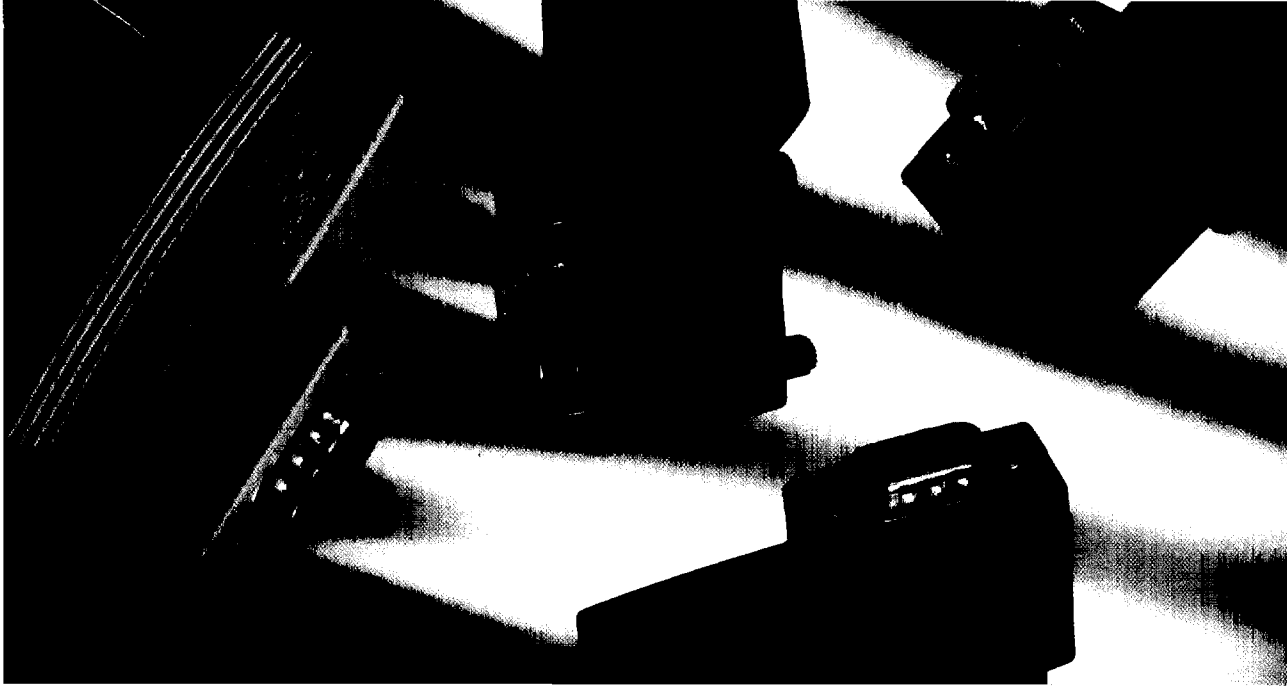


ERbic®

ERNI

Bus Interface Connector System PROFIBUS, CAN-Bus, Interbus-S and Bitbus



Introduction

The ERbic® line of bus interface connectors are versatile, compact and easy to service. They are available for PROFIBUS, CAN-bus, Interbus-S and Bitbus interface systems. This versatile interface system features an integral grounding metal strain relief in a backshell that is built around the universal 9-pin D-Subminiature connector – making this a compact interface system.

The ERbic® features the bus configuration name (i.e. CAN, PROFIBUS, etc.) molded-in on the color-coded plastic backshell housing. The connector's color coded backshell housing also distinguishes between the specific bus node and termination versions (for example: grey for PROFIBUS node and yellow for PROFIBUS termination). ERbic® termination connectors feature integral termination resistors for the appropriate bus termination.

The CAN-Bus and PROFIBUS ERbic® node connectors are also available with an additional D-Subminiature connector, allowing continuous bus operation during servicing/programming. In addition, this second connector permits the input and the output signals to be bridged.

To facilitate wiring termination, the ERbic® offers PCB mounted terminal blocks (screw-clamp) and a choice of vertical or horizontal cable entry. Finally, EMI/RFI shielding protection is available via optional shielding on the backshell's inner side.

The ERNI Advantage

- Off-the-shelf interface connectors for PROFIBUS, CAN-Bus, Interbus-S and Bitbus (other/custom bus connectors available upon request)
- Uniform bus connector design (color-coded) for systems integrating different bus systems
- CAN-Bus and PROFIBUS node connectors offer secondary D-Subminiature connector for servicing/programming
- ERbic® offers integrated resistors for appropriate bus termination
- Node connectors for PROFIBUS, CAN-Bus and Bitbus In/Out will keep bus operational if node is disconnected
- PROFIBUS version with integrated SMT inductances for 12 MBit/s data transmission rate
- Color-coding of individual termination and node bus type for easy identification
- ESD protection due to fully insulated housing
- EMI/RFI shielding available upon request
- Horizontal or vertical cable entry
- All-metal cable strain relief grounded to D-Sub bezel
- Standard #4/40 UNC universal D-subminiature knurled, plastic, thumbscrews with slotted head ensure secure connector attachment
- Reversed D-Sub versions available

ERbic® Bus Interface Connector System

Electrical And Mechanical Characteristics

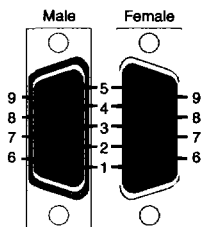
Interface Connector <i>(includes connectors for servicing/programming options - see table opposite page)</i>	9-pin D-Subminiature <i>(see configuration table below for different Bus systems)</i>
Cable I/O	2 horizontal or 2 vertical outlets (1 outlet may be sealed with blind plate)
Cable Diameter	Min. 0.177" (4.5 mm) Max. 0.315" (8.0 mm)
Cable Termination	PCB mounted screw-clamp terminal block
Data Transmission Rate	Up to 12 MBit/s (for PROFIBUS)
Operating Temperature Range	Min. -4°F (-20°C) Max. 158°F (70°C)
Permissible Humidity	Max. 75% at 77°F (25°C)
Degree of Protection	IP40
Dimensions <i>(refer to drawings below for additional dimensions)</i>	2.54" x 1.87" x 0.63" (64.6 mm x 47.5 mm x 16.0 mm)
Backshell Material	Thermoplastic, UL 94V-1
D-Subminiature Screw	#4/40 UNC, knurled and slotted

Pin Configurations For The Different Bus Systems

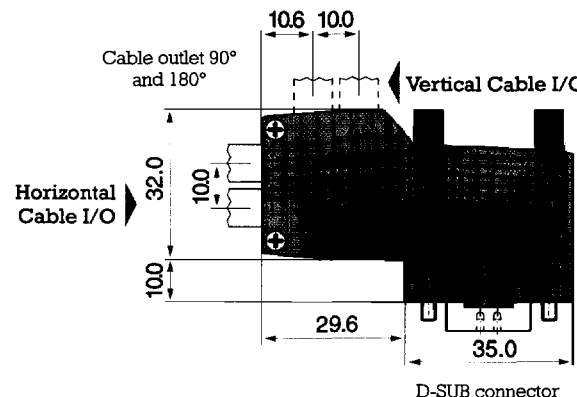
Pin No. <i>(refer to illustration below)</i>	PROFIBUS		CAN-Bus		Interbus-S		Bitbus	
	Male	Female	Male	Female	Male/Female	Male In/Out	Male In/Out	Male In/Out
	Signal	Signal	Connected with	Signal	Signal	Signal	Signal	Signal
1	-	-	-	-	DO	DO	DO	12V
2	-	-	CAN-L	-	DI	DI	DI	GND
3	RxD/TxD-P	DATA	CAN-GND	-	COM	COM	COM	DATA
4	-	-	-	-	-	-	-	CLK/RTS
5	GND	GND	-	9	-	-	-	-
6	+5V	-	V+GND	-	DO	DO	DO	12V
7	-	-	CNA-H	-	DI	DI	DI	GND
8	RxD/TxD-N	DATA	-	-	-	-	-	DATA
9	-	-	V+	-	-	-	-	CLK/RTS

Dimensions

(measurements in mm)



Pin number schematic for above table
(reversed versions available)

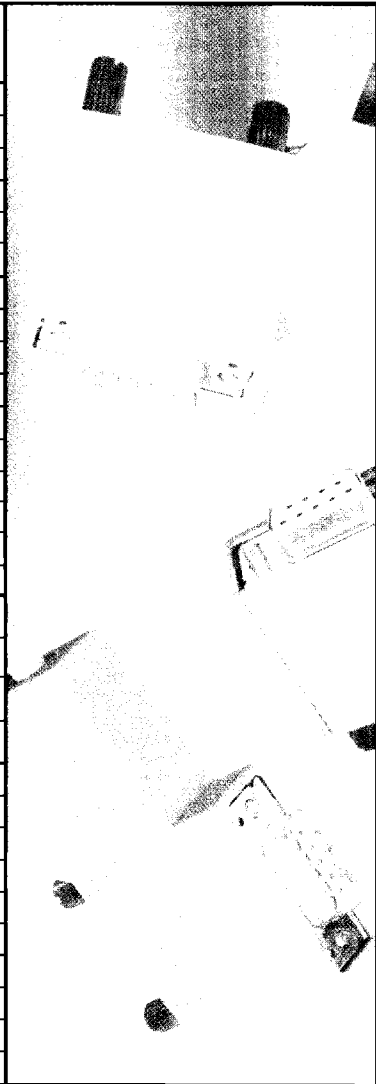


ERbic® Bus Interface Connector System



Ordering Information

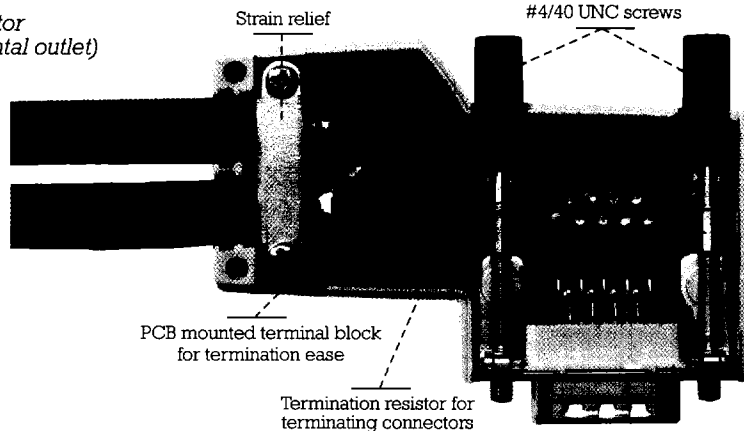
Bus Type	ERbic® Type	Color	Cable	9-pin D-Sub	Part Number
PROFIBUS <small>(Reversed Available)</small>	Node	Grey	Horizontal	Male	103648
			Vertical		103658
	Node for service/programming	Grey	Horizontal	Male (2x)	103663
			Vertical		on request
Termination	Yellow	Horizontal	Male	103649	
		Vertical		103659	
CAN-Bus	Node	Black	Horizontal	Female	103668
			Vertical		103669
	Node with capacitor	Black	Horizontal	Female	103642
			Vertical		103652
	Node for service/programming	Black	Horizontal	Female (2x)	103662
			Vertical		on request
	Termination	Green	Horizontal	Female	103643
			Vertical		103653
Termination with capacitor	Green	Horizontal	Female	103644	
		Vertical		103654	
Interbus-S <small>(Reversed Available)</small>	-	Red	Horizontal	Female	103650
				Male	103651
	-	Red	Vertical	Female	103660
				Male	103661
Bitbus	Node	Light Grey	Horizontal	Male	103646
			Vertical		103656
	Node	Light Grey	Horizontal	Female	103645
			Vertical		103655
	Node In/Out	Light Grey	Horizontal	Male	104089
			Vertical		104131
	Termination	Orange	Horizontal	Male	103647
			Vertical		103657
Termination In/Out	Orange	Horizontal	Male	104090	
		Vertical		104132	



Packaging: One unit in box with enclosed assembly instructions.

ERbic® With Two Versions For Cable Outlet: Horizontal Or Vertical

(PROFIBUS node connector shown here with horizontal outlet)



ERNI Manufactures A Wide Range Of World-class Quality Interconnection Products

ERNI Components – Beyond Customer Satisfaction

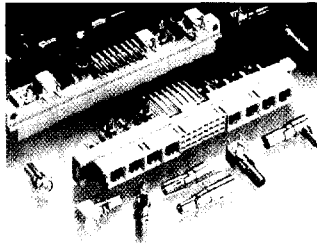
For more than 40 years, ERNI has been meeting and exceeding customer expectations worldwide through engineering excellence and product innovation, flexible delivery programs such as just-in-time and ship-to-stock, industry leading quality recognized by awards from around the world, and some of the best talent in the business. Plus a commitment to identifying and designing products and services that meet our customers' needs – today and tomorrow.

With manufacturing operations in five countries and a distribution network spanning the globe, ERNI is strategically positioned to serve the growing electronics industry needs into the 21st century. For technical assistance or ordering information, call your local representative or our Customer Service Department at (804) 530-5012.

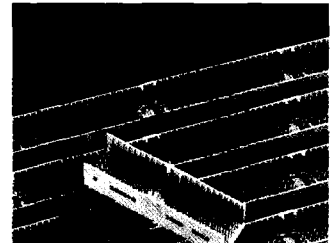
- DIN 41612 connectors in pressfit, thru-hole and SMT.
- High density DIN connectors up to 160 pins.
- Signal, power, RF and fiber optic M Series connectors.
- SMC .050" (1.27 mm) center-line connectors in SMT and thru-hole.
- Edgecard connectors including .050" (1.27 mm) center and SMT.
- D-sub pressfit connectors.
- Right-angle pressfit DIN connectors.
- 64 and 96 IDC ribbon cable DIN connectors.

- ERnet® 2mm Hard Metric connectors.
- ½ and ⅓ DIN Series.
- MIL C-55302 connectors.
- DIN crimp snap-in connectors.
- Eurocard center connectors.
- Pressfit .025" (.635 mm) square post headers.
- LDG series of DIN rail mountable miniature enclosures.
- DIN cable housings and strain reliefs.
- ERbic® Bus Interface Connector System.
- Plus, Custom and Special Designs.

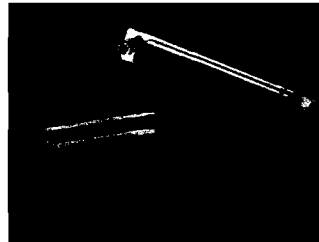
ERNI



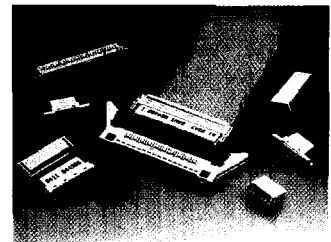
M SERIES mixed configuration DIN connectors



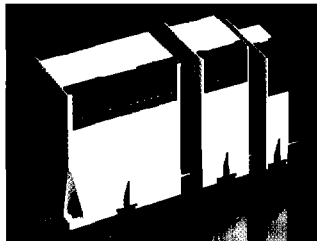
ERnet® 2mm Hard Metric connectors



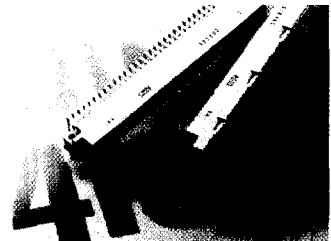
D SUB PRESSFIT connectors



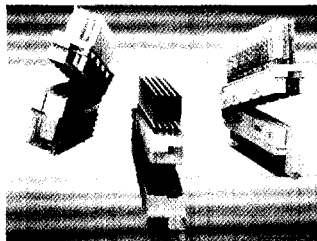
SMC .050" (1.27 mm) center-line connectors



LDG-A miniature enclosures



Wide range of DIN 41612 connectors



High density DIN connectors



ERbic® Bus Interface Connector System

EXPECT IT FROM ERNI

See Our Web Page: • <http://www.erni.com>

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