



**Electrical Connection Technology,
for Power Supply**

Electrical connection technology, for power supply

Product range overview

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Overview of power supply for valve terminals									
Plug	Valve terminal								→ Page
	Type 04	Type 10 ¹⁾	Type 03	DN1	AS1	Type 02	Type ECP	Type 50	
FBSD-GD-7	-	■	-	■	■	-	-	-	4 / 5.1-90
FBSD-GD-9	-	■	-	■	■	-	-	-	4 / 5.1-90
FBSD-GD-13,5	-	■	-	■	■	-	-	-	4 / 5.1-90
FBSD-WD-7	-	■	-	■	■	-	-	-	4 / 5.1-90
FBSD-WD-9	-	■	-	■	■	-	-	-	4 / 5.1-90
NTSD-GD-9	■	-	■	-	-	■	■	■	4 / 5.1-121
NTSD-GD-13,5	■	-	■	-	-	■	■	■	4 / 5.1-121
NTSD-WD-7	■	-	■	-	-	■	■	■	4 / 5.1-121
NTSD-WD-9	■	-	■	-	-	■	■	■	4 / 5.1-121
NTSD-WD-11	■	-	■	-	-	■	■	■	4 / 5.1-121
PS1-SAC10-10POL	-	■	-	-	-	-	-	-	4 / 5.1-123

1) Power supply CPV Direct

Type 10/type 12

In the case of valve terminals type 10 and type 12 with bus interface, the voltage is supplied via the CP installation system (type ECP).

Type 32

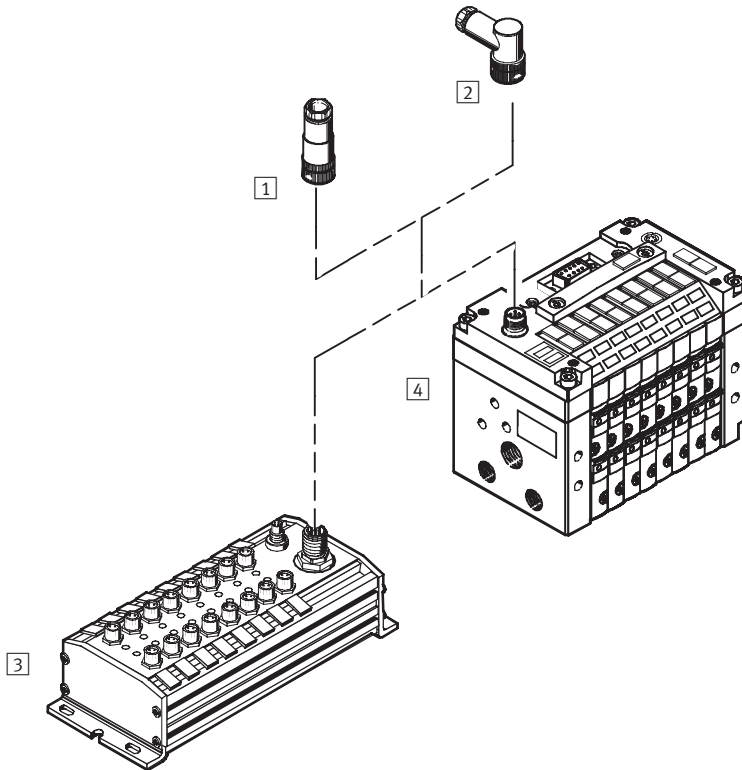
In the case of valve terminal type 32 with bus interface, the voltage is supplied via the CPX terminal (type 50).

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Electrical connection technology, for power supply

Peripherals overview

Power supply via M12 connection



Accessories		Brief description	→ Page
1	FBSD-GD-...	Fieldbus connection, straight socket	4 / 5.1-90
2	FBSD-WD-7 FBSD-WD-9	Fieldbus connection, angled socket, Pg7 Fieldbus connection, angled socket, Pg9	4 / 5.1-90 4 / 5.1-90
3	CP-E16-M8-Z	Input module, 16 inputs	4 / 4.6-47
4	CPV-...-GE-...-8	Valve terminal, CPV Direct	4 / 4.7-1

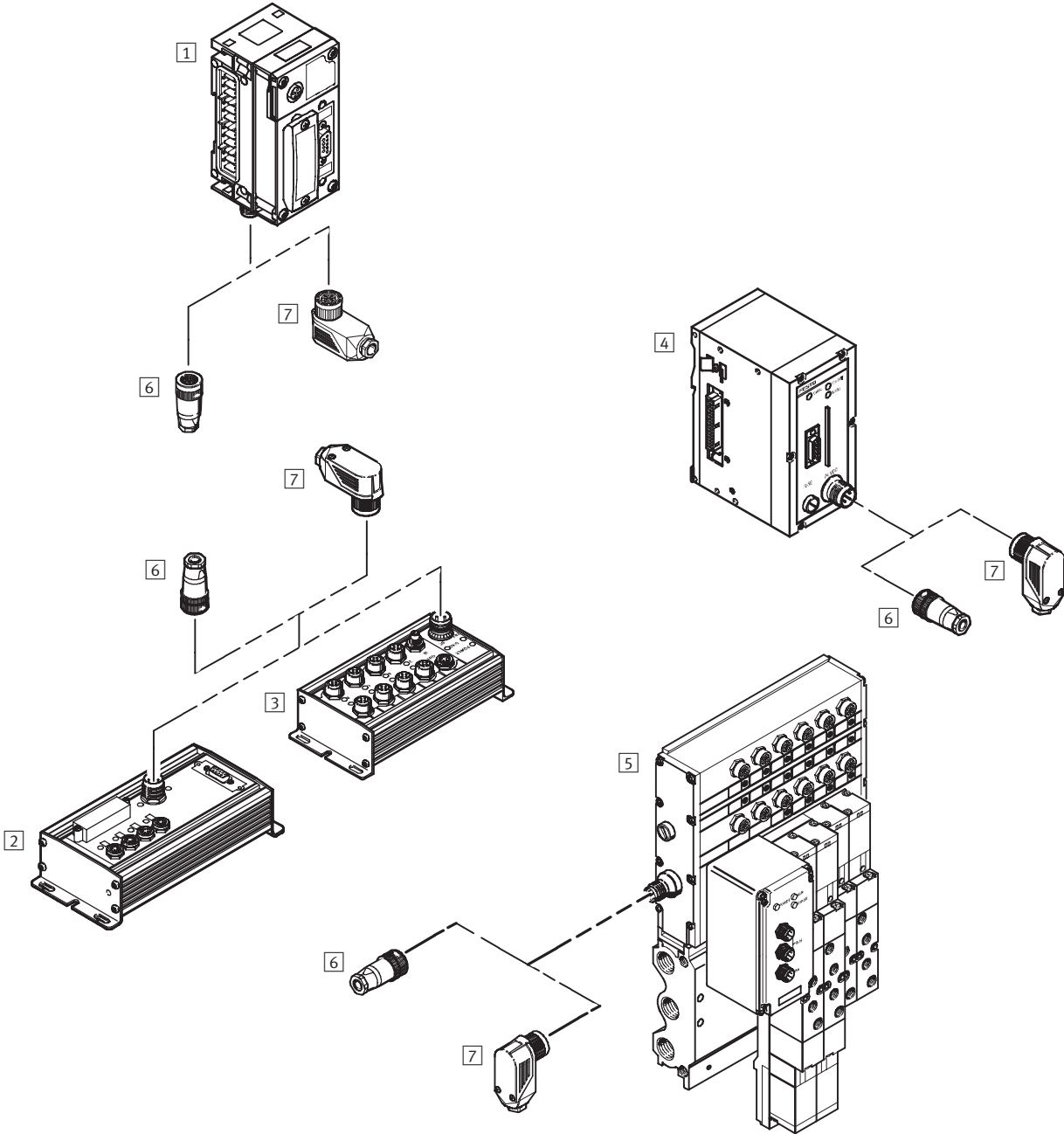
 Note
Additional variants can be configured and ordered through the NEBU modular system.

Electrical connection technology, for power supply

Peripherals overview



Power supply via M18 connection



Accessories for valve terminals
Electrical connector systems

5.1

Electrical connection technology, for power supply

Peripherals overview

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Accessories			
	Brief description	→ Page	
1	CPX-FB...	Fieldbus node, CPX terminal, type 50	4 / 4.8-1
2	CP-FB05-E	Fieldbus node, CPI installation system	4 / 4.6-1
3	CP-A08-M12-5POL	Output module, CPI installation system	4 / 4.6-65
4	IFB...-03	Fieldbus node, valve terminal type 03/04, Midi/Maxi	4 / 4.8-163
5	VIFB-02	Valve terminal type 02, Tiger 2000	4 / 2.3-1
6	NTSD-GD-...	Power supply socket, straight	4 / 5.1-121
7	NTSD-WD-...	Power supply, angled socket	4 / 5.1-121

Accessories for valve terminals
Electrical connector systems

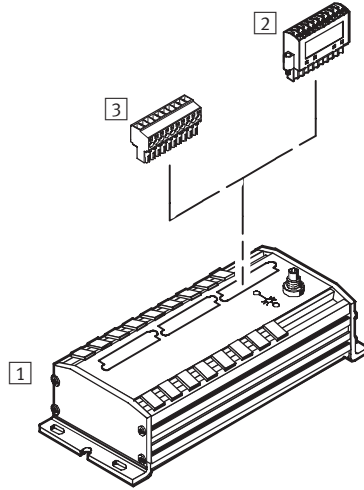
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Electrical connection technology, for power supply

Peripherals overview

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Power supply via terminal strip



Accessories for valve terminals
Electrical connector systems

5.1

Accessories			
	Brief description	→ Page	
1	CP-E16-KL-IP20-Z	Input module with additional power supply for sensors, CPI installation system	4 / 4.6-47
2	SEA-KL-SAC	Connection set, tension-spring socket	4 / 5.1-123
3	PS1-ZC13-5	Screw terminal socket, 10-pin	4 / 5.1-123

Electrical connection technology, for power supply

Technical data – NTSD

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- Plug/socket for power supply
- Can be fabricated with any cable lengths
- 4-pin plug socket
- With screw terminals
- Wire cross section of up to 2.5 mm²



General technical data		
Type	NTSD-...	
Type of mounting	M18 union nut	
Mounting position	Any	
Operating voltage range	[V]	250 AC
Current-carrying capacity	[A]	16
Protection class to EN 60 529	IP67 (assembled)	
Material of housing	Polybuteneterephthalate	
Material of contacts	Brass/copper base alloy	
Storage temperature	[°C]	-20 ... +70
Ambient temperature	[°C]	-5 ... +50

Ordering data							
	Electrical connection	Cable gland fitting	Permissible cable diameter [mm]	Max. wire cross section [mm ²]	Product weight [g]	Type	Part No.
	Socket, straight, 4-pin, screw terminal	Pg9	6 ... 8	1.5	25	NTSD-GD-9	18 493
	Socket, straight, 5-pin, screw terminal, B-coded	Pg9	6 ... 8	0.75	25	NTSD-GD-9-M12-5POL-RK	538 999
	Socket, straight, 4-pin, screw terminal	Pg13.5	10 ... 12	2.5	31	NTSD-GD-13,5	18 526
	Socket, angled, 4-pin, screw terminal	Pg9	6 ... 8	1.5	30	NTSD-WD-9	18 527
	Socket, angled, 4-pin, screw terminal	Pg11	5 ... 11	2.5	34	NTSD-WD-11	533 119

Electrical connection technology, for power supply

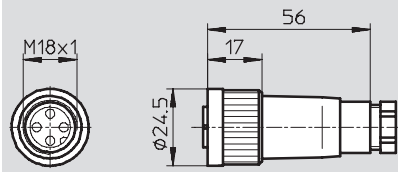


Technical data – NTSD

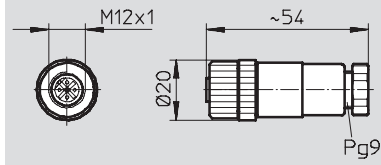
Download CAD data → www.festo.com/en/engineering

Dimensions

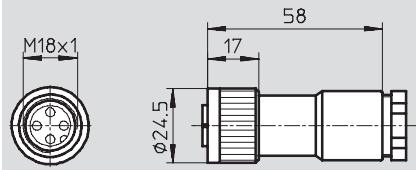
NTSD-GD-9



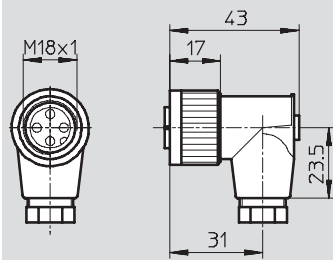
NTSD-GD-9-M12-5POL-RK



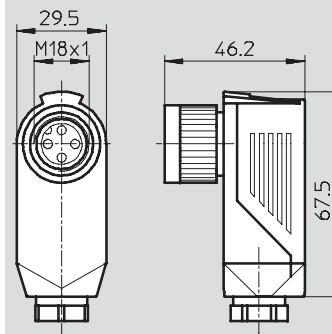
NTSD-GD-13,5



NTSD-WD-9



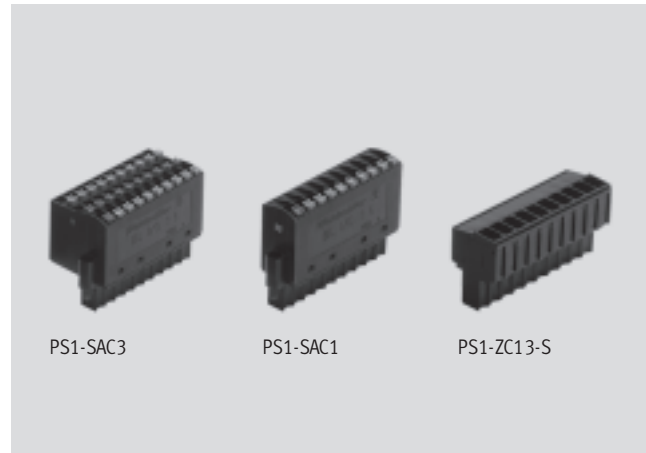
NTSD-WD-11



Electrical connection technology, for power supply

Technical data – PS1-SAC-...

- Connector for power supply, 10-pin or 30-pin
- Individually or as a set
- Simple cable connection using clamping technology



General technical data	
Type	PS1-SAC-.../SEA-KL-...
Type of mounting	2 M2x7 screws
Max. wire cross section	[mm ²] 0.08 ... 0.75
Operating voltage range	[V] 50 AC
Material of housing	Polybuteneterephthalate
Ambient temperature	[°C] -20 ... +100

Ordering data					
	Electrical connection	Current-carrying capacity	Product weight	Type	Part No.
		[A]	[g]		
	Socket, 10-pin, terminal strip, 10-pin	4	14	PS1-SAC10-10POL	197 159
	Socket, 10-pin, terminal strip, 10-pin	4	40	PS1-SAC11-10POL+LED	197 160
	Socket, 10-pin, terminal strip, 30-pin	0.5	25	PS1-SAC30-30POL	197 161
	Socket, 10-pin, terminal strip, 30-pin	0.5	25	PS1-SAC31-30POL+LED	197 162
	Socket, 10-pin, terminal strip, 10/30-pin	0.5/4	71	SEA-KL-SAC10/30	526 256
	Screw terminal socket, 10-pin	4	37	PS1-ZC13-10POL-SCHRAUBKL	160 800

Electrical connection technology, for power supply

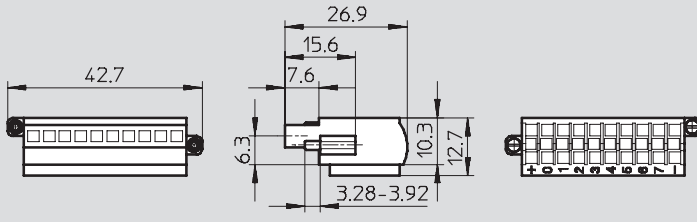
Technical data – PS1-SAC-...



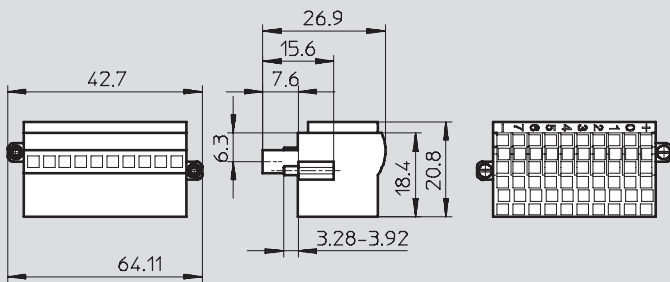
Dimensions

Download CAD data → www.festo.com/en/engineering

PS1-SAC10-10POL



PS1-SAC30-30POL



Electrical connection technology, for power supply

Technical data – NECU





- Plug, socket for power supply
- 4-pin
- Can be fabricated with any cable lengths
- With screw terminals



General technical data		
Type	NECU-M-S-D12G4-C2-ET	NECU-M8G4
Type of mounting	–	Via knurled nut
Mounting position	–	Any
Operating voltage range	[V DC] ≤ 300	0 ... 60
	[V AC] ≤ 250	0 ... 60
Permissible cable diameter	[mm] 6 ... 8	3.5 ... 5
Connection cross section	[mm ²] 0.14 ... 0.75	0.14 ... 0.5
Plug coding	D, for Ethernet	–
Material of casing	Die-cast zinc, nickel plated	Polybutylene terephthalate
Material of seals	Nitrile rubber	–
Material of contacts	Gold-plated brass	Gold-plated brass
Note on materials	Free of copper and PTFE	–

Operating and environmental conditions		
	NECU-M-S-D12G4-C2-ET	NECU-M8G4
Ambient temperature [°C]	–40 ... +85	–40 ... +80
Corrosion resistance class CRC ¹⁾	1	2

1) Corrosion resistance class 1 according to Festo standard 940 070
 Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.
 CRC2: Corrosion resistance class to Festo standard 940 070
 Components with medium corrosion exposure. Externally visible components with significant decorative function in direct contact with normal industrial atmosphere or media such as coolants and lubricants.

Ordering data						
	Electrical connection	Acceptable current load [A]	Protection class to EN 60529	Product weight [g]	Type	Part No.
	Straight plug, screw terminal, round plug connector M12x1, 4-pin	4	IP65/67	47	NECU-M-S-D12G4-C2-ET	543 109
	Straight socket, M8x1, 4-pin	4	IP67	9.5	NECU-M8G4	544 392

Electrical connection technology, for power supply

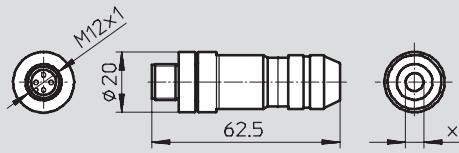
Technical data – NECU

FESTO

Dimensions

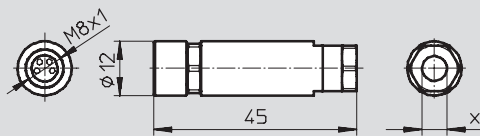
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NECU-M-S-D12G4-C2-ET



X Cable diameter 6 ... 8 mm

NECU-M8G4



X Cable diameter 3.5 ... 5 mm

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Electromechanical actuators, motors, controllers & drives



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Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 12,000 employees in 56 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

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To meet this commitment, we strive to ensure a consistent, integrated, and systematic approach to management that will meet or exceed the requirements of the ISO 9001 standard for Quality Management and the ISO 14001 standard for Environmental Management.



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