ENGLISH

Multipole connectors - T-TYPE enclosures

Standard & Hygienic Series

The company and the product

I.L.M.E. SpA - **INDUSTRIA LOMBARDA MATERIALE ELETTRICO** - has been operating **in Milan since 1938** , in particular in the electrotechnical sector for the manufacture of equipment for industrial installations.
ILME reflects the traditional **entrepreneurial spirit of Lombardy,** and has enjoyed continuous expansion for over half a century. The company has carved an important role for itself in the principal world markets, also operating directly in the countries that have assumed world leadership in the field of automation, including Germany and Japan.
In the **electrical connection** sector with applications in industrial automation, characterised by **top performance** and utmost **reliability** needs**,** ILME is today the acknowledged partner of many leading companies worldwide.

The company's fundamental values are: **Product innovation**, original solutions, excellent **price-quality ratio,** acustomer-oriented **service,** ethical behaviour and respect for the environment.

To promote the continuing improvement of its qualitative **results,** ILME has always encouraged its collaborators to work with maximum **responsibility and participation.**

The company focuses on a series of benefits to the user, including research into the most suitable materials, high quality and safe cabling, a rapid turnaround and readily available services.

ISO 9001 certification: 2015
Design, manufacture and distribution
of industrial electrical equipment (IAF 19)
Certificate No. 50 100 11133

CE marking

As from 1st January 1997, in order to launch electrical products on the European market the manufacturer must ensure these bear the relevant CE marking, in line with the Low Voltage Directive 73/23/ EEC * (implemented in Italy as L.D. 18-10-1977 no. 791) and its modification 93/68/EEC * (implemented in Italy as L.D. 25-11-1996 no. 626/96, published in the supplement to the Gazzetta Ufficiale of 14-12-1996).
The CE marking must be visible on the product or, if this is not possible, on the packaging, the instructions for use or on the warranty certificate. It acts as a declaration by the manufacturer that the product complies with all relevant EU directives regarding its field of application.

ILME products bear the CE marking on the actual product or its packaging.

Almost all ILME products fall within the scope of the Low Voltage Directive. A declaration of conformity is required in order to be able to apply the CE marking. This declaration, to which the market is not directly entitled, must be made available to the controlling authorities (in Italy, the Ministry for Industry, Commerce and Handicraft) at all times. In it, the manufacturer declares the technical safety standard(s) followed in the manufacture of the product. These standards must be, in decreasing order of preference:

- a European standard (EN prefix)
- a European harmonisation document (HD prefix)
- an international IEC standard
- a national standard
- in the absence of reference standards, the manufacturer's internal specifications guaranteeing compliance with the basic safety requirements of the directive.

Compliance with harmonised technical standards (i.e. ratified by CENELEC) also constitutes presumption of compliance with the basic safety requirements of the directives.
The CE marking of ILME products results from the declaration of conformity of the product to harmonised standards or international IEC standards.

Through the CE marking, ILME declares full compliance, not merely with the directive's basic safety requirements, but also with those international or national EU standards on which voluntary safety certification markings are based (e.g. IMQ and VDE). In this way, ILME intends to give the CE marking the value of self-certification in terms of safety, given the loss in legal value of voluntary certifications issued by third parties, ratified by directive 93/68/EEC*.

Notwithstanding the above, practically all ILME products still bear voluntary conformity markings.

The above mentioned EU declaration of conformity becomes null and void when the assembly of products includes one or more components not manufactured by ILME and without CE marking.

***Note:** The next legal reference for the Low Voltage Directive was 2006/95/EC, as consolidation of the original Directive 73/23/EEC + Directive 93/68/EEC. On 29th March 2014, the Official Journal of the European Union published the new Low Voltage directive 2014/35/EU dd. 26th February 2014, a recast version of directive 2006/95/EC, which is in force since on 20th April 2016.

The information contained in this catalogue is not binding and may be changed without notice.

T-TYPE enclosures

Standard & Aggressive environments, Hygienic applications

T-TYPE
STANDARD
for standard applications

Pages 6-15

T-TYPE/W
for aggressive environments

Pages 16-25

HYGIENIC T-TYPE/H
for food & beverage

HYGIENIC T-TYPE/C
for low temperatures

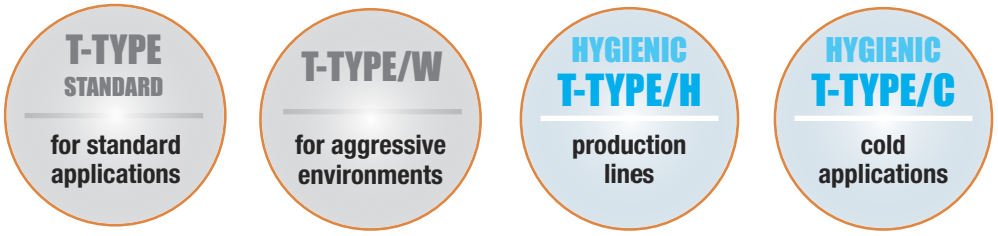
ECOLAB

Pages 26-53

T-TYPE General information

International standards

The T-TYPE enclosures have been successfully tested



T-TYPE enclosures have been **successfully** tested in accordance with the following international standards, guaranteeing their usage for numerous applications:

- **EN 61984: Connectors - Safety requirements and tests.**
- **ANSI/UL 50 (Enclosures for Electrical Equipment)** equivalent to voluntary North American standard NEMA 250 (NEMA = National Electrical Manufactures Association) and the corresponding Canadian standard CSA C22.2 No. 94 (Special Purpose Enclosures) for degrees of protection used in North America and required by local installation codes (e.g. NFPA 70 National Electrical Code in the USA, CSA plant standards for Canada). The current type approval was obtained after passing a series of tests carried out in accordance with the standard, in particular: **Type 12 (= NEMA 12)** for internal use, similar to degree of protection IP54 according to IEC/EN 60529. (Only standard T-TYPE enclosures).
- **EN 60529: Degrees of protection provided by enclosures (IP Code)** for ratings IP65, IP66 and IP69.
- **EN 62262: Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK Code)** for ratings IK09 (enclosures with levers), IK10 (enclosures without levers).
- **IEC 60068-2-52: Environmental testing - Part 2-52: Salt mist, cyclic:** with 5% solution of sodium chloride (NaCl), solution Ph from 6,5 to 7,2;
  ENVIRONMENTAL CONDITIONS: salt mist, 35 °C for 2 hours; 40 °C for 168 hours with 93% relative humidity;
  NO. OF CYCLES: 4;
  TEST PASSED: maintaining the IP degree of protection and with a change of contact resistance ≤ 50% of the initial value or ≤ 5 mΩ.
- **IEC 60068-2-6: Environmental testing - Part 2-6: Vibration (sinusoidal):** with values 10Hz÷500Hz, 0,35 mm amplitude of displacement, 50m/s^2 (5g$_n$), crossover point 60,1 Hz;
  NO. OF CYCLES: 10;
  TEST PASSED: scanning 3 axes for 2 hours, with a change of contact resistance value ≤ 50% of the initial value or ≤ 5 mΩ and no micro-interruption (≥ 1 μs).
- **IEC 60068-2-3: Environmental testing - Part 2-3: Damp heat, steady state:** at 40 °C, 93% relative humidity, 504 hours;
  TEST PASSED: with a change of contact resistance value ≤ 50% of the initial value or ≤ 5 mΩ and no disruptive discharge (insulation resistance > 100 GΩ).
- **IEC 60068-2-30: Environmental testing - Part 2-30: Damp heat, cyclic:** 40 °C, 95% relative humidity, 12 hours at ambient temperature;
  NO. OF CYCLES: 21;
  TEST PASSED: with a change of contact resistance value ≤ 50% of the initial value or ≤ 5 mΩ and no disruptive discharge (insulation resistance > 100 GΩ).

T-TYPE General information

Application fields

NAVAL

OFFSHORE

ROBOTICS

AUTOMATION

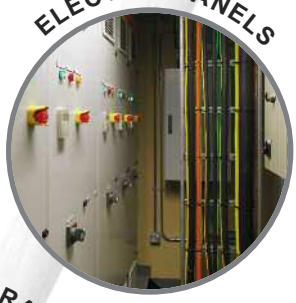
SALT-SPRAYERS

T-TYPE
application fields

standard applications
aggressive environments
food & beverage

POWER SUPPLIES

ELECTRIC PANELS



RADIO CONTROLS

FOOD & BEVERAGE

SAFETY SYSTEMS

T-TYPE General information

Resistance to chemicals comparison table

The classification herewith provided is only a generic reference guide in order to enable a first selection. It is based on literature data provided by the suppliers of the raw materials used, which are related to tests carried out on specimens under test conditions which are not always homogeneous and involving accelerating techniques, therefore not necessarily describing real operational conditions. The actual behaviour of products in the field may therefore be positively or negatively influenced by several variable environmental parameters such as temperature, relative humidity, simultaneous presence of a plurality of substances and their concentration, exposure time, dynamic or static application condition, and so on. The accuracy of transferring the indications given herein to the actual conditions of use is therefore merely indicative and does not imply any guarantee or responsibility by ILME.

	T-TYPE	T-TYPE / W	T-TYPE / H	T-TYPE / C
A				
Acetone (propanone)	x	x	x	x
Active chlorine	x	x	x	x
Alum	●	●	●	●
Ammonia, 10% aqueous solution	●	x	●	●
Ammonia, liquid	x	x	●	●
Ammonium acetate	●	x	●	●
Ammonium carbonate	●	●	●	x
Ammonium chloride	●	●	●	x
Ammonium nitrate	●	●	●	●
Ammonium phosphate	●	●	●	●
Ammonium sulphate	●	●	●	●
Amyl alcohol	□	□	□	x
Aniline	□	□	x	x
Aqua regia (1:3 nitric acid : hydrochloric acid)	x	x	x	x
Asphalt	□	□	□	x
B				
Beer	●	●	●	●
Benzene	x	□	x	x
Borax	□	□	□	□
Boric acid	●	●	●	●
Boric acid, 10% aqueous solution	●	●	●	●
Boric water (boric acid 3%)	●	●	●	●
Butane, gas	□	□	□	x
Butane, liquid	□	□	□	x
C				
Calcium chloride	●	●	●	●
Calcium chloride, 10% aqueous solution	●	●	●	●
Calcium chloride, diluted suspension	●	●	●	●
Calcium nitrate	●	●	●	●
Calcium sulphate	●	●	x	●
Caustic potash (potassium hydroxide) 10%	x	●	●	x
Citric acid 50% aqueous solution	x	x	●	●
Copper sulphate 10% aqueous solution	●	●	●	●
Cresol	□	□	x	x
Cresolic solution	□	□	x	x
Cutting oil	□	□	□	x
Cyclo-hexane	□	□	□	x
D				
Deca-hydro-naphtalene	x	x	x	x
Di-exyl Phtalate	●	x	x	x

	T-TYPE	T-TYPE / W	T-TYPE / H	T-TYPE / C
D				
Di-isononyl Phtalate	●	x	x	x
Di-optyl Phtalate	●	●	x	x
Diesel Oil	□	□	□	□
Diluted Glucose	●	●	●	●
Diluted Glycerine	●	●	●	●
Diluted Glycol	●	●	●	●
Diluted Phenol	□	□	x	x
Diluted urea	●	●	●	●
E				
Ethanol (ethyl alcohol)	x	x	x	●
Ethyl alcohol	●	●	□	●
Ethylene-glycol or propylene-glycol	●	●	●	●
F				
Fatty acids	●	●	●	□
Ferric chloride, 10% aqueous solution	x	x	x	x
Formalin (formaldehyde 40% aqueous solution)	x	x	●	●
Fruit juices	●	●	●	●
Fuel oils	□	□	□	x
G				
Gaseous ammonia	□	x	●	●
Gaseous propane	x	●	●	x
Glycerine	●	●	●	●
Grinding oil	□	□	□	x
Gypsum (see calcium sulphate)	●	●	x	●
H				
Heptane	□	□	□	x
Hexane	□	□	□	x
Hydrochloric acid, <2% aqueous solution	x	x	●	□
Hydrogen sulphide	□	x	●	x
I				
Ink	●	●	●	●
IRM oil 901	●	●	●	●
IRM oil 902	□	●	●	x
IRM oil 903	x	□	□	□
Isopropyl alcohol	□	●	●	●
K				
Kitchen salt, aqueous solution	●	●	●	●

Legend ● : Resistant □ : Limited resistance x : Not resistant

T-TYPE General information

Resistance to chemicals comparison table

	T-TYPE	T-TYPE / W	T-TYPE / H	T-TYPE / C
L				
Lactic acid	●	●	●	●
Linseed oil	●	●	●	●
Liquid soap	x	●	●	●
Lubricating engine oil	□	□	□	x
Lubricating oil	●	●	●	x
M				
Mercury	●	●	●	●
Methanol (methyl alcohol)	x	x	●	●
Methyl alcohol, diluted 50%	□	□	●	●
Mineral based oil	●	●	●	●
Mineral oils (un-tasteful)	●	●	●	●
Mothballs (naphthalene, paradichlorobenzene)	□	□	x	x
Muriatic acid, concentrated	x	x	x	x
N				
n-Butanol (butyl alcohol)	●	●	●	●
Naphthalene	□	●	x	x
Normal (low octane) gasoline (petrol)	□	□	□	x
O				
Octane	□	□	□	x
Oleic acid	●	●	●	x
Oxalic acid	●	●	●	●
Ozone	x	x	x	□
P				
Paraffin oil	●	●	●	●
Petrol ether	□	□	□	□
Petroleum	●	●	●	●
Petroleum spirit (dry cleaning)	□	□	x	x
Potassium carbonate	●	●	●	●
Potassium chlorate	●	●	x	●
Potassium chloride	●	●	●	●
Potassium cyanide, aqueous solution	●	●	●	●
Potassium di-chromate	□	□	●	●
Potassium iodide	□	□	●	●
Potassium nitrate	□	x	x	●
Potassium persulphate	□	□	x	●
Potassium sulphate	□	□	●	●
S				
Sea water	●	●	●	●
Silicon oil	●	●	●	x
Soap solution	□	●	●	●
Sodium bicarbonate (oxide)	●	●	●	●
Sodium carbonate (washing soda)	●	●	●	●
Sodium chlorate	●	●	x	●
Sodium chloride (kitchen salt)	●	●	●	●

	T-TYPE	T-TYPE / W	T-TYPE / H	T-TYPE / C
S				
Sodium disulphate, aqueous solution	●	●	●	●
Sodium hydroxide (caustic soda)	x	x	●	●
Sodium hydroxide 12,5% (liscivia)	□	x	●	●
Sodium Hypochlorite	x	x	●	●
Sodium nitrate	●	●	●	x
Sodium nitrite	□	□	●	x
Sodium perborate	●	●	●	●
Sodium phosphate	●	●	●	x
Sodium silicate	●	x	x	●
Sodium sulphate	●	●	●	●
Sodium sulphide	●	●	●	●
Sodium Thiosulphate (photographic fixer)	●	●	●	●
Solution for photographic processing	●	●	●	●
Starch, aqueous (amylum)	●	●	●	●
Stearic acid	●	●	●	●
Succinic acid (butanedioic acid)	●	●	●	●
Sulphur	●	●	x	x
Sulphur dioxide (sulphurous anhydride)	□	x	x	□
Sulphuric acid, 2% aqueous solution	x	x	□	□
T				
Tallow	●	●	●	●
Tar	□	□	x	□
Tartaric acid	●	●	●	●
Toluene	x	x	x	x
Transformer oil (dielectric)	●	●	●	●
Trichloroethylene	x	x	x	x
Trichresyl phosphate	●	●	x	x
Turpentine essence	x	□	□	x
U				
Urine	●	●	●	●
V				
Vegetable oil	●	●	●	●
Vinegar	x	□	●	□
W				
Water	●	●	●	●
White alcohol (isopropanol + ethanol)	□	●	●	●
X				
Xylene	x	x	x	x

Legend ● : Resistant □ : Limited resistance x : Not resistant

T-TYPE Standard

For modular and standard inserts

T-TYPE insulating enclosures series

T-TYPE
STANDARD
IP65, UL TYPE 12
for standard applications

Alongside the wide range of traditional metallic enclosures for ILME multipole connectors, there is now available a **new series of enclosures in self-extinguishing thermoplastic material** in the most common sizes “44.27”, “57.27”, “77.27” and “104.27”.

Quality and money saving are the main features of these enclosures, as an outcome of careful product studies.

Valuable characteristics of these new versions of enclosures:
- **significant structural solidity** and mechanical robustness by virtue of **substantial thickness;**
- **external dimensions** of the bulkhead mounting housings are **similar to those of the corresponding metallic enclosures; hole fixing centres are unchanged;**
- **pre-fastened gaskets** for easier installation;
- **wide space inside the enclosures** for cables, with mounted connector inserts, similar to the corresponding “high construction” versions;
- possibility of making **total insulation** constructions (equivalent to Class II) ⧈ ;
- **absence of powder paint** for environments in which these are not recommended (e.g. to avoid food contamination).

T-TYPE STANDARD

STANDARD APPLICATIONS

DATA SHEETS AT PAGES 8-15

- **Enclosures** in **thermoplastic material, dark grey RAL 7012 colour,** with high thicknesses providing structural solidity and durability.
- Built-in **polyurethane gaskets.**
- **Locking levers** in **thermoplastic material colour grey RAL 7001.**
- **M25, M32 and M40** threaded cable entries.
- **IP65** degree of protection according to **EN 60529;**
- **UL TYPE 12** degree of protection according to **ANSI/UL50.**
- Each enclosure carries its own part number, thread/size, conformity **markings** and UL type rating.
- Ambient temperature range: **-40 °C / +90 °C.**

T-TYPE Standard

For modular and standard inserts

FOCUS ON:

① Construction

By using the BC-MUL® moulding technique and use of MIL.BOX® material, **these enclosures are structurally solid and mechanically robust,** due to their increased thickness. They are particularly resistant to the main pollutants present in industrial environments. The lever enclosure pegs are built into the enclosures. The methods for fastening the connector inserts to the enclosures are made of M3 threaded metal inserts.

With reference to metal construction enclosures, which to comply with the electrical installation safety norms, must be earthed via a metal connection to the grounding terminal of the inserts mounted inside the enclosures, the new series of enclosures offers a solution for **total insulation** constructions (equivalent to class II) where necessary. The thermoplastic material used is RAL 7012 dark grey colour and UL 94V-2 grade self-extinguishing and has passed glow wire testing in accordance with the IEC (EN) 60695-2-11 at 650 °C in compliance with intended uses.

The **surface mounting** high construction housings are supplied **with an open threaded entry** and diametrically opposite a closed threaded entry, which can be **opened** by the user, if required (with suitable tool).

Manufactured from insulating material, they do not require **special reinforced insulation** as the metal versions do, for use with series **CME higher voltage** connector inserts (screw-type terminals).

② Gaskets

T-Type standard sealing gaskets have been produced by means of the FIPFG technology (Formed-In-Place-Foam-Gasket). They have therefore been incorporated in the base flange on bulkhead mounting housings for easier installation.

• T-Type Standard: Built-in polyurethane gaskets

③ Levers

The locking levers have been produced in self-extinguishing thermoplastic material, grey RAL 7001 colour.

④ Dimensions

The internal dimensions allow mounting of all connector inserts in their relevant sizes. The external dimensions of the bulkhead mounting housings are similar to those of the corresponding metallic enclosures; hole fixing centres are unchanged.

Hoods offer an inner cabling space similar to that of the “high” construction models of the corresponding metal enclosures. Other characteristics are in compliance with the applicable safety standard for electrical connectors, IEC/EN 61984.

⑤ Cable entries

The housing and hood cable entries are available with metric thread, respectively:

- **M25 or M32** for smaller sizes “44.27” and “57.27”.
- **M32 or M40** for larger sizes “77.27” and “104.27”.

The recent standard IEC/EN 61076-7-100 regarding metric cable entries for multipole electrical connectors for heavy duty uses, which standardises some main dimensions for entries and their related accessories (gaskets, pressure nuts), have been carefully considered in the product design.

⑥ Markings

Each enclosure carries its own part number and conformity markings.

inserts page

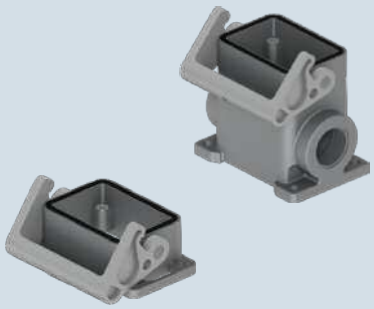
CDD	24	poles + ⏚	67
CDS	9	poles + ⏚	78
CSH	6	poles + ⏚	91
CNE, CSE	6	poles + ⏚	104
CCE	6	poles + ⏚	110
CSS	6	poles + ⏚	122
CT, CTSE (16A) ***)**	6	poles + ⏚	130
CQE	10	poles + ⏚	138
MIXO	2	modules	179 ÷ 215

pages refer to CN.16 catalogue

***) only for standard insulating version TCHI**

insert centre distance: **44 x 27 mm**

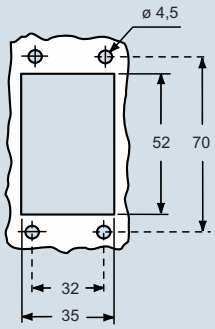
housings with single lever



hoods with 2 pegs

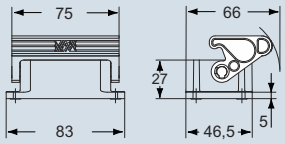
description	part No.	entry M	part No.	entry M
bulkhead mounting housing with thermoplastic lever	**TCHI 06 L**			
surface mounting housing with thermoplastic lever surface mounting housing with thermoplastic lever	**TMAP 06 L25** **TMAP 06 L32**	**25** **32**		
with pegs, side entry with pegs, side entry			**TMAO 06 L25** **TMAO 06 L32**	**25** **32**
with pegs, top entry with pegs, top entry			**TMAV 06 L25** **TMAV 06 L32**	**25** **32**

panel cut-out for bulkhead mounting housing in mm

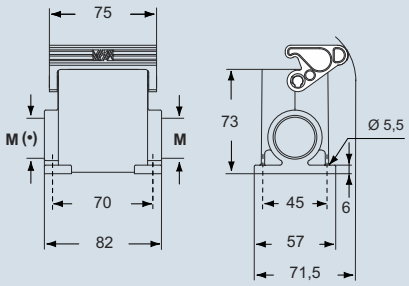


dimensions in mm

TCHI 06 L



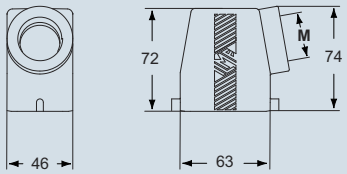
TMAP 06 L25 and **TMAP 06 L32**



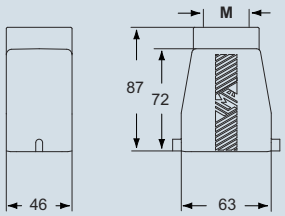
(•) The surface mounting, high construction housings are supplied with an open threaded entry (•) and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

dimensions in mm

TMAO 06 L25 and **TMAO 06 L32**



TMAV 06 L25 and **TMAV 06 L32**



cULus Type 12

IP65

- ambient temperature limits -40 °C / +90 °C.

dimensions shown are not binding
and may be changed without notice

inserts: page:

CDD..... 24 poles + ⏚ 67
CDS..... 9 poles + ⏚ 78
CSH..... 6 poles + ⏚ 91
CNE, CSE ..... 6 poles + ⏚ 104
CCE..... 6 poles + ⏚ 110
CSS..... 6 poles + ⏚ 122
CT, CTSE (16A) ***)**.... 6 poles + ⏚ 130
CQE..... 10 poles + ⏚ 138
MIXO..... 2 modules 179 ÷ 215

pages refer to CN.16 catalogue

***) only for standard insulating version TCHI**

insert centre distance: **44 x 27 mm**

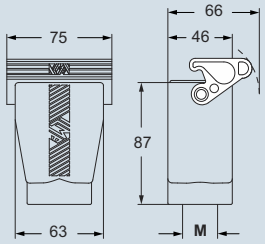
hoods with single lever top entry

covers

description	part No.	entry M	part No.
with thermoplastic lever and gasket	**TMAV 06 LG25**	**25**	
with thermoplastic lever and gasket	**TMAV 06 LG32**	**32**	
with pegs			**TCHC 06 L**
with thermoplastic lever and gasket			**TCHC 06 LG**

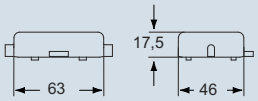
dimensions in mm

TMAV 06 LG25 and **TMAV 06 LG32**

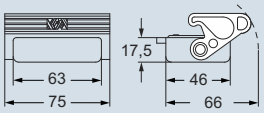


dimensions in mm

TCHC 06 L



TCHC 06 LG



cULus Type 12

IP65

- ambient temperature limits -40 °C / +90 °C.

dimensions shown are not binding
and may be changed without notice

inserts: page:

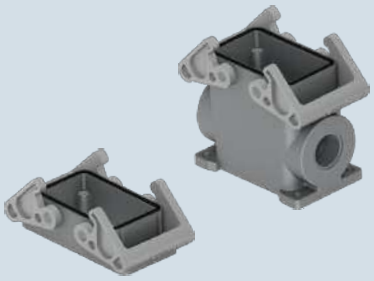
CDD	42	poles + ⏚	69
CDS	18	poles + ⏚	79
CSH	10	poles + ⏚	92
CNE, CSE	10	poles + ⏚	105
CCE	10	poles + ⏚	111
CSS	10	poles + ⏚	123
CT, CTSE (16A) ***)**	10	poles + ⏚	131
CQE	18	poles + ⏚	139
CMCE	3+2 (aux)	poles + ⏚	148
CME	3+2 (aux)	poles + ⏚	149
CMSH	3+2 (aux)	poles + ⏚	149
CX	8/24	poles + ⏚	169
MIXO	3	modules	179 ÷ 215

pages refer to CN.16 catalogue

***) only for standard insulating version TCHI**

insert centre distance: **57 x 27 mm**

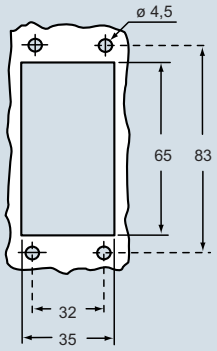
housings with double lever



hoods with 4 pegs

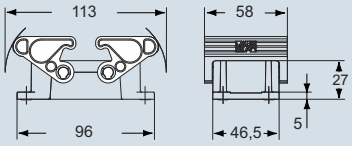
description	part No.	entry M	part No.	entry M
bulkhead mounting housing with thermoplastic levers	**TCHI 10**			
surface mounting housing with thermoplastic levers surface mounting housing with thermoplastic levers	**TMAP 10.25** **TMAP 10.32**	**25** **32**		
with pegs, side entry with pegs, side entry			**TMAO 10.25** **TMAO 10.32**	**25** **32**
with pegs, top entry with pegs, top entry			**TMAV 10.25** **TMAV 10.32**	**25** **32**

panel cut-out for bulkhead mounting housing in mm

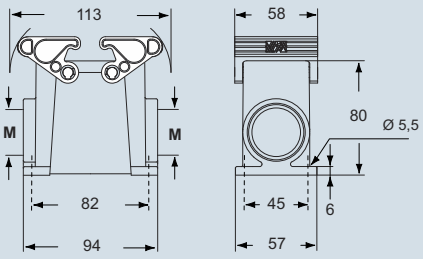


dimensions in mm

TCHI 10



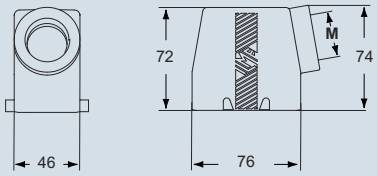
TMAP 10.25 and **TMAP 10.32**



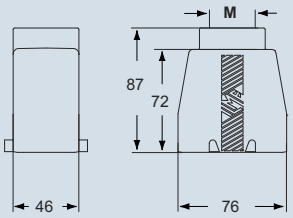
The surface mounting, high construction housings are supplied with an open threaded entry and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

dimensions in mm

TMAO 10.25 and **TMAO 10.32**



TMAV 10.25 and **TMAV 10.32**



c UL us Type 12

EN 60529 IP65 IEC 60529

- ambient temperature limits -40 °C / +90 °C.

dimensions shown are not binding
and may be changed without notice

inserts: page:

CDD	42	poles + ⏚	69
CDS	18	poles + ⏚	79
CSH	10	poles + ⏚	92
CNE, CSE	10	poles + ⏚	105
CCE	10	poles + ⏚	111
CSS	10	poles + ⏚	123
CT, CTSE (16A) ***)	10	poles + ⏚	131
CQE	18	poles + ⏚	139
CMCE	3+2 (aux)	poles + ⏚	148
CME	3+2 (aux)	poles + ⏚	149
CMSH	3+2 (aux)	poles + ⏚	149
CX	8/24	poles + ⏚	169
MIXO	3	modules	179 ÷ 215

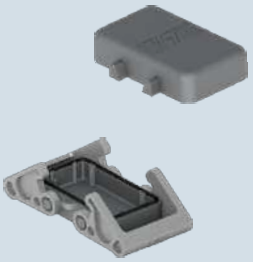
pages refer to CN.16 catalogue

***) only for standard insulating version TCHI**

insert centre distance: **57 x 27 mm**

hoods with double lever top entry

covers

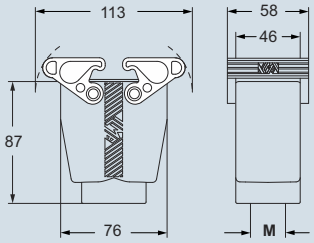


description	part No.	entry M
with thermoplastic levers and gasket	**TMAV 10 G25**	**25**
with thermoplastic levers and gasket	**TMAV 10 G32**	**32**

description	part No.
with 4 pegs	**TCHC 10**
with 2 thermoplastic levers and gasket	**TCHC 10 G**

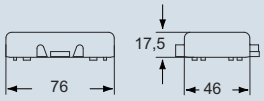
dimensions in mm

TMAV 10 G25 and **TMAV 10 G32**

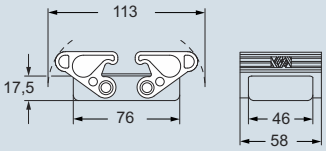


dimensions in mm

TCHC 10



TCHC 10 G



c UL us Type 12

IP65

- ambient temperature limits -40 °C / +90 °C.

dimensions shown are not binding
and may be changed without notice

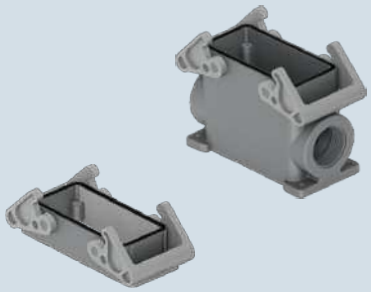
inserts:		page:
CD.....	40 poles + ⏚	57
CDD.....	72 poles + ⏚	70
CDS.....	27 poles + ⏚	80
CSH.....	16 poles + ⏚	93
CNE, CSE.....	16 poles + ⏚	106
CCE.....	16 poles + ⏚	112
CSS.....	16 poles + ⏚	124
CT, CTSE (16A) ***)**..	16 poles + ⏚	132
CQE.....	32 poles + ⏚	140
CQEE.....	40 poles + ⏚	146
CMCE.....	6+2 (aux) poles + ⏚	150
CME, CMSH..	6+2 (aux) poles + ⏚	151
CP.....	6 poles + ⏚	162
CX.....	6/36 and 12/2 poles + ⏚	170÷171
CX.....	4/0 and 4/2 poles + ⏚	172
MIXO.....	4 modules	179÷215

pages refer to CN.16 catalogue

***) only for standard insulating version TCHI**

insert centre distance: **77,5 x 27 mm**

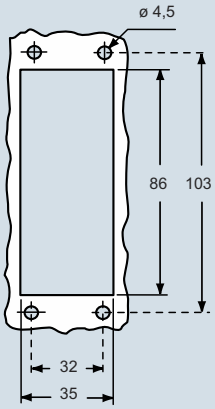
housings with double lever



hoods with 4 pegs

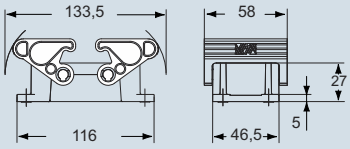
description	part No.	entry M	part No.	entry M
bulkhead mounting housing with thermoplastic levers	**TCHI 16**			
surface mounting housing with thermoplastic levers surface mounting housing with thermoplastic levers	**TMAP 16.32** **TMAP 16.40**	**32** **40**		
with pegs, side entry with pegs, side entry			**TMAO 16.32** **TMAO 16.40**	**32** **40**
with pegs, top entry with pegs, top entry			**TMAV 16.32** **TMAV 16.40**	**32** **40**

panel cut-out for bulkhead mounting housing in mm

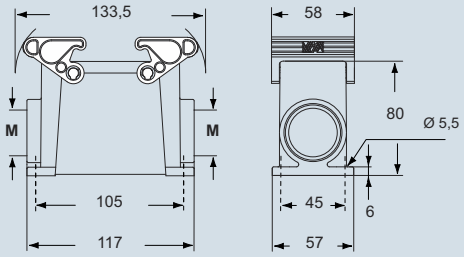


dimensions in mm

TCHI 16



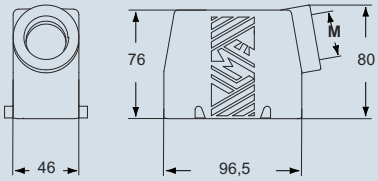
TMAP 16.32 and **TMAP 16.40**



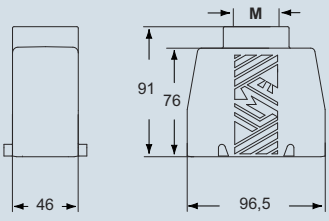
The surface mounting, high construction housings are supplied with an open threaded entry and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

dimensions in mm

TMAO 16.32 and **TMAO 16.40**



TMAV 16.32 and **TMAV 16.40**



c UL us Type 12

EN 60529 IP65 IEC 60529

- ambient temperature limits -40 °C / +90 °C.

dimensions shown are not binding
and may be changed without notice

inserts: page:

CD	40	poles + ⏚	57
CDD	72	poles + ⏚	70
CDS	27	poles + ⏚	80
CSH	16	poles + ⏚	93
CNE, CSE	16	poles + ⏚	106
CCE	16	poles + ⏚	112
CSS	16	poles + ⏚	124
CT, CTSE (16A) ***)**	16	poles + ⏚	132
CQE	32	poles + ⏚	140
CQEE	40	poles + ⏚	146
CMCE	6+2 (aux)	poles + ⏚	150
CME, CMSH	6+2 (aux)	poles + ⏚	151
CP	6	poles + ⏚	162
CX	6/36 and 12/2	poles + ⏚	170÷171
CX	4/0 and 4/2	poles + ⏚	172
MIXO	4	modules	179÷215

pages refer to CN.16 catalogue

***) only for standard insulating version TCHI**

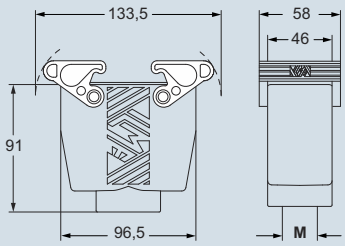
insert centre distance: **77,5 x 27 mm**

hoods with double lever top entry

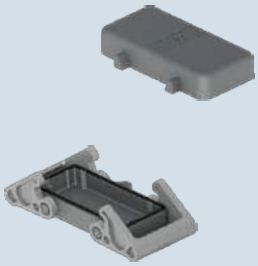
description	part No.	entry M
with thermoplastic levers and gasket	**TMAV 16 G32**	**32**
with thermoplastic levers and gasket	**TMAV 16 G40**	**40**

dimensions in mm

TMAV 16 G32 and **TMAV 16 G40**



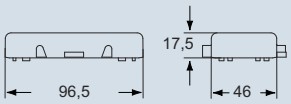
covers



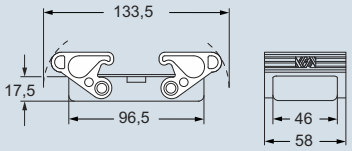
description	part No.
with 4 pegs	**TCHC 16**
with 2 thermoplastic levers and gasket	**TCHC 16 G**

dimensions in mm

TCHC 16



TCHC 16 G



c UL us Type 12

IP65

- ambient temperature limits -40 °C / +90 °C.

dimensions shown are not binding
and may be changed without notice

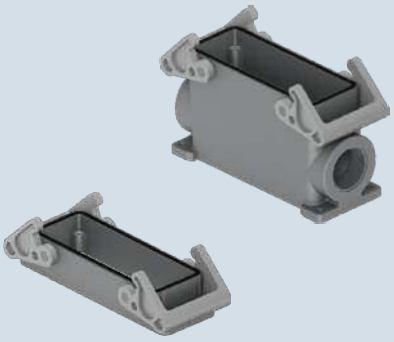
inserts:		page:
CD	64 poles + ⏚	59
CDD	108 poles + ⏚	72
CDS	42 poles + ⏚	81
CSH	24 poles + ⏚	94
CNE, CSE	24 poles + ⏚	107
CCE	24 poles + ⏚	113
CSS	24 poles + ⏚	125
CT, CTSE (16A) ***)	24 poles + ⏚	133
CQE	46 poles + ⏚	141
CQEE	64 poles + ⏚	147
CMCE	10+2 (aux) poles + ⏚	152
CME, CMSH	10+2 (aux) poles + ⏚	153
CMCE	16+2 (aux) poles + ⏚	158
CME	16+2 (aux) poles + ⏚	159
CX	4/8 and 6/6 poles + ⏚	173, 175
MIXO	6 modules	179÷215

pages refer to CN.16 catalogue

***) only for standard insulating version TCHI**

insert centre distance: **104 x 27 mm**

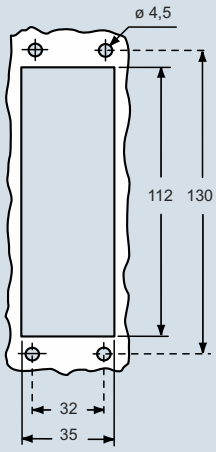
housings with double lever



hoods with 4 pegs

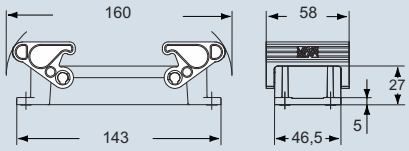
description	part No.	entry M	part No.	entry M
bulkhead mounting housing with thermoplastic levers	**TCHI 24**			
surface mounting housing with thermoplastic levers surface mounting housing with thermoplastic levers	**TMAP 24.32** **TMAP 24.40**	**32** **40**		
with pegs, side entry with pegs, side entry			**TMAO 24.32** **TMAO 24.40**	**32** **40**
with pegs, top entry with pegs, top entry			**TMAV 24.32** **TMAV 24.40**	**32** **40**

panel cut-out for bulkhead mounting housing in mm

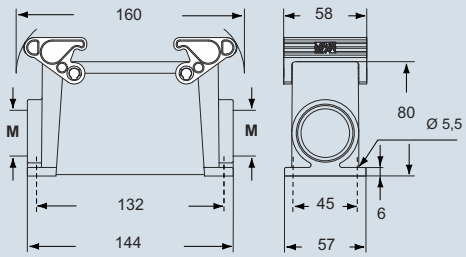


dimensions in mm

TCHI 24



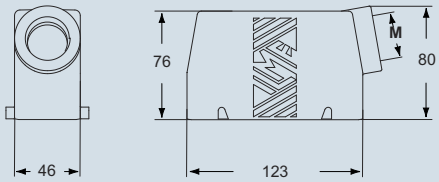
TMAP 24.32 and **TMAP 24.40**



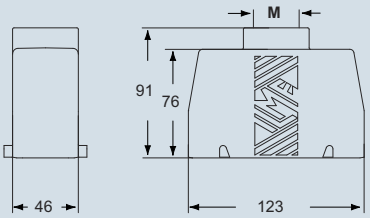
The surface mounting, high construction housings are supplied with an open threaded entry and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

dimensions in mm

TMAO 24.32 and **TMAO 24.40**



TMAV 24.32 and **TMAV 24.40**



c UL us Type 12

IP65

- ambient temperature limits -40 °C / +90 °C.

dimensions shown are not binding
and may be changed without notice

inserts: page:

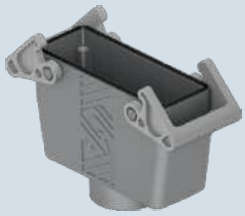
CD ..... 64 poles + ⏚ 59
CDD..... 108 poles + ⏚ 72
CDS..... 42 poles + ⏚ 81
CSH..... 24 poles + ⏚ 94
CNE, CSE ..... 24 poles + ⏚ 107
CCE..... 24 poles + ⏚ 113
CSS..... 24 poles + ⏚ 125
CT, CTSE (16A) ***)**.. 24 poles + ⏚ 133
CQE..... 46 poles + ⏚ 141
CQEE..... 64 poles + ⏚ 147
CMCE..... 10+2 (aux) poles + ⏚ 152
CME, CMSH 10+2 (aux) poles + ⏚ 153
CMCE..... 16+2 (aux) poles + ⏚ 158
CME..... 16+2 (aux) poles + ⏚ 159
CX..... 4/8 and 6/6 poles + ⏚ 173, 175
MIXO..... 6 modules 179÷215

pages refer to CN.16 catalogue

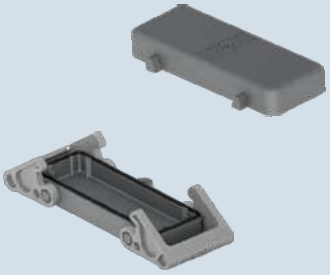
***) only for standard insulating version TCHI**

insert centre distance: **104 x 27 mm**

hoods with double lever top entry



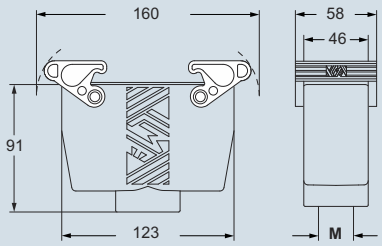
covers



description	part No.	entry M	part No.
with thermoplastic levers and gasket	**TMAV 24 G32**	**32**	
with thermoplastic levers and gasket	**TMAV 24 G40**	**40**	
with 4 pegs			**TCHC 24**
with 2 thermoplastic levers and gasket			**TCHC 24 G**

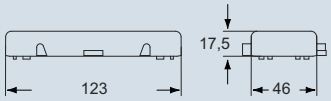
dimensions in mm

TMAV 24 G32 and **TMAV 24 G40**

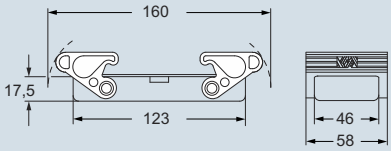


dimensions in mm

TCHC 24



TCHC 24 G



cULus Type 12

IP65

- ambient temperature limits -40 °C / +90 °C.

dimensions shown are not binding
and may be changed without notice

T-TYPE / W

Aggressive environments

- **Enclosures** in **thermoplastic material, dark grey RAL 7012 colour,** with high thicknesses providing structural solidity and durability.
- Built-in **FKM fluoroelastomer sealing gaskets.**
- **Locking levers** in **thermoplastic material colour grey RAL 7001.**
- **M25, M32 and M40** threaded cable entries.
- **IP66** degree of protection according to **EN 60529.**
- Each enclosure carries its own part number, thread size and conformity **markings**.
- Ambient temperature range: **-40 °C / +90 °C.**

NOTE: As the characterizing element of the T-TYPE/W series is the **different sealing gasket** material, hoods and covers without sealing gaskets for this series are the same of T-Type Standard.

DATA SHEETS AT PAGES 18-25

T-TYPE/W

IP66
for aggressive environments

OFFSHORE

NAVAL

SALT-SPRAYERS

T-TYPE / W

Featuring an original design, construction types available are:

surface mounting housings
with double entry of which one closed but threaded

hoods
with levers

bulkhead mounting housings

hoods
with side entry

hoods
with top entry

covers
with pegs (for housings) with levers (for hoods)

single lever, side and top entry, for size "44.27"

single lever, side and top entry, for size "44.27"

double lever, side and top entry, for other sizes "57.27, 77.27, 104.27"

double lever, side and top entry, for other sizes "57.27, 77.27, 104.27"

inserts: page:

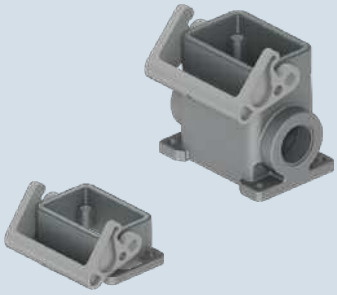
CDD	24	poles + ⏚	67
CDS	9	poles + ⏚	78
CSH	6	poles + ⏚	91
CNE, CSE	6	poles + ⏚	104
CCE	6	poles + ⏚	110
CSS	6	poles + ⏚	122
CT, CTSE (16A) ***)	6	poles + ⏚	130
CQE	10	poles + ⏚	138
MIXO	2	modules	179 ÷ 215

pages refer to CN.16 catalogue

***) only for standard insulating version THIW**

insert centre distance: **44 x 27 mm**

housings with single lever

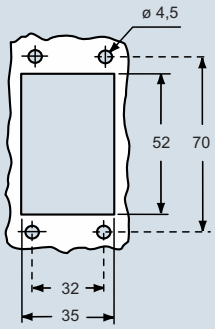


FKM gasket

hoods with 2 pegs

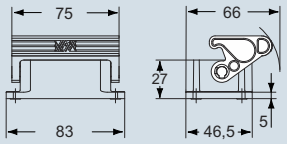
description	part No.	entry M	part No.	entry M
bulkhead mounting housing with thermoplastic levers	**THIW 06 L**			
surface mounting housing with thermoplastic levers surface mounting housing with thermoplastic levers	**TAPW 06 L25** **TAPW 06 L32**	**25** **32**		
with pegs, side entry with pegs, side entry			**TMAO 06 L25** **TMAO 06 L32**	**25** **32**
with pegs, top entry with pegs, top entry			**TMAV 06 L25** **TMAV 06 L32**	**25** **32**

panel cut-out for bulkhead mounting housing in mm

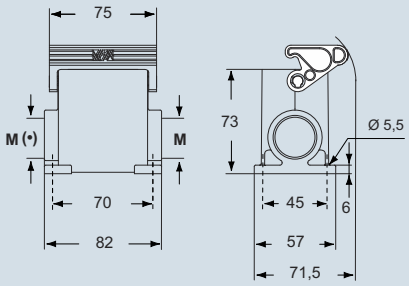


dimensions in mm

THIW 06 L



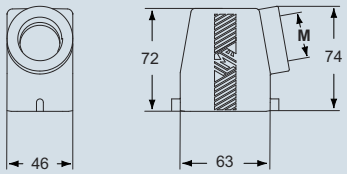
TAPW 06 L25 and **TAPW 06 L32**



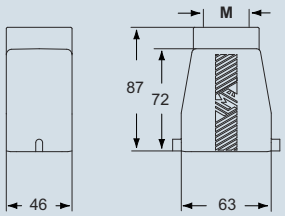
(•) The surface mounting, high construction housings are supplied with an open threaded entry (•) and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

dimensions in mm

TMAO 06 L25 and **TMAO 06 L32**



TMAV 06 L25 and **TMAV 06 L32**



IP66 EN 60529 IEC 60529

- ambient temperature limits -40 °C/+90 °C

dimensions shown are not binding
and may be changed without notice

inserts: page:

CDD	24	poles + ⏚	67
CDS	9	poles + ⏚	78
CSH	6	poles + ⏚	91
CNE, CSE	6	poles + ⏚	104
CCE	6	poles + ⏚	110
CSS	6	poles + ⏚	122
CT, CTSE (16A) ***)	6	poles + ⏚	130
CQE	10	poles + ⏚	138
MIXO	2	modules	179 ÷ 215

pages refer to CN.16 catalogue

***) only for standard insulating version THIW**

insert centre distance: **44 x 27 mm**

hoods with single lever top entry

FKM gasket

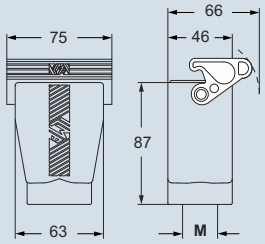
covers

FKM gasket

description	part No.	entry M	part No.
with thermoplastic lever and gasket	**TAVW 06 LG25**	**25**	
with thermoplastic lever and gasket	**TAVW 06 LG32**	**32**	
with pegs			**TCHC 06 L**
with thermoplastic lever and gasket			**THCW 06 LG**

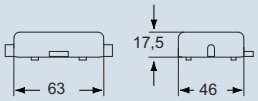
dimensioni in mm

TAVW 06 LG25 and **TAVW 06 LG32**

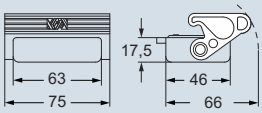


dimensioni in mm

TCHC 06 L



THCW 06 LG



IP66 EN 60529 IEC 60529

- ambient temperature limits -40 °C/+90 °C

dimensions shown are not binding
and may be changed without notice

inserts: page:

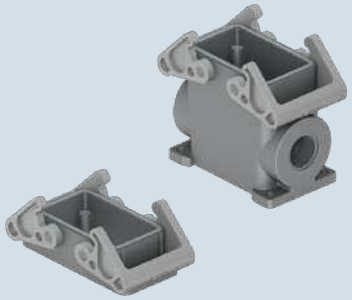
CDD	42	poles + ⏚	69
CDS	18	poles + ⏚	79
CSH	10	poles + ⏚	92
CNE, CSE	10	poles + ⏚	105
CCE	10	poles + ⏚	111
CSS	10	poles + ⏚	123
CT, CTSE (16A) *)	10	poles + ⏚	131
CQE	18	poles + ⏚	139
CMCE	3+2 (aux)	poles + ⏚	148
CME	3+2 (aux)	poles + ⏚	149
CMSH	3+2 (aux)	poles + ⏚	149
CX	8/24	poles + ⏚	169
MIXO	3	modules	179 ÷ 215

pages refer to CN.16 catalogue

***) only for standard insulating version THIW**

insert centre distance: **57 x 27 mm**

housings with double lever

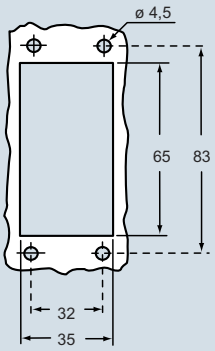


FKM gasket

hoods with 4 pegs

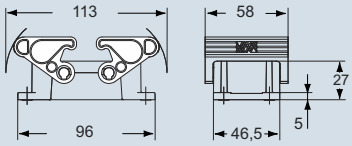
description	part No.	entry M	part No.	entry M
bulkhead mounting housing with thermoplastic levers	**THIW 10**			
surface mounting housing with thermoplastic levers surface mounting housing with thermoplastic levers	**TAPW 10.25** **TAPW 10.32**	**25** **32**		
with pegs, side entry with pegs, side entry			**TMAO 10.25** **TMAO 10.32**	**25** **32**
with pegs, top entry with pegs, top entry			**TMAV 10.25** **TMAV 10.32**	**25** **32**

panel cut-out for bulkhead mounting housing in mm

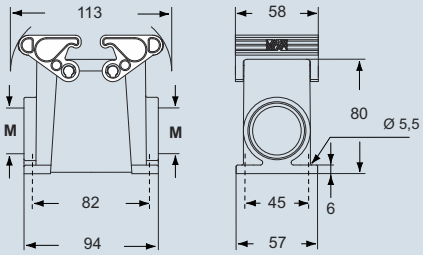


dimensions in mm

THIW 10



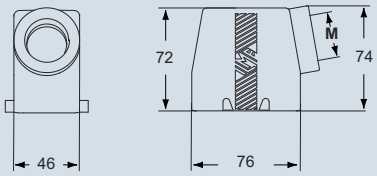
TAPW 10.25 and **TAPW 10.32**



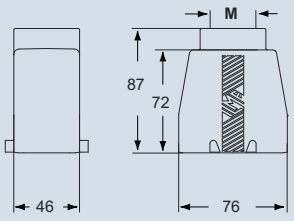
The surface mounting, high construction housings are supplied with an open threaded entry and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

dimensions in mm

TMAO 10.25 and **TMAO 10.32**



TMAV 10.25 and **TMAV 10.32**



IP66

- ambient temperature limits -40 °C/+90 °C

dimensions shown are not binding
and may be changed without notice

inserts: page:

CDD	42	poles + ⏚	69
CDS	18	poles + ⏚	79
CSH	10	poles + ⏚	92
CNE, CSE	10	poles + ⏚	105
CCE	10	poles + ⏚	111
CSS	10	poles + ⏚	123
CT, CTSE (16A) ***)**	10	poles + ⏚	131
CQE	18	poles + ⏚	139
CMCE	3+2 (aux)	poles + ⏚	148
CME	3+2 (aux)	poles + ⏚	149
CMSH	3+2 (aux)	poles + ⏚	149
CX	8/24	poles + ⏚	169
MIXO	3	modules	179 ÷ 215

pages refer to CN.16 catalogue

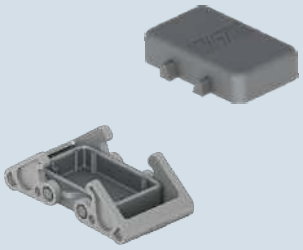
***) only for standard insulating version THIW**

insert centre distance: **57 x 27 mm**

hoods with double lever top entry

FKM gasket

covers

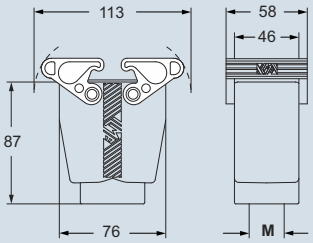


FKM gasket

description	part No.	entry M	part No.
with thermoplastic levers and gasket	**TAVW 10 G25**	**25**	
with thermoplastic levers and gasket	**TAVW 10 G32**	**32**	
with 4 pegs			**TCHC 10**
with 2 thermoplastic levers and gasket			**THCW 10 G**

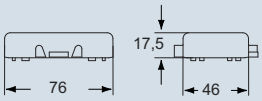
dimensions in mm

TAVW 10 G25 and **TAVW 10 G32**

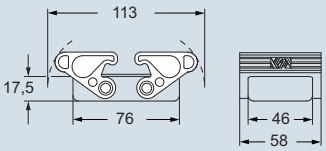


dimensions in mm

TCHC 10



THCW 10 G



IP66 EN 60529 IEC 60529

- ambient temperature limits -40 °C/+90 °C

dimensions shown are not binding
and may be changed without notice

inserts: page:

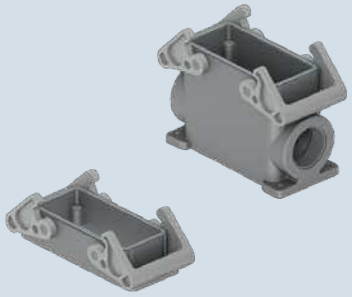
CD	40	poles + ⏚	57
CDD	72	poles + ⏚	70
CDS	27	poles + ⏚	80
CSH	16	poles + ⏚	93
CNE, CSE	16	poles + ⏚	106
CCE	16	poles + ⏚	112
CSS	16	poles + ⏚	124
CT, CTSE (16A) *)	16	poles + ⏚	132
CQE	32	poles + ⏚	140
CQEE	40	poles + ⏚	146
CMCE	6+2 (aux)	poles + ⏚	150
CME, CMSH	6+2 (aux)	poles + ⏚	151
CP	6	poles + ⏚	162
CX	6/36 and 12/2	poles + ⏚	170÷171
CX	4/0 and 4/2	poles + ⏚	172
MIXO	4	modules	179÷215

pages refer to CN.16 catalogue

***) only for standard insulating version THIW**

insert centre distance: **77,5 x 27 mm**

housings with double lever

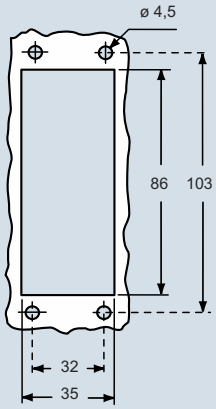


FKM gasket

hoods with 4 pegs

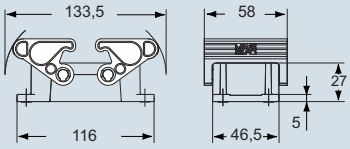
description	part No.	entry M	part No.	entry M
bulkhead mounting housing with thermoplastic levers	**THIW 16**			
surface mounting housing with thermoplastic levers surface mounting housing with thermoplastic levers	**TAPW 16.32** **TAPW 16.40**	**32** **40**		
with pegs, side entry with pegs, side entry			**TMAO 16.32** **TMAO 16.40**	**32** **40**
with pegs, top entry with pegs, top entry			**TMAV 16.32** **TMAV 16.40**	**32** **40**

panel cut-out for bulkhead mounting housing in mm

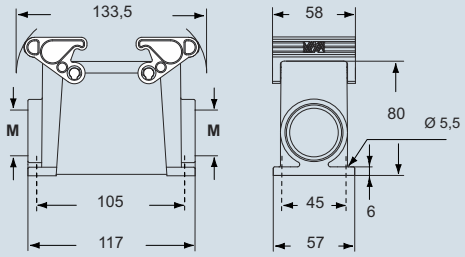


dimensions in mm

THIW 16



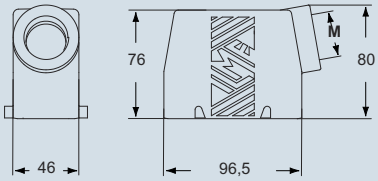
TAPW 16.32 and **TAPW 16.40**



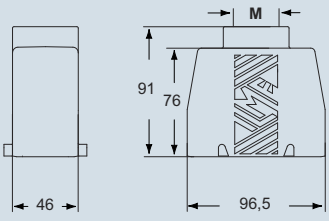
The surface mounting, high construction housings are supplied with an open threaded entry and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

dimensions in mm

TMAO 16.32 and **TMAO 16.40**



TMAV 16.32 and **TMAV 16.40**



IP66

- ambient temperature limits -40 °C/+90 °C

dimensions shown are not binding
and may be changed without notice

inserts: page:

CD	40	poles + ⏚	57
CDD	72	poles + ⏚	70
CDS	27	poles + ⏚	80
CSH	16	poles + ⏚	93
CNE, CSE	16	poles + ⏚	106
CCE	16	poles + ⏚	112
CSS	16	poles + ⏚	124
CT, CTSE (16A) *)	16	poles + ⏚	132
CQE	32	poles + ⏚	140
CQEE	40	poles + ⏚	146
CMCE	6+2 (aux)	poles + ⏚	150
CME, CMSH	6+2 (aux)	poles + ⏚	151
CP	6	poles + ⏚	162
CX	6/36 and 12/2	poles + ⏚	170÷171
CX	4/0 and 4/2	poles + ⏚	172
MIXO	4	modules	179÷215

pages refer to CN.16 catalogue

***) only for standard insulating version THIW**

insert centre distance: **77,5 x 27 mm**

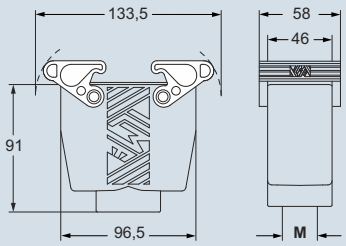
hoods with double lever top entry

FKM gasket

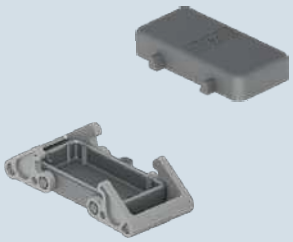
description	part No.	entry M
with thermoplastic levers and gasket	**TAVW 16 G32**	**32**
with thermoplastic levers and gasket	**TAVW 16 G40**	**40**

dimensions in mm

TAVW 16 G32 and **TAVW 16 G40**



covers

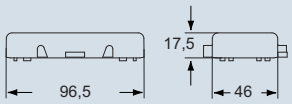


FKM gasket

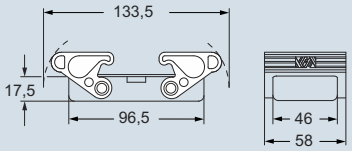
description	part No.
with 4 pegs	**TCHC 16**
with 2 thermoplastic levers and gasket	**THCW 16 G**

dimensions in mm

TCHC 16



THCW 16 G



IP66 EN 60529 IEC 60529

- ambient temperature limits -40 °C/+90 °C

dimensions shown are not binding
and may be changed without notice

inserts: page:

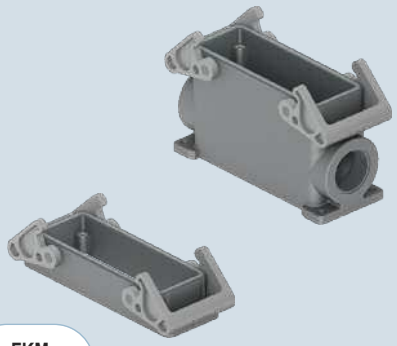
CD ..... 64 poles + ⏚ 59
CDD..... 108 poles + ⏚ 72
CDS..... 42 poles + ⏚ 81
CSH..... 24 poles + ⏚ 94
CNE, CSE ..... 24 poles + ⏚ 107
CCE..... 24 poles + ⏚ 113
CSS..... 24 poles + ⏚ 125
CT, CTSE (16A) *).. 24 poles + ⏚ 133
CQE..... 46 poles + ⏚ 141
CQEE..... 64 poles + ⏚ 147
CMCE..... 10+2 (aux) poles + ⏚ 152
CME, CMSH 10+2 (aux) poles + ⏚ 153
CMCE..... 16+2 (aux) poles + ⏚ 158
CME..... 16+2 (aux) poles + ⏚ 159
CX..... 4/8 and 6/6 poles + ⏚ 173, 175
MIXO..... 6 modules 179÷215

pages refer to CN.16 catalogue

***) only for standard insulating version THIW**

insert centre distance: **104 x 27 mm**

housings with double lever

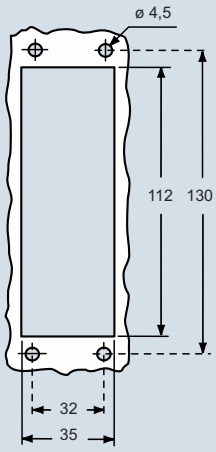


FKM gasket

hoods with 4 pegs

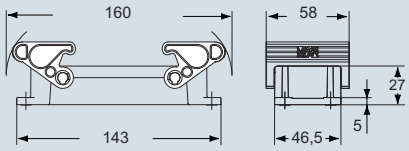
description	part No.	entry M	part No.	entry M
bulkhead mounting housing with thermoplastic levers	**THIW 24**			
surface mounting housing with thermoplastic levers surface mounting housing with thermoplastic levers	**TAPW 24.32** **TAPW 24.40**	**32** **40**		
with pegs, side entry with pegs, side entry			**TMAO 24.32** **TMAO 24.40**	**32** **40**
with pegs, top entry with pegs, top entry			**TMAV 24.32** **TMAV 24.40**	**32** **40**

panel cut-out for bulkhead mounting housing in mm

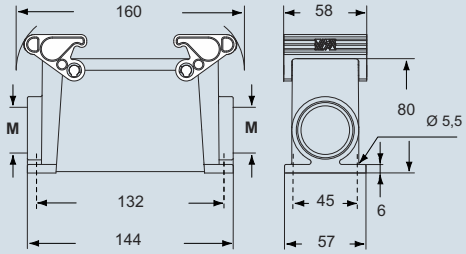


dimensions in mm

THIW 24



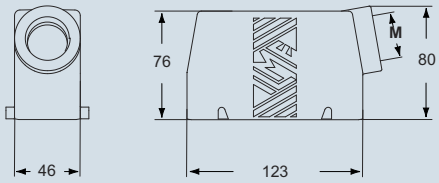
TAPW 24.32 and **TAPW 24.40**



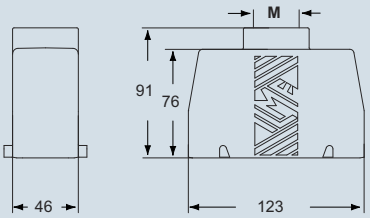
The surface mounting, high construction housings are supplied with an open threaded entry and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

dimensions in mm

TMAO 24.32 and **TMAO 24.40**



TMAV 24.32 and **TMAV 24.40**



IP66

- ambient temperature limits -40 °C/+90 °C

dimensions shown are not binding
and may be changed without notice

inserts: page:

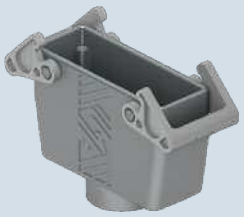
CD	64 poles + ⏚	59
CDD	108 poles + ⏚	72
CDS	42 poles + ⏚	81
CSH	24 poles + ⏚	94
CNE, CSE	24 poles + ⏚	107
CCE	24 poles + ⏚	113
CSS	24 poles + ⏚	125
CT, CTSE (16A) *)	24 poles + ⏚	133
CQE	46 poles + ⏚	141
CQEE	64 poles + ⏚	147
CMCE	10+2 (aux) poles + ⏚	152
CME, CMSH	10+2 (aux) poles + ⏚	153
CMCE	16+2 (aux) poles + ⏚	158
CME	16+2 (aux) poles + ⏚	159
CX	4/8 and 6/6 poles + ⏚	173, 175
MIXO	6 modules	179÷215

pages refer to CN.16 catalogue

***) only for standard insulating version THIW**

insert centre distance: **104 x 27 mm**

hoods with double lever top entry

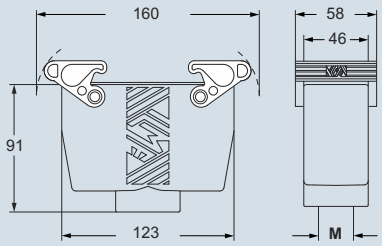


FKM gasket

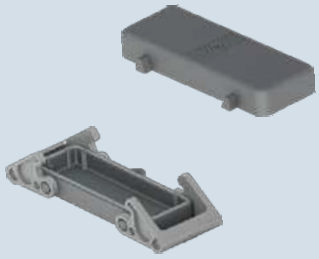
description	part No.	entry M
with thermoplastic levers and gasket	**TAVW 24 G32**	**32**
with thermoplastic levers and gasket	**TAVW 24 G40**	**40**

dimensions in mm

TAVW 24 G32 and **TAVW 24 G40**



covers

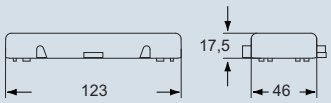


FKM gasket

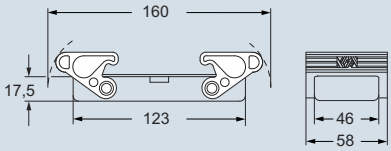
description	part No.
with 4 pegs	**TCHC 24**
with 2 thermoplastic levers and gasket	**THCW 24 G**

dimensions in mm

TCHC 24



THCW 24 G



IP66 EN 60529 IEC 60529

- ambient temperature limits -40 °C/+90 °C

dimensions shown are not binding
and may be changed without notice

HYGIENIC

For food and beverage

DAIRY

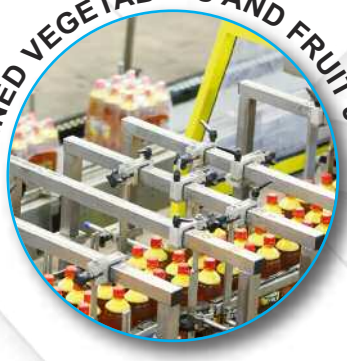
PASTA

PASTRIES AND BAKERY PRODUCTS

HYGIENIC
application fields

food & beverage
applications

CANNED VEGETABLES AND FRUIT JUICE



WINE AND SPIRITS

PET FOOD

MEAT AND POULTRY

HYGIENIC

Resistance of materials to detergents/disinfectants used in the food industry

The new **ILME T-Type/H and T-Type/C** enclosure materials have been selected to guarantee compatibility with the principal alkaline or acid detergents and disinfectants used in the food industry. In particular, series T-Type/H and T-Type/C enclosures have been tested according to protocol **F&E/P3-E n. 40-1 by Ecolab,** leading multinational in the detergent sector, to verify their compatibility with the following cleaning fluids:

- **Acid foaming detergents: P3-topax 52, Topaz AC5, P3-topmaxx 520 and P3-topax 56.**
- **Alkaline foaming detergents: P3-topax 19, Topaz MD3 and Ecofoam Basic.**
- **Strong alkaline foaming detergents: P3-topax 36, Topaz HD1 and P3-topax 30.**
- **Alkaline-chloride foaming detergents-disinfectants: P3-topax 66, Ecofoam CL and P3-topax M95.**
- **Non-foaming peracetic based disinfectants: P3-oxonia active, P3-topactive OKTO and P3-topactive DES.**
- **Neutral disinfectants: P3-topax 990 and P3-topax 91.**

ECOLAB F&E/P3-E n. 40-1 Test Protocol

SEE DECLARATION OF COMPATIBILITY AT PAGES 28-29

- Full immersion of parts in detergent / disinfectant solutions.
- Water hardness of 200ppm $CaCO_3$.
- Tests performed at concentrations 30% higher than those normally recommended in technical data sheets.
- Test duration (each detergent): 28 days at 20 °C (equivalent to 6 years of daily cleaning).
- Test solution renewed every 3-4 days for oxidizing products (P3-oxonia active, P3-topactive OKTO, P3-topax 66).
- Test results evaluation: ISO 4068-1 (esthetic appearance and mass loss).

Cleanability and degrees of protection used in the food industry

Series T-Type/H and T-Type/C enclosures have been designed to facilitate cleaning of surfaces that could potentially come into contact with food. For this purpose **Series T-Type/H and T-Type/C** enclosures have **IP66 and IP69 degrees of protection as per IEC 60529 Edition 2.2 (2013-08)** to allow jet washing, as typically used in the food industry.

The suitability of ILME products for the **cleanability** requirements stated by Machinery Directive 2006/42/EC for both Splash and Food Area zones (EN 1672-2 and EN ISO 14159) **depends on the specific installation of ILME products on the machine and must be evaluated by the machine manufacturer** (see page 31, Table 1, Applications Zones).

In addition to the Hygienic version, aluminium enclosures are also available with degrees of protection up to IP68 (check for possible applicability).

Declaration of compatibility - By courtesy of ECOLAB s.r.l.

DECLARATION OF COMPATIBILITY

between ECOLAB hygiene products
and ILME enclosures for multipole connectors

For the completely safe cleaning of your plant

The ideal partner for Industrial Connections for power supply of plug connected devices, connections for auxiliary circuits and automation control:

T-type H and T-type C enclosures

The declaration proves the high resistance of these enclosures to Ecolab products commonly and worldwide used in Food and Beverage Industries.

ILME S.p.a.
Via Marco Antonio Colonna, 9 - 20149 Milano (MI)
www.ilme.com

Supplier of hygiene solutions for Food and Beverage industries

Products

Equipments

Services

Ecolab s.r.l.
Via Paracelso 6 – 20864 Agrate Brianza (MB)
www.it.ecolab.eu

Declaration of compatibility - By courtesy of ECOLAB s.r.l.

ECOLAB

Compatible products with T-type/C and T-type/H ILME enclosures

See below for the test procedure

PRODUCT	%	T-TYPE ENCLOSURE	DEFECT QUANTITY	DEFECT QUALITY	COLOR VARIATION
P3-topax 52 - Topaz AC5	6	C and H	0	0	0
P3-topax 19 - Topaz MD3	6	C and H	0	0	0
P3-topax 36 - Topaz HD1	6	C and H	0	0	0
P3-topax 91	6	C and H	0	0	0
P3-topax 990	6	C and H	0	0	0
P3-oxonia active	1	C and H	0	0	0
P3-topactive okto	3	C and H	0	0	0
P3-topax 66	6	C and H	0	0	0

DEFECT QUANTITY: 0 means - No detectable defect
DEFECT QUALITY: 0 means - Up to 10x magnification no detectable defect
COLOR VARIATION: 0 means - Unchanged, no discoloration

Test procedure

- Test performed by Ecolab Technical Application Service
- Ecolab reference method 40.1 – ISO 4068-1 for the evaluation
- Full immersion of parts in detergent/disinfectant solutions
- Water hardness of 200ppm $CaCO_3$
- 28 days total time at 20°C (equivalent to the contact time that occurs in 6 years of daily cleaning)
- Concentrations tested 30% higher than those normally recommended
- Test solution renewed every 3-4 days for oxidizing products (P3-oxonia active, P3-topactive OKTO, P3-topax 66)

Final statement

- The Ecolab Technical Application Service Italy certifies that the ILME enclosures for multipole connectors T-type/C and T-type/H are perfectly compatible with the above listed Ecolab detergents and disinfectants used in a concentration 30% higher than those normally recommended.

February 2016

HYGIENIC

Requirements on materials in contact or that may come into contact with food products

T-Type/H and T-Type/C materials have been selected to satisfy the requirements of **EHEDG Guideline n° 32** "Materials of construction for food equipment in contact with food" and point 2.1.1, letter a) in Annex I of the **Machinery Directive 2006/42/EC.** Paragraph 91 of the **Guide to the application of Machinery Directive 2006/42/EC** specifies that the reference at Annex I, point 2.1.1, letter a) of the directive must be considered as a reference to **EC regulation n. 1935/2004** and **directive 2002/72/EC.**

EU commission regulation n. 10/2011 dated 14 January 2011, concerning plastic material and objects designed for contact with food products, is a specific measure as provided for by article 5, paragraph 1 of the above-mentioned **EC regulation n. 1935/2004.**

It defines specific regulations for plastic materials and objects in order to guarantee their use in safe conditions and supersedes commission **directive 2002/72/EC** dated 6 August 2002 on plastic materials and objects designed for contact with food products. Art. 2, section 2 of the above-mentioned **EU regulation n. 10/2011** specifies that **rubber and silicone** do not fall within the field of application of the regulation. EU regulation n. 10/2011 provides for the use of materials in positive lists of technological monomers, additives and adjuvants and the passing of global and specific migration tests in food simulants.

ILME **T-Type/H and T-Type/C** series enclosure materials have been selected according to **EU n. 10/2011** regulation requirements and each component has been tested according to **EU regulation n. 10/2011** and **EC regulation n. 1935/2004.**

Furthermore, T-Type/H and T-Type/C series gasket materials have been formulated according to **FDA Guideline 21 CFR §177.2600** and T-Type enclosures and levers materials complying with **FDA, 21 CFR, §177.1520** (a)(3)(i)(c)(1), (b) and (c)3.1a.

HYGIENIC

Risk Assessment and Critical Control Points in the food industry

Companies that work in the food sector must implement **HACCP,** i.e. Hazard Analysis and Critical Control Points system **(EC Regulation 852/2004** on food product hygiene in force since 01/01/2006) and can voluntarily apply for various certificates (ISO 22000, BRC, ISF, etc.).

All those involved in primary food production (harvesting, milking, breeding), its preparation, transformation, manufacturing, packaging, storage, transport, distribution, handling, sales or supply, including consumer catering, are required to implement an HACCP system, i.e. a series of procedures aimed at preventing food contamination hazards. HACCP is based on monitoring food processing points where biological, chemical or physical contamination hazards may arise. In 2006, HACCP was made mandatory for companies that deal with the food for animals (production of raw materials, mixtures and additives).

A company required to implement HACCP can initially divide its food processing machinery into three zones from the point of view of risk for food product hygiene. The choice of the zone in which the wiring and connectors are installed depends on the risk assessment the manufacturer must conduct as per **Machinery Directive 2006/42/EC** which, in chapter 2.1, sets out the additional requirements for the food industry (see Table 1).

Table 1. According to EN 1672-2:2009 - Food processing machinery - Basic concepts - Part 2: Hygiene requirements

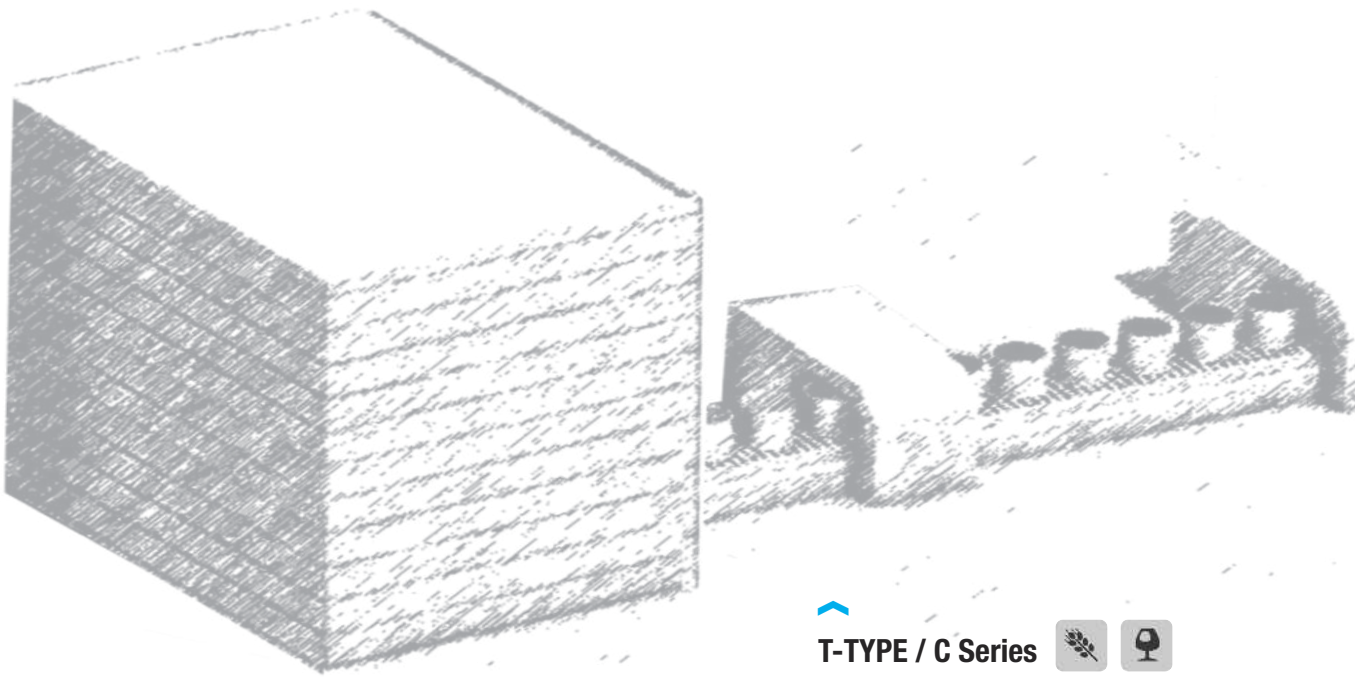
Application Zones	Zone Requirements	Usable Products
No Food Area: Zone where there is no contact risk with food.	No additional requirement for the food industry.	Enclosures series T-Type, T-Type/W, C-Type, BIG, IP68, C7 IP67, W-Type, EMC, COB, …
Splash Area: Zone where components may come into contact with food but there is no risk that the food that came into contact with the components in this area returns to the production cycle.	In this zone, components also come into contact with cleaning agents used in the food industry and must therefore be cleanable and resistant to the washing process (see "Resistance of materials to detergents/disinfectants used in the food industry" and "Cleanability and degrees of protection used in the food industry", see page 27).	New Hygienic version enclosures series T-Type/H and T-Type/C.
Food Area: Zone where components may come into contact with food, with the risk that the food that came into contact with the components in this area returns to the production cycle.	In this zone, in addition to complying with the cleanability and washing requirements, the components are also subject to a series of more stringent requirements aimed at making negligible the risk of food contamination in the process (see paragraph "Requirements on materials in contact or that may come into contact with food products", see page 30).	**For more information about T-Type/C in special version, please contact our Offices.**

Food & Beverage Hygiene Requirements

Application Zones

Low Temperatures
❱ Splash Area

Zone Requirements



Usable Products

T-TYPE / C Series

HYGIENIC / C

Range of temperature:
-50 °C / +70 °C

Production lines

❱ Splash Area

Splash Area

Zone where components may come into contact with food but there is no risk that the food that came into contact with the components in this area returns to the production cycle.

❱ No Food Area

No Food Area

Zone where there is no contact risk with food.

T-TYPE / H Series

HYGIENIC / H

Insulating enclosures with resistance of materials to detergents/disinfectants

STANDARD Series

T-TYPE Std. & W

Insulating enclosures, up to 200A inserts

www.ilme.com

HYGIENIC

T-TYPE/H & T-TYPE/C

The evolution of T-Type insulating enclosures meets food and beverage requirements

HYGIENIC food & beverage applications

IP66 IP69

ECOLAB Everywhere It Matters.

The new Hygienic multi-pole connector enclosures version **(series T-Type/H and T-Type/C)** has been designed for installation on food industry machines and systems.

For this purpose, the following improvements to the T-Type series have been made in order to satisfy the requirements laid down by chapter 2.1 of **Machinery Directive 2006/42/EC** for the machines on which they are installed:
- material cleanability and resistance to the cleaning and sanitising agents normally used in the food industry;
- materials in terms of the requirements for accidental contact with food products.

The T-Type/H and T-Type/C series enclosures fit different sealing gaskets.

For T-Type/H series enclosures, the sealing gasket is in HNBR rubber, a material with excellent resistance to both acidic and alkaline detergents as well as any animal and vegetable fats it could come into contact with in food industry applications. For T-Type/C series enclosures, the sealing gasket is made by silicone rubber, a material with good resistance to acidic and alkaline detergents as well as animal and vegetable fats. It is also characterised by its improved resistance to low temperatures (series suitable for uses as low as -50 °C), conditions that can arise in food industries that use the cold chain.

A dedicated variant of this new Hygienic version may be used where a high risk of accidental contact with food is occuring during production (see page 31, Table 1, Application Zones, Food Area). For more information about this possible special version, please contact our Offices.

In accordance with the requirements set forth in **EHEDG Guideline n. 32** “Materials of construction for food equipment in contact with food” (EHEDG = European Hygienic Engineering & Design Group), the closing levers and sealing gaskets are coloured blue to easily identify any accidental contaminations in food products and to facilitate the visual identification of their complete cleanliness.

HYGIENIC

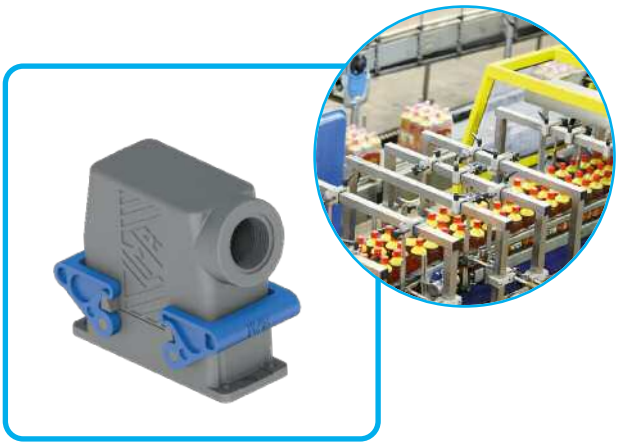
T-TYPE/H & T-TYPE/C

T-TYPE / H

PRODUCTION LINES APPLICATIONS

DATA SHEETS AT PAGES 38-45

- **Enclosures** in **thermoplastic material, dark grey RAL 7012 colour,** with high thicknesses providing structural solidity and durability.
- Sealing gaskets made by **HNBR rubber formulated in accordance with FDA Guideline 21 CFR §177.2600.**
- **Levers** in **thermoplastic material, blue RAL 5015 colour.**
- **M25, M32 and M40** threaded cable entries.
- **IP66 and IP69** degree of protection according to **EN 60529.**
- Each enclosure carries its own part number, thread/size and conformity **markings**.
- Ambient temperature range: **-40 °C / +70 °C.**

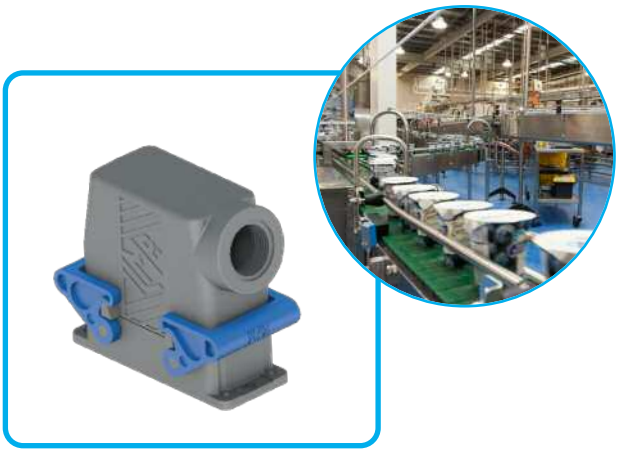


T-TYPE / C

LOW-TEMPERATURE APPLICATIONS

DATA SHEETS AT PAGES 46-53

- **The Hygienic T-Type/C Series enclosures** have been **specifically designed** for food and beverage ambient temperature as low as -50 °C **(range: -50 °C / +70 °C).**
- **Enclosures** in **thermoplastic material, dark grey RAL 7012 colour,** with high thicknesses providing structural solidity and durability.
- This version differs from the Hygienic T-Type/H one for the **sealing gaskets** made by in accordance with **FDA Guideline 21 CFR §177.2600.**
- ILME **T-Type/C** series enclosure materials have been selected according to **EU n. 10/2011** regulation requirements and each component has been tested according to **EU regulation n. 10/2011** and **EC regulation n. 1935/2004.**



NOTE: As the characterizing elements of the Hygienic Series are the different sealing gasket material and the different locking lever, hoods and covers without sealing gaskets and locking levers are the same of series T-Type Standard.

HYGIENIC

T-TYPE/H & T-TYPE/C

FOCUS ON:

1 Construction

By using the BC-MUL® moulding technique together with the use of MIL.BOX® material, **these enclosures are structurally solid and mechanically robust,** due to their increased thickness. They are particularly resistant to the main pollutants present in industrial environments. The lever enclosure pegs are built into the enclosures. The methods for fastening the connectors to the enclosures are made by M3 threaded metal inserts. With reference to metal construction, which to comply with electrical installation safety norms, must be earthed via a metal connection to the protective earth terminal of the connector inserts inside the enclosure, **the new series of enclosures offers a solution for total insulation constructions ⧈ (equivalent to class II) where necessary.**

The thermoplastic material used is RAL 7012 dark grey colour and has passed **glow wire** testing in accordance with the IEC (EN) 60695-2-11 at **650 °C** in compliance with intended uses.

2 Gaskets

Gaskets have been produced in **HNBR rubber or SILICONE rubber** and have been incorporated in the base flange on bulkhead mounting housings for easier installation.

3 Levers

The locking levers have been produced in **self-extinguishing thermoplastic material,** blue RAL 5015 colour.

4 Dimensions

The internal dimensions allow mounting of all connector inserts in their relevant sizes. The external dimensions of the bulkhead mounting housings are similar to those of the corresponding metallic enclosures; hole fixing centres are unchanged. Hoods offer an inner cabling space similar to that of the "high" construction models of the corresponding metal enclosures. Other characteristics are in compliance with the applicable safety standard for electrical connectors, **IEC/EN 61984.**

5 Cable entries

The housing and hood cable entries are available with metric thread, respectively:

- **M25 or M32** for smaller sizes "44.27" and "57.27".
- **M32 or M40** for larger sizes "77.27" and "104.27".

The surface mounting, high construction housings are supplied with an open threaded entry and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

The recent standard **IEC/EN 61076-7-100** regarding metric cable entries for multipole electrical connectors for heavy duty uses, which standardises some main dimensions for entries and their related accessories (gaskets, pressure nuts), have been carefully considered in the product design.

6 Markings

Each enclosure carries its own part number and conformity markings.

HYGIENIC

Featuring an original design, construction types available are:

surface mounting housings
with double entry of which one closed but threaded

hoods
with levers

bulkhead mounting housings

hoods
with side entry

hoods
with top entry

covers
with pegs (for housings)
with levers (for hoods)

single lever, side and top entry, for size "44.27"

single lever, side and top entry, for size "44.27"

double lever, side and top entry, for other sizes "57.27, 77.27, 104.27"

double lever, side and top entry, for other sizes "57.27, 77.27, 104.27"

inserts page

CDD	24	poles + ⏚	67
CDS	9	poles + ⏚	78
CSH	6	poles + ⏚	91
CNE, CSE	6	poles + ⏚	104
CCE	6	poles + ⏚	110
CSS	6	poles + ⏚	122
CT, CTSE (16A) ***)	6	poles + ⏚	130
CQE	10	poles + ⏚	138
MIXO	2	modules	179 ÷ 215

pages refer to CN.16 catalogue

***) only for standard insulating version THIH**

insert centre distance: **44 x 27 mm**

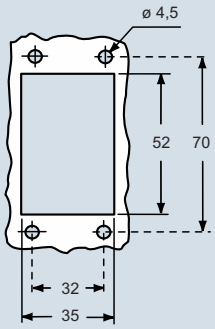
housings with single lever

HNBR gasket

hoods with 2 pegs

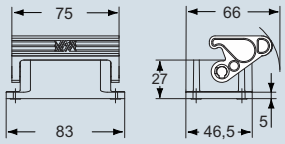
description	part No.	entry M	part No.	entry M
bulkhead mounting housing with thermoplastic lever	**THIH 06 L**			
surface mounting housing with thermoplastic lever surface mounting housing with thermoplastic lever	**TAPH 06 L25** **TAPH 06 L32**	**25** **32**		
with pegs, side entry with pegs, side entry			**TMAO 06 L25** **TMAO 06 L32**	**25** **32**
with pegs, side entry with pegs, side entry			**TMAV 06 L25** **TMAV 06 L32**	**25** **32**

panel cut-out for bulkhead mounting housing in mm

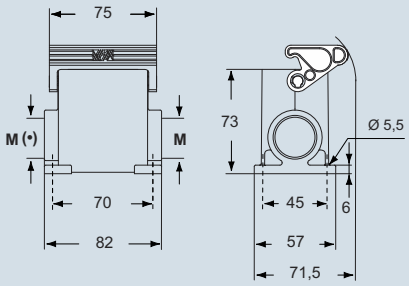


dimensions in mm

THIH 06 L



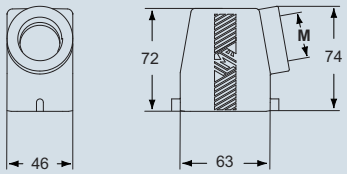
TAPH 06 L25 and **TAPH 06 L32**



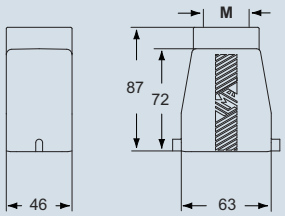
(•) The surface mounting, high construction housings are supplied with an open threaded entry (•) and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

dimensions in mm

TMAO 06 L25 and **TMAO 06 L32**



TMAV 06 L25 and **TMAV 06 L32**



IP66 IP69 EN 60529 IEC 60529

- ambient temperature limits -40 °C / +70 °C

dimensions shown are not binding
and may be changed without notice

inserts: page:

CDD	24	poles + ⏚	67
CDS	9	poles + ⏚	78
CSH	6	poles + ⏚	91
CNE, CSE	6	poles + ⏚	104
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CQE	10	poles + ⏚	138
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pages refer to CN.16 catalogue

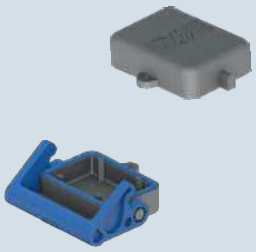
***) only for standard insulating version THIH**

insert centre distance: **44 x 27 mm**

hoods with single lever top entry

HNBR gasket

covers

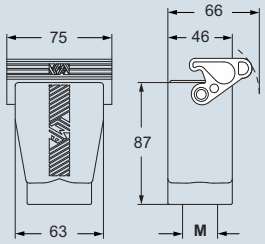


HNBR gasket

description	part No.	entry M	part No.	entry M
with thermoplastic lever and gasket	**TAVH 06 LG25**	**25**		
with thermoplastic lever and gasket	**TAVH 06 LG32**	**32**		
with pegs			**TCHC 06 L**	
with thermoplastic lever and gasket			**THCH 06 LG**	

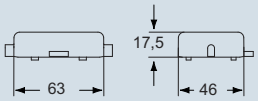
dimensions in mm

TAVH 06 LG25 and **TAVH 06 LG32**

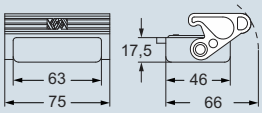


dimensions in mm

TCHC 06 L



THCH 06 LG



IP66 IP69 IEC 60529

- ambient temperature limits -40 °C / +70 °C

dimensions shown are not binding
and may be changed without notice

inserts: page:

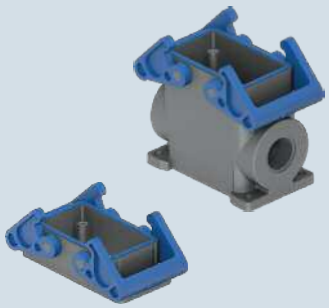
CDD	42	poles + ⏚	69
CDS	18	poles + ⏚	79
CSH	10	poles + ⏚	92
CNE, CSE	10	poles + ⏚	105
CCE	10	poles + ⏚	111
CSS	10	poles + ⏚	123
CT, CTSE (16A) *)	10	poles + ⏚	131
CQE	18	poles + ⏚	139
CMCE	3+2 (aux)	poles + ⏚	148
CME	3+2 (aux)	poles + ⏚	149
CMSH	3+2 (aux)	poles + ⏚	149
CX	8/24	poles + ⏚	169
MIXO	3	modules	179 ÷ 215

pages refer to CN.16 catalogue

***) only for standard insulating version THIH**

insert centre distance: **57 x 27 mm**

housings with double lever

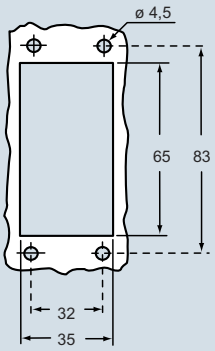


HNBR gasket

hoods with 4 pegs

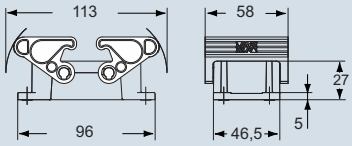
description	part No.	entry M	part No.	entry M
bulkhead mounting housing with thermoplastic levers	**THIH 10**			
surface mounting housing with thermoplastic levers surface mounting housing with thermoplastic levers	**TAPH 10.25** **TAPH 10.32**	**25** **32**		
with pegs, side entry with pegs, side entry			**TMAO 10.25** **TMAO 10.32**	**25** **32**
with pegs, top entry with pegs, top entry			**TMAV 10.25** **TMAV 10.32**	**25** **32**

panel cut-out for bulkhead mounting housing in mm

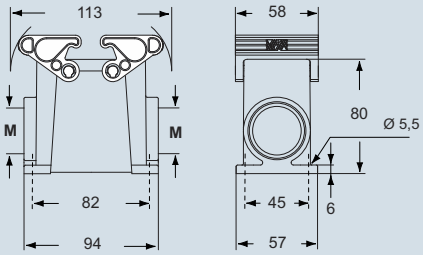


dimensions in mm

THIH 10



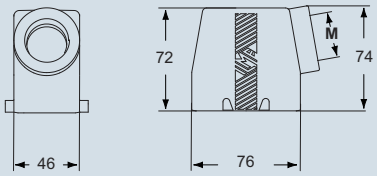
TAPH 10.25 and **TAPH 10.32**



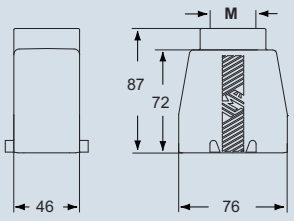
The surface mounting, high construction housings are supplied with an open threaded entry and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

dimensions in mm

TMAO 10.25 and **TMAO 10.32**



TMAV 10.25 and **TMAV 10.32**



IP66 IP69 EN 60529 IEC 60529

- ambient temperature limits -40 °C / +70 °C

dimensions shown are not binding
and may be changed without notice

inserts: page:

CDD	42	poles + ⏚	69
CDS	18	poles + ⏚	79
CSH	10	poles + ⏚	92
CNE, CSE	10	poles + ⏚	105
CCE	10	poles + ⏚	111
CSS	10	poles + ⏚	123
CT, CTSE (16A) *)	10	poles + ⏚	131
CQE	18	poles + ⏚	139
CMCE	3+2 (aux)	poles + ⏚	148
CME	3+2 (aux)	poles + ⏚	149
CMSH	3+2 (aux)	poles + ⏚	149
CX	8/24	poles + ⏚	169
MIXO	3	modules	179 ÷ 215

pages refer to CN.16 catalogue

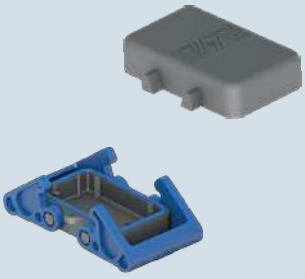
***) only for standard insulating version THIH**

insert centre distance: **57 x 27 mm**

hoods with double lever top entry

HNBR gasket

covers

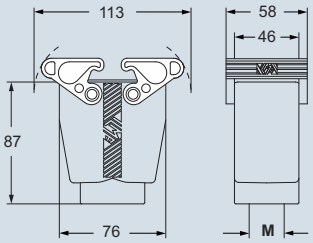


HNBR gasket

description	part No.	entry M	part No.
with thermoplastic levers and gasket	**TAVH 10 G25**	**25**	
with thermoplastic levers and gasket	**TAVH 10 G32**	**32**	
with 4 pegs			**TCHC 10**
with 2 thermoplastic levers and gasket			**THCH 10 G**

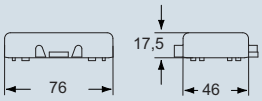
dimensions in mm

TAVH 10 G25 and **TAVH 10 G32**

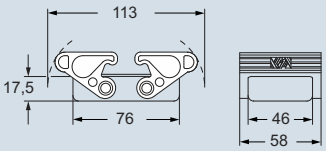


dimensions in mm

TCHC 10



THCH 10 G



IP66 IP69 IEC 60529

- ambient temperature limits -40 °C / +70 °C

dimensions shown are not binding
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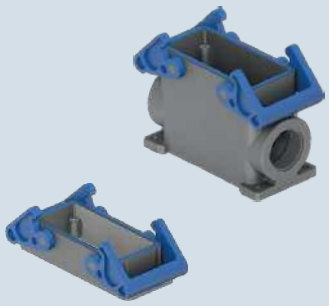
HYGIENIC T-TYPE/H

inserts:			page:
CD	40	poles + ⏚	57
CDD	72	poles + ⏚	70
CDS	27	poles + ⏚	80
CSH	16	poles + ⏚	93
CNE, CSE	16	poles + ⏚	106
CCE	16	poles + ⏚	112
CSS	16	poles + ⏚	124
CT, CTSE (16A) *)	16	poles + ⏚	132
CQE	32	poles + ⏚	140
CQEE	40	poles + ⏚	146
CMCE	6+2 (aux)	poles + ⏚	150
CME, CMSH	6+2 (aux)	poles + ⏚	151
CP	6	poles + ⏚	162
CX	6/36 and 12/2	poles + ⏚	170÷171
CX	4/0 and 4/2	poles + ⏚	172
MIXO	4	modules	179÷215

pages refer to CN.16 catalogue
***) only for standard insulating version THIH**
insert centre distance: **77,5 x 27 mm**

housings with double lever

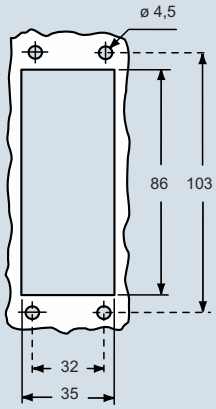


HNBR gasket

hoods with 4 pegs

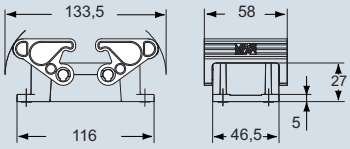
description	part No.	entry M	part No.	entry M
bulkhead mounting housing with thermoplastic levers	**THIH 16**			
surface mounting housing with thermoplastic levers surface mounting housing with thermoplastic levers	**TAPH 16.32** **TAPH 16.40**	**32** **40**		
with pegs, side entry with pegs, side entry			**TMAO 16.32** **TMAO 16.40**	**32** **40**
with pegs, top entry with pegs, top entry			**TMAV 16.32** **TMAV 16.40**	**32** **40**

panel cut-out for bulkhead mounting housing in mm

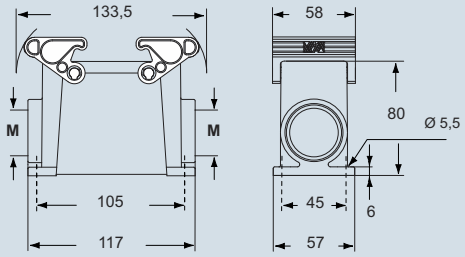


dimensions in mm

THIH 16



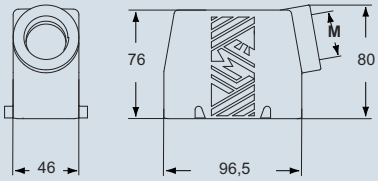
TAPH 16.32 and **TAPH 16.40**



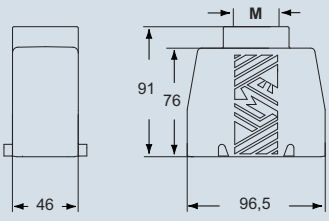
The surface mounting, high construction housings are supplied with an open threaded entry and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

dimensions in mm

TMAO 16.32 and **TMAO 16.40**



TMAV 16.32 and **TMAV 16.40**



IP66 IP69 EN 60529 IEC 60529

- ambient temperature limits -40 °C / +70 °C

dimensions shown are not binding
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inserts: page:

CD	40	poles + ⏚	57
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CDS	27	poles + ⏚	80
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CCE	16	poles + ⏚	112
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CT, CTSE (16A) *)	16	poles + ⏚	132
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CP	6	poles + ⏚	162
CX	6/36 and 12/2	poles + ⏚	170÷171
CX	4/0 and 4/2	poles + ⏚	172
MIXO	4	modules	179÷215

pages refer to CN.16 catalogue

***) only for standard insulating version THIH**

insert centre distance: **77,5 x 27 mm**

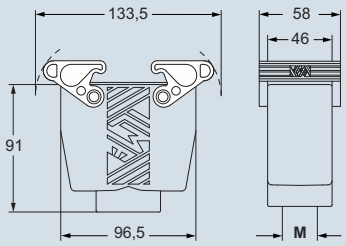
hoods with double lever top entry

HNBR gasket

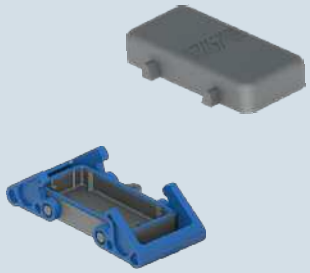
description	part No.	entry M
with thermoplastic levers and gasket	**TAVH 16 G32**	**32**
with thermoplastic levers and gasket	**TAVH 16 G40**	**40**

dimensions in mm

TAVH 16 G32 and **TAVH 16 G40**



covers

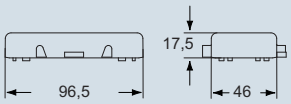


HNBR gasket

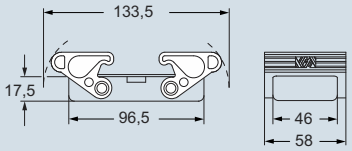
description	part No.
with 4 pegs	**TCHC 16**
with 2 thermoplastic levers and gasket	**THCH 16 G**

dimensions in mm

TCHC 16



THCH 16 G



IP66 IP69 EN 60529 IEC 60529

- ambient temperature limits -40 °C / +70 °C

dimensions shown are not binding
and may be changed without notice

inserts:		page:
CD	64 poles + ⏚	59
CDD	108 poles + ⏚	72
CDS	42 poles + ⏚	81
CSH	24 poles + ⏚	94
CNE, CSE	24 poles + ⏚	107
CCE	24 poles + ⏚	113
CSS	24 poles + ⏚	125
CT, CTSE (16A) *)	24 poles + ⏚	133
CQE	46 poles + ⏚	141
CQEE	64 poles + ⏚	147
CMCE	10+2 (aux) poles + ⏚	152
CME, CMSH	10+2 (aux) poles + ⏚	153
CMCE	16+2 (aux) poles + ⏚	158
CME	16+2 (aux) poles + ⏚	159
CX	4/8 and 6/6 poles + ⏚	173, 175
MIXO	6 modules	179÷215

pages refer to CN.16 catalogue

***) only for standard insulating version THIH**

insert centre distance: **104 x 27 mm**

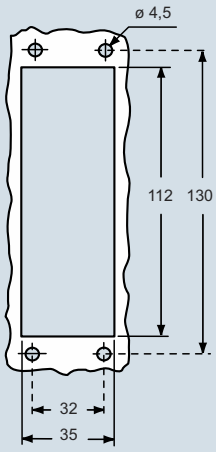
housings with double lever

HNBR gasket

hoods with 4 pegs

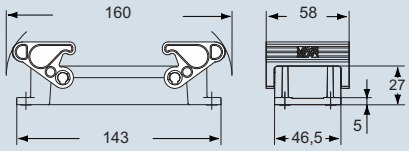
description	part No.	entry M	part No.	entry M
bulkhead mounting housing with thermoplastic levers	**THIH 24**			
surface mounting housing with thermoplastic levers surface mounting housing with thermoplastic levers	**TAPH 24.32** **TAPH 24.40**	**32** **40**		
with pegs, side entry with pegs, side entry			**TMAO 24.32** **TMAO 24.40**	**32** **40**
with pegs, top entry with pegs, top entry			**TMAV 24.32** **TMAV 24.40**	**32** **40**

panel cut-out for bulkhead mounting housing in mm

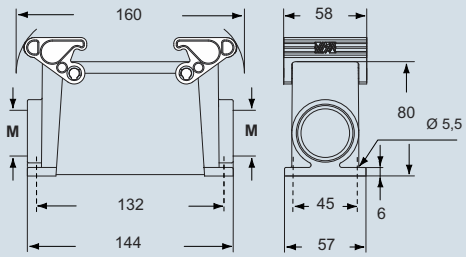


dimensions in mm

THIH 24



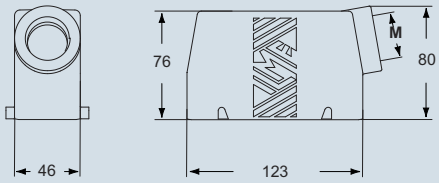
TAPH 24.32 and **TAPH 24.40**



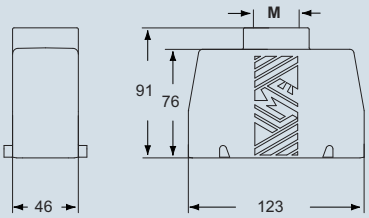
The surface mounting, high construction housings are supplied with an open threaded entry and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

dimensions in mm

TMAO 24.32 and **TMAO 24.40**



TMAV 24.32 and **TMAV 24.40**



IP66 IP69 IEC 60529

- ambient temperature limits -40 °C / +70 °C

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inserts:

		page:
CD	64 poles + ⏚	59
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CMCE	16+2 (aux) poles + ⏚	158
CME	16+2 (aux) poles + ⏚	159
CX	4/8 and 6/6 poles + ⏚	173, 175
MIXO	6 modules	179÷215

pages refer to CN.16 catalogue

***) only for standard insulating version THIH**

insert centre distance: **104 x 27 mm**

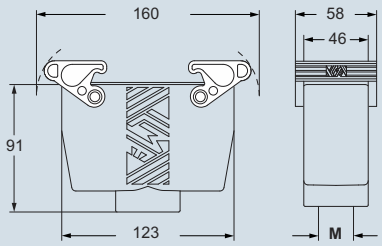
hoods with double lever top entry

HNBR gasket

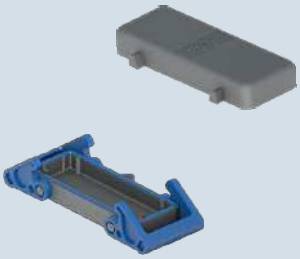
description	part No.	entry M
with thermoplastic levers and gasket	**TAVH 24 G32**	**32**
with thermoplastic levers and gasket	**TAVH 24 G40**	**40**

dimensions in mm

TAVH 24 G32 and **TAVH 24 G40**



covers

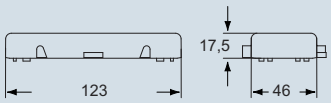


HNBR gasket

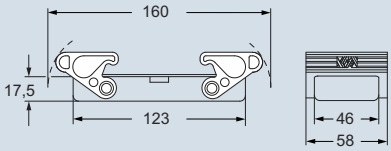
description	part No.
with 4 pegs	**TCHC 24**
with 2 thermoplastic levers and gasket	**THCH 24 G**

dimensions in mm

TCHC 24



THCH 24 G



IP66 IP69 EN 60529 IEC 60529

- ambient temperature limits -40 °C / +70 °C

dimensions shown are not binding
and may be changed without notice

inserts: page:

CDD	24	poles + ⏚	67
CDS	9	poles + ⏚	78
CSH	6	poles + ⏚	91
CNE, CSE	6	poles + ⏚	104
CCE	6	poles + ⏚	110
CSS	6	poles + ⏚	122
CT, CTSE (16A) ***)	6	poles + ⏚	130
CQE	10	poles + ⏚	138
MIXO	2	modules	179 ÷ 21

pages refer to CN.16 catalogue

***) only for standard insulating version THIC**

insert centre distance: **44 x 27 mm**

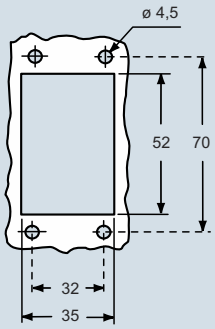
housings with single lever

SILICONE gasket

hoods with 2 pegs

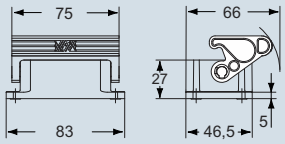
description	part No.	entry M	part No.	entry M
bulkhead mounting housing with thermoplastic lever	**THIC 06 L**			
surface mounting housing with thermoplastic lever surface mounting housing with thermoplastic lever	**TAPC 06 L25** **TAPC 06 L32**	**25** **32**		
with pegs, side entry with pegs, side entry			**TMAO 06 L25** **TMAO 06 L32**	**25** **32**
con piolini, uscita verticale con piolini, uscita verticale			**TMAV 06 L25** **TMAV 06 L32**	**25** **32**

panel cut-out for bulkhead mounting housing in mm

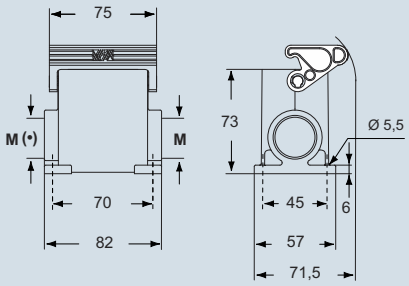


dimensions in mm

THIC 06 L



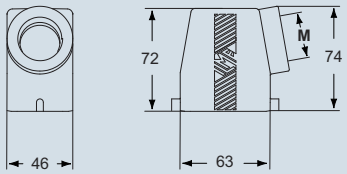
TAPC 06 L25 and **TAPC 06 L32**



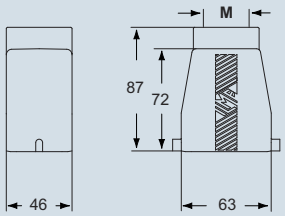
(•) The surface mounting, high construction housings are supplied with an open threaded entry (•) and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

dimensions in mm

TMAO 06 L25 and **TMAO 06 L32**



TMAV 06 L25 and **TMAV 06 L32**



IP66 IP69 EN 60529 IEC 60529

- ambient temperature limits -50 °C/+70 °C

dimensions shown are not binding
and may be changed without notice

inserts: page:

CDD	24	poles + ⏚	67
CDS	9	poles + ⏚	78
CSH	6	poles + ⏚	91
CNE, CSE	6	poles + ⏚	104
CCE	6	poles + ⏚	110
CSS	6	poles + ⏚	122
CT, CTSE (16A) ***)	6	poles + ⏚	130
CQE	10	poles + ⏚	138
MIXO	2	modules	179 ÷ 21

pages refer to CN.16 catalogue

***) only for standard insulating version THIC**

insert centre distance: **44 x 27 mm**

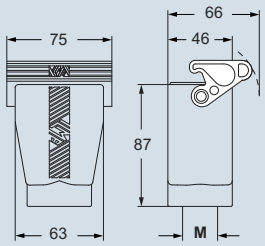
hoods with single lever top entry

SILICONE gasket

description	part No.	entry M
with thermoplastic lever and gasket	**TAVC 06 LG25**	**25**
with thermoplastic lever and gasket	**TAVC 06 LG32**	**32**

dimensions in mm

TAVC 06 LG25 and **TAVC 06 LG32**



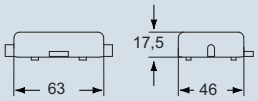
covers

SILICONE gasket

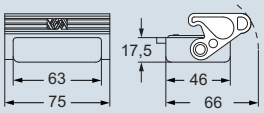
description	part No.
with pegs	**TCHC 06 L**
with thermoplastic lever and gasket	**THCC 06 LG**

dimensions in mm

TCHC 06 L



THCC 06 LG



IP66 IP69 IEC 60529

- ambient temperature limits -50 °C/+70 °C

dimensions shown are not binding
and may be changed without notice

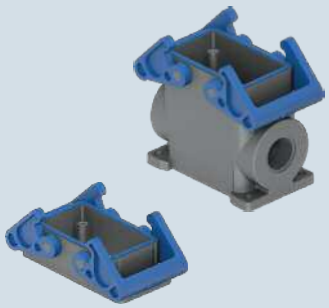
inserts: page:

CDD	42	poles + ⏚	69
CDS	18	poles + ⏚	79
CSH	10	poles + ⏚	92
CNE, CSE	10	poles + ⏚	105
CCE	10	poles + ⏚	111
CSS	10	poles + ⏚	123
CT, CTSE (16A) *)	10	poles + ⏚	131
CQE	18	poles + ⏚	139
CMCE	3+2 (aux)	poles + ⏚	148
CME	3+2 (aux)	poles + ⏚	149
CMSH	3+2 (aux)	poles + ⏚	149
CX	8/24	poles + ⏚	169
MIXO	3	modules	179 ÷ 215

pages refer to CN.16 catalogue
***) only for standard insulating version THIC**

insert centre distance: **57 x 27 mm**

housings with double lever

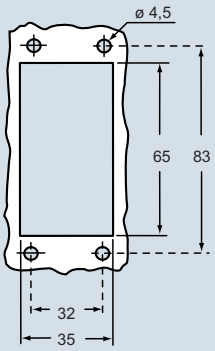


SILICONE gasket

hoods with 4 pegs

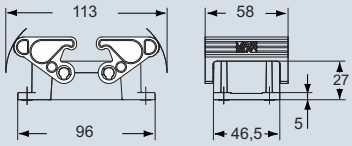
description	part No.	entry M	part No.	entry M
bulkhead mounting housing with thermoplastic levers	**THIC 10**			
surface mounting housing with thermoplastic levers surface mounting housing with thermoplastic levers	**TAPC 10.25** **TAPC 10.32**	**25** **32**		
with pegs, side entry with pegs, side entry			**TMAO 10.25** **TMAO 10.32**	**25** **32**
with pegs, top entry with pegs, top entry			**TMAV 10.25** **TMAV 10.32**	**25** **32**

panel cut-out for bulkhead mounting housing in mm

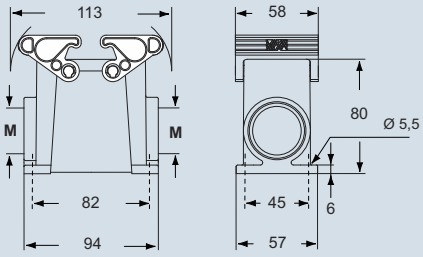


dimensions in mm

THIC 10



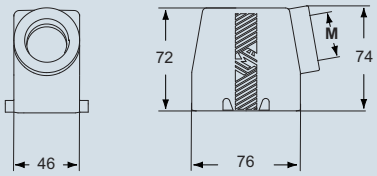
TAPC 10.25 and **TAPC 10.32**



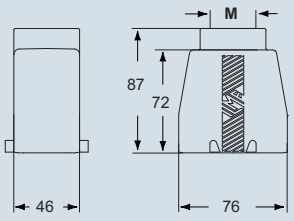
The surface mounting, high construction housings are supplied with an open threaded entry and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

dimensions in mm

TMAO 10.25 and **TMAO 10.32**



TMAV 10.25 and **TMAV 10.32**



IP66 IP69 EN 60529 IEC 60529

- ambient temperature limits -50 °C/+70 °C

dimensions shown are not binding
and may be changed without notice

inserts: page:

CDD	42	poles + ⏚	69
CDS	18	poles + ⏚	79
CSH	10	poles + ⏚	92
CNE, CSE	10	poles + ⏚	105
CCE	10	poles + ⏚	111
CSS	10	poles + ⏚	123
CT, CTSE (16A) *)	10	poles + ⏚	131
CQE	18	poles + ⏚	139
CMCE	3+2 (aux)	poles + ⏚	148
CME	3+2 (aux)	poles + ⏚	149
CMSH	3+2 (aux)	poles + ⏚	149
CX	8/24	poles + ⏚	169
MIXO	3	modules	179 ÷ 215

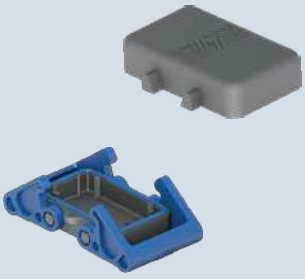
pages refer to CN.16 catalogue
***) only for standard insulating version THIC**

insert centre distance: **57 x 27 mm**

hoods with double lever top entry

SILICONE gasket

covers

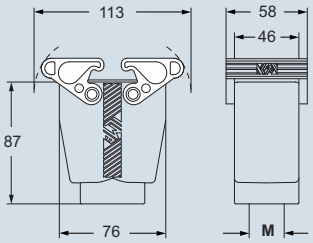


SILICONE gasket

description	part No.	entry M	part No.
with thermoplastic levers and gasket	**TAVC 10 G25**	**25**	
with thermoplastic levers and gasket	**TAVC 10 G32**	**32**	
with 4 pegs			**TCHC 10**
with 2 thermoplastic levers and gasket			**THCC 10 G**

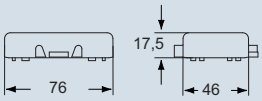
dimensions in mm

TAVC 10 G25 and **TAVC 10 G32**

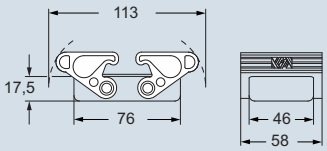


dimensions in mm

TCHC 10



THCC 10 G



IP66 IP69 IEC 60529

- ambient temperature limits -50 °C/+70 °C

dimensions shown are not binding
and may be changed without notice

inserts: page:

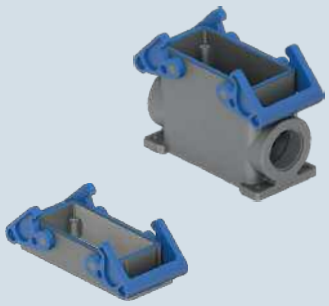
CD	40	poli + ⏚	57
CDD	72	poli + ⏚	70
CDS	27	poli + ⏚	80
CSH	16	poli + ⏚	93
CNE, CSE	16	poli + ⏚	106
CCE	16	poli + ⏚	112
CSS	16	poli + ⏚	124
CT, CTSE (16A) ***)**	16	poli + ⏚	132
CQE	32	poli + ⏚	140
CQEE	40	poli + ⏚	146
CMCE	6+2 (aux)	poli + ⏚	150
CME, CMSH	6+2 (aux)	poli + ⏚	151
CP	6	poli + ⏚	162
CX	6/36 e 12/2	poli + ⏚	170÷171
CX	4/0 e 4/2	poli + ⏚	172
MIXO	4	moduli	179÷215

pages refer to CN.16 catalogue

***) only for standard insulating version THIC**

insert centre distance: **77,5 x 27 mm**

housings with double lever

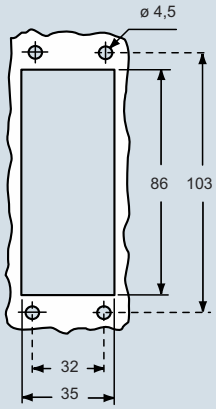


SILICONE gasket

hoods with 4 pegs

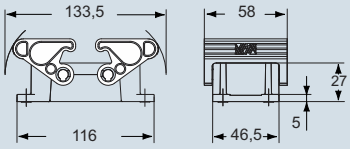
description	part No.	entry M	part No.	entry M
bulkhead mounting housing with thermoplastic levers	**THIC 16**			
surface mounting housing with thermoplastic levers surface mounting housing with thermoplastic levers	**TAPC 16.32** **TAPC 16.40**	**32** **40**		
with pegs, side entry with pegs, side entry			**TMAO 16.32** **TMAO 16.40**	**32** **40**
with pegs, top entry with pegs, top entry			**TMAV 16.32** **TMAV 16.40**	**32** **40**

panel cut-out for bulkhead mounting housing in mm

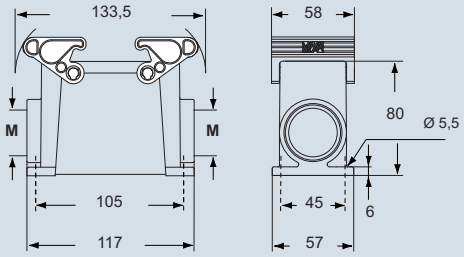


dimensions in mm

THIC 16



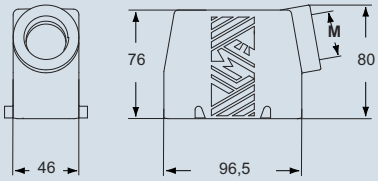
TAPC 16.32 and **TAPC 16.40**



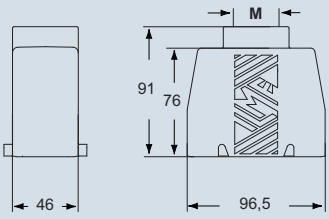
The surface mounting, high construction housings are supplied with an open threaded entry and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

dimensions in mm

TMAO 16.32 and **TMAO 16.40**



TMAV 16.32 and **TMAV 16.40**



IP66 IP69 EN 60529 IEC 60529

- ambient temperature limits -50 °C/+70 °C

dimensions shown are not binding
and may be changed without notice

inserts:

			page:
CD	40	poli + ⏚	57
CDD	72	poli + ⏚	70
CDS	27	poli + ⏚	80
CSH	16	poli + ⏚	93
CNE, CSE	16	poli + ⏚	106
CCE	16	poli + ⏚	112
CSS	16	poli + ⏚	124
CT, CTSE (16A) ***)**	16	poli + ⏚	132
CQE	32	poli + ⏚	140
CQEE	40	poli + ⏚	146
CMCE	6+2 (aux)	poli + ⏚	150
CME, CMSH	6+2 (aux)	poli + ⏚	151
CP	6	poli + ⏚	162
CX	6/36 e 12/2	poli + ⏚	170÷171
CX	4/0 e 4/2	poli + ⏚	172
MIXO	4	moduli	179÷215

pages refer to CN.16 catalogue

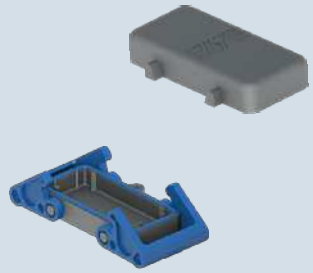
***) only for standard insulating version THIC**

insert centre distance: **77,5 x 27 mm**

hoods with double lever top entry

SILICONE gasket

covers



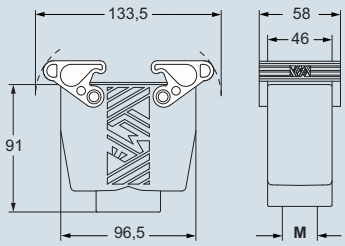
SILICONE gasket

description	part No.	entry M
with thermoplastic levers and gasket	**TAVC 16 G32**	**32**
with thermoplastic levers and gasket	**TAVC 16 G40**	**40**

description	part No.
with 4 pegs	**TCHC 16**
with 2 thermoplastic levers and gasket	**THCC 16 G**

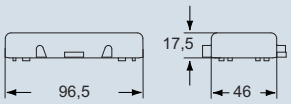
dimensions in mm

TAVC 16 G32 and **TAVC 16 G40**

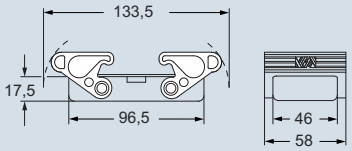


dimensions in mm

TCHC 16



THCC 16 G



IP66 IP69 IEC 60529

- ambient temperature limits -50 °C/+70 °C

dimensions shown are not binding
and may be changed without notice

inserts:

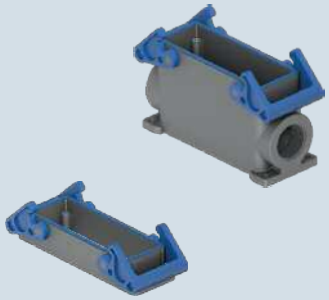
		page:
CD	64 poles + ⏚	59
CDD	108 poles + ⏚	72
CDS	42 poles + ⏚	81
CSH	24 poles + ⏚	94
CNE, CSE	24 poles + ⏚	107
CCE	24 poles + ⏚	113
CSS	24 poles + ⏚	125
CT, CTSE (16A) *)	24 poles + ⏚	133
CQE	46 poles + ⏚	141
CQEE	64 poles + ⏚	147
CMCE	10+2 (aux) poles + ⏚	152
CME, CMSH	10+2 (aux) poles + ⏚	153
CMCE	16+2 (aux) poles + ⏚	158
CME	16+2 (aux) poles + ⏚	159
CX	4/8 and 6/6 poles + ⏚	173, 175
MIXO	6 modules	179÷215

pages refer to CN.16 catalogue

***) only for standard insulating version THIC**

insert centre distance: **104 x 27 mm**

housings with double lever

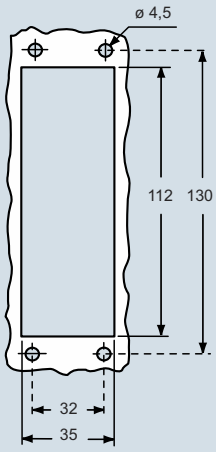


SILICONE gasket

hoods with 4 pegs

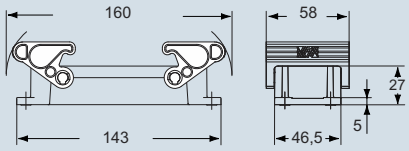
description	part No.	entry M	part No.	entry M
bulkhead mounting housing with thermoplastic levers	**THIC 24**			
surface mounting housing with thermoplastic levers surface mounting housing with thermoplastic levers	**TAPC 24.32** **TAPC 24.40**	**32** **40**		
with pegs, side entry with pegs, side entry			**TMAO 24.32** **TMAO 24.40**	**32** **40**
with pegs, top entry with pegs, top entry			**TMAV 24.32** **TMAV 24.40**	**32** **40**

panel cut-out for bulkhead mounting housing in mm

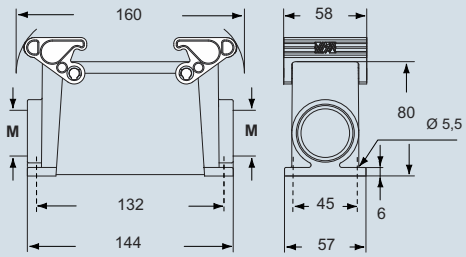


dimensions in mm

THIC 24



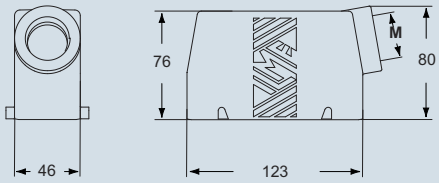
TAPC 24.32 and **TAPC 24.40**



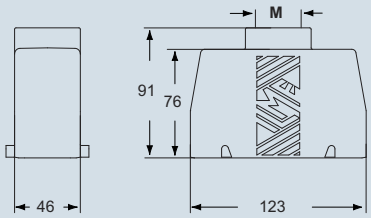
The surface mounting, high construction housings are supplied with an open threaded entry and diametrically opposite a closed threaded entry which can be opened by the user if required (with suitable tool).

dimensions in mm

TMAO 24.32 and **TMAO 24.40**



TMAV 24.32 and **TMAV 24.40**



IP66 IP69 IEC 60529

- ambient temperature limits -50 °C/+70 °C

dimensions shown are not binding
and may be changed without notice

inserts: page:

CD	64 poles + ⏚	59
CDD	108 poles + ⏚	72
CDS	42 poles + ⏚	81
CSH	24 poles + ⏚	94
CNE, CSE	24 poles + ⏚	107
CCE	24 poles + ⏚	113
CSS	24 poles + ⏚	125
CT, CTSE (16A) *)	24 poles + ⏚	133
CQE	46 poles + ⏚	141
CQEE	64 poles + ⏚	147
CMCE	10+2 (aux) poles + ⏚	152
CME, CMSH	10+2 (aux) poles + ⏚	153
CMCE	16+2 (aux) poles + ⏚	158
CME	16+2 (aux) poles + ⏚	159
CX	4/8 and 6/6 poles + ⏚	173, 175
MIXO	6 modules	179÷215

pages refer to CN.16 catalogue

***) only for standard insulating version THIC**

insert centre distance: **104 x 27 mm**

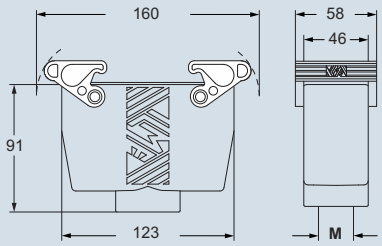
hoods with double lever top entry

SILICONE gasket

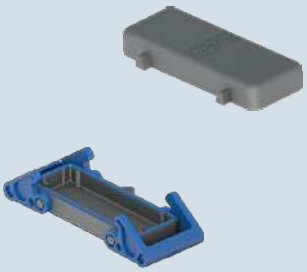
description	part No.	entry M
with thermoplastic levers and gasket	**TAVC 24 G32**	**32**
with thermoplastic levers and gasket	**TAVC 24 G40**	**40**

dimensions in mm

TAVC 24 G32 and **TAVC 24 G40**



covers

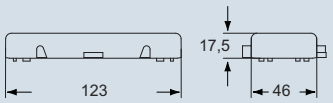


SILICONE gasket

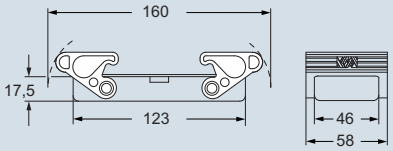
description	part No.
with 4 pegs	**TCHC 24**
with 2 thermoplastic levers and gasket	**THCC 24 G**

dimensions in mm

TCHC 24



THCC 24 G



- ambient temperature limits -50 °C/+70 °C

dimensions shown are not binding
and may be changed without notice

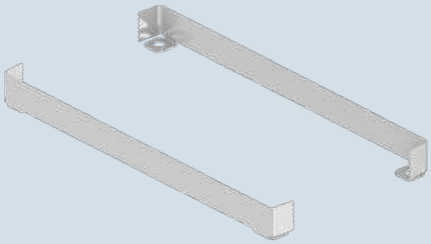
inserts: page:

CD..... 40, 64 poles + ⏚ 57, 59
CDD..... 24, 42, 72, 108 poles + ⏚ 67-72
CDS..... 9, 18, 27, 42 poles + ⏚ 78-81
CSH..... 6, 10, 16, 24 poles + ⏚ 91-94
CNE, CSE.... 6, 10, 16, 24 poles + ⏚ 104-107
CCE..... 6, 10, 16, 24 poles + ⏚ 110-113
CSS..... 6, 10, 16, 24 poles + ⏚ 122-125
CT, CTSE..... 6, 10, 16, 24 poles + ⏚ 130-133
CQE..... 10, 18, 32, 46 poles + ⏚ 138-141
CQEE..... 40, 64 poles + ⏚ 146-147
CMCE 3, 6, 10, 16+2 (aux) poles + ⏚ 148-158
CMSH.....3, 6, 10+2 (aux) poles + ⏚ 149-153
CP..... 6 poles + ⏚ 162
CX..... 8/24, 6/36, 12/2 poles + ⏚ 169-171

pages refer to CN.16 catalogue

insert centre distance:
44 x 27 mm, 57 x 27 mm
77,5 x 27 mm, 104 x 27 mm

PE optional earth jumpers

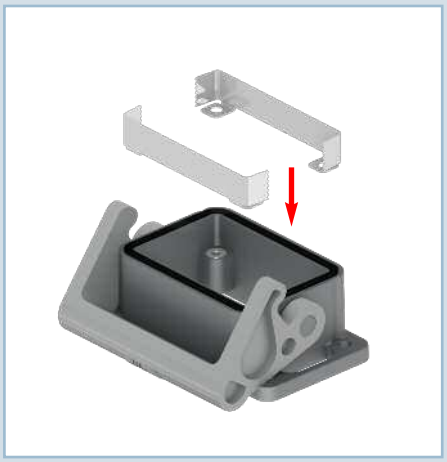


description	part No.
galvanized brass, to be optionally used with T-TYPE enclosures series and COB systems:	
- for inserts size “44.27”	**CR 06 BPE**
- for inserts size “57.27”	**CR 10 BPE**
- for inserts size “77.27”	**CR 16 BPE**
- for inserts size “104.27”	**CR 24 BPE**

CR...BPE accessories PE (protective earth) jumpers could be mounted under the connector inserts for the connection of the two insert’s PE plates.

To guarantee to proper alignment of the insert inside the enclosure, it is necessary to use both jumpers supplied (in the same housing or hood); the jumpers are not usable individually.

Furthermore the user is responsible for verifying the continuity of the ⏚ connection (male and female) independently of using CR...BPE earth jumpers.



dimensions shown are not binding
and may be changed without notice

Interchangeability with other ILME series

T-TYPE series housings can be coupled with metal hoods. Insulating hoods can be coupled with “V-Type” metal housings.

Hoods “57.27”, “77.27” and “104.07” can be mounted on COB TCQ and COB BC frames simply by replacing the supplied levers with COB L levers (to be purchased separately).

Insulating enclosures are ideal for mounting of all ILME inserts with the exception of series models CT 40/ 64 and CTS 40/ 64 connector. Inserts with 45° terminals of the CTE series (screw-type terminals) and CTSE (spring terminals) are only insertable from the front (therefore not from the back) of the bulkhead mounting housings.

Being made by insulating material, they do not require a special reinforced insulation as metal ones do, for use with series CME higher voltage connector inserts (screw-type terminals).

With the exception of the limitations described below, it is generally possible to mount the MIXO series modular connectors and frames with the ground and screen anchors dedicated to this series.

Limitations

With respect to enclosures in metal alloy, ILME insulating enclosures have some limitations of use in combination with particular accessories:

- CRZ 06/ 10/ 16/ 24 reduction plates cannot be mounted with bulkhead mounting housings due to increased dimensions of the fastening flange of these insulating enclosures.
- The CYG 16 in-line joint cannot be mounted on the bulkhead mounting housings T-TYPE series because the gaskets of the latter do not fit together with the joint profile.
- The CYR 16.3 and CYR 24.4 round cable feed-throughs are difficult to position on their respective bulkhead mounting housings T-TYPE series.
- CPT 24 disposable protection cover cannot be mounted on insulating enclosures due to increased outer dimensions of these enclosures.
- MIXO series insert anchors cannot be mounted on TMAO 06/ 10 enclosures.
- MIXO series insert anchors cannot be mounted on TMAO 06/ 10 enclosures.
- When using both cable entries of surface mounting housings, the conduit shall be of insulating type.

Important notes

ILME designs and manufactures complete solutions for Heavy Duty electrical power connections.

The connector (although offered to the user as a variety of elements, usually inserts and enclosures, to allow the selection of the ideal combination) has been **designed as a complete connector** and tested to be compliant with the essential safety requirements of the EU Low Voltage Directive 2006/95/EC (2014/35/EU from April 20, 2016) and in particular the EN 61984 standard.

The design of this "whole" system guarantees that every allowed combination of inserts, enclosures and accessories cannot result as improper.

The products in this catalogue alone cannot guarantee the best functionality upon installation, as this depends also on their correct **"putting into service"** which must be performed in compliance with the applicable system safety standards and according to the "rule of the art".

Therefore the effectiveness of the installation of the connector depends on the choices of the end user who must also take into account the following safety requirements.

Connectors must **not be connected or disconnected when live or under load.**

After wiring the inserts it is necessary to **verify the continuity of the protective earth connections.**

The correct coupling of the inserts is guaranteed only if they are installed (with the four fixing screws supplied) inside the corresponding enclosures or onto compatible accessories in this catalogue. I.L.M.E. SpA is not responsible for any different application.

Wiring of **screw-type terminal connections** must be carried out applying the correct tightening torque in order to avoid false contacts or damage to the conductor, the screw or the terminal.

Crimping tools and contacts used should preferably be supplied by the same manufacturer to avoid difficulties with the insertion and retention of the contacts themselves.

Correct wiring of spring-clamp connection inserts is guaranteed only when the correct screwdriver indicated in the specific catalogue, or possibly on the insert, is used.

Avoid forcing the contacts during **connection and disconnection.** Connectors must be coupled and uncoupled in the axial direction with respect to the contacts, without bending and pulling the attached conductor bundles or cables.

Installation of two **inserts side by side**, in enclosures with two bays, must respect the polarity drawing marked on the insert (or the contact side view, as shown in this catalogue) to avoid inverted coupling.

The installation of two or more identical connectors side by side is recommended only with the use of coding pins in order to avoid mismatched couplings.

In order to keep the declared degree of protection (IP code), enclosures must be completed with cable glands and/or other accessories with at least an equal protection rating.

Moreover, the IP protection rating (according to EN 60529) is guaranteed when the enclosures, complete with inserts, are coupled and locked with their locking levers (or devices).

Finally, Please note:
- ILME cannot be held responsible for individual components in uses other than those described in this catalogue.
- ILME cannot be held responsible for incorrect connector selection in relation to the environmental conditions of the application (e.g.: influence of ambient temperature, moisture, environmental pollution, etc.).

Connector inserts and their enclosures are generally compatible with similar/equivalent products from other manufacturers, according to the last samples tested.
Full compatibility cannot be guaranteed in the event of technical changes made by other manufacturers. In particular, maximum performance of IP68 enclosures (Series CG) cannot be guaranteed when coupled with other manufacturers' products.

I.L.M.E. SpA takes no responsibility in verifying whether the components herein contained comply with any specific regulations of fields of application.

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Catalogues