

# WAIN Connector



## » WAIN at the EPLAN Data Portal

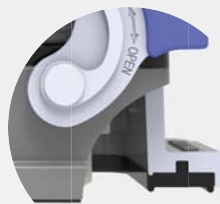
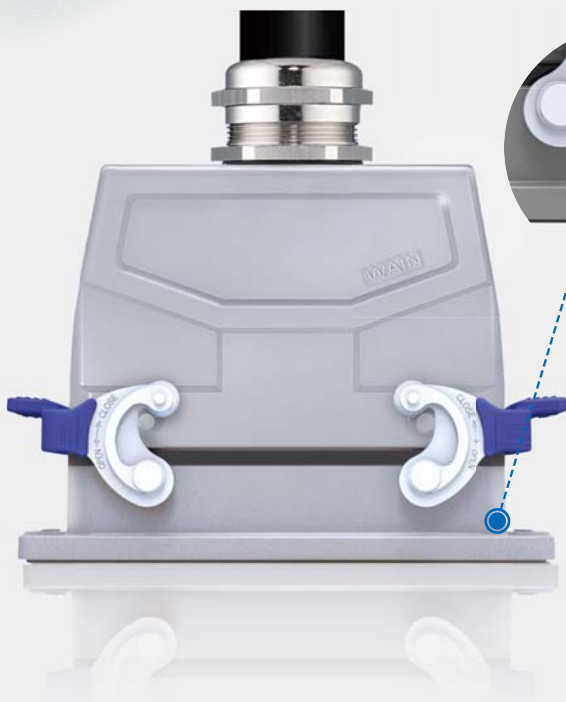
We are glad to inform you that WAIN products are now available on EPLAN Data Portal. There are more than 3500 components online for your reference. This way, customers can select WAIN products more quickly and conveniently so as to save the time of design and production and furthermore improve the efficiency.



» Selected the best online products over 3500



## WAIN<sup>®</sup> new hoods/housings (IP67)



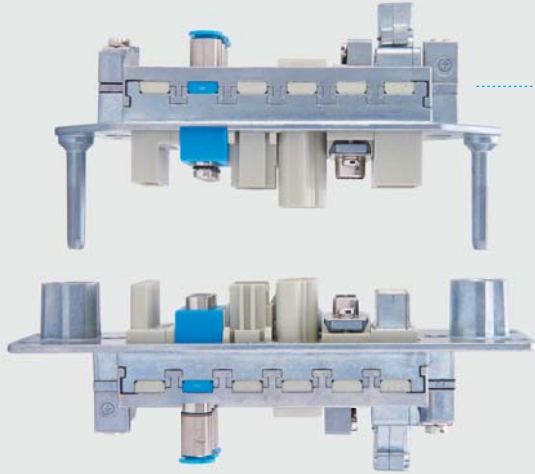
### ■ Glue-free bottom base without mucilage glue

The hidden bottom base provides better corrosion resistance.

### ■ Innovation:

1. New appearance by independent development.
2. Degree of protection IP67.
3. The hidden glue-free bottom base provides better corrosion resistance
4. Compatible with the old-designed hoods/housings

## HF24B-F(M)ADK Metal Docking Frame



Direct installation without hood and housing

### Innovation:

1. Easy assembly and disassembly with hanging type half-threaded screws.
2. Putting guiding pins into conical holes to realize guiding.
3. Using the floating washers to increase gaps, it helps to increase guiding function.
4. Guiding through crown spring improves the safety performance greatly.
5. Direct installation and no need to match with hoods/housings.

## HMP-003-V2 Metal Pneumatic Module

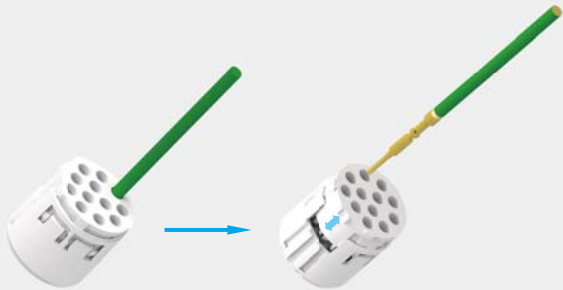


### Innovation:

1. Easy disassembly of the contacts and module by using contact removal tool.
2. Quick connection and disconnection of the air tube.
3. Metal pneumatic contact increases strength and service life of the module.

## MR23 Circular Connector

Efficient mounting and removal of contacts through Push-Pull mounting technology



### Innovation:

1. Crimp connection stabilizes the signal transmission in vibration environment.
2. Push-Pull mounting technology realizes efficient mounting and removal without any tool.
3. Reverse coding is also available.

## H24B.P-SEH-4B-M50 Extra Large Plastic Hood



Largest wire diameter of  $\Phi 47\text{mm}$



### Innovation:

1. The hood is designed as a separate structure, easy assembly and disassembly with screws
2. Enlarged space inside the hood makes it convenient to connect and install large cables
3. Mating hood and housing with locking levers, the connector will not easily fall apart
4. Excellent electrical insulating property (Insulating resistance  $> 10 \Omega$ )
5. High performance material suits the harsh environment
6. Light weight, high mechanical properties and economical
7. Widely used in various applications, compatible with regular inserts, frames, etc.



## 32 pin anti-open circuit connector



### Innovation:

1. The stress relief structure of PCB electrical connection can release the stress, so as to protect PCB from damage.
2. Assembly and welding of two-stage welding pins: one or more pins and PCB at male end are welded with female plug at the same time, which is not easy to damage the welding points, more effective to achieve reliable operation of the system, and easy to install and maintain.



Assembly and welding of two-stage welding pins  
The stress relief structure of PCB electrical connection  
can release the stress, so as to protect PCB from damage.

## 7/8 Circular connector

Screw terminal, Easy assembly on site.



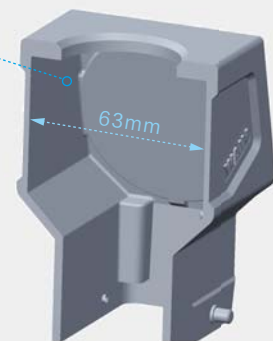
### Innovation:

1. Original anti-loosing joint to avoid accidental losing, with superior performance in shock resistance and vibration load.
2. 7/8 flange seat with fixed cable wiring design, greatly improving cable life and connection stability.
3. Screw terminal, easy to maintain and operate! Easy assembly on site.
4. Patented design with sleeve pin to improve mechanical life.
5. Superior waterproof, dustproof and explosion-proof performance, with protection grade up to IP67.
6. The connector is made of high temperature resistant material, with the maximum temperature of 125 °C, and the fire rating of UL94V0

## W24B.C-TEH/E-4B-M50 Enlarge metal hood



Internal space up to 63mm wide  
Large cable wiring and installation is easier!



### Innovation:

1. The internal space of the conventional 24B high structure hood is only 34mm, and the internal space of this extra large shell can reach 63mm.
2. Increase the internal space to ensure that the cable with large cable outer diameter can also be wired.
3. It is made of aluminum alloy metal with high strength and long service life!
4. It can be compatible with conventional insert, frame and other usage, It has a wide range of uses.
5. Wiring method: side entry/top entry.

## WAIN Heavy duty connector

Heavy - duty connector is designed for modular production pre - wiring and satisfying severe environmental conditions, which is mainly applied in rail transit, industrial automation and equipment manufacturing fields. Compared with traditional wiring methods, use of heavy - duty connector can reduce site wiring operation after equipment or vehicle leaves the workshop, enhance production efficiency and reduce quality risk of site wiring.

Flexible production is core reflection of industrial 4.0. Modular design, production and application of all functional modules of equipment can lay solid foundation for flexible production. With deep development of industrial automation, equipment has witnessed more renovation. For example, a large amount of equipment has adopted module design whose functions have been constantly increased according to application demand. Use of heavy - duty connectors including pneumatic module, large current module, electromagnetic shielding module and D - Sub module has not only achieved accessible and rapid connection among module equipment , but also has guaranteed transmission of signal and power supply. As for manufacturers of machinery equipment, they can not only obtain safe and reliable connection, but also save installation time and reduce comprehensive production cost.As for end users, they can easily install operation equipment without instructions of any professional personnel and maintenance also becomes easier. It can not only increase effectiveness and practicality of machinery equipment, but also reduce installation time and reduced equipment repair time.

WAIN is a comprehensive professional enterprise with integration of R&D, manufacture and sales of heavy - duty connectors.The company has modernized work places including injection molding workshop, hardware workshop, casting workshop,electroplating workshop,assembly and mould workshop. In addition,the company has product R&D and product performance testing laboratory and several technical patents.We are dedicated to providing high - quality product for industrial connection system.WAIN connector product has thousands of portfolios and can satisfy electric and signal connection requirements of different fields and different situations.



## Contents

Rectangular connector  
- Inserts

	Rated voltage	Rated current	Number of contacts	Wire Connection	Page
HA Series - the slim inserts	230/400V 250V	10A 16A	3, 4, 10, 16, 32	Crimp / Screw Spring	P01 - 01 ~ P01 - 06
HE Series - compact inserts	500V	16A	6, 10, 16, 24, 32, 48	Crimp / Screw Spring	P02 - 01 ~ P02 - 10
HVE Series - high voltage inserts	830V 400/690V	16A 16A	3, 6, 10, 12, 20, 16, 32	Screw Crimp	P03 - 01 ~ P03 - 11
HVES Series - high voltage inserts	830V	16A	3, 6, 10, 12, 20	Spring	P04 - 01 ~ P04 - 07
HEE Series - high density inserts	500V *690V, 1000V	16A	10, 18, 32, 46, 40, 64, 92	Crimp	P05 - 01 ~ P05 - 12
HD&HDD Series - ultra - high density inserts	- 120V/-50V 250V *400V, 500V	10A 10A	8 7 - 216	Crimp	P06 - 01 ~ P06 - 24
HSB Series - high heavy - current inserts	400/690V	35A	6, 12	Screw	P07 - 01 ~ P07 - 05
HK Series - combination inserts	160 - 830V	10A - 100A	various	Crimp Screw	P08 - 01 ~ P08 - 27
HE AV Series - extendible inserts	500V	16A	6, 10, 16, 24	Screw	P09 - 01 ~ P09 - 07
HD AV Series - extendible inserts	250V	10A	40, 64	Screw	P09 - 08 ~ P09 - 12
HM Series - flexible and combined inserts	50 - 5000V Fiber Optic / Pneumatic	5A - 200A	1 - 42	Crimp / Screw Spring	P10 - 01 ~ P10 - 70
HQ Series - compact inserts	230 - 690V	10A, 16A, 40A	2 - 17	Crimp Screw	P11 - 01 ~ P11 - 19
HC Series - high heavy - current inserts	1150 - 4000V	200A - 650A	1 - 4	Crimp Screw	P12 - 01 ~ P12 - 26

## Rectangular connector - Crimp contacts

Type	Page
5A, 10A, 16A, 40A, 70A, 100A, 200A, 250A, 350A, 650A Crimp	P13 - 01 ~ P13 - 07

## Rectangular connector - Accessories

	Page
PCB - adapter	P14 - 02 ~ P14 - 11
Rail bracket	P14 - 02 ~ P14 - 11
Ground terminal/Docking frame	P14 - 12 ~ P14 - 13
Code pin	P14 - 14 ~ P14 - 16
Cable clamp	P14 - 17 ~ P14 - 18
	P14 - 19

## Rectangular connector - Hoods/Housings

3A	Hoods/Housings (Plastic, Metal, EMC, Corrosion resistance, H version Pressure tight)	P15 - 06 ~ P15 - 16
10A	Hoods/Housings (Plastic, Metal)	P15 - 17 ~ P15 - 18
16A	Metal Hoods/Housings	P15 - 19 ~ P15 - 20
32A	Metal Hoods/Housings	P15 - 21 ~ P15 - 24
6B	Hoods/Housings (Plastic, Metal, Corrosion resistance, EMC, W version, H version, C version Pressure tight, WV/HV)	P15 - 25 ~ P15 - 38
10B	Hoods/Housings (Plastic, Metal, Corrosion resistance, EMC, W version, H version, C version Pressure tight, WV/HV)	P15 - 39 ~ P15 - 69
16B	Hoods/Housings (Plastic, Metal, Corrosion resistance, EMC, W version, H version, C version Pressure tight, WV/HV)	P15 - 70 ~ P15 - 107
24B	Hoods/Housings (Plastic, Metal, Corrosion resistance, EMC, W version, H version, C version Pressure tight, WV/HV)	P15 - 108 ~ P15 - 150
32B	Hoods/Housings (Metal, WV/HV)	P15 - 151 ~ P15 - 159
48B	Hoods/Housings (Metal, WV/HV)	P15 - 160 ~ P15 - 162
HC	Hoods/Housings (Plastic, Metal)	P15 - 163 ~ P15 - 168
Thickened seal part	( H series BK housing )	P15 - 169 ~ P15 - 170

\*By adjusting the layout of contacts, they could be applied up to 690V or 1000V.

By adjusting the layout of contacts, they could be applied up to 400V or 500V.

To users: Part of the data pictures in this product manual may be updated. Please refer to the latest data provided by the technical department of our company while selecting the model. For the details, please call 400-882-5885, confirm with the sales personnel of our company or inquire via [info@wainconnector.com](mailto:info@wainconnector.com).

## Contents

## Circular connector

	Rated voltage	Rated current	Number of contacts	Terminal	Page
Technical characteristics					P16-02 ~ P16-11
M8	30V, 60V	4A	3, 4	screw clamp connection, solder, dip solder, moulded	P17-01 ~ P17-20
M12 - A	60V, 125V, 250V	2A, 4A, 8A	3, 4, 5, 8	screw clamp connection, solder, dip solder, moulded, single wires	P18-01 ~ P18-40
M12 - B	125V, 250V	4A, 8A	3, 4, 5,	screw clamp connection, solder, dip solder, moulded, single wires	P18B-01 ~ P18B-27
M12 - D	250V	4A	4	screw clamp connection, solder, dip solder, moulded, single wires	P19-01 ~ P19-15
M12 - X	250V	4A	8	crimp terminal, single wires	P19X-01 ~ P19X-07
M12 Distributor Sensor junction box	60/250V 10~30V DC	4A 2A, 9A	4, 5 4, 5	- pluggable M23	P20-01 ~ P20-04
7/8	300V	8A, 9A, 10A, 12A	3(2+PE), 4(3+PE), 5(4+PE),	screw clamp connection,	P21-01 ~ P21-08
HR23(M23)	25V~/60V -	7A, 15A	6, 9, 12, 17, 19	crimp terminal, (PCB)solder terminal screw clamp connection	P22-01 ~ P22-13
MR23	25V~/60V -	7A	12	crimp terminal	P23-01 ~ P23-04
M23	250V, 630V	9A, 30A	6, 8	crimp terminal	P24-01~ P24-07
M40	250V	20A, 60A	4/4	crimp terminal	P25-01~ P25-04
Power electrical connector	250V	1A, 13A, 20A, 25A, 40A	4, 5, 6, 10, 26, RJ45&3	crimp terminal, solder terminal	P26-01~ P26-08
HW	1000V	800A	1	crimp terminal	P27-01~ P27-04

## Customized product

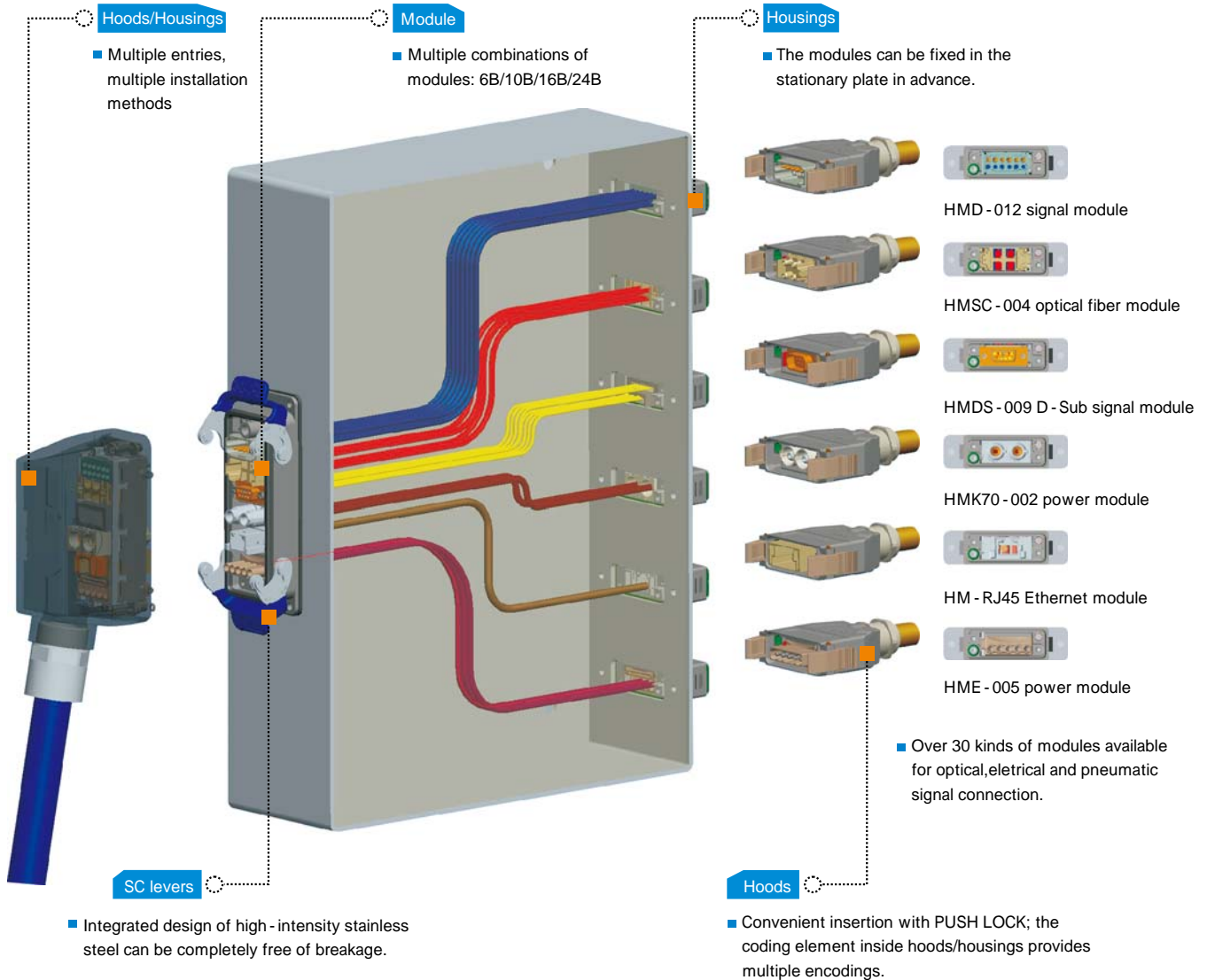
	Rated voltage	Rated current	Number of contacts	Terminal	Page
HCC Series - single row inserts	500V	30A	10	Screw terminal	P28-01 ~ P28-02
HV Series - single row inserts	400V	20A	8	Screw terminal	P29-01 ~ P29-04
32 pin anti - open circuit connector	250V	10A	24+8(anti - open circuit ) +1(grounding )	crimp terminal, (PCB)solder terminal screw clamp connection	P29-05 ~ P29-08
D-Sub-044 Series		3A	44	crimp terminal	P29-09 ~ P29-12
Charging socket	500V/12V	150A/2A	8/2	crimp terminal	P29-13 ~ P29-16
wiring harness					P30-01 ~ P30-14
Optical fiber					P31-01 ~ P31-04

## Tools/Cable gland

	Page
Tools/Cable gland	P32-01 ~ P32-26
List of part no.	P33-01 ~ P33-22

## New products: "WU" single module connector series

The innovative products of WAIN in 2016 combine dozens of modules (large current, signal current, optical fiber, gas, Ethernet and so on) into an independent unit with EMC performance and a protection level of IP65.



WAIN provides solutions for various branching integration demands!



### ● Product characteristics:

- smaller width, more compact, space-saving;
- convenient locks save time during assembly;
- encoder inside hoods/housings provides multiple encodings;
- modules can be fixed in the stationary plate in advance;
- With grounding function;
- Grounding screw is in vertical direction, which does not interfere with the face plate so that operation space is large;
- It is matched with multiple single module slugs;
- EMC function;

For more information about the hoods, housings and modules of "WU" Series, please refer to HM Series.

System certificates



ISO 14001



ISO 9001



IRIS

Product certificates



VDE



UL



CE



CQC



EAC

Introduction to IRIS: IRIS, standing for International Railway Industry Standard, is an initiative led by the Union of the European Railway Industries (UNIFE). It is mainly used to ensure the high quality of the whole railway industry and make the manufacturers of railway equipment meet the requirements of global railways for high - quality railway parts and increase their competitiveness in the world. IRIS aims to develop and implement a universal system to evaluate the quality management systems of railway industry. IRIS adds railway specific requirements into ISO 9001; in short, IRIS is the extension of ISO 9001 for railway industry.

**EUROMAP** WAIN is one of the recommended suppliers of EUROMAP, the Europe' s Association for plastics and rubber machinery manufacturers.

EUROMAP recommendations:

The inserts and the relevant enclosures meet the EUROMAP Recommendations (European Committee of machinery manufacturers for the plastic and rubber industry) EUROMAP 12, 13, 14.1, 14.2, 16, 27.1, 28, 29, 62, 67, 67.1, 70, 73, 74, 78

For more information, please visit WAIN's homepage: [www.wainconnector.com](http://www.wainconnector.com)

Product applications

• Energy



• Rail transit



• Machine manufacturing



• Automation





- Convenient maintenance
- Rapid surefooted installation
- Degree of protection IP68

” WAIN provides stable and reliable electrical connection for variable pitch blades and slip rings.



■ Turbine parts



■ Turbine parts



■ Pitch system

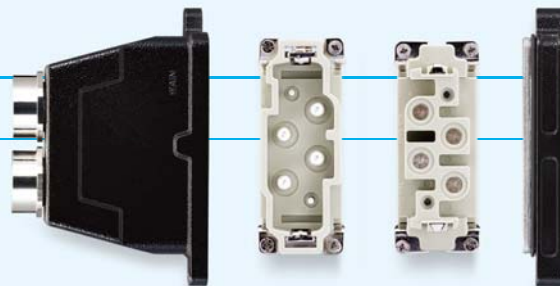
## 】 Connectors in wind power generation

Wind power generation is the most mature way of power generation, which is qualified for large - scale development and has commercial development prospect., and it has been developed in the recent years. Reliable operation and convenient maintenance and replacement of functional module system are significant for the wind power station.

WAIN Connector provides reliable electrical connection solutions for wind power generation. The HC, HE, RJ45, HR23 series, as well as other series can satisfy various connection of weak and strong current in different applications of wind power.

### 】 HK Combination Connectors

- Combination of power and signal area in one connector
- Up to 200A current connection
- Match with various kinds of hoods and housings
- An ideal connector for large current connection in narrow space



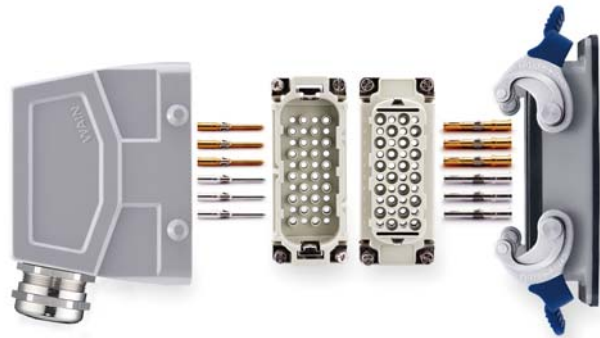
## 】 Connectors in Electric power industry

Reliability, safety, economic efficiency, energy efficiency and environment - friendliness are important indicators of power grid operation. Therefore, new - type intelligent power grid taking physical power grid as foundation and integrating advanced sensor measurement technology, communication technology, information technology, computer technology and control technology is an important way to reach these indicators.

The various model of WAIN Connector also facilitates the safety, reliable operation and intelligent transformation of power grid.



】 In order to meet the heavy-current and high-voltage requirements in power generation, WAIN provides HD HDD series and H version shell to build a secure and stable system.



### » HD HDD High-Density Inserts

- Safe and reliable, convenient maintenance
- High density of crimping contacts, up to 216 contacts, compact structure
- Match with various kinds of hoods and housings



■ Vacuum circuit breaker



■ High - tension switch cabinet



■ Box - type substation

## » Connectors in Rail transit

Due to further specialization of labor and requirements for convenient maintenance, the modular design of components in the railway traffic technology is being attached with more and more attention. WAIN Connector provides a complete solution for different electrical connections among all kinds of components, ensuring the safe and reliable coordinated operation of each component in various environments.



### » HM Series Inserts: Flexible Combination

- Modular structure with high flexibility.
- Compact structure saves space.
- Connectors can be assembled according to special requirement.





” WAIN provides connection solution with high protection grade for important occasions such as high-speed train, jumper wire of subway, air-conditioner and lighting, etc.



■ Jumper wire



■ Coupling end



■ Coupling end



■ Hauling system

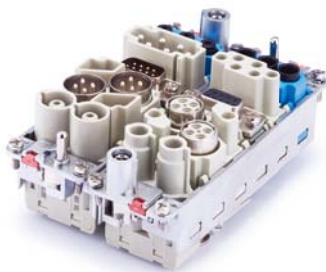


WAIN uses single connector to achieve power and signal transmission so that robot wiring is more reasonable and engineering application can be carried out with high efficiency.

## » Use the least space to realize the automation

In the development of modern automation technology, flexibility is a very important indicator, including flexibility and convenience of installation, use, production and commissioning.

WAIN ' s HE, HEE, HK, HM and other series, along with hoods and housings with various degrees of protection, cable outlets and locking levers, can satisfy the requirements for space and electrical connection.



## » HM Combined suite

- Modular structure
- Universality , reducing inventory
- Realize the power and signal transmission in the least space
- Meet electrical or signal connecting requirements in different fields and for different purposes



■ Outer join



■ Control system

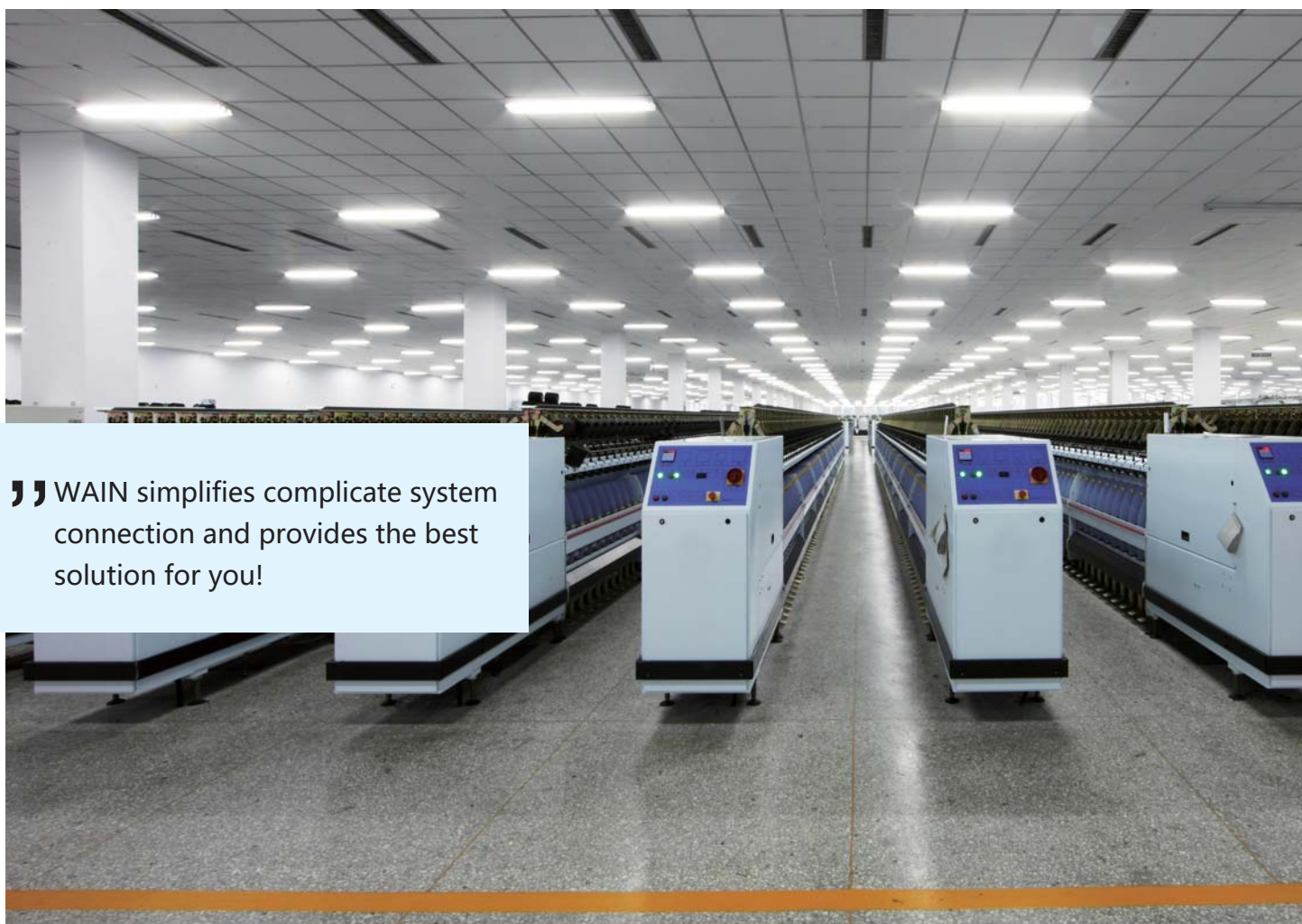


■ Outer join

## » Connector in machinery

In machinery manufacturing field, due to the diversified equipment and space requirements, light, gas and other media are also needed to be transmitted in some cases, besides weak current and strong current.

WAIN Connector provides integral solutions for this; it not only has many electrical connectors, but also has connectors for other media (such as pneumatic connector). It can satisfy different applications of various kinds of equipment, and simultaneously connect electrical circuit and gas circuit in a connector if necessary.



» WAIN simplifies complicate system connection and provides the best solution for you!



**»** HQ compact connectors

- Convenient maintenance
- Compact design
- Match pressure tight or EMC hoods/housings



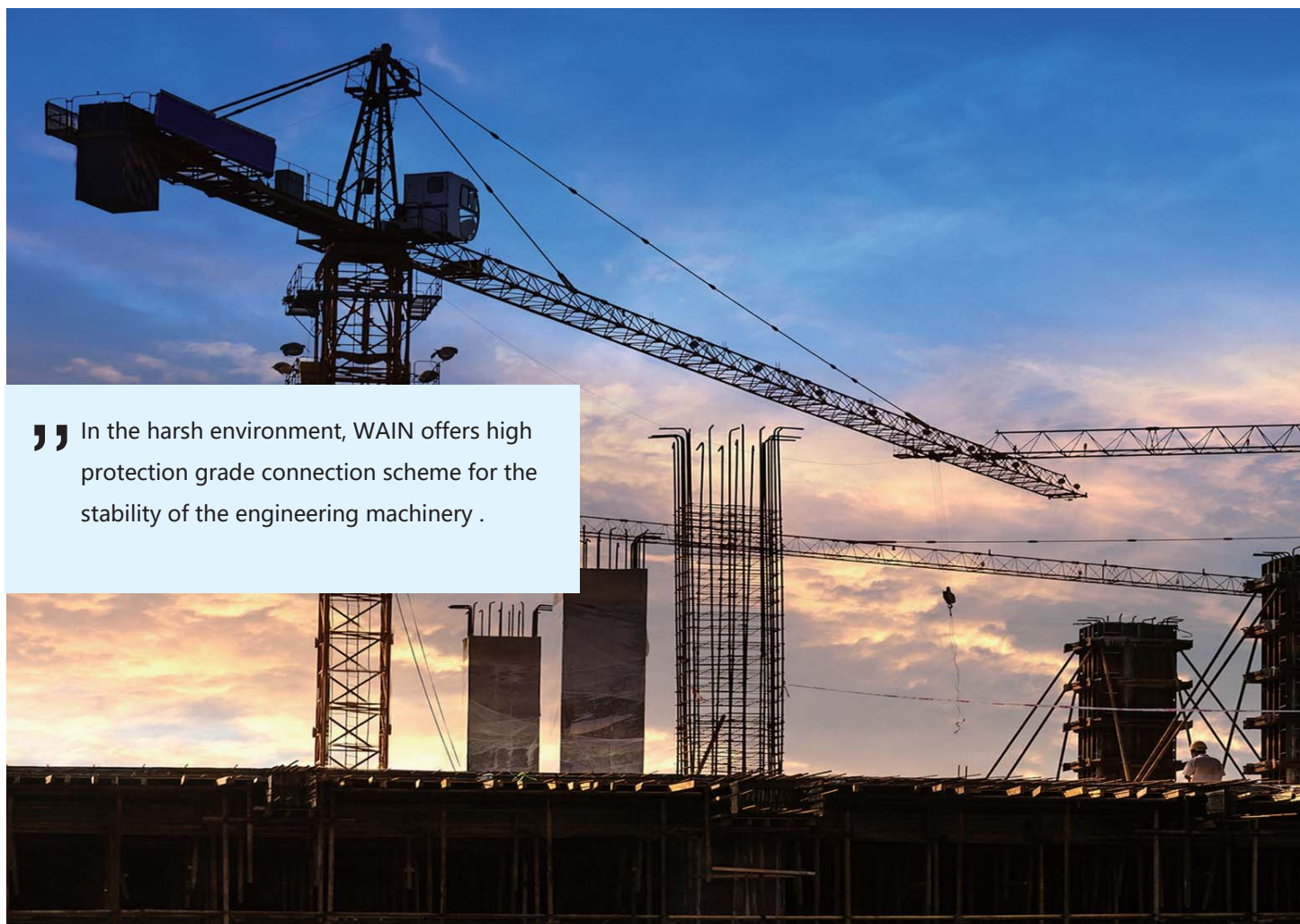
### » Connector in engineering machinery

The future demands for diversification, high rise, beautiful appearance, energy conservation and environmental protection in construction industry will absolutely promote the development of engineering machinery.

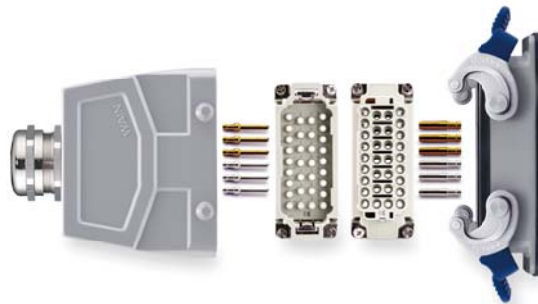
WAIN Connector, boasting of dozens of series, thousand of models, strong current connection up to 650A and shells with IP65/IP68 protection grade, provides reliable electrical connection for the high-end and intelligent development of construction machinery.

\*The hoods/housings developed by WAIN for harsh environment reach a salt-spray protection of 500 hours. Compared with similar product around the world, it has more excellent protection capability.

\*Airtightness of fluororubber has formed standard adapter of WAIN product. Therefore, it can satisfy protection requirement under chemistry and chemical engineering environment.



» In the harsh environment, WAIN offers high protection grade connection scheme for the stability of the engineering machinery .



### HEE High density connectors

- High density of crimping contacts , up to 92 pins
- Polarised insert
- Contacts available with either hard silver plated or hard gold plated surface
- Various degrees of protection and cable entries for the hoods
- Airtightness of fluororubber
- Locking levers made of stainless steel



■ Engineering machinery



■ Engineering machinery

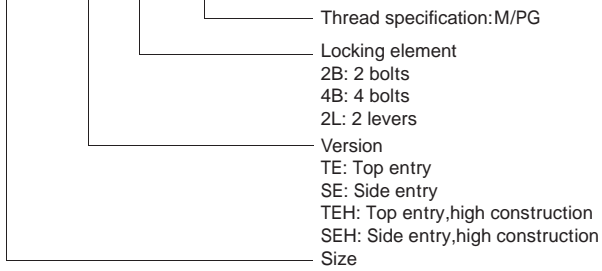


■ Engineering machinery

Explain for Designation

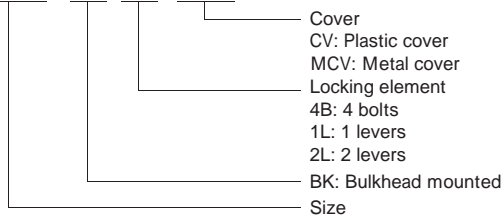
Hood

W24B - TE - 4B - M25

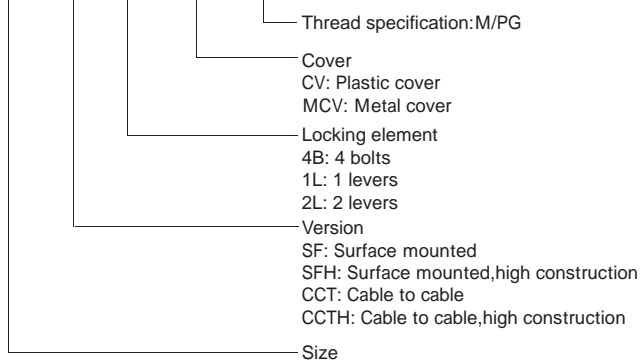


Housing

W24B - BK - 4B - CV

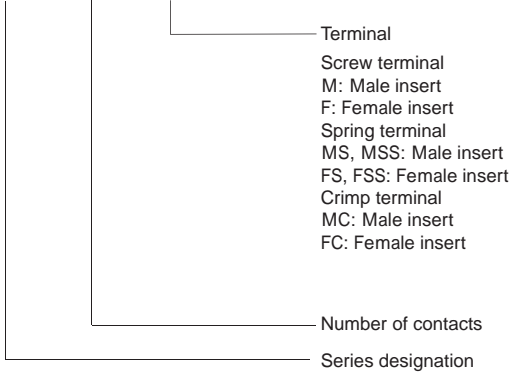


W24B - SF - 1L - CV - M25

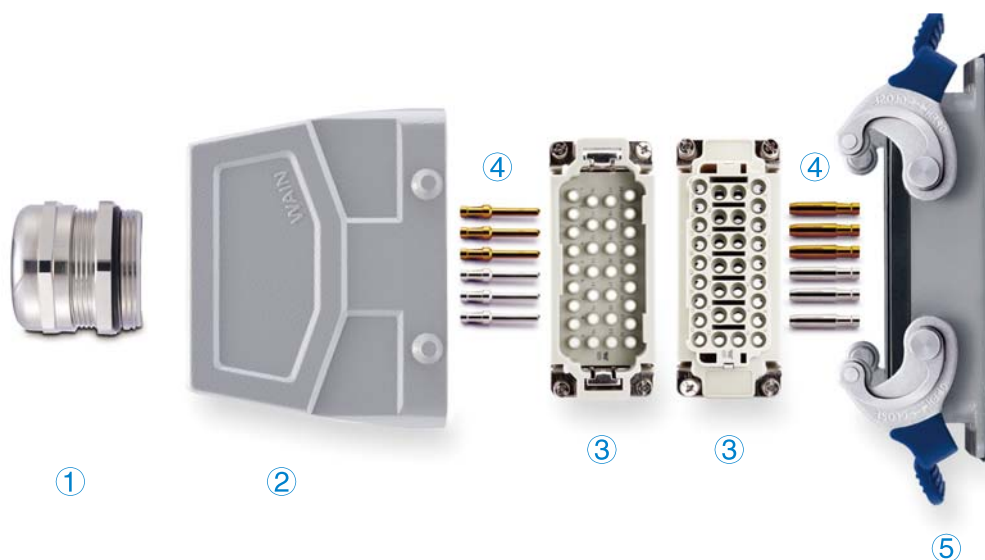


Insert

HE - 024 - M



## Parts of the heavy duty connector

**Cable gland**

Nylon or brass nickel plated  
 Universal cable glands  
 Cable gland with normal or multiple seal  
 Other Cable gland

**Hoods**

Low or high construction  
 Top or side cable ent  
 2 bolts or 4 bolts or 2 locking levers

**Male insert or Female insert**

Screw terminal  
 Crimp terminal  
 Cage-clamp terminal  
 Spring terminal

**Crimp contacts ( only for crimp connection insert )**

Golden plated or silver plated  
 Rated current: 5A, 10A, 16A, 40A, 70A, 100A, 200A, 350A, 650A

**Housings**

Bulkhead mounting or surface mounting or cable to cable  
 Low or high construction  
 1 or 2 locking levers or 4 bolts  
 With or without thermoplastic/metal covers

Except standard hoods/housings, special hoods/housings with high protection level(IP68 ) and EMC screening are also available for clients.

\*For customized requirement, please contact us.