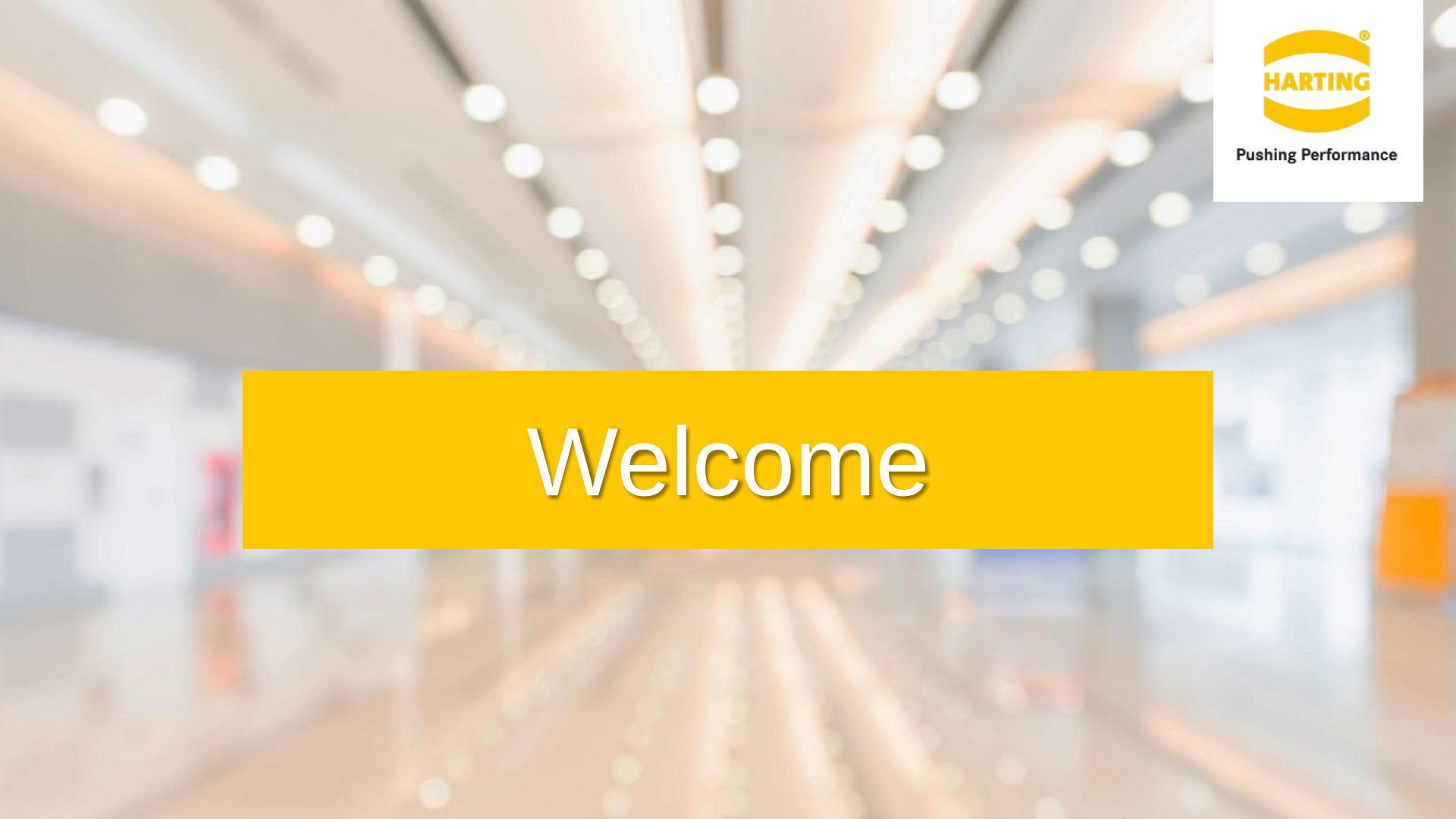

HARTING
Pushing Performance
Welcome

Installation Circular Connector

HARTING UIC 558 Series

UIC 558 Series

UIC 558 Series: Robust interfaces for inter-car jumpers

HARTING is expanding its wide-ranging portfolio for railway applications with two interfaces according to UIC 558 (with inserts offering space for 13 or 18 pins, respectively) as well as an additional solution with 22 pins and a PE for inter-car jumpers. The new series offers interfaces for connecting remote control and data transmission lines to locomotive-hauled passenger trains. The lifelines of rail vehicles transmit data and signals for the remote control of lighting, the operation of door opening systems as well as the transmission of acoustic information and digital data packets.

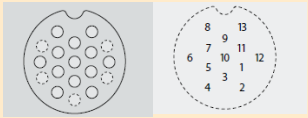
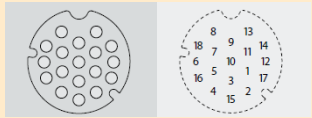
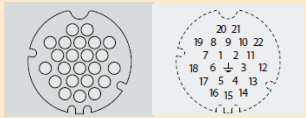
UIC 558 – Basic information

- **International Union of Railways (UIC)**
- **UIC Standard History**
  - **UIC 568**, describes a 13-conductor cable and connectors used for transmitting a variety of data and commands between a locomotive and passenger carriages. Examples of data and command includes for loudspeaker messages, train destination signs, and control of doors (locked/un-locked, open/close) and others
  - **UIC 558**, was developed to adopt Train Communication Network (TCN as in IEC61375) with18- conductor cable and connector. 13-wire plugs can be connected to an 18-pin socket, and the signals from the 13-wire cable carried through and the remaining five wires are used for the Train Communication Network (TCN)-bus and side-sensitive door control.
  - **IRS 50558**, was introduced to standardize the Train Communication network (TCN) based on Ethernet technology (IEC-61375-2-5)

UIC 558 – Product introduction

- The connector is used for **transmitting a variety of data and commands** between a locomotive and passenger wagons
- **Break-away function** ensures a non-destructive disconnection of plug and socket (trigger at 500N)
- **Modular connector** having option for **13, 18 and 22** contacts arrangement. Can be extended to 8 and 18 pole Ethernet options.
- Color coded and mechanical polarization to ensure correct mating position.
- Corrosion resistance ASTM B117-09 (500h Salt fog test)
- The HARTING portfolio complies with the regulations of **UIC 558 VE** (IRIS 50558. from 2017)

UIC 558 – Product introduction

	UIC 558 - 13 Pin	UIC 558 - 18 Pin	22 Pin + PE
UIC 558 VE **(until 1994: UIV 568 VE)**	●	●	
Colour coding			
Contact arrangement	 **13 contacts**	 **18 contacts**	 **22+PE contacts**

UIC 558 – Component part numbers

Type	Description EN	Part Number
	UIC558-HTE-13PIN-PG21	09 58 001 1440
	UIC558-HTE-18PIN-PG21 (Red bar)	09 58 001 1441
	UIC558-HTE-22PIN-PG21 (Blue bar)	09 58 001 1442
	UIC558-HBM/CM-13PIN	09 58 001 0301
	UIC558-HBM/CM-18PIN (Red bar)	09 58 001 0302
	UIC558-HBM/CM-22PIN (Blue bar)	09 58 001 0303
	UIC558-13PIN-MI-CRT	09 58 013 3001
	UIC558-13PIN-FI-CRT	09 58 013 3101
	UIC558-18PIN-MI-CRT	09 58 018 3001
	UIC558-18PIN-FI-CRT	09 58 018 3101
	UIC558-22PIN-MI-CRT	09 58 022 3001
	UIC558-22PIN-FI-CRT	09 58 022 3101

UIC 558 – Component part numbers

Type	Description EN	Part Number
Cable gland	UIC558-CGM-P PG21	09 58 001 9901
Contacts	UIC558-MC-CRT-0.75-1.0 mm²/18 AWG-AG	09 58 000 6105
	UIC558-FC-CRT-0.75-1.0 mm²/18 AWG-AG	09 58 000 6205
	UIC558-MC-CRT-0.75-1.0 mm²/18 AWG-AU	09 58 000 6305
	UIC558-FC-CRT-0.75-1.0 mm²/18 AWG-AU	09 58 000 6405
	UIC558-MC-CRT-0.75-1.0 mm²/18 AWG-NI	09 58 000 6505
	UIC558-FC-CRT-0.75-1.0 mm²/18 AWG-NI	09 58 000 6605

Tools	Part Number
Crimping Tool UIC 558	09 99 000 0967
Removal Tool UIC 558	09 99 000 0968

UIC 558 – Product introduction

Break-away function

- This safety feature ensures non-destructive disconnection of plug and receptacle
- If the connector has not been disconnected before the wagons or the locomotive are moved apart, this safety function implements a defined disconnection
- If the force exceeds 500N, the plug will be released from the socket
- There is no damage to the connector, the wagon or the locomotive

UIC 558 – Technical Characteristics

Electrical

Requirement	Standard	Value
Rated Voltage	---	60 V (110 V/22 Pin)
Rated Current	---	10 A
Contact Resistance	IEC 60512-2	<4 mΩ
Insulation Resistance	IEC 60512-3-1	> 10 MΩ
Wire Gauge	---	18 ... 17 AWG / 0.75…1 mm²

UIC 558 – Technical Characteristics

Mechanical

Requirement	Standard	Value
Termination type	---	Machined Crimp contacts
Contact diameter	---	3 mm
Contact surface	---	Gold, Silver and Nickel
Unmating force	UIC 558	100N to 250N
Breakaway force	UIC 558	>500N
Mechanical endurance	IEC 60512-5, test 9a	10,000 Mating cycles
Shock & Vibration	IEC 61373	Category 2

UIC 558 – Technical Characteristics

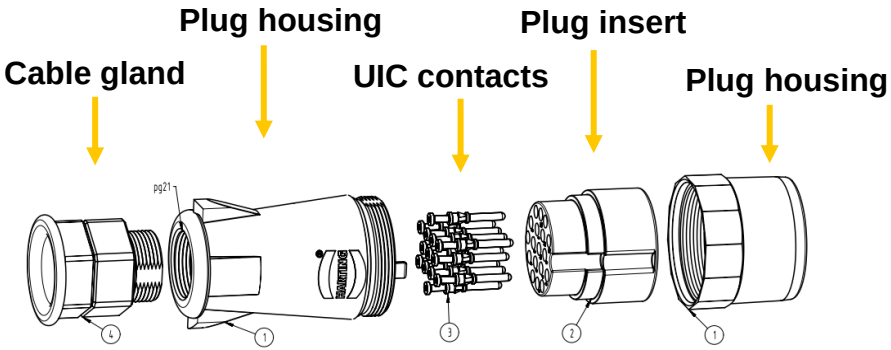
Others

Parameters	Standard	Value
Operating temperature range	---	-50°C to +125°C
IP Rating	IEC 60529	IP69
Salt Spray	IEC 60512-11-6	>500Hrs
Fire Protection	EN 45545	HL3 / R23
Material (Plastic)	---	PA 66 30% GF
Material (Die-Cast)	---	Aluminum, Light Grey (RAL 7035) powder coating
Flammability	UL 94	V-0
Seal	---	Silicone

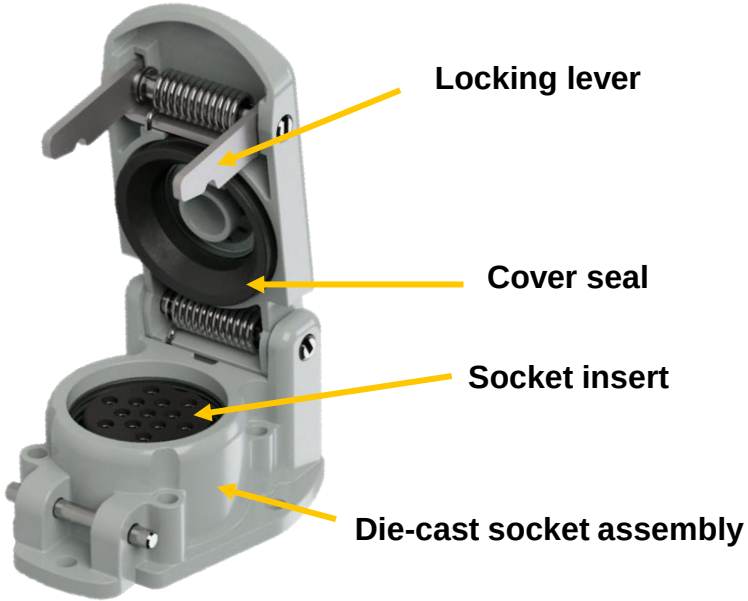
UIC 558 – Detailed view

Plug Assembly

Plug Assembly – Exploded View



Socket Assembly

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Thank you
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HARTING UIC 558 Series

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