

# RJF RB

Ethernet connection system for harsh environment – Industrial Ethernet



IDC Receptacle  
CAT 6



PCB Receptacle

RJFRB allows you to use an Ethernet Class D / Cat 5e and Class E / Cat 6 connection for 10 BaseT, 100 BaseTX or 1000 BaseT networks in harsh environments.  
With the patented RJStop® system you can use a standard RJ45 cordset in a protective **composite** plug which will protect it from shocks, dust and fluids.  
**No hazardous on-field cabling and grounding!**

### Main characteristics

- Sealed against fluids and dust (IP68)
- Shock, vibration and traction resistant
- No cabling operation in field, no tools required
- **Reverse bayonet coupling**
- RJ45 cordset retention in the plug: 70 N in the axis
- Mating cycles: 500 min
- Compatible with cable diameter from 5,5 mm [0.216 in] to 7 mm [0.275 in]

### Environmental protection

- Sealing: IP68
- Salt spray > 1000 h
- Fire retardant / Low smoke: UL94 V0 and NFF 16102, DIN 5510-2
- Thermal shock: 5 cycles at - 40°C / +100°C
- Operating temperature: - 40°C / +85°C

### Data transmission

10 BaseT, 100 BaseTX and 1000 BaseT networks  
Cat 5e per TIA/EIA 568B and ClassD per ISO/IEC 11801  
Cat6 per TIA/EIA 568B and ClassE per ISO/IEC 11801

### Applications

- Telecom equipments
- Video control
- Robotics
- Industrial process control
- CNC machines
- Special machines
- Motion control

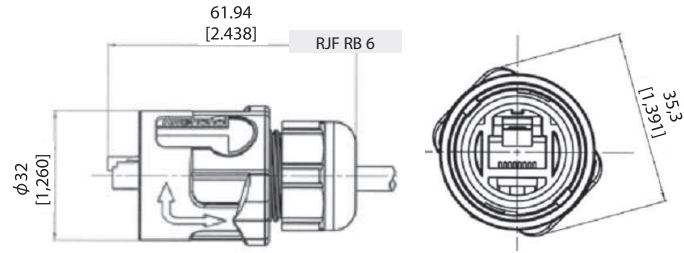
### Part number code

	RJF RB	7	1RA
<b>Shell type</b>			
<b>6:</b> composite reverse bayonet plug, plastic gland			
<b>7:</b> composite jam nut receptacle			
<b>Back terminations (for receptacles only)</b>			
<b>1:</b> female RJ45			
<b>1RA:</b> right angle female RJ45			
<b>2:</b> RJ45 Cordset			
<b>3U:</b> IDC cat6 - unshielded			
<b>3F:</b> IDC cat6 - partial shielding			
<b>3S:</b> IDC cat6 - 100% shielded			
<b>5:</b> straight PCB			
<b>Cordset length (for receptacles with "2" back termination only)</b>			
<b>03 100BTX:</b> 0.3m [11.81 inches]			
<b>05 100BTX:</b> 0.5m [19.68 inches]			
<b>10 100BTX:</b> 1m [39.37 inches]			
<b>15 100BTX:</b> 1.5m [59.05 inches]			
<b>Remark: cabling configuration → 100 BTX = 568B (Ethernet specification)</b>			

- Examples:
- Plug: RJF RB 6
  - Receptacle, female RJ45 Back termination: RJF RB 71
  - Receptacle, right angle female RJ45 back termination: RJF RB 71RA
  - Receptacle, 1,5m [59.05"] RJ45 cordset termination: RJF RB 72 15 100BTX

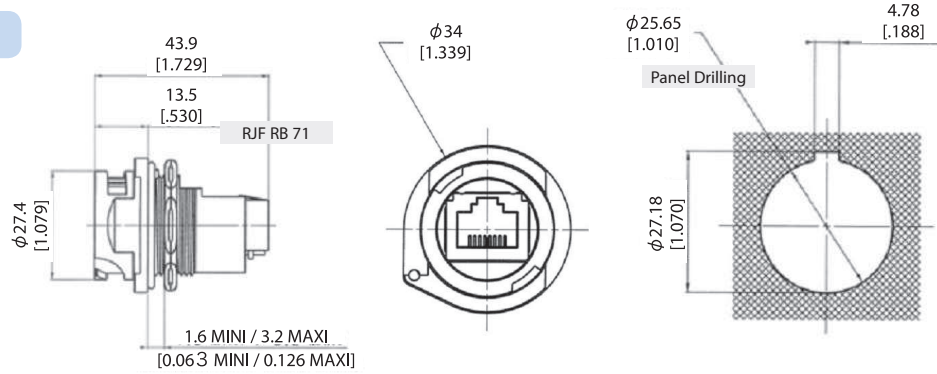
## Plug

- Type 6 shell with plastic gland

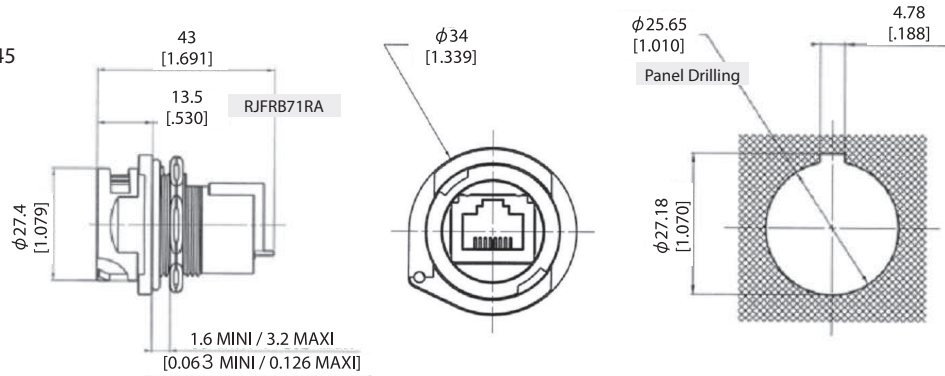


## Receptacles

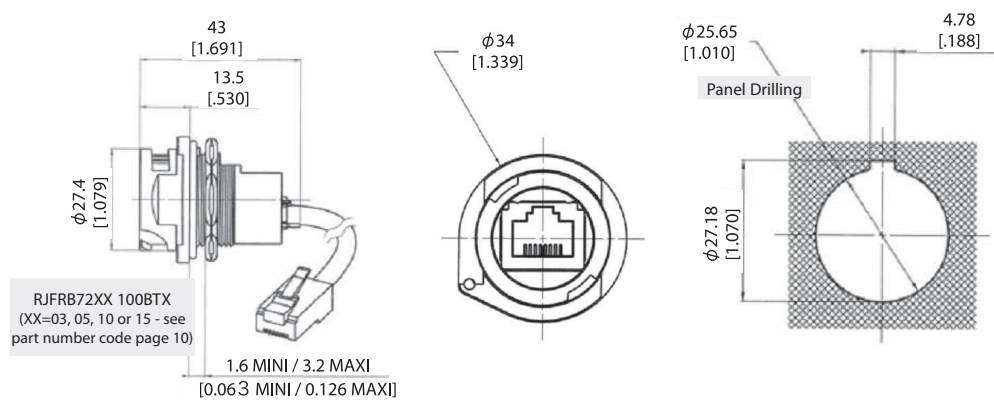
- Type 1: female RJ45 (front mounting)



- Type 1RA: right angle female RJ45 (front mounting)



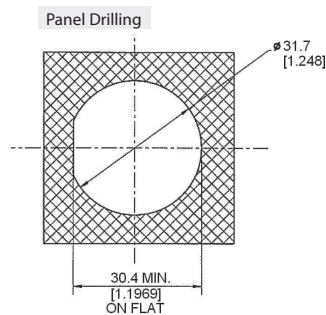
- Type 2: RJ45 cordset (front mounting)



- Type 3: IDC CAT 6 termination (rear mounting)



Unshielded: RJF RB 73U  
Partial shielding RJF RB 73F

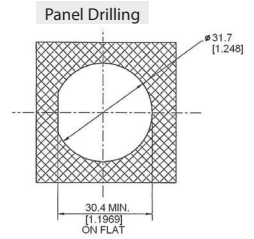
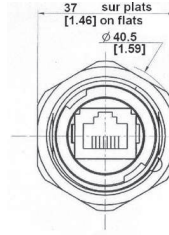
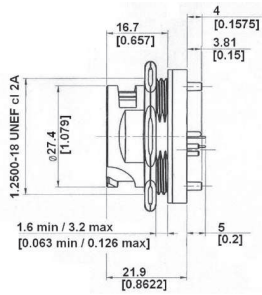


Shielded: RJFRB73S

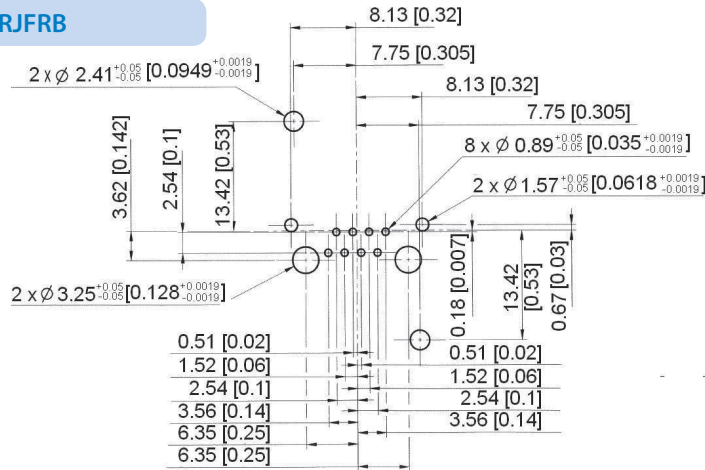
■ Straight PCB termination receptacle:  
(rear mounting)



Part number: RJF RB 75

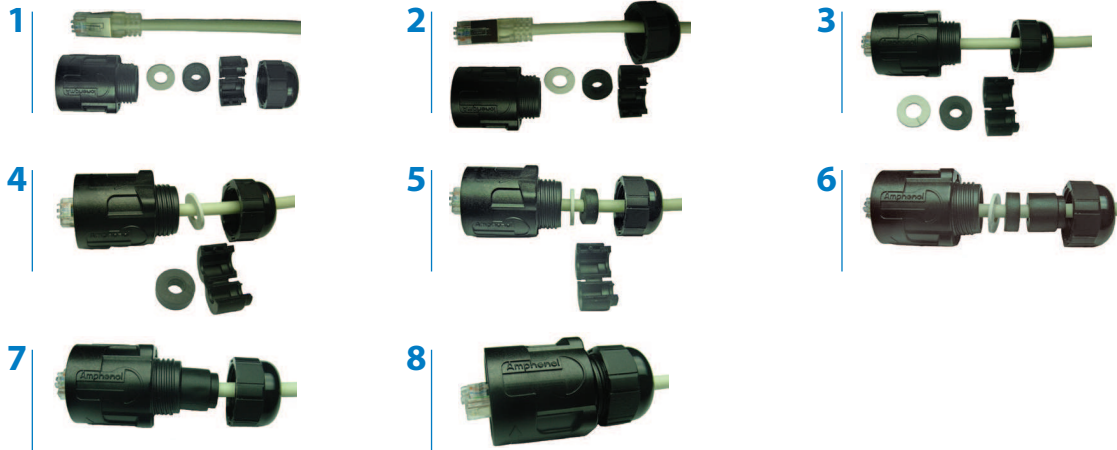


PCB drilling RJFRB



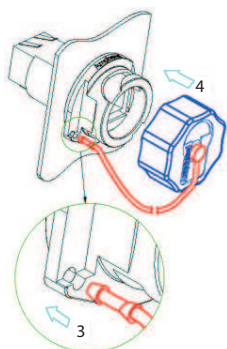
**IMPORTANT NOTE**  
The customer's PCB design will determine the receptacle category.

Assembly instructions

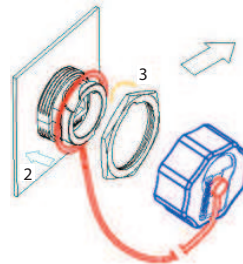


Accessories

■ IP68 Dust caps



RJF RB C7  
Cap for receptacles RJFRB71 / 71RA / 72xxx



RJF RB C75  
Cap for receptacles RJFRB75 and RJFRB73x