

# 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

| Series                                                          | RJF RB                                        | 7 | 1RA |
|-----------------------------------------------------------------|-----------------------------------------------|---|-----|
| RJF RB                                                          |                                               |   |     |
| Shell Type                                                      |                                               |   |     |
| 6:                                                              | Composite reverse bayonet Plug, Plastic Gland |   |     |
| 7:                                                              | Composite jam nut Receptacle                  |   |     |
| Back Terminations (For Receptacles only)                        |                                               |   |     |
| 1:                                                              | Female RJ45                                   |   |     |
| 1RA:                                                            | Right angle female RJ45                       |   |     |
| 2:                                                              | RJ45 Cordset                                  |   |     |
| 3U:                                                             | IDC cat6 - unshielded                         |   |     |
| 3F:                                                             | IDC cat6 - partial shielding                  |   |     |
| 3S:                                                             | IDC cat6 - 100% shielded                      |   |     |
| 5:                                                              | Straight PCB                                  |   |     |
| Cordset Length (For Receptacles with "2" back termination only) |                                               |   |     |
| 03 100BTX:                                                      | 0.3m [11.81 inches]                           |   |     |
| 05 100BTX:                                                      | 0.5m [19.68 inches]                           |   |     |
| 10 100BTX:                                                      | 1m [39.37 inches]                             |   |     |
| 15 100BTX:                                                      | 1.5m [59.05 inches]                           |   |     |

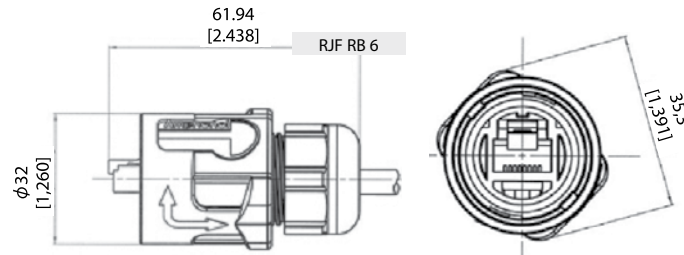
**Remark: Cabling configuration:** 100 BTX = 568B (Ethernet specification)

**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

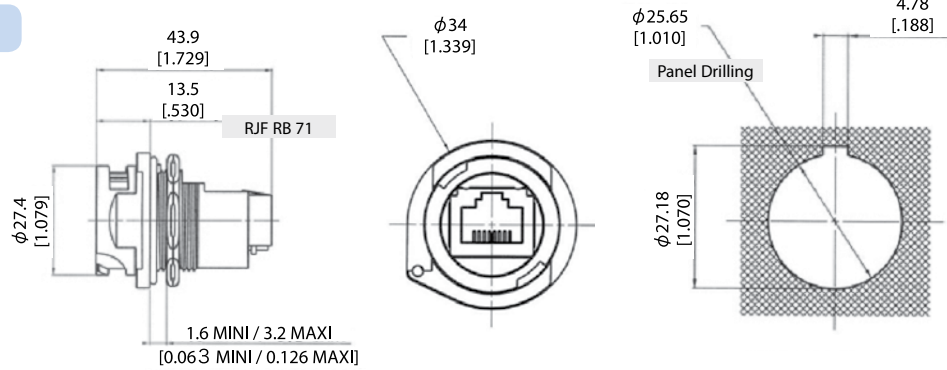
## Plug

### ■ Type 6 Shell with Plastic Gland

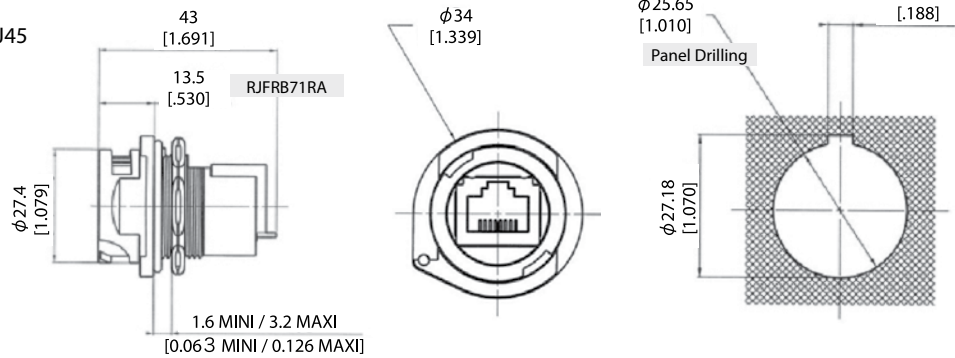


## Receptacles

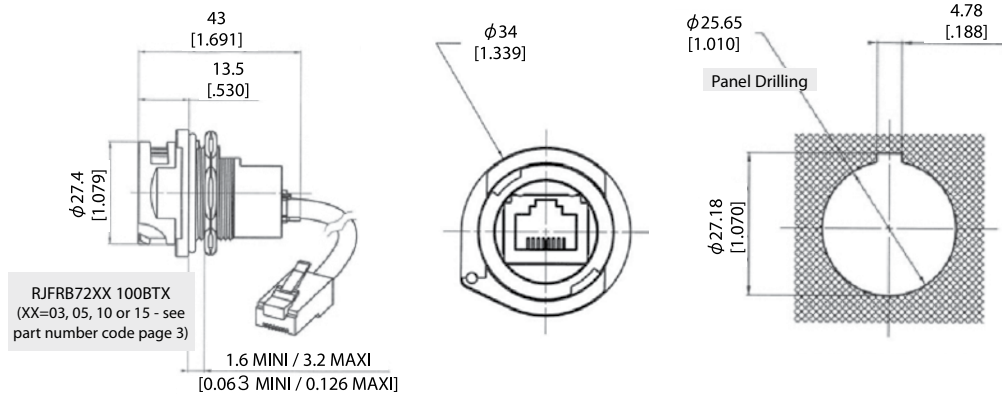
### ■ Type 1: Female RJ45 (front mounting)



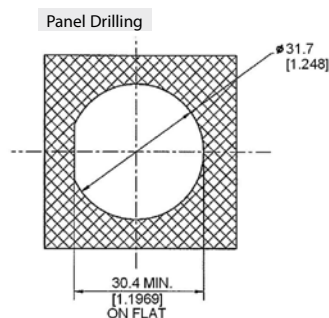
### ■ Type 1RA: Right Angle Female RJ45 (front mounting)



### ■ Type 2: RJ45 Cordset (front mounting)



### ■ Type 3: IDC CAT 6 termination (rear mounting)



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

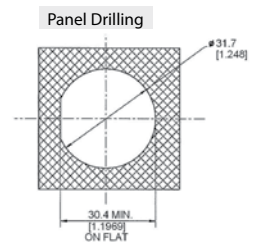
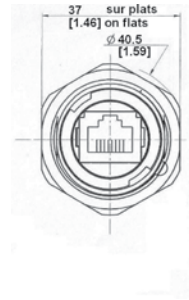
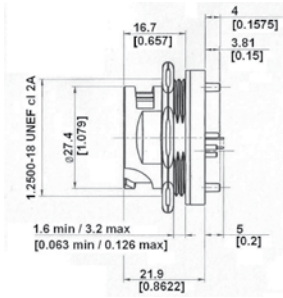


Shielded: RJFRB73S

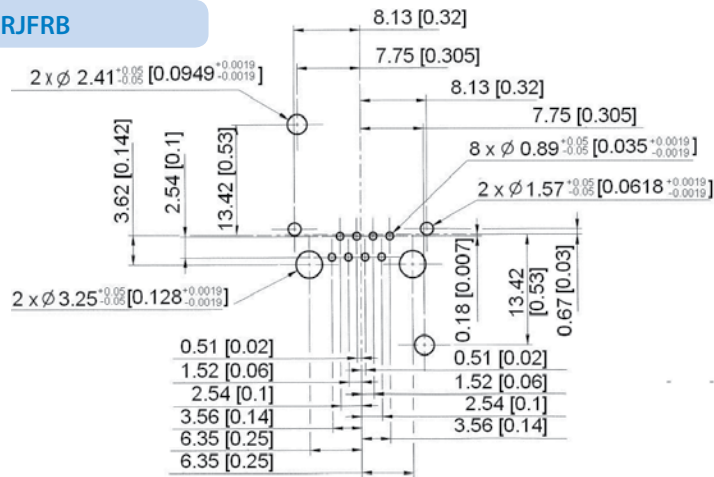
■ Straight PCB termination receptacle:  
(rear mounting)



Part number: RJF RB 75



PCB Drilling RJFRB



**IMPORTANT NOTE**

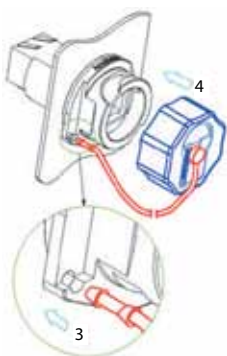
The customer's PCB design will determine the receptacle category.

Assembly Instructions



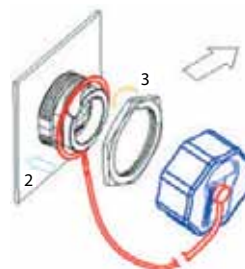
Accessories

■ IP68 Dust Caps



RJF RB C7

Cap for receptacles RJFRB71 / 71RA / 72xxx



RJF RB C75

Cap for receptacles RJFRB75 and RJFRB73x