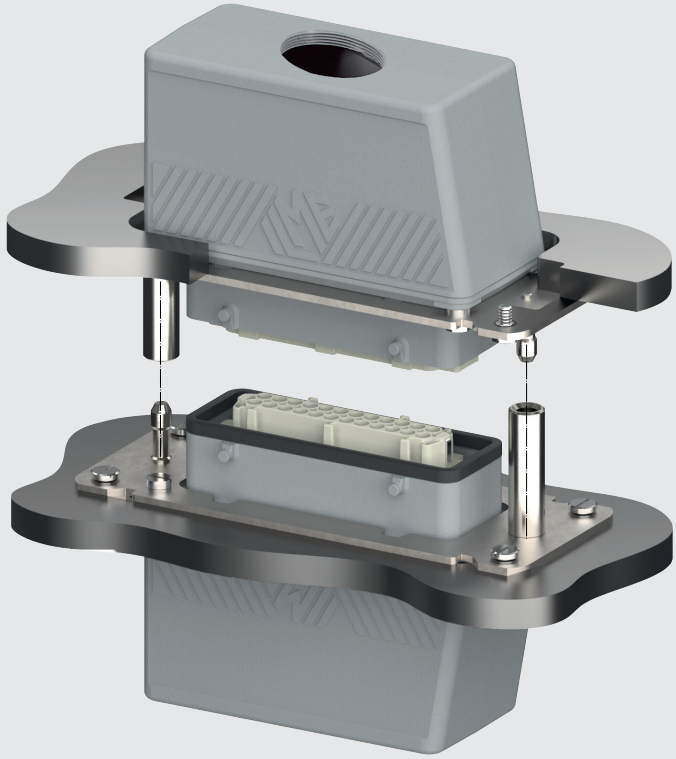
3 INSTALLATION ON THE PANEL



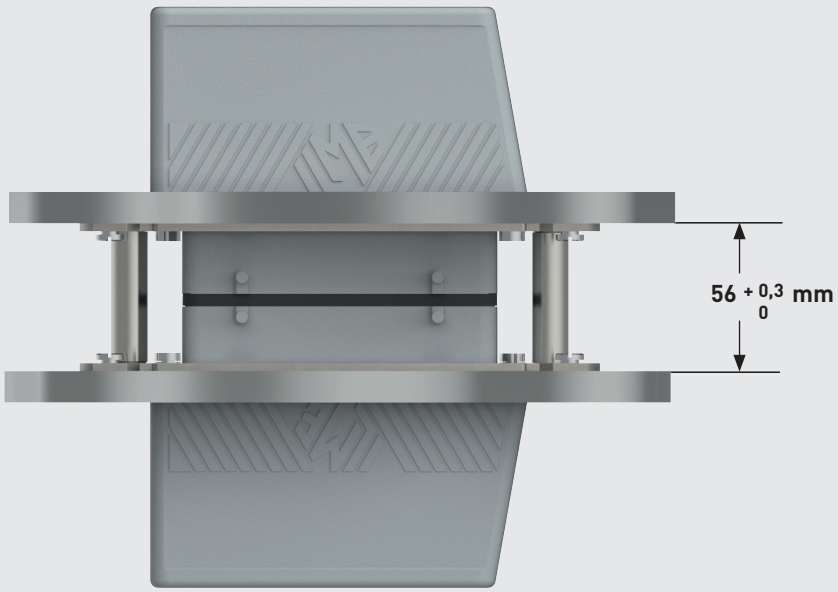
Flat blade 10,0 x 1,2 mm
Tightening torque: 2,5 Nm

Watch our online tutorial

4 INSTALLATION ON THE PANELS

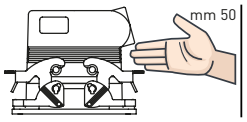
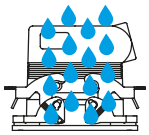
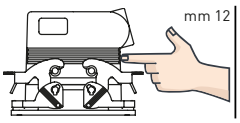
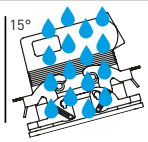
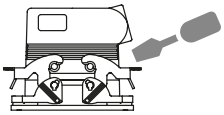
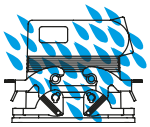
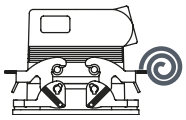
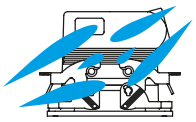
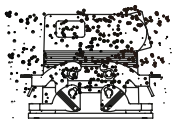
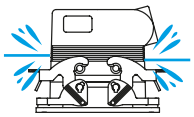
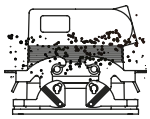
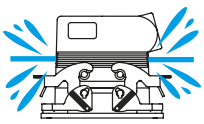
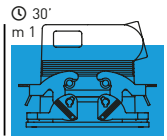
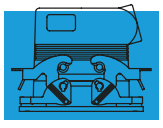
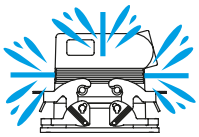


5 CLOSING DISTANCE BETWEEN PANELS TO ACHIEVE IP DEGREE OF PROTECTION



THE DEGREE OF PROTECTION

The connector's housing, sealing and locking mechanism protect the connection from external influences such as mechanical shocks, foreign bodies, humidity, dust, water or other fluids such as cleansing and cooling agents, oils, etc. The degree of protection the housing offers is explained in the IEC 60529, DIN EN 60529, standards that categorize enclosures according to foreign body and water protection.
The following table shows the **IP (Ingress Protection) Ratings Guide**.

FIRST Index figure	Degree of protection SOLIDS		SECOND Index figure	Degree of protection WATER	
0		No protection	0		No protection
1		Protected against access to hazardous parts with the back of a hand and protected against solid foreign objects of Ø 50 mm and greater	1		Protected against vertically falling water drops
2		Protected against access to hazardous parts with a finger - protected against solid foreign objects of Ø 12,5 mm and greater	2		Protected against vertically falling water drops when enclosure tilted up to 15° (on either side of the vertical)
3		Protected against access to hazardous parts with a tool - protected againstsolid foreign objects of Ø 2,5 mm and greater	3		Protected against spraying water (at an angle up to 60° on either side of the vertical)
4		Protected against access to hazardous parts with a wire - protected against solid foreign objects of Ø 1,0 mm and greater	4		Protected against splashing water from any direction
5		Protected against access to hazardous parts with a wire dust-protected (no harmful dust deposit)	5		Protected against water jets from any direction
6		Protected against access to hazardous parts with a wire dust-tight (total protection against dust)	6		Protected against powerful water jets from any direction (similar to sea waves)
			7		Protected against the effects of temporary immersion in water at a maximum depth of 1 metre for 30 min
			8		Protected against the effects of continuous immersion in water at depth and/or duration upon agreement, more severe than for numeral 7
			9		Protected against high pressure and temperature water jets from any direction

RATING EXAMPLE

IP 6 5

Description according to IEC 60529

CHANGEOVER FROM PG THREADS TO METRIC

After 31st December 1999, the German safety standard DIN VDE 0619 (1987-09) and the standards it refers to - DIN 46319 for dimensions with metric threads and DIN 46320 (T1-T4), DIN 46255 and DIN 46259 for dimensions with Pg threads (Pg = Panzerrohr-Gewinde: literally “threads for armoured pipes”) - were withdrawn and European standard EN 50262 “Metric cable glands for electrical installations” has been in force since 1st January 2000.

This standard defines the new sizes with metric threads for cable glands according to EN 60423 and establishes the safety prescriptions.

Conversely, it does not specify the dimensions, such as the size of the tightening wrench, the diagonal dimension, or the dimensions of the tightness seals, as was the case in the withdrawn DIN for Pg cable glands.

The standard came definitively into force on 1st April 2001, when the contrasting national standards were withdrawn.

It is valid in all member countries of CENELEC (European Electrical Standardisation Committee) and its publication has led to a broadening of the supply of enclosures for multi-pole connectors for industrial use, to include new enclosure versions with cable entry suitable for metric cable glands.

NOTE – In 2016 the new EN 62444:2013 standard “Cable glands for electrical installations” replaced the former to cover only cable gland with metric thread whose range is now M6 through M110 (previously up to M75).

Cable gland producers have introduced the new metric series to add to the Pg size series, to gradually replace the latter type. The transitional period indicated in the new standard should have ended on 1st March 2001, after which date the use of cable entry devices with Pg thread and, as a result, enclosures with Pg thread, should have ended in new installations. Nevertheless, both the cable entry devices and the relevant enclosures with Pg thread, may continue to be used as spare parts. For the mandatory **CE** marking of these items, observance of the safety conditions specified by the Low Voltage Directive is sufficient, however adherence to the safety requirements of EN 62444 provides presumption of conformity.

To distinguish hoods and surface-mounting housings with metric entries from the relevant Pg versions (identified with a C pre-code), the ILME metric types are identified with an M pre-code. The transposition table below indicates the correspondence rule adopted in most cases by ILME for creating the new metric versions.

Pg → metric transposition table

Pg	Metric
Pg 11	M20
Pg 13.5	M20
Pg 16	M20
Pg 21	M25
Pg 29	M32
Pg 36	M40
Pg 42	M50

Cable diameter for use with ILME cable glands

∅ in mm	Metric thread				
Series	**20**	**25**	**32**	**40**	**50**
AS M..P	6 - 12,5	10 - 18	14 - 24	15 - 24	23 - 30
AS M..E	8 - 12,5	13,5 - 18	17 - 24	—	—
AG M..T	6 - 8 -10	11 - 14 - 17	19 - 21 -24	26 - 29 - 32	35 - 38 - 41
AG M..I	5 - 12,5	9 - 18	14 - 25	18 - 32	24 - 38,5
AG M..R	6 - 8 -10	11 - 14 - 17	19 - 21 - 24	—	—

For more information, please refer to the technical catalogue on www.ilme.com