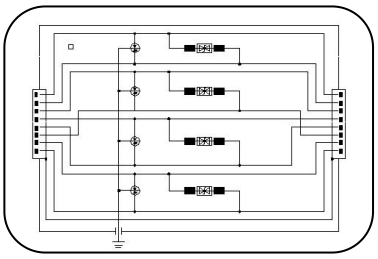
Single-Port CAT6 ETHERNET SURGE PROTECTOR

D-05/RJ45...



Basic circuit diagram

PROSURGE D-05/RJ45 single-port CAT6 Ethernet surge protector is designed for protecting Gigabit Ethernet terminals or RJ45/Ethernet cable system against surges, a suitable for use in category location B, C (ANSI/IEEE C62.41) or directly at the upstream near the protected devices. The D-05/RJ45 is fulfilling the requirements of Category 6, can be universally used for all data services with nominal voltages of 5V. It is ideally suited for Gigabit Ethernet such as Industrial Networks and Local Area Networks (LANs) , also for Telecom, ATM, ISDN, Voice over IP and similar applications in structured cabling systems according to Class E up to 250 MHz. All lines are protected by powerful 3-pole gas tubes and fast clamping diodes.

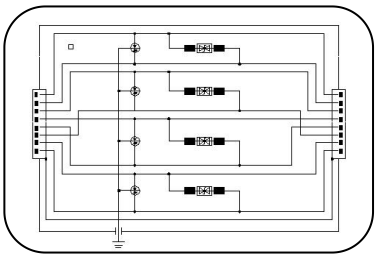
Technical Features

- UL listed Ethernet protector per UL 497b standard (UL file: QVGQ.E504171), complied with IEC/EN 61643-21 (D1,C1,C2,C3)
- Suitable for CAT 5 (up to 100MHz) and CAT 6 (up to 250MHz Class E) cable system
- High discharge capability, total nominal discharge current 10kA 8/20μs and Lightning current up to 1.0kA
- EMI Shielded housing,earthing via DIN Rail / grounding wire/ screw rod optional
- DIN Rail mounting (or customized)
- Compatible EN50173 , ISO/IEC 1180

Part No.		D-05/RJ45	D-05/RJ45B
In accordance with		UL497b,EN50173 Category 6,IEC/EN 61643-21	
IEC/EN category		D1/C1/C2/C3	
Ports		Single-PORT	
Nominal voltage (DC)	Un	5V	
Max. continuous operating voltage (DC)	Uc	6V	
C2 Nominal discharge current (8/20μs)	In	2.5kA	
C2 Total Nominal discharge current (8/20μs)	In	10kA	
D1 Lightning impulse current (10/350μs)	Iimp	1kA	
Nominal current	I_L	1A	
Voltage protection level	@C2 (8/20μs) Up	55V(L-L); 400V(L-G)	
	@C3 (1KV/μs) Up	25V(L-L); 500V(L-G)	
Insertion loss		≤3 dB	
Frequency range, max.	fG	250 MHz	
Transmission speed		1000Mbps	
Response time		≤1ns	
Technology		Two-stage protection circuit, GDT/TVS technology	
Transmission standards		10BaseT/ 100BaseT/1000BaseT /1000BaseT	
Pinning		1/2, 3/6, 4/5, 7/8	
Location		Indoor	
Degree of protection		IP20	
Mounting		35 mm DIN-Rail (IEC/EN 60715)	Fixed Installation
Earthing		DIN Rail or grounding wire	Screw rod
Enclosure material		Metal	
Type of connection IN/OUT		RJ45 sockets (shielded)	
Dimensions		92 x 40 x 25 mm	
Operating temperature range		-40°C ~ +80°C	
Approvals, Certifications		UL,CE	

Single-Port CAT6 ETHERNET SURGE PROTECTOR - OUTDOOR APPLICATION

D-05P/RJ45



Basic circuit diagram

PROSURGE D-05P/RJ45 single-port CAT6 Ethernet surge protector is designed for protecting Gigabit Ethernet terminals or RJ45/Ethernet cable system against surges, a suitable for use in category location B, C (ANSI/IEEE C62.41) or directly at the upstream near the protected devices. The D-05P/RJ45 is fulfilling the requirements of Category 6, can be universally used for all data services with nominal voltages of 5V. It is ideally suited for Gigabit Ethernet such as Industrial Networks and Local Area Networks (LANs) , also for Telecom, ATM, ISDN, Voice over IP and similar applications in structured cabling systems according to Class E up to 250 MHz. All lines are protected by powerful 3-pole gas tubes and fast clamping diodes.

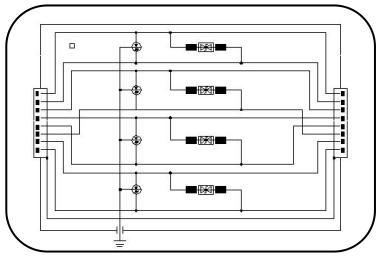
Technical Features

- UL listed Ethernet protector per UL 497b standard (UL file: QVGQ.E504171), complied with IEC/EN 61643-21 (D1,C1,C2,C3)
- Suitable for CAT 5 (up to 100MHz) and CAT 6 (up to 250MHz Class E) cable system
- High discharge capability, total nominal discharge current 10kA 8/20μs and Lightning current up to 1.0kA
- IP66 waterproof plastic enclosure for outdoor applications
- Earthing via grounding wire
- Compatible EN50173 , ISO/IEC 1180

Part No.		D-05P/RJ45
In accordance with		UL497b,EN50173 Category 6,IEC/EN 61643-21
IEC/EN category		D1/C1/C2/C3
Ports		Single-PORT
Nominal voltage (DC)	Un	5V
Max. continuous operating voltage (DC)	Uc	6V
C2 Nominal discharge current (8/20μs)	In	2.5kA
C2 Total Nominal discharge current (8/20μs)	In	10kA
D1 Lightning impulse current (10/350μs)	Iimp	1kA
Nominal current	I_L	1A
Voltage protection level (V)	@C2 (8/20μs) Up	55V(L-L); 400V(L-G)
	@C3 (1KV/μs) Up	25V(L-L); 500V(L-G)
Insertion loss		≤3 dB
Frequency range, max.	fG	250 MHz
Transmission speed		1000Mbps
Response time		≤1ns
Technology		Two-stage protection circuit, GDT/TVS technology
Transmission standards		10BaseT/ 100BaseT/1000BaseT /1000BaseT
Pinning		1/2, 3/6, 4/5, 7/8
Location		Outdoor
Degree of protection		IP66
Mounting		Fixed Installation
Earthing		Grounding wire
Enclosure material		Waterproof plastic
Cable glands		Plastic/Rubber
Type of connection IN/OUT		RJ45 sockets (shielded)
Dimensions		132 x 68 x 50 mm
Operating temperature range		-40°C ~ +80°C
Approvals, Certifications		UL,CE

Single-Port CAT6 PoE SURGE PROTECTOR

D-48/RJ45-POE



Basic circuit diagram

PROSURGE D-48/RJ45-POE single-port CAT6 PoE surge protector is designed for protecting Gigabit Ethernet and Power over Ethernet (PoE) terminals or RJ45/Ethernet cable system against surges, a suitable for use in category location B, C (ANSI/IEEE C62.41) or directly at the upstream near the protected devices.

The D-48/RJ45-POE is fulfilling the requirements of Category 6 & all version of PoE (PoE+, PoE ++), can be universally used for all data services with nominal voltages up to 60V. It is ideally suited for PoE and Gigabit Ethernet application and similar applications in structured cabling systems according to Class E up to 250 MHz. All lines are protected by powerful 3-pole gas tubes and fast clamping diodes.

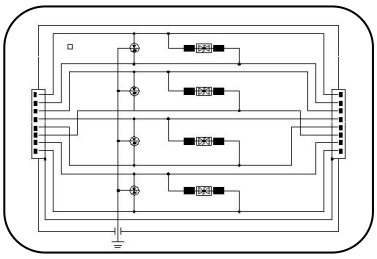
Technical Features

- UL listed Ethernet protector per UL 497b standard (UL file: QVGQ.E504171), complied with IEC/EN 61643-21 (D1,C1,C2,C3)
- Suitable for CAT 5 (up to 100MHz) and CAT 6 (up to 250MHz Class E) cable system
- PoE, PoE+, PoE ++(4PPOE) compatible with IEEE 802.3af, IEE 802.3at, IEEE 802.3bt
- High discharge capability, total nominal discharge current 10kA 8/20μs and Lightning current up to 1.0kA
- EMI Shielded housing,earthing via DIN Rail / grounding wire/ screw rod optional
- DIN Rail mounting (or customized)
- Compatible EN50173 , ISO/IEC 1180

Part No.		D-48/RJ45-POE	D-48/RJ45B-POE
In accordance with		UL497b, IEEE 802.3at/af/bt, EN50173 Category 6,IEC/EN 61643-21	
IEC/EN category		D1/C1/C2/C3	
Ports		Single-PORT	
Nominal voltage (DC)	Un	48V	
Max. continuous operating voltage (DC)	Uc	60V	
C2 Nominal discharge current (8/20μs)	In	2.5kA	
C2 Total Nominal discharge current (8/20μs)	In	10kA	
D1 Lightning impulse current (10/350μs)	Iimp	1kA	
Nominal current	I_L	1A	
Voltage protection level (V)	@C2 (8/20μs) Up	150(L-L); 400(L-G)	
	@C3 (1KV/μs) Up	110(L-L); 500(L-G)	
Insertion loss		≤3 dB	
Frequency range, max.	fG	250 MHz	
Transmission speed		1000Mbps	
Response time		≤1ns	
Technology		Two-stage protection circuit, GDT/TVS technology	
Transmission standards		10BaseT/ 100BaseT/1000BaseT /1000BaseT/PoE+/PoE++	
Pinning		1/2, 3/6, 4/5, 7/8 for data; 1&2/ 3&6,4&5/ 7&8 for PoE	
Location		Indoor	
Degree of protection		IP20	
Mounting		35 mm DIN-Rail (IEC/EN 60715)	Fixed Installation
Earthing		DIN Rail or grounding wire	Screw rod
Enclosure material		Metal	
Type of connection IN/OUT		RJ45 sockets (shielded)	
Dimensions		92 x 40 x 25 mm	
Operating temperature range		-40°C ~ +80°C	
Approvals, Certifications		UL,CE	

Single-Port CAT6 PoE SURGE PROTECTOR - OUTDOOR APPLICATION

D-48P/RJ45-POE



Basic circuit diagram

PROSURGE D-48P/RJ45-POE single-port CAT6 PoE surge protector is designed for protecting Gigabit Ethernet and Power over Ethernet (PoE) terminals or RJ45/Ethernet cable system against surges, a suitable for use in category location B, C (ANSI/IEEE C62.41) or directly at the upstream near the protected devices.

The D-48P/RJ45-POE is fulfilling the requirements of Category 6 & all version of PoE (PoE+, PoE ++), can be universally used for all data services with nominal voltages up to 60V. It is ideally suited for PoE and Gigabit Ethernet application and similar applications in structured cabling systems according to Class E up to 250 MHz. All lines are protected by powerful 3-pole gas tubes and fast clamping diodes.

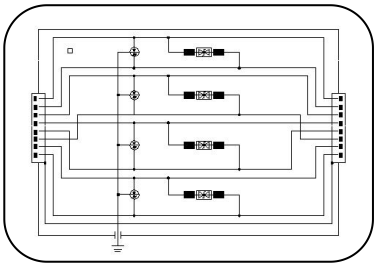
Technical Features

- UL listed Ethernet protector per UL 497b standard (UL file: QVGQ.E504171), complied with IEC/EN 61643-21 (D1,C1,C2,C3)
- Suitable for CAT 5 (up to 100MHz) and CAT 6 (up to 250MHz Class E) cable system
- PoE, PoE+, PoE ++(4PPOE) compatible with IEEE 802.3af, IEE 802.3at, IEEE 802.3bt
- High discharge capability, total nominal discharge current 10kA 8/20μs and Lightning current up to 1.0kA
- Waterproof plastic enclosure for outdoor applications, IP66
- Earthing via grounding wire
- Compatible EN50173 , ISO/IEC 1180

Part No.		D-48P/RJ45-POE
In accordance with		UL497b, IEEE 802.3at/af/bt, EN50173 Category 6,IEC/EN 61643-21
IEC/EN category		D1/C1/C2/C3
Ports		Single-PORT
Nominal voltage (DC)	Un	48V
Max. continuous operating voltage (DC)	Uc	60V
C2 Nominal discharge current (8/20μs)	In	2.5kA
C2 Total Nominal discharge current (8/20μs)	In	10kA
D1 Lightning impulse current (10/350μs)	Iimp	1kA
Nominal current	I_L	1A
Voltage protection level (V)	@C2 (8/20μs) Up	150(L-L); 400(L-G)
	@C3 (1KV/μs) Up	110(L-L); 500(L-G)
Insertion loss		≤3 dB
Frequency range, max.	fG	250 MHz
Transmission speed		1000Mbps
Response time		≤1ns
Technology		Two-stage protection circuit, GDT/TVS technology
Transmission standards		10BaseT/ 100BaseT/1000BaseT /1000BaseT/PoE+/PoE++
Pinning		1/2, 3/6, 4/5, 7/8 for data; 1&2/ 3&6,4&5/ 7&8 for PoE
Location		Outdoor
Degree of protection		IP66
Mounting		Fixed Installation
Earthing		Grounding wire
Enclosure material		Waterproof plastic
Cable glands		Plastic/Rubber
Type of connection IN/OUT		RJ45 sockets (shielded)
Dimensions		132 x 68 x 50 mm
Operating temperature range		-40°C ~ +80°C
Approvals, Certifications		UL,CE

24-Port CAT6 ETHERNET SURGE PROTECTOR - 19'' BAY DESIGN

D-05/RJ45-24P



Basic circuit diagram

PROSURGE D-05/RJ45-24P Protector 24-port CAT6 Ethernet surge protector is designed for protecting Gigabit Ethernet terminals or RJ45/Ethernet cable system against surges, a suitable for use in category location B, C (ANSI/IEEE C62.41) or directly at the upstream near the protected devices. The D-05/RJ45-24P is fulfilling the requirements of Category 6, can be universally used for all data services with nominal voltages of 5V. It is ideally suited for Gigabit Ethernet such as Industrial Networks and Local Area Networks (LANs) , also for Telecom, ATM, ISDN, Voice over IP and similar applications in structured cabling systems according to Class E up to 250 MHz. All lines are protected by powerful 3-pole gas tubes and fast clamping diodes.

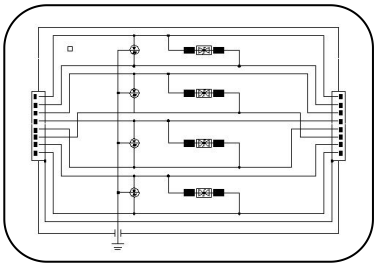
Technical Features

- UL listed Ethernet protector per UL 497b standard (UL file: QVGQ.E504171), complied with IEC/EN 61643-21 (D1,C1,C2,C3)
- Suitable for CAT 5 (up to 100MHz) and CAT 6 (up to 250MHz Class E) cable system
- High discharge capability, total nominal discharge current 10kA 8/20μs and Lightning current up to 1.0kA
- EMI Shielded Enclosure,19'' bay design,can be installed conveniently into standard 19-inch cabinet racks
- Earthing via a screw rod
- Compatible EN50173 , ISO/IEC 1180

Part No.		D-05/RJ45-24P
In accordance with		UL497b,EN50173 Category 6,IEC/EN 61643-21
IEC/EN category		D1/C1/C2/C3
Ports		24-PORT
Nominal voltage (DC)	Un	5V
Max. continuous operating voltage (DC)	Uc	6V
C2 Nominal discharge current (8/20μs)	In	2.5kA
C2 Total Nominal discharge current (8/20μs)	In	10kA
D1 Lightning impulse current (10/350μs)	Iimp	1kA
Nominal current	I_L	1A
Voltage protection level (V)	@C2 (8/20μs) Up	55V(L-L); 400V(L-G)
	@C3 (1KV/μs) Up	25V(L-L); 500V(L-G)
Insertion loss		≤3 dB
Frequency range, max.	fG	250 MHz
Transmission speed		1000Mbps
Response time		≤1ns
Technology		Two-stage protection circuit, GDT/TVS technology
Transmission standards		10BaseT/ 100BaseT/1000BaseT /1000BaseT
Pinning		1/2, 3/6, 4/5, 7/8
Location		Indoor
Degree of protection		IP20
Mounting		19'' cabinet rack
Earthing		Screw rod
Enclosure material		Metal
Type of connection IN/OUT		RJ45 sockets (shielded)
Dimensions		490 x101x 27 mm
Operating temperature range		-40°C ~ +80°C
Approvals, Certifications		UL,CE

24-Port CAT6 PoE SURGE PROTECTOR - 19'' BAY DESIGN

D-48/RJ45-24P-POE



Basic circuit diagram

PROSURGE D-48/RJ45-24P-POE 24-port CAT6 PoE surge protector is designed for protecting Gigabit Ethernet and Power over Ethernet (PoE) terminals or RJ45/Ethernet cable system against surges, a suitable for use in category location B, C (ANSI/IEEE C62.41) or directly at the upstream near the protected devices.

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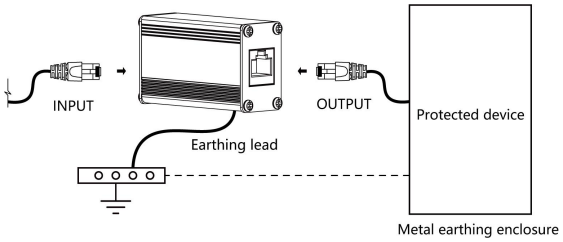
- High discharge capability, total nominal discharge current 10kA 8/20μs and Lightning current up to 1.0kA
- EMI Shielded Enclosure,19'' bay design,can be installed conveniently into standard 19-inch cabinet racks
- Earthing via a screw rod
- Compatible EN50173 , ISO/IEC 1180

Part No.		D-48/RJ45-24P-POE
In accordance with		UL497b, IEEE 802.3at/af/bt, EN50173 Category 6,IEC/EN 61643-21
IEC/EN category		D1/C1/C2/C3
Ports		24-PORT
Nominal voltage (DC)	Un	48V
Max. continuous operating voltage (DC)	Uc	60V
C2 Nominal discharge current (8/20μs)	In	2.5kA
C2 Total Nominal discharge current (8/20μs)	In	10kA
D1 Lightning impulse current (10/350μs)	Iimp	1kA
Nominal current	I_L	1A
Voltage protection level (V)	@C2 (8/20μs) Up	150(L-L); 400(L-G)
	@C3 (1KV/μs) Up	110(L-L); 500(L-G)
Insertion loss		≤3 dB
Frequency range, max.	fG	250 MHz
Transmission speed		1000Mbps
Response time		≤1ns
Technology		Two-stage protection circuit, GDT/TVS technology
Transmission standards		10BaseT/ 100BaseT/1000BaseT /1000BaseT/PoE+/PoE++
Pinning		1/2, 3/6, 4/5, 7/8 for data; 1&2/ 3&6,4&5/ 7&8 for PoE
Location		Indoor
Degree of protection		IP20
Mounting		19'' cabinet rack
Earthing		Screw rod
Enclosure material		Metal
Type of connection IN/OUT		RJ45 sockets (shielded)
Dimensions		490 x101x 27 mm
Operating temperature range		-40°C ~ +80°C
Approvals, Certifications		UL,CE

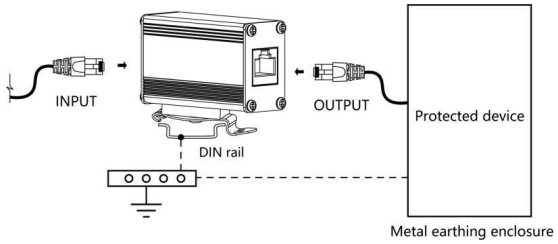
Installation Instructions

- This unit is connected in series to the protected circuit/equipment
- The units are frequently installed at both ends of the line,the Output terminal should be connected to the protected equipment.
- Place the unit as close as possible to the piece of equipment that is being protected.
- For proper operation, all surge devices rely upon a good earth connection. Earthing of the unit can be via a DIN/grounding wire /screw rod.
- Earth connections from the ground wire to earth link MUST be as short as possible (should be less than 50cm) and have a cross-sectional area of at least 2.5 mm^2(or follow local codes).
- There should be some clearance between power lines and data lines .
- A common cable duct must be subdivided with metal partitions.

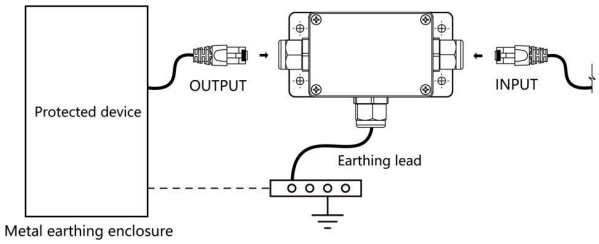
- D-xx/RJ45 connection (Earth via grounding wire)



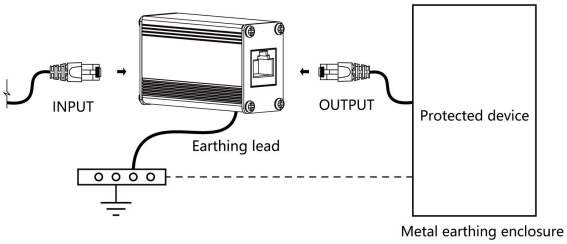
- D-xx/RJ45 connection (Earth on DIN Rail)



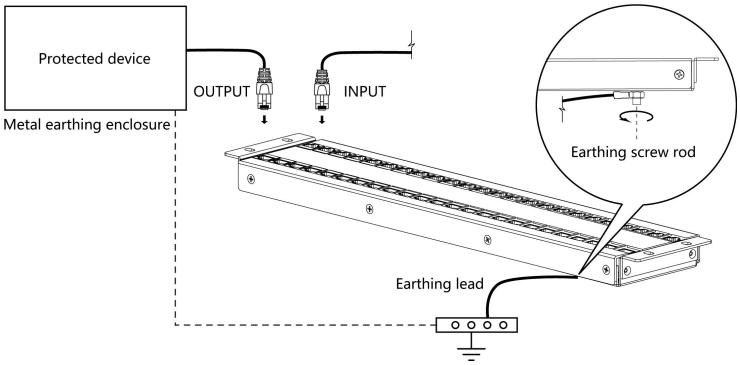
- D-xxP/RJ45 connection (Earth via grounding wire)



- D-xx/RJ45B connection(Earth via screw rod)

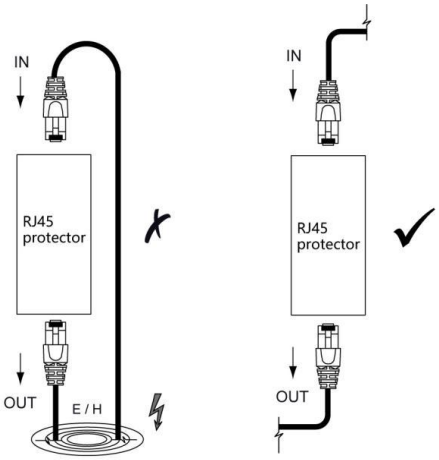


- D-xx/RJ45-24P connection(Earth via screw rod)



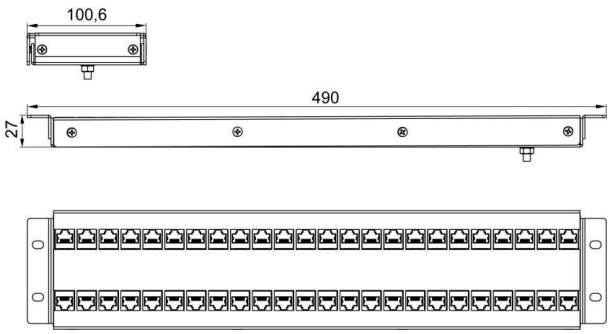
RJ45 patch cable routing

- Ensure that protected and unprotected lines are routed separately.

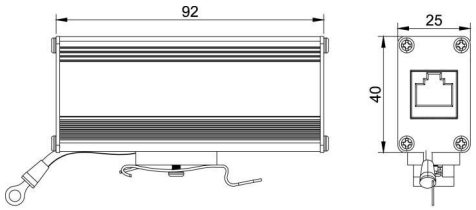


Dimension (units are in mm)

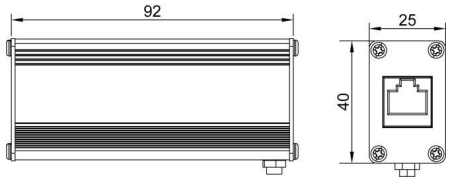
- D-xx/RJ45-24P Dimension



- D-xx/RJ45 Dimension



- D-xx/RJ45B Dimension



- D-xxP/RJ45 Dimension