

PASSIVE SIGNAL DISTRIBUTION

for Mobile Machines

06|2023

Disadvantages of existing solutions



- Huge installation effort
- High space requirement
- Problems with water ingress and condensation water
- Signal LEDs not visible in closed box



- Functional extensions difficult to implement
- Hardly manageable variety of variants
- Poor reparability - renewed failure preprogrammed
- Strong dependence on the assembler

xtremeDB – the ideal installation system



CAN / Sensor
Power Splitter



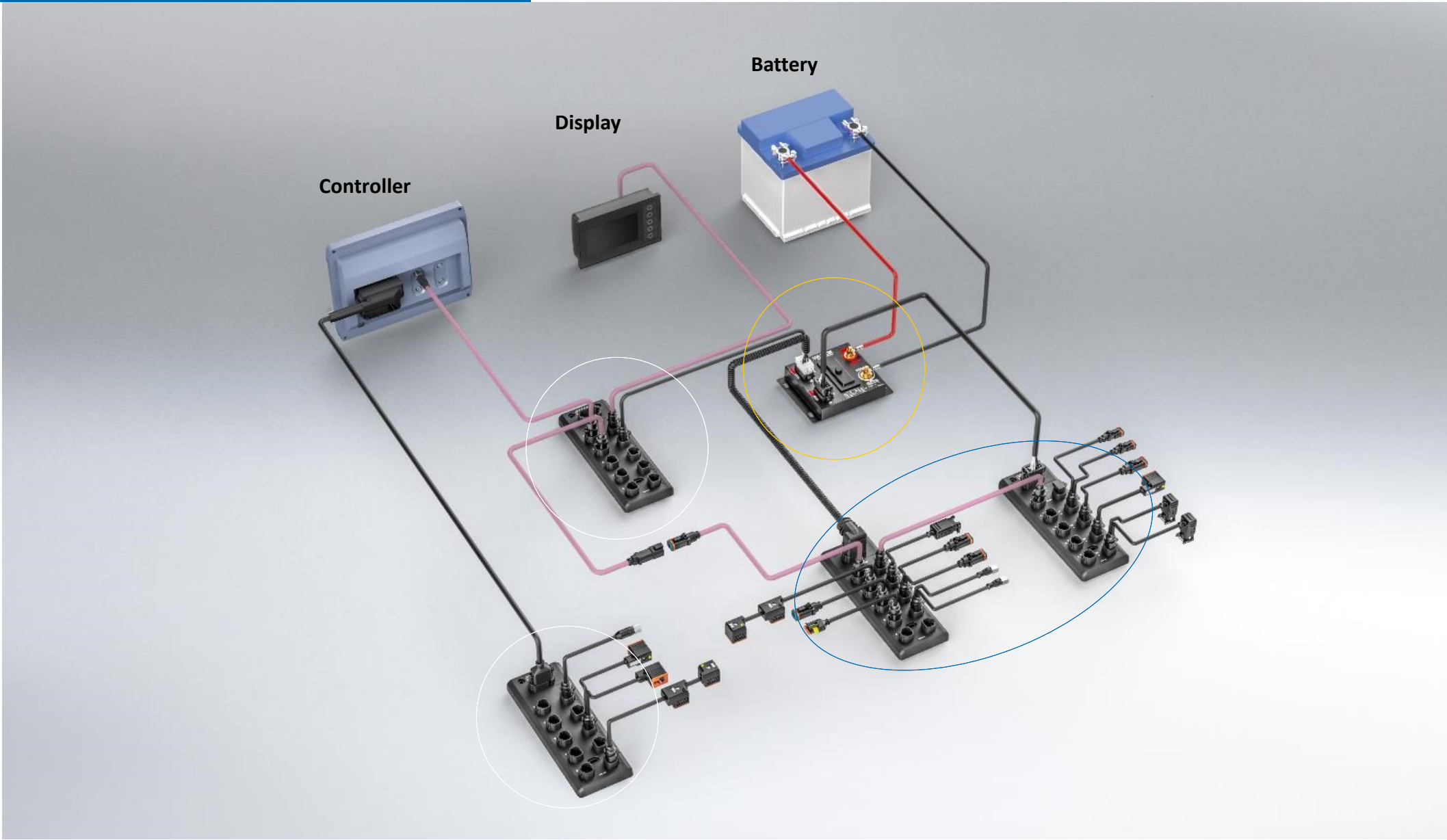
Output POWER
Splitter



PASSIVE Splitter



ACTIVE Module

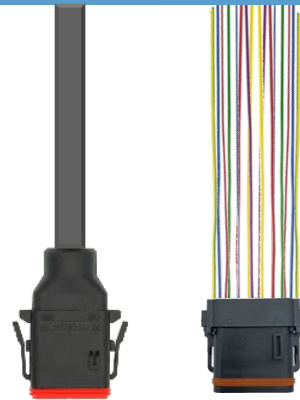


Technology worlds

Round Cables



Industrial
Installation Technology



Fully compatible with sheathed
cable and single cores –
mixing possible!

Single Wires

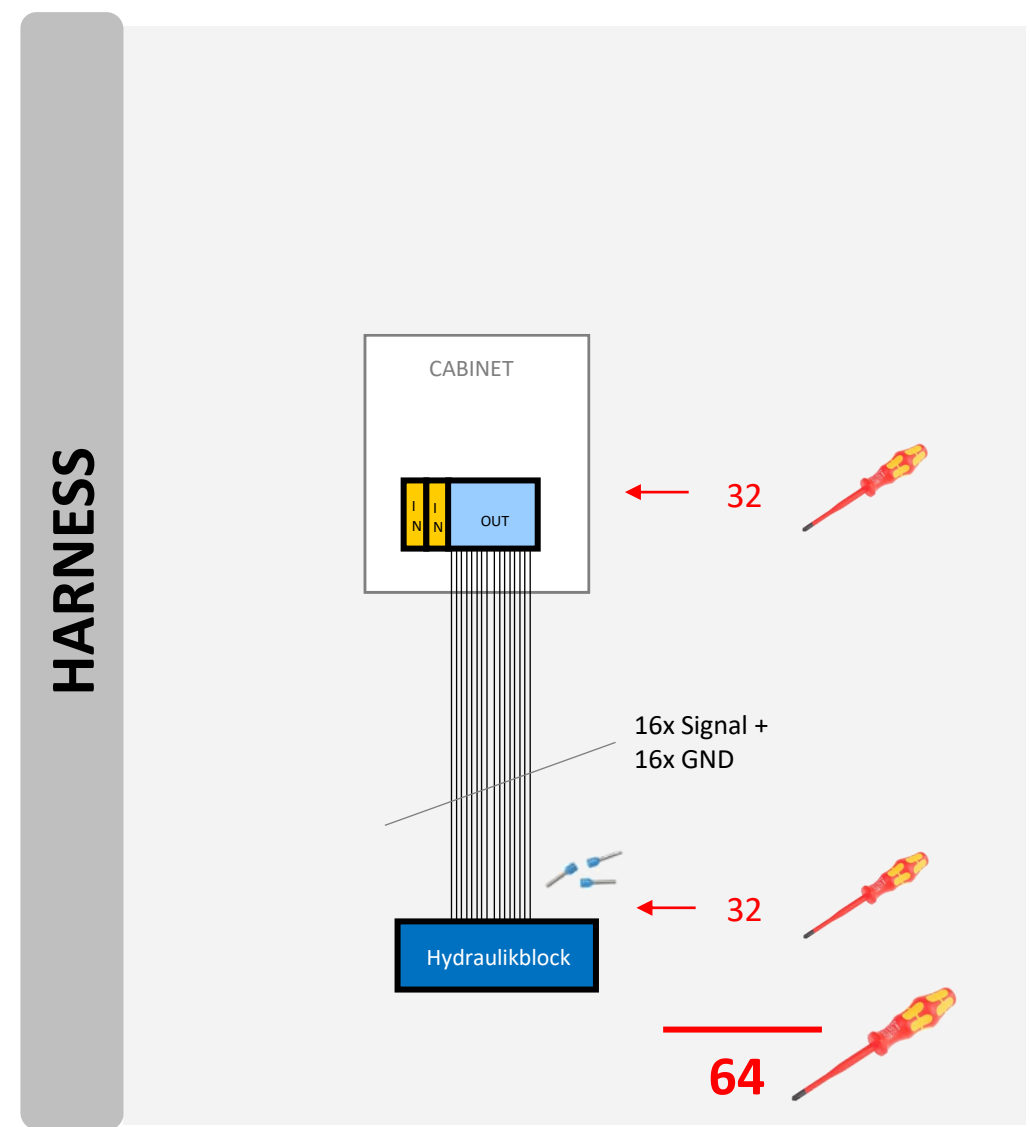
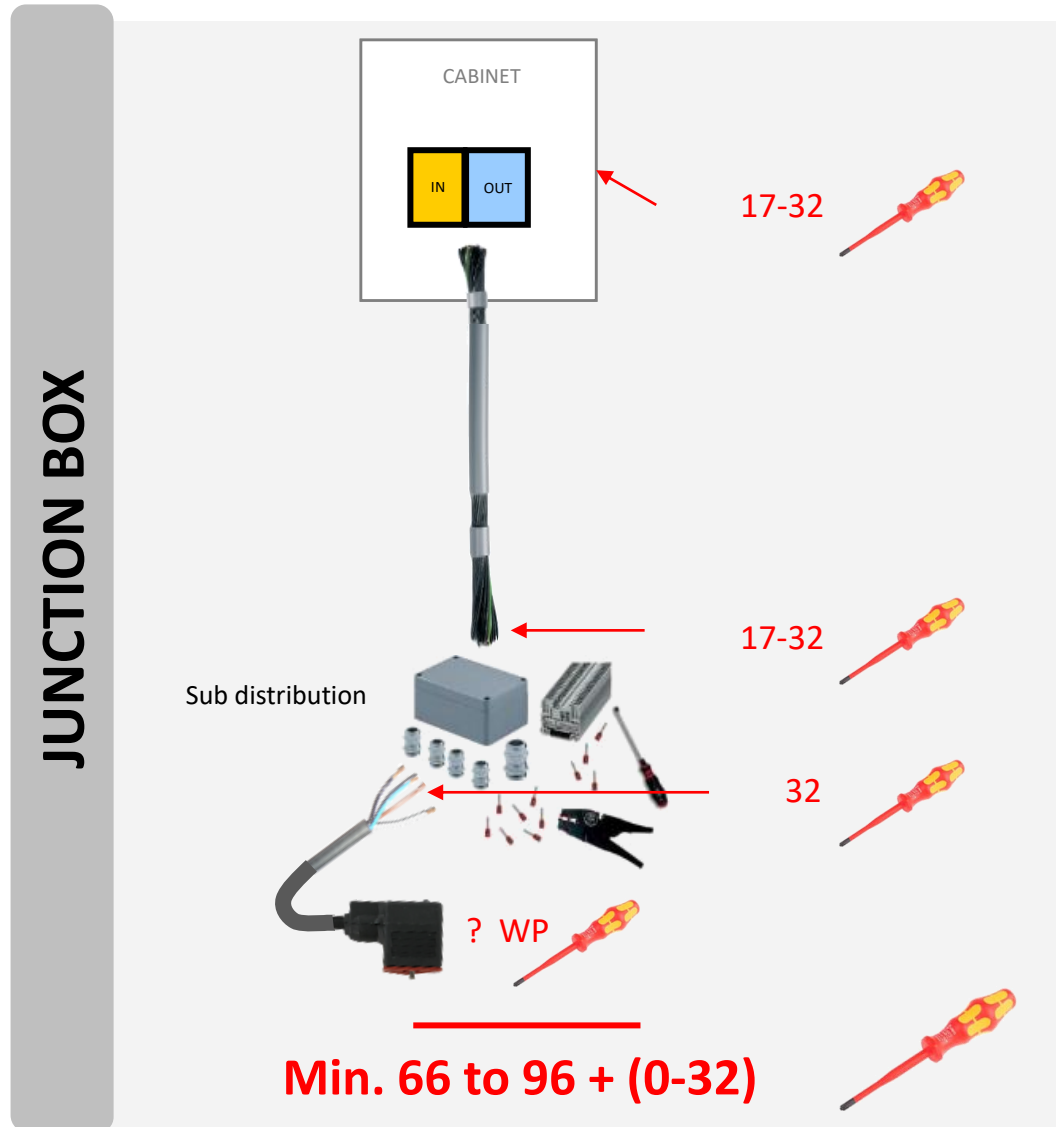


Automotive
Installation Technology



Comparison of established installation systems

Connection of 16 hydraulic valves to a controller



PASSIVE SPLITTERS



1

High quality wiring technology

Pre-assembled, fully molded AT connectors in combination with robust, abrasion-resistant, high-flex PUR cables

2

Durable and sealed

Resistant to oils, fuels, cleaning media, salts and antifreeze, slurry-resistant, permanently high-pressure cleanable

3

Connection? Child's play!

Plug-and-play - no electrician required due to pluggable and pre-tested components

4

Use of existing IOs

Brings existing IOs on the controller simply and without a bus system into the field - completely without a harness maker



16 valves per passive distributor

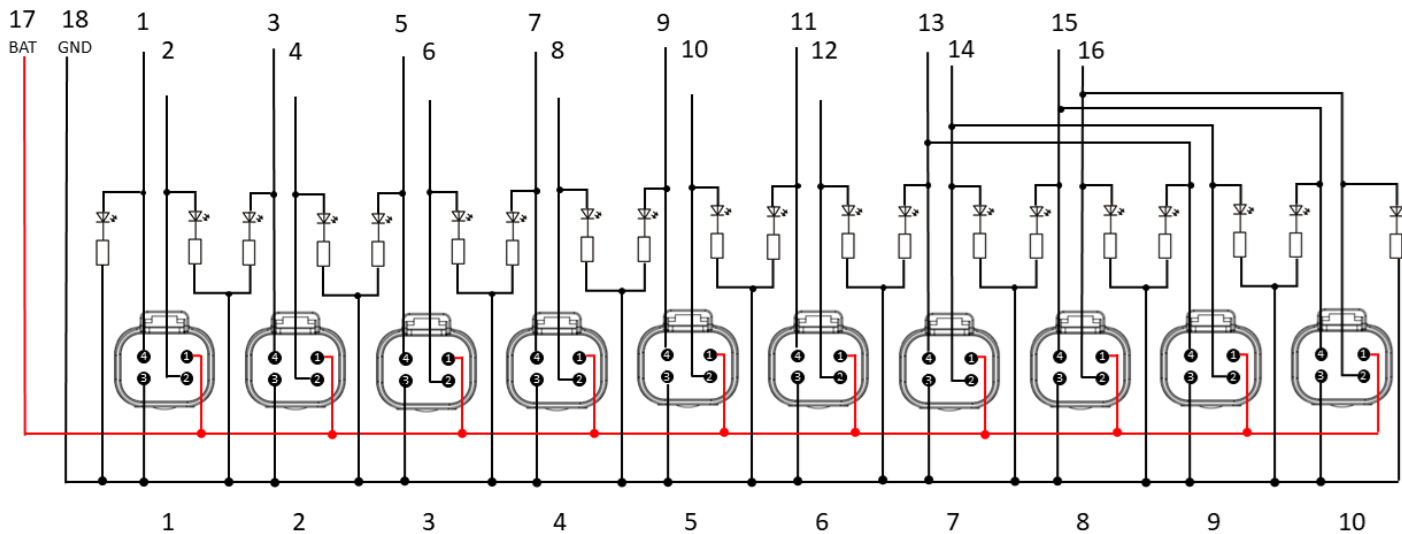
= only 18 connection points

+ 9 plug points



xtremeDB Passive DT passive splitters

- Suitable for on-board voltages from 8 V to 32 V DC
- Compatible with standard DT plug technology
- Up to 13 A / 26 A total current
- Two signals per slot, freely usable for input or output signals
- Variants with sensor supply or double ground per port
- Available with and without LEDs (suitable for analog signals)



xtremeDB PASSIVE

Homerun cable DP7 0°

Connector

- AT16-18SA-SR02
- PVC overmold with 0° cable outlet direction
- Original silicon seal integrated
- Integrated corrugated tube connection

Cable

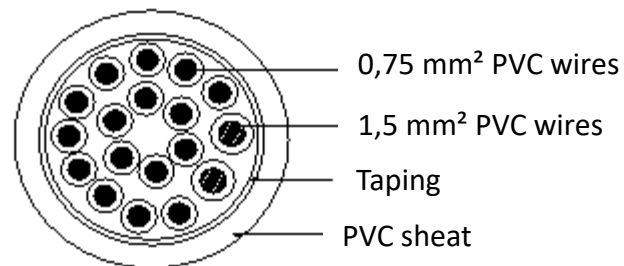
- PVC cable 16x 0,75 + 2x1,5 mm²
- Standard lengths 3, 5, 10 m
- For fixed installation
- Operating temperature -40 to +80 °C (-40 to +176°F)

Environmental conditions

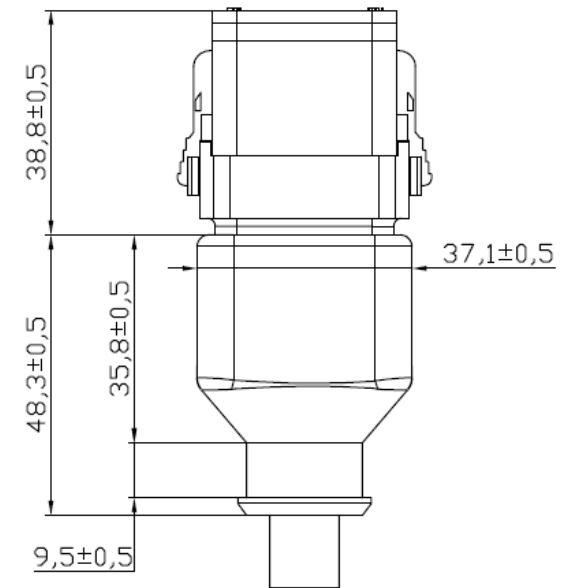
- IP68 / 66K / 69K
- UV- and cold resistant, weatherproof
- Generally good chemical resistance



Blind cap [DP-34042-706](#)



Ø 12.0 mm (.472 inch)



Dimensions in mm

Shop it

[DP-34042-78x](#)



xtremeDB PASSIVE

Homerun cable DP1

Connector

- DT-XT 18CCT PLUG BLACK KEYING A
- TPU overmold with 0° cable outlet direction
- Short design

Cable

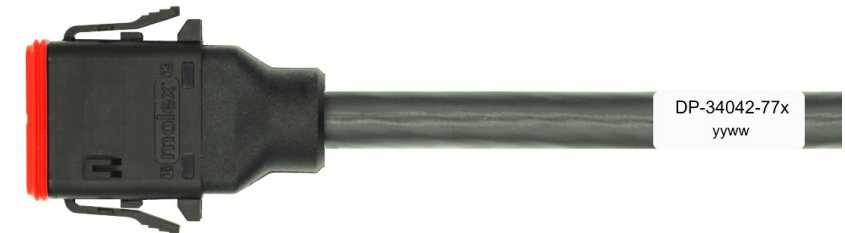
- PUR high flex drag chain cable 24 x 0,75 mm²
- Standard lengths 3, 5, 7.5, 10, 15 m
- Bending radius and operating temperature range:
(fixed) > 5 x cable diameter | -40 to +80 °C (-40 to +176°F)
(flexible) > 10 x cable diameter | -25 to +80 °C (-13 to +176°F)

Environmental conditions

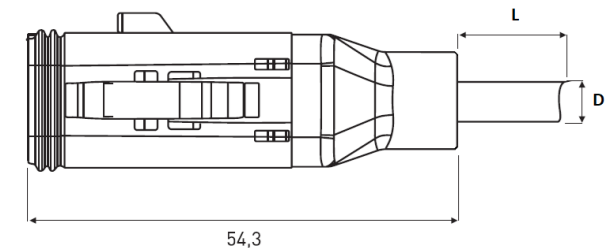
- IP67
- Oil resistant Hydrolysis and microbe resistant
- Abrasion, UV and weather resistant
- Generally good chemical resistance
- UL approval



SHOP IT NOW:
[DP-34042-77x](#)



Ø 11.8 mm (.465 inch)

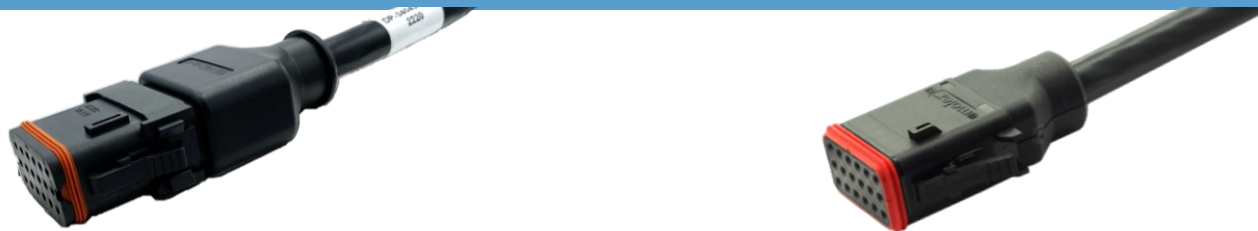


54,3
Dimensions in mm



xDB PASSIVE homerun cables

Technical differences



Designation	Homerun Cable DP7	Homerun Cable DP1
Base connector	AT16-18SA-SR02	DT-XT 18CCT PLUG BLACK KEYING A
Overmold	PVC	TPE
Plug connection length	ca. 87 mm (3,43 inch)	ca. 54 mm (2,13 inch)
Integrated corr. tube connection	Yes, size M25	No
Cable jacket material	PVC	PUR
Wire insulation material	PVC	PP
Construction	16x 0,75 mm ² + 2x 1,5 mm ² (~ 16x AWG18 + 2x AWG15)	24x 0,75 mm ² (24x AWG18)
Standard Lengths	3, 5, 10 m (9.8, 16.4, 32.8 ft)	3, 5, 7.5, 10, 15 m (9.8, 16.4, 24.6, 32.8, 49,2 ft)
Cable outer diameter	ca. 12 mm (.472 inch)	ca. 11,8 mm (.465 inch)
Suitable for flexible usage?	No, fixed usage only	Yes, drag chain capable
IP rating	IP68 66K 69K	IP67
Cable resistance	UV-, cold- and weather resistant, good chemical resistance	Halogen free, flame retardant, oil- hydrolysis- microbe- UV- and weathering resistant, good chemical resistance abrasion resistant
Approvals	CE, RohS	CE, RohS, UL recognized



MVP potted / MVP xtreme Potted M12 passive splitters



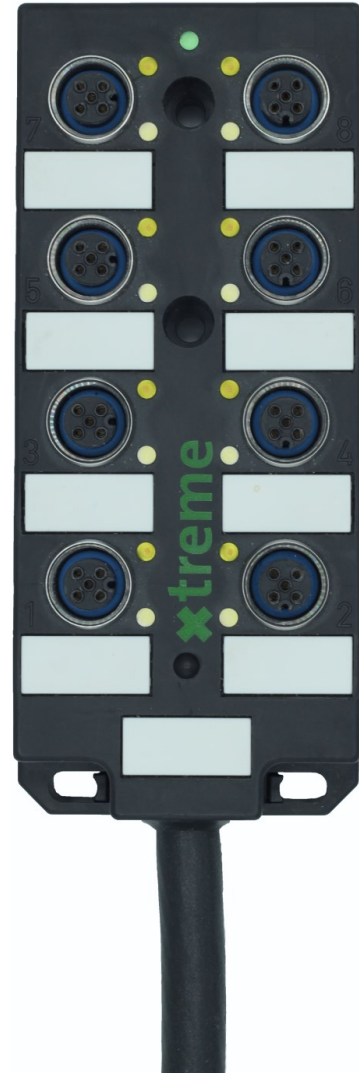
Space-saving, robust and durable

MVP potted

- suitable for temperatures from -20 ... +60° C
- IPx7
- Metal threads
- Yellow signal LEDs
- Insensitive to vibration and shock
- Oil resistant

MVP xtreme

- Suitable for temperatures from -40 ... +85° C
- IPx8 and IPx6K -> suitable for use with cold water pressure cleaners
- Ultra-bright, two-color signal LEDs (yellow / white) for on-board voltages of 12 V and 24 V DC
- All metal parts made of stainless steel
- resistant even under the permanent influence of liquid manure, fertilizer, silage additives, hydraulic oils, diesel, gasoline and lubricants



Exact12

Overmolded M12 passive splitters

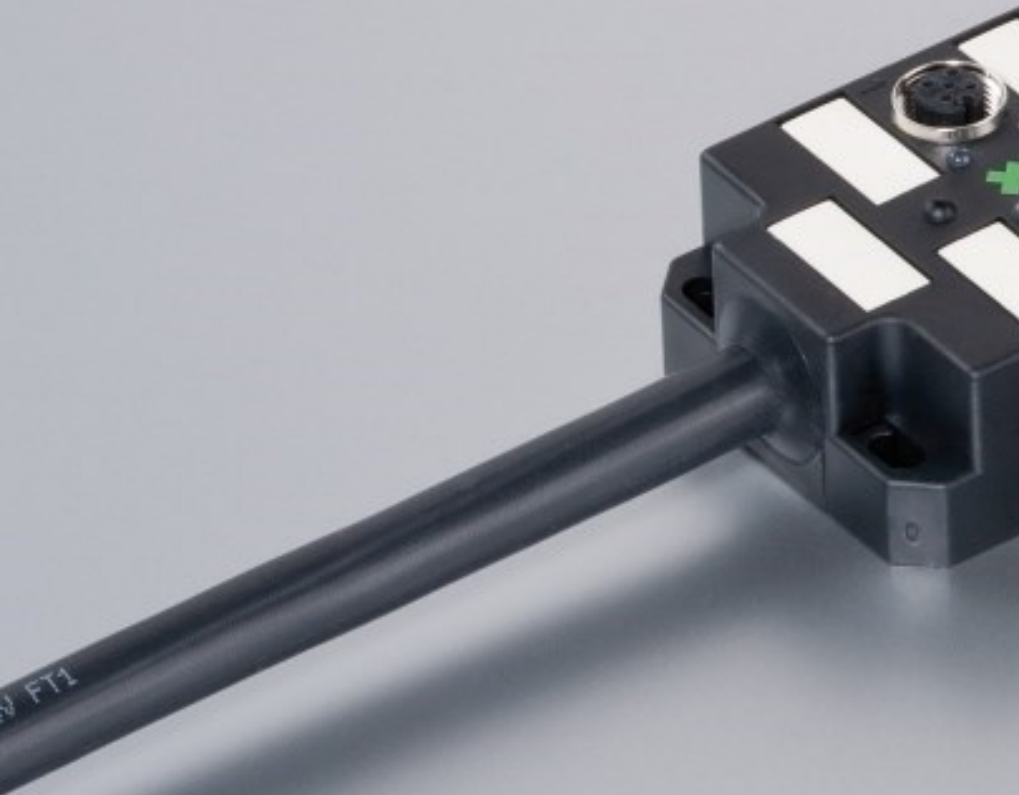
- Suitable for temperatures from -25 to +70° C
- Two-color LEDs for on-board voltages of 12 V and 24 V DC
- Current carrying capacity up to 4 A per pin at 12 A total current
- IPx5 and IPx7 tested
- Captive seals
- Fully molded - resistant to vibrations and shocks
- No metal parts -> No corrosion possible

Cost-effective solution for many moderate applications



M12 splitters

Homerun Cable PUR / TPM



Highly flexible connecting cable, drag chain and torsion resistant (ME cable type 445 / 456).

■ Mechanical properties

Bending radius

- (fixed) > 5 x cable diameter
- (moving) > 10 x cable diameter
- Cycles 2 million at 2 m/s travel

Torsion data

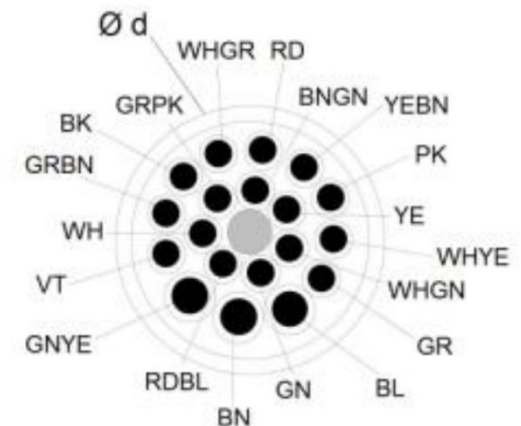
- Angle ± 180
- Cycles 500.000

■ Temperature range

- (fixed): - 40 to + 80°C
- (moving): - 40 to + 60°C

■ Environmental conditions:

- Oil resistant, abrasion resistant
- Hydrolysis and microbe resistant
- UV and weather resistant
- Generally good chemical resistance



Passiv Splitters

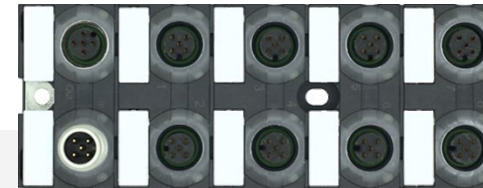
Variant overview



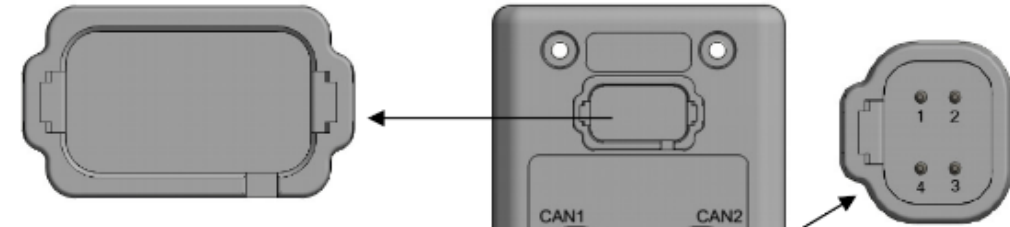
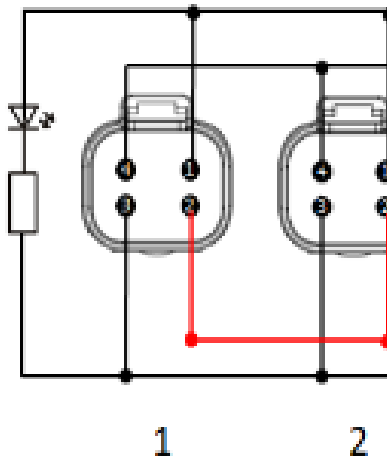
Variante	xtremeDB	MVP xtreme PUR black	MVP Verguss PUR black	Exact12 PUR black
Splitter for inputs and outputs +/- supply, with LED	DP-34045-1	8072-68510-456xxxx		8000-84510-445xxxx 8000-88510-456xxxx
Splitter for inputs and outputs +/- supply, no LED	DP-34045-6		277278 (1,4 m) 277316 (2 m) 277251 (5 m) 277312 (10 m)	8000-84512-445xxxx 8000-88512-456xxxx
Splitter for outputs - /- supply, with LED	DP-34045-3			
Splitter for outputs - /- supply, no LED	DP-34045-5			



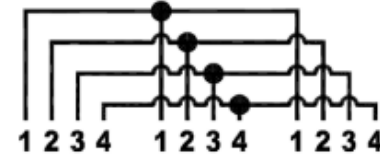
CAN SPLITTERS STAR SHAPE



xtremeDB passive DT CAN star shape splitter



Connections:
No Connection



Connections:
CAN Ports 1 to 10
Pin 1 = Power
Pin 2 = CAN High
Pin 3 = Ground A
Pin 4 = CAN Low

Ports are connected internally in series with each other to conform to trunk/drop system

DP-34045-2-000

CAN splitters significantly simplify the star-shaped wiring of CAN networks

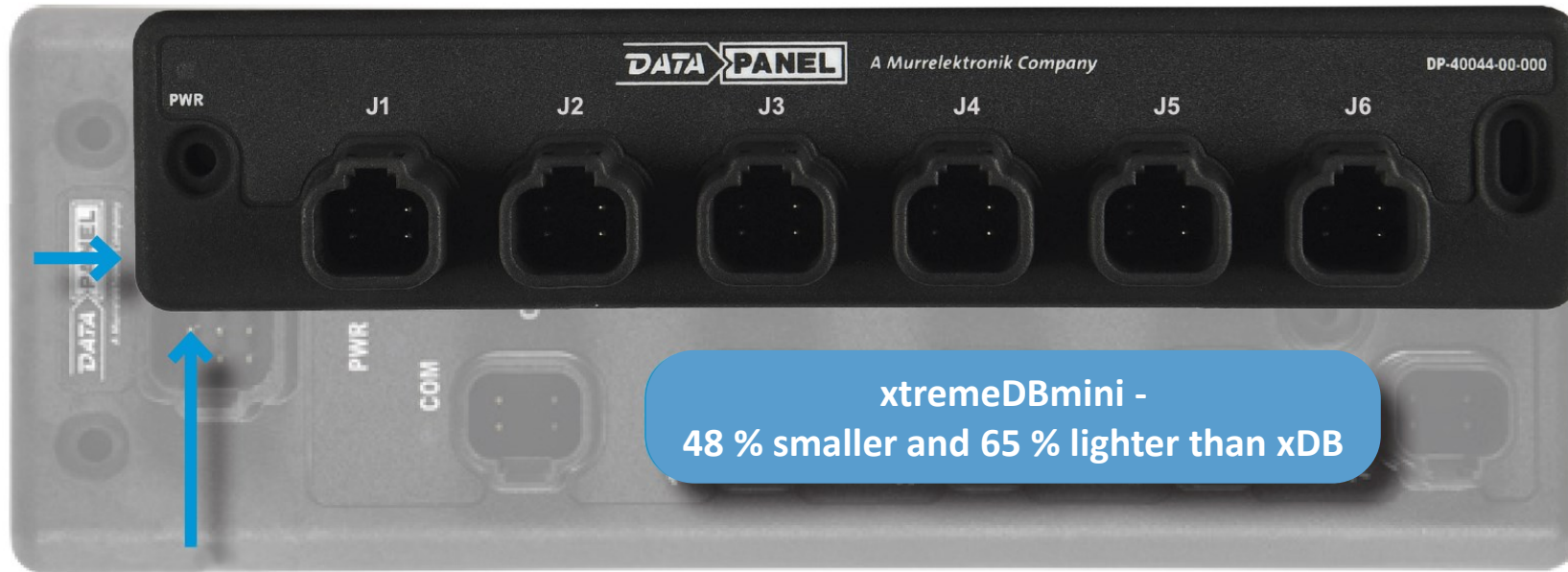
Baud-Rate / baud rate	Länge der Stichleitung / drop line length	gesamte Länge aller Stichleitungen / total length of all drop lines
1 Mbit/s	< 0,3 m	< 25 m
500 kbit/s	< 1,2 m	< 66 m
250 Kbit/s	< 2,4 m	< 120 m
125 Kbit/s	< 4,8 m	< 310 m



xtremeDBm passive
DT CAN star shape splitter



[DP-40044-00-000](#)



238 mm



51 mm



xtremeDBmini -
48 % smaller and 65 % lighter than xDB

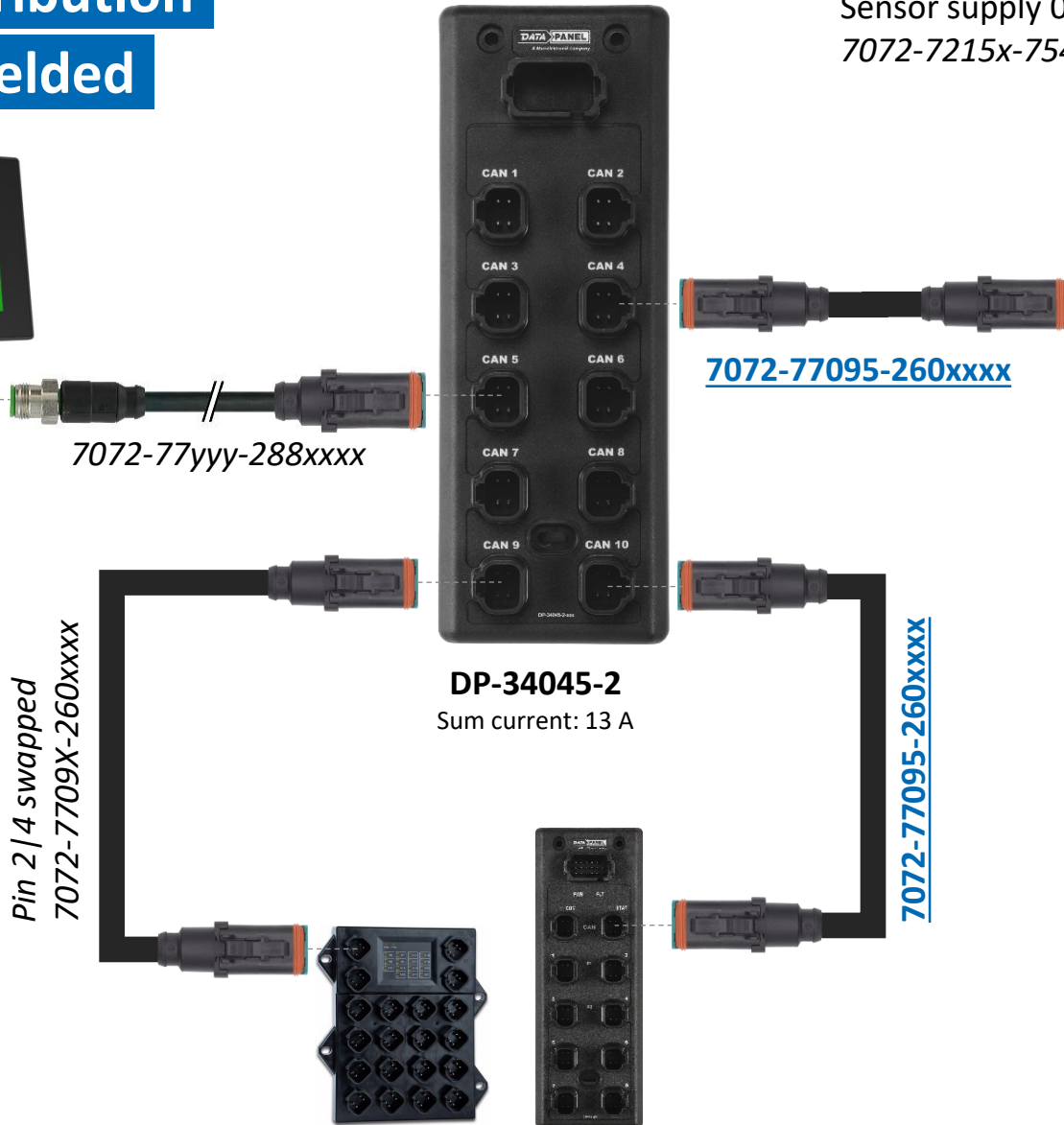
Just as good as xDB, only smaller!



CAN distribution DT unshielded



CAN master
e.g. display
control



Sensor supply 0,75 mm²
7072-7215x-754xxxx (Pin 1+3)

Sensor supply 1,5 mm²
7072-7215x-484xxxx (Pin 1+3)



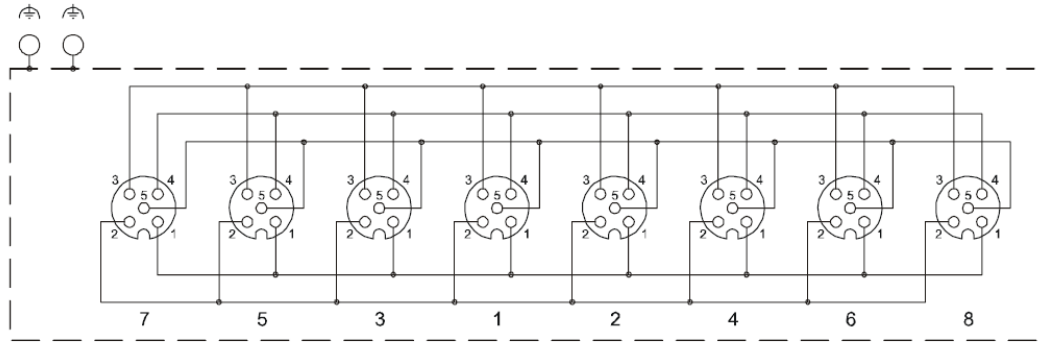
DP-40044-00-000

Summenstrom: 13 A

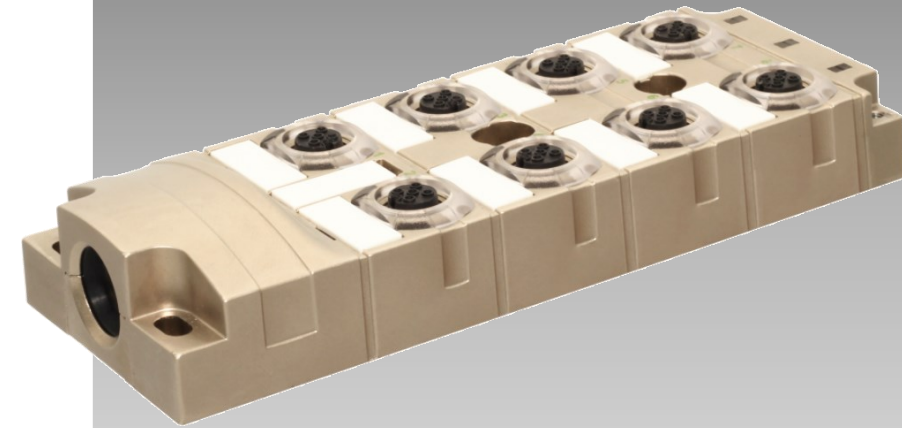
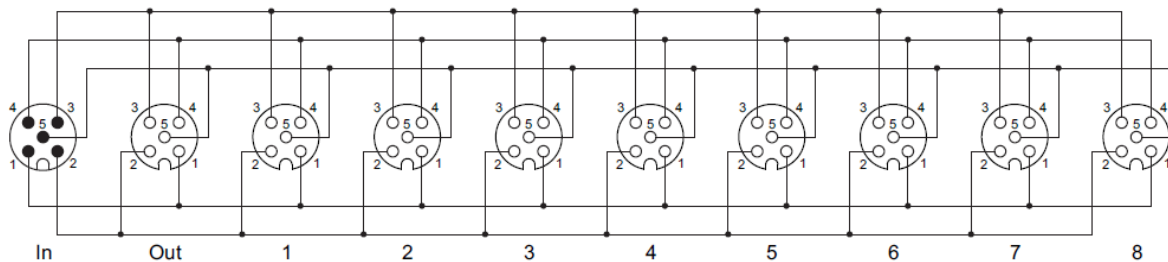


MVP Metal | Cube Passive

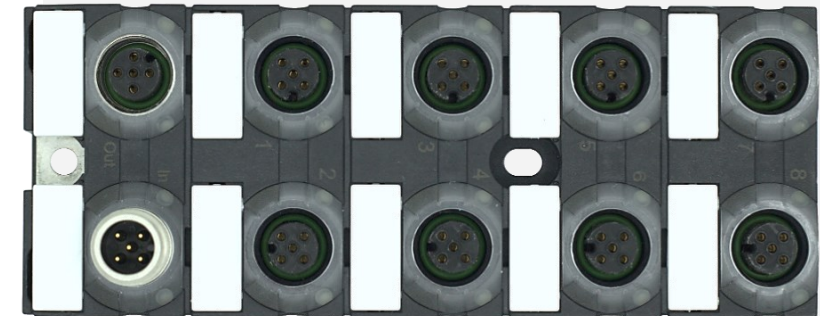
M12 CAN star shape splitter



- Complete encapsulation for IPx7 / IPx8
- Shielded CAN connections (only full metal housing)
- Star distribution of all five M12 pins
- Compatible with standard M12 CAN cables (A-cod. 5-pin)



[277289](#)



[277080](#)



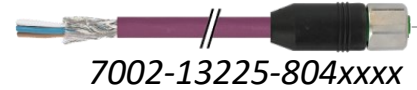
CAN distribution M12 shielded



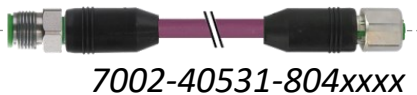
CAN master
e.g. display
control



7002-13571-804xxxx



7002-13225-804xxxx



7002-40531-804xxxx



7002-131xx-804xxxx
Stift - Stift



7002-42781-000000



e.g. xtremeDB CAN Bus module



7072-77285-804xxxx



7002-40531-804xxxx

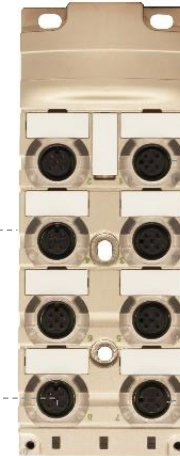
e.g.. CAN Sensor



7072-7728x-804xxxx
DT Pin 2/4 switched



e.g. xtremeBLOCK CAN bus module



277289
Sum current 4 A



7002-13105-804xxxx



7072-77285-804xxxx



CAN Termination R 120 Ω
7000-13461-000000



CAN distribution M12 unshielded



CAN master
e.g. display control



7072-40yyy-288xxxx



[7072-12249-288xxxx](#)



e.g. xtreme CAN Bus module



[7002-42751-000000](#)



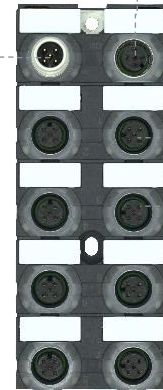
7072-77yyy-288xxxx



[7072-77285-804xxxx](#)



7072-40yyy-288xxxx



[277080](#)

Sum current 4 A



Sensor supply 0,75 mm²
7072-1202x-754xxxx (Pin 1+3)



CAN Termination R 120 Ω
[7000-13461-000000](#)



7072-77yyz-288xxxx
DT Pin 2 / 4 swapped



e.g. xtreme CAN Bus module



CAN LOOP SPLITTER



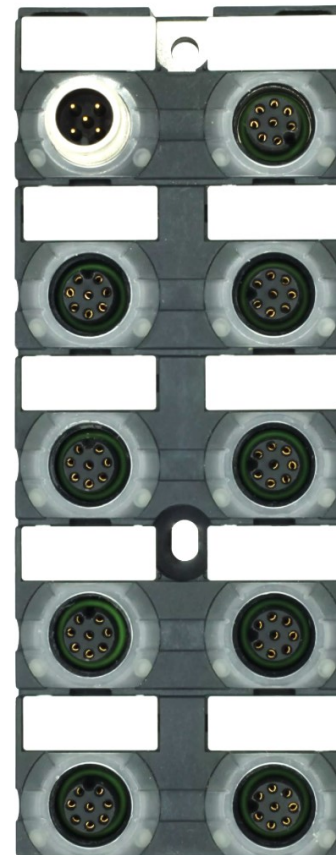
Cube Passive CANloop splitter

Features:

- Nine 8-pin M12 ports for CAN nodes
- Two potentials with different LED color (gn | ge) (socket OUT (top right) carries both potentials)
- 0.75 A multifuse per port
- Shield can be looped through from IN to OUT by knurled nut
- Two different connection cables cover all functions
- Termination and bridge plugs in different contact carrier colors (green / black)



5 conductor hybrid cable 3x0,75 + 1x(2x0,5)
[7072-12249-288xxxx](#)



[8000-698KS-0000000](#)



Con. cable 8 – 5 pin [343474 / 75 / 76](#)



Termination R 120 Ω
[343471](#)



Jumper plug for empty intermediate ports
[343472](#)



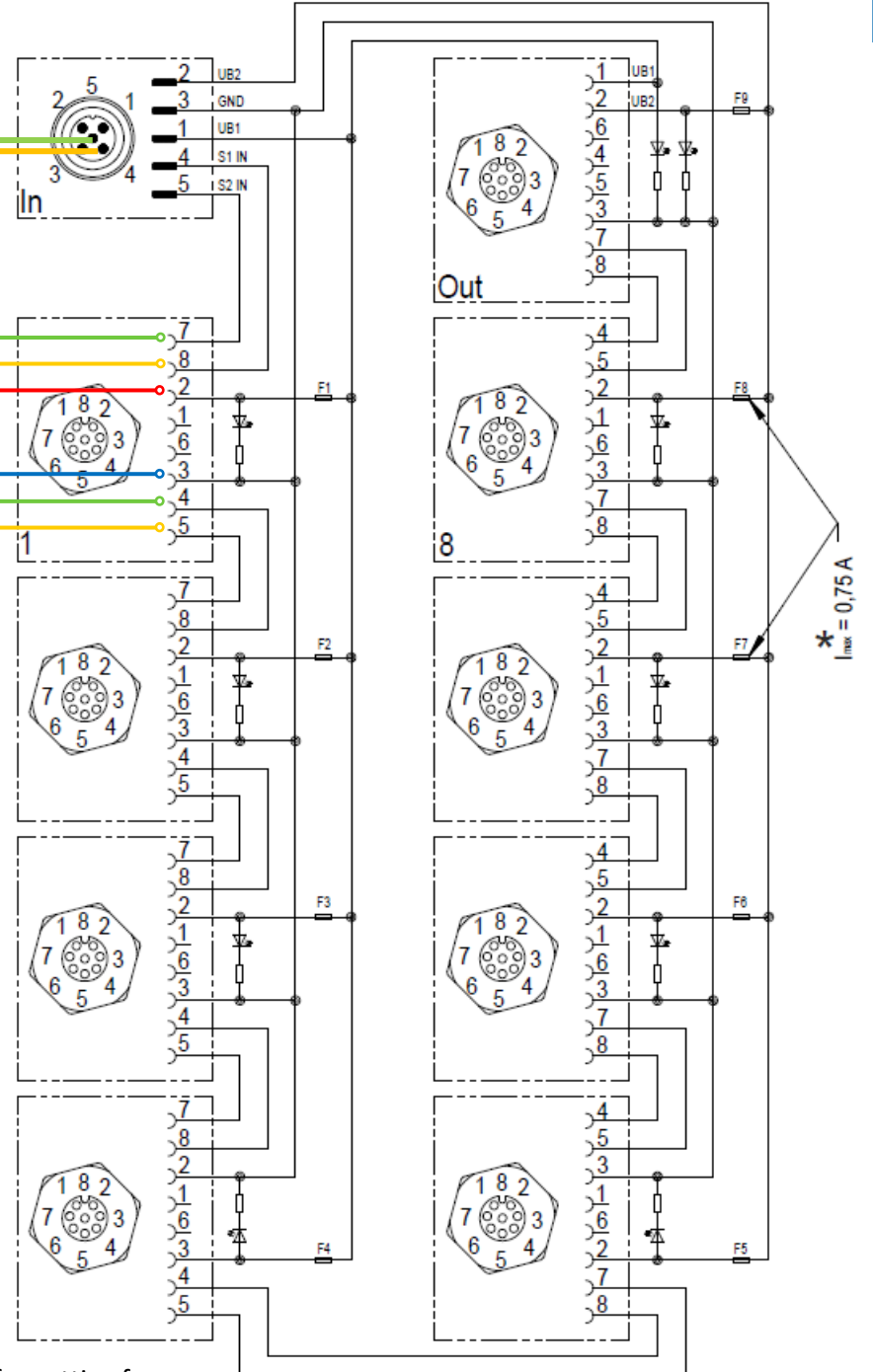
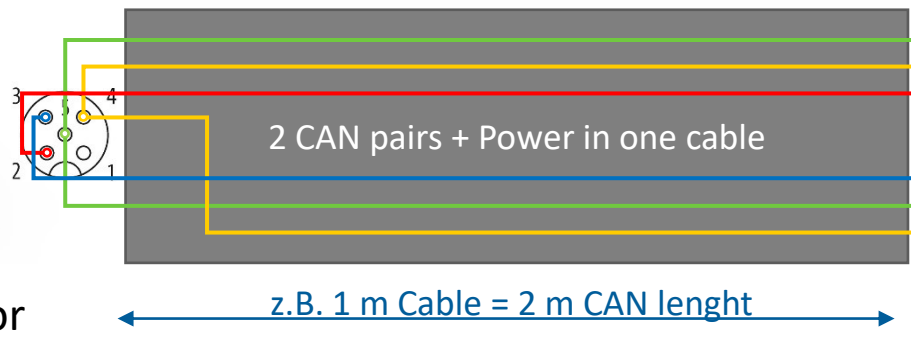
Cube Passive CANloop splitter



e.g. CAN Sensor



CAN L
CAN H



Instead of drop lines only a doubling of the CAN line length!

*Thermal, self-resetting fuses



CABLES AND ACCESSORIES

You can easily find under <https://www.data-panel.eu/en/wiring-systems/supply-and-homerun-cables-xtremedb/signal-cables/>





AGRICULTURAL



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