HARTING

® Pushing Performance

People | Power | Partnership

HARTING PushPull
V4 Industrial Selection Guide

HARTING PushPull System – Product Features

Toolless Assembly
Click and go with PushPull. No torque requirements makes for an easy connection.

IP65/67 Protected Where Needed
When mated, the PushPull connector achieves IP65/67 rated protection.

Versatile Concept
Extensive compatibility during installation due to the internationally standardised system interfaces.

Robust Design
High grade plastic components make it usable both in outdoor applications and in the harshest industrial environments, meeting industry standards.

Lightweight
Thanks to its plastic material, the PushPull has a weight advantage compared with other connectors.

Time Saving
Due to easy mating and the click and go design, the assembly of the connector is done within seconds.
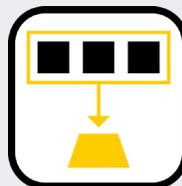
Chemical Resistance
Although the PushPull is made of plastic, the connector is resistant to chemicals and other aggressive influences.

An Audible Click
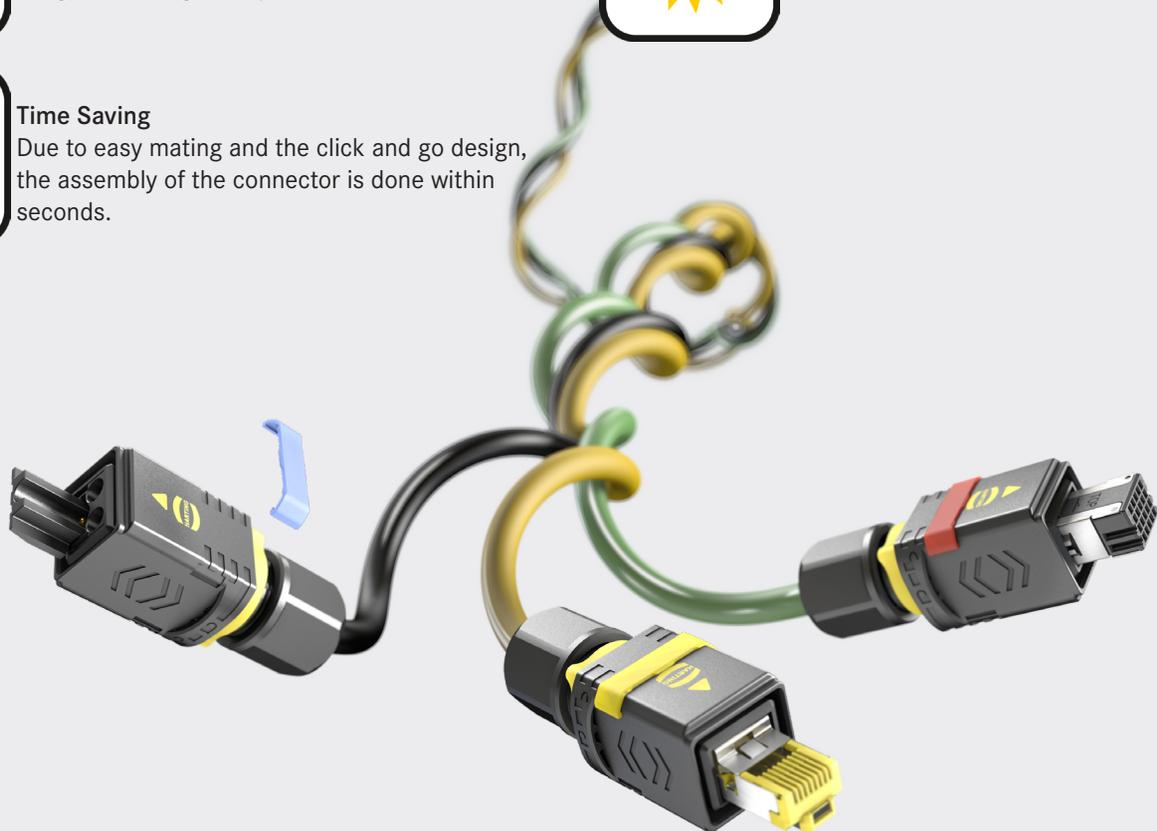Acknowledgement of a secure, vibration resistant connection.

Cost Saving
A connector with an economic one piece housing design, that is 75% faster to mate compared with a traditional M12 screw termination.

Space Saving
The PushPull connectors are designed with space saving in mind.

UV Radiation
Resistant to UV, salt mist, ozone and climatic stress.

HARTING PushPull System – User Benefits

Locking Mechanism

- The PushPull mating process is safe and intuitive
- A rotational locking ring prevents accidental disconnection for secure mating
- The locking ring is simple, effective and easy to use
- Ergonomic grips provide improved installation process reliability

Connection Indicators

- Alignment markers improve the speed of connection
- Audible click provides tactile mating feedback
- Connection time is minimised, reducing down-time of machines
- PushPull connection reduces installation costs

Colour Coding

- Colour coding increases the speed of plug and play connectivity
- The colour marking ensures an easy mating process
- Provides indication that the connector and socket are properly assigned to each other
- Enables technicians to easily keep track of all connectors, preventing incorrect wiring

Data, Signal, Power

- Modular inserts for data, signal and power
- Data, signal and power on an electrical basis
- Fibre optic versions for EMI/RFI resistant signal security
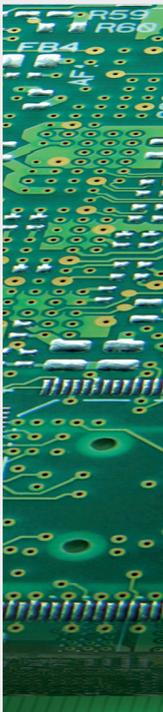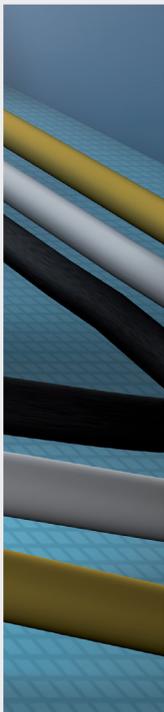- PushPull mating requires no torque tightening tools

HARTING PushPull Device Connectivity for Data – Signal – Power

HARTING Connectivity & Networks generates solutions throughout the triad of Installation Technology, Device Connectivity, and Automation IT for all automation lifelines – namely data, signals and power. In line with this strategic course, the HARTING PushPull equipment interfaces provide universal solutions for specific user applications. The range of available contact inserts extends from solutions for 1/10 Gigabit Ethernet through to 250 V / 16 A power supply applications.

A consistent, ongoing innovation process ensures that users of HARTING's continuously expanding PushPull product range always benefit from the latest interface technology – combining the life lines of devices in IP65 / IP67 housings with simple and reliable operation.

This Selection Guide supports you in choosing the ideal solution for your specific application from one of the numerous interface combinations available, while keeping the focus set squarely on the specific lifeline to be transferred. Based on the interface function required, you select the suitable contact insert for the PCB and a corresponding bulkhead housing, and complete the connection by opting for the appropriate connectors, system cables, and accessories.

Drawing on these strengths, PushPull is an ideal solution for IP65 / IP67 Device Connectivity featuring convenient handling and universal functionality for all lifelines.

DEVICE SIDE			CABLE SIDE	
HOUSING MATERIALS	CONTACT INSERT		CONTACT INSERT	HOUSING MATERIALS
	DATA			
	RJ45			
	LC duplex			
	USB			
PLASTIC	SIGNAL			PLASTIC
	Mini DisplayPort			
	50 V, 5 A / 2 A	10 poles / 20 poles		
	POWER			
	48 V / 12 A	4 poles		
	250 V / 16 A	3 poles		

V4

DIRECT DEVICE INTEGRATION ON PCB		
HARTING PushPull Compact bulkhead housing for device integration	Plastic, angled, without fixing clip Plastic, angled, with fixing clip	09 45 545 0043 09 45 545 0042
	Plastic, straight, without fixing clip	09 45 545 0040
HARTING PushPull RJ45 jack, Cat. 5	angled SMD 90° angled SMD 90° T&R packaging angled 90°, THT straight 180°, THT	09 45 551 1100 09 45 551 1110 09 45 551 1102 09 45 551 1103
DEVICE INTEGRATION WITH PANEL FEED-THROUGH		
HARTING PushPull RJ45 panel feed-through, plastic inc. back-to-back RJ45 jack.	Compact housing, Cat. 6 / 6_A, 1/10 Gbit/s	09 45 245 1561
HARTING PushPull RJ45 panel feed-through, plastic with cable jack	Compact housing Cable jack, 8 pole, Cat. 6 / 6_A, AWG 28 - 24, IDC, 1/10 Gbit/s Cable jack, 8 pole, Cat. 6 / 6_A, AWG 24 - 22, IDC, 1/10 Gbit/s preLink® cable jack, 8 pole, Cat. 6	09 45 545 0041 09 45 545 1561 09 45 545 1562 20 82 001 0002
CONNECTOR CABLE SIDE		
HARTING PushPull RJ45 connector with IDC- or piercing termination, plastic	4 poles, Cat. 5 IDC 8 poles, Cat. 6_A (Piercing contacts, 10 Gbits/s) 8 poles, Cat. 6 IDC	09 45 145 1106 09 45 145 1521 09 45 145 1561
SYSTEM CABLE PUR, RJ45, 8 POLES		
HARTING PushPull system cable RJ45, 8 poles, Cat. 6 / 6_A 1/10 Gbit/s, yellow, PUR cable 8x AWG 26/7 stranded (other cable types and length on request)	1.0 m 3.0 m 5.0 m 10.0 m	09 48 282 8756 010 09 48 282 8756 030 09 48 282 8756 050 09 48 282 8756 100
OUTLETS		
HARTING PushPull RJ45 outlet, Cat. 6, 2 times	Plastic, black Plastic, white	09 45 845 1500 09 45 845 1501
ACCESSORIES		
IP65 / IP67 HARTING PushPull RJ45 coupler, Cat.6 / 6_A	For an easy connection of PushPull RJ45 system cables	09 45 345 1560

V4

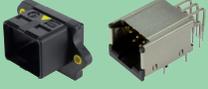| TOOLING		
HARTING RJ Industrial® stripping tool	Stripping for Ethernet cable inclusive blade cassette	09 45 800 0000
	Blade cassette	09 45 800 0001
HARTING RJ Industrial® universal stripping tool		09 45 800 0002
HARTING RJ Industrial® cable cutter		09 45 800 0004
HARTING RJ Industrial® side cutter		09 45 800 0005
HARTING RJ Industrial® Gigalink mounting tool	for HARTING RJ Industrial® Gigalink connectors	09 45 800 0520
preLink® mounting tool	for preLink® connectors	20 82 000 9901

DATA (FIBER OPTIC LC-DUPLEX) — V4

DEVICE INTEGRATION WITH PANEL FEED-THROUGH		
HARTING PushPull LC duplex panel feed-through	Plastic, multimode GOF Compact Plastic, singlemode GOF Compact	09 57 442 0511 000 09 57 442 0512 000

SYSTEM CABLE			
	Length	Metal	Plastic
HARTING PushPull LC duplex system cable Other cable types and length on request	1.0 m singlemode 1.0 m multimode 50 / 125 1.0 m multimode 62.5 / 125 10.0 m singlemode 10.0 m multimode 50 / 125 10.0 m multimode 62.5 / 125	33 58 231 0010 026 33 58 231 0010 027 33 58 231 0010 028 33 58 231 0100 026 33 58 231 0100 027 33 58 231 0100 028	33 61 221 0010 001 33 61 221 0010 002 33 61 221 0010 003 33 61 221 0100 001 33 61 221 0100 002 33 61 221 0100 003

DATA (USB) — V4

DIRECT DEVICE INTEGRATION ON PCB		
HARTING PushPull Compact bulkhead housing for device integration	Plastic, angled, without fixing clip Plastic, angled, with fixing clip	09 45 545 0043 09 45 545 0042
HARTING PushPull USB solder jack, angled 90°, THT	USB 2.0 type B	09 45 541 1900
HARTING PushPull USB adapter PCB	USB 2.0 type A to pin header USB 2.0 type A to solder points USB 2.0 type B-B USB 2.0 type B-B, 90° USB 2.0 type A-B	09 45 541 1902 09 45 541 1903 09 45 541 1906 09 45 541 1907 09 45 541 1910

DEVICE INTEGRATION WITH PANEL FEED-THROUGH		
HARTING PushPull USB Compact, panel feed-through, jack to jack	USB 2.0 type A USB 3.0 type A	09 45 245 1920 09 45 245 1930

SYSTEM CABLE		
HARTING PushPull USB shielded system cable (other cable types and lengths on request)	USB 2.0 type B, double sided PushPull 1.5 m USB 2.0 type A, double sided PushPull 1.5 m USB 3.0 type A, double sided PushPull 1.5 m	09 45 445 3902 09 45 445 1902 09 45 445 2902
	USB 2.0 type B, PushPull - IP20 1.5 m USB 2.0 type A, PushPull - IP20 1.5 m USB 3.0 type A, PushPull - IP20 1.5 m	09 45 445 3912 09 45 445 1912 09 45 445 2912

ACCESSORIES — V4

ACCESSORIES V4		
HARTING PushPull protection covers for Hybrid Signal, USB, RJ45, Power and LC duplex, device side, plastic	Protection cover IP40	09 45 845 0003
	Protection cover IP65 / IP67, passive locking without fixing cord passive locking with plastic fixing cord passive locking with nylon fixing cord	09 45 845 0009 024 09 45 845 0009 09 45 845 0011 024
	Protection cover IP65 / IP67, active locking without fixing cord active locking with plastic fixing cord active locking with nylon fixing cord	09 45 845 0015 09 45 845 0014 09 45 845 0013
HARTING PushPull protection covers for Hybrid Signal, USB, RJ45, Power and LC duplex, connector, plastic	Protection cover IP65 / IP67, with fixing cord	09 45 845 0010
HARTING PushPull housings, plastic	Cable to cable, cable diameter 6.5 - 9.5 mm Bulkhead	09 45 345 0000 09 45 345 0001
HARTING PushPull blinding plate		09 45 845 0019

DIRECT DEVICE INTEGRATION ON PCB

HARTING PushPull Mini DisplayPort bulkhead housing, plastic, for device integration	Compact housing	09 45 545 0042
	Mini DisplayPort jack, angled	09 45 551 1000
	Adapter for the integration of the Mini DisplayPort jack into the Compact housing	09 45 545 1002

SYSTEM CABLE

HARTING PushPull Mini DisplayPort system cable, 20 poles, black, TPE, AWG 32, both sides assembled	DisplayPort 1.2, both sides PushPull	0.5 m	09 45 145 1000
	DisplayPort 1.2, both sides PushPull	1.0 m	09 45 145 1001
	DisplayPort 1.2, both sides PushPull	1.5 m	09 45 145 1002
	DisplayPort 1.2, both sides PushPull	2.0 m	09 45 145 1003
	DisplayPort 1.1, both sides PushPull	3.0 m	09 45 145 1004
	DisplayPort 1.2 PushPull / IP20	0.5 m	09 45 145 1010
	DisplayPort 1.2 PushPull / IP20	1.0 m	09 45 145 1011
	DisplayPort 1.2 PushPull / IP20	1.5 m	09 45 145 1012
	DisplayPort 1.2 PushPull / IP20	2.0 m	09 45 145 1013
	DisplayPort 1.1 PushPull / IP20	3.0 m	09 45 145 1014

DEVICE INTEGRATION ON PCB

HARTING PushPull Signal jack insert, 10 poles, 50 V / 5 A	Compact housing, without fixing clip, angled	09 45 545 0043
	Compact housing, with fixing clip	09 45 545 0042
	Compact housing, without fixing clip, straight	09 45 545 0040
	Signal solder jack, straight	09 45 545 9012
	Signal solder jack, angled	09 45 545 9011

DEVICE INTEGRATION WITH PANEL FEED-THROUGH

HARTING PushPull Signal panel feed-through, 10 poles, 50 V / 5 A, plastic 20 poles, 50 V / 2 A, plastic	Compact housing, 10 poles, without insert	09 45 545 0041
	System cable (1 m) with compact housing, 10 poles	09 48 430 08A6 010
	System cable (1 m) with compact housing, 20 poles only	33 22 143 1000 062
	Insert for crimp contacts (Order male D-Sub contacts separately)	09 45 545 9010

CONNECTOR CABLE SIDE

HARTING PushPull Signal connector, 10 poles, 50 V / 5 A, plastic 20 poles only available as a system cable	Connector for crimp contacts (Order female D-Sub contacts separately)	09 45 145 9011

SYSTEM CABLE

HARTING PushPull system cable, 10 poles, AWG 20, PVC (other cable types and lengths on request) 50 V / 5 A, plastic	0.5 m	09 48 313 18A6 005
	1.0 m	09 48 313 18A6 010
	2.0 m	09 48 313 18A6 020
	5.0 m	09 48 313 18A6 050
HARTING PushPull system cable, 20 poles, 0.14 mm^2, PUR (other cable types and lengths on request) 50 V / 2 A, plastic	0.5 m	09 48 353 5848 005
	1.0 m	09 48 353 5848 010
	2.0 m	09 48 353 5848 020
	5.0 m	09 48 353 5848 050

ACCESSORIES

HARTING PushPull 10 pole signal male crimp contacts for HARTING PushPull panel feed-through– 0945 545 9010	for 0.25-0.52 mm^2 (AWG 24 - 20), turned	0967 000 8576
	for 0.33-0.82 mm^2 (AWG 22 - 18), turned	0967 000 3576
	for 0.25 - 0.56 mm^2 (AWG 24 - 20), stamped	0967 000 8178
HARTING PushPull 10 pole signal female crimp contacts for HARTING PushPull connector– 0945 145 9011	for 0.25-0.52 mm^2 (AWG 24 - 20), turned	0967 000 8476
	for 0.33-0.82 mm^2 (AWG 22 - 18), turned	0967 000 3476
	for 0.25 - 0.56 mm^2 (AWG 24 - 20), stamped	0967 000 8278

TOOLING V4

HARTING PushPull 10 pole crimping tool	Turned crimp contacts	0999 000 0501
	Stamped crimp contacts	0999 000 0175
Locator for HARTING PushPull 10 pole signal contacts	for use with crimping tooling for turned crimped contacts only - 0999 000 0501	0999 000 0531

POWER (48 V / 12 A) — V4

DIRECT DEVICE INTEGRATION ON PCB		
HARTING PushPull Compact bulkhead housing for device integration	Plastic, angled, without fixing clip Plastic, angled, with fixing clip	09 45 545 0043 09 45 545 0042
HARTING PushPull Power jack insert, 4 poles, 48 V / 12 A	angled, 90° for PCB mounting straight, 180° for PCB mounting straight, for crimp contacts	09 46 500 4400 09 46 500 4402 09 46 500 4401
DEVICE INTEGRATION WITH PANEL FEED-THROUGH		
HARTING PushPull Power panel feed-through, 4 poles 48 V / 12 A, plastic	Compact with crimp contacts AWG 16 - 14 Compact with spring-cage connection	09 46 245 4420 09 46 245 4021
CONNECTOR CABLE SIDE		
HARTING PushPull Power connector, 4 poles 48 V / 12 A	Plastic, with crimp contacts AWG 16 – 14 Plastic, without contacts	09 46 145 4420 09 46 145 4421
Han-Power® T energy distributor, 3 x 4 poles 48 V / 12 A	Plastic, with contacts	09 12 008 4770

POWER (250 V / 16 A) — V4

DEVICE INTEGRATION WITH PANEL FEED-THROUGH		
HARTING PushPull Power panel feed-through, 3 poles 250 V / 16 A, plastic	Compact with crimp contacts AWG 16 -14 Power female with solder termination, angled Power female with crimp termination, without contacts	09 46 245 3420 09 46 500 3400 09 46 500 3401
CONNECTOR CABLE SIDE		
HARTING PushPull Power connector, 3 poles 250 V / 16 A	Plastic, with crimp contacts AWG 16 - 14 Plastic, without contacts	09 46 145 3420 09 46 145 3421

POWER (ACCESSORIES) — V4

ACCESSORIES		
HARTING PushPull Power female crimp contacts for HARTING PushPull panel feed-through	for 0.75 mm^2 (AWG 20 - 18) for 1.0 mm^2 (AWG 18) for 1.0 – 1.5 mm^2 (AWG 16 - 14) for 2.5 mm^2 (AWG 12)	09 46 500 0404 09 46 500 0408 09 46 500 0402 09 46 500 0406
HARTING PushPull Power male crimp contacts for HARTING PushPull connector	for 0.75 mm^2 (AWG 20 - 18) for 1.0 mm^2 (AWG 18) for 1.0 – 1.5 mm^2 (AWG 16 - 14) for 2.5 mm^2 (AWG 12)	09 46 500 0403 09 46 500 0407 09 46 500 0401 09 46 500 0405
HARTING PushPull Power coding pin set	for 4 different codings	09 46 840 0000

POWER (ACCESSORIES) — V4

TOOLING V4		
HARTING PushPull Power crimping tool		09 46 800 0000
Insertion and removal tools for HARTING PushPull Power contacts	Removal tool Insertion tool	09 46 800 0098 09 46 800 0099
Locator for HARTING PushPull Power contacts	for use with crimping tool 09 99 000 0001	09 46 800 0010

HARTING PushPull Selection Guide

HARTING PushPull System – Markets and Applications

- On-board communications
- Bus payment/ticketing
- Passenger information systems (WIFI, Displays)
- Digital media
- On-board CCTV

- Robotic controls
- Ink jet printing
- Semiconductor machinery
- Food machinery
- Plastic hot runners
- Smart agriculture
- Packing machinery

- Security/supervision (CCTV)
- Traffic information
- Industrial vision systems
- Power inverter
- Measurement and instrumentation
- Information terminals
- Professional power supplies
- Weighing systems
- Electronic drives

- Wind turbine monitoring
- Sensors
- Alarms

[Click&Connect]

> Power, Signal, Data –
  three lifelines in one housing

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