

## Computer System Interconnections

### Russellstoll Line Selections for Indoor and Outdoor Applications

#### DuraGard® to 4P4W 20A through 60A

The toughest construction in thermoplastic safety, durability and performance by design, in UL 94-V0 flame-rated DuraV® material. With DurOring sealed pins, sleeves and interiors are watertight even unmated. 30A and 50A unique circuit breaker interlock line in DuraV® are the best choices in all standard voltage polarization options through 600VAC (Interlock to 480VAC).

#### Angle Type to 3P4W 60A use

The original 60A main power computer system connector, Angle Type plugs are also available in specialty UL 94-V0 material (aluminum connectors). As part of the MRO usage 30–200A Angle Type Line, the 60A connector is still commonly used today. Other lines such as MaxGard® should be used for changeout when possible.

#### Spec Grade to 4P4W 20A and 30A

Otherwise similar to the DuraGard®, Spec Grade refers to blue Lexan plugs only made to the same original FS/FD™ design standards as DuraGard®, in UL 94-5VA flame-rated material. Spec Grade features DurOring sealed pins, and sleeves and interiors are watertight even unmated. Spec Grade devices have been superceded by DuraGard® ratings for OEM use.

#### MaxGard® 30A to 4P5W

For DP/Computer System Applications, a special MaxGard® polarization reflects DP installations. Special thermoplastic housing and back handle are supplied for these applications. Use wherever 4P5W installations are required.

#### FS/FD™ to 3P4W 15A through 30A

The original 15/20/30A computer system connectors, the FS/FD™ line in aluminum continues in MRO usage. Many installations can also mate directly or convert to DuraGard® units. Our large installed base can be supported with any construction and product options. Convert to DuraGard® when possible.

#### UniGard® to 4P5W 20A to 100A

Thermoplastic International standard 309-2 or CEE-17 type connector lines usage is growing, especially in OEM, export and standard performance applications. The IP67 style is watertight when mated and directly interchangeable with other manufacturers. International designations shadow U.S. ratings: 20/16A, 30/32A, 60/63A and 100/125A. IP67 devices have screw collars or flap/screw covers, with catalog number "W" suffixes.

## Computer System Interconnections

More than 30 years ago, Russellstoll® offered the first pin and sleeve connectors that met the demanding needs of the Data Processing industry, and we've been leading the way ever since.

The expanding technology of the Computer System Industry is creating more sophisticated applications, which require safe, reliable connections that exceed the tough demands of today's applications. Russellstoll's commitment to excellence offers you that and more... Safety, Durability, Reliability and Performance on our complete line of plugs, receptacles and connectors.

Pin and sleeve power connections are chosen for Computer System interconnections because of the absolute performance required in today's mainframe and peripheral installation. Pin and sleeve connections have been proven to be more reliable in service than any bladed device. Data centers stay in service because Russellstoll® keeps them connected.

### Usage

- Any application where electrical connections must be protected from humidity, water, condensation and/or dust entering the wiring compartment and contacts
- Cable-to-connector sealing and device locking designs are critical
- Thermoplastic connectors preferred: some with aluminum conduit grounded shell
- Connection integrity needs are absolute; data center systems cannot go down
- Underfloor data center applications and wall-mount installations

### Typical Application Groups



- Telephony Equipment
- Switching Rack Systems
- Power Distribution Units
- Test and Laboratory Equipment
- Mainframes from 30–270A
- Peripherals
- Data Storage Devices
- Military or Critical Power Supplies

## Computer System Interconnections

### Quick Selection Chart



SERIES*	FS/FD™ AND ANGLE TYPE	SPEC GRADE	DURAGARD®	UNIGARD®
Available Ranges (Amp)	20, 30 and 60*	20 and 30	20, 30, 50 and 60	30 (IEC)
Safety Grade™ UL Flame-Rated High-Temp Thermoplastic	UL 94-V0 Aluminum	UL94-5VA	UL94-V0	UL94-V0
Easy-to-Wire Rear-Loaded Interiors	—	✓	✓	✓
Single Rated Safety Voltage Polarizations	20A	20A 30A	20A 30A 50A 60A	30A (9h-IEC)
Waterproof O-Ring Seal (pins, sleeves and interiors)	—	✓	✓	✓
2nd Internal Ground Lug (cable shielding alt.)	—	✓	(optional)	—
External Cable Clamp	✓	—	✓	✓
External Gland Nut Lock	—	—	✓	✓

\* 60A devices are specially designed versions of Russellstoll Angle Type (7328DP).



**TüV** For TüV listed devices, contact Technical Services.

## Computer System Interconnections

Power & High Voltage — Russellstoll® Pin & Sleeve Power Connectors

### Plugs



		VOLTAGE	PLUG SAFETY POLARIZATION	STD. CABLE BUSHING**	FS/FD™ ALUMINUM•	SPEC GRADE UL 94-5VA	SEE BUSHING CHART DURAGARD® UL 94-V0*
2P/3W	15/20 Amp	Up to 600VAC/250VDC		.625" .455" .405"	3720	3720DP (.375) 3720DP/0455 3720DP/0405	9P23U0
		125VAC		.625" .455" .405"	3720U1	3720DPU1 (.375) 3720DPU1/0455 3720DPU1/0405	9P23U1
		250VAC		.625" .455" .405"	3720U2	3720DPU2 (.375) 3720DPU2/0455 3720DPU2/0405	9P23U2
	30 Amp	Up to 600VAC		.760" .700" .625"	3750	3750DP	9P33U0
	50 Amp	Up to 600VAC		1.000" .925" .750"	—	—	9P53U0
	60 Amp	125VAC		1.000"	—	—	9P63U1
		250VAC		1.000"	—	—	9P63U2
3P/4W	20 Amp	Up to 600VAC/250VDC		.688" .625" .606"	3730	— 3730DP/0625 3730DP	— 9P24U0 —
	30 Amp	Up to 600VAC		1.100" 1.000" .875" .760"	3760	3760DPG/1100 3760PDG/1000 3760PDG/0875 3760DPG0760	— 9P34U0♦ — —
	50 Amp	Up to 600VAC/250VDC		1.000" .925" .750"	—	—	9P54U0
	60 Amp	125/250VAC		1.000"	—	—	9P64U1
		250 3Ø VAC		1.000"	—	—	9P64U2
	60 Amp	Special Angle Type Up to 600VAC	 Angle Type	1.375" 1.188" 1.020" .750"	7328-78^	— — — —	7328DP/1375 — 7328DP† 7328DP/0750
4P/5W	3ØY 120/208 VAC	 MaxGard	.775"	—	—	DS3516MPDP+	

**Notes:** All 20A devices are compatible. 30A FS/FD™ receptacles and connectors will accept all styles of mating plugs.

\* For a more complete listing of UL 94-V0 rated devices, consult DuraGard® information on pages H-357–H-375.

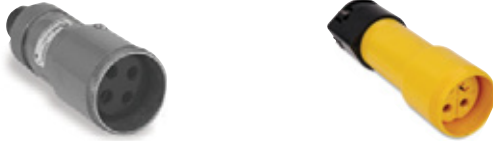
\*\* Consult your Thomas & Betts representative for additional cable bushing sizes not listed.

† 7328 DP series thermoplastic can replace 7328 metallic.

• 30A FS/FD™ aluminum plugs may not directly exchange with DuraGard® plugs. FS/FD metal mating devices must be used.

## Computer System Interconnections

### Connectors



### Receptacles



FS/FD™ ALUMINUM	DURAGARD® UL94-V0*	FS/FD™ ALUMINUM•	DURAGARD® UL94-V0*
3913	9C23U0	3743	9R23U0W ▼
3913U1	9C23U1	3743U1	9R23U1W ▼
3913U2	9C23U2	3743U2	9R23U2W ▼
3933 ■	— 9C33U0 ■ —	3753 ■	9R33U0W ▼ ■
—	9C53U0	—	9R53U0W ●
—	9C63U1	—	9R63U1
—	9C63U2	—	9R63U2
3914	— 9C24U0 —	3744	9R24U0W ▼
3934 ■	— 9C34U0 ◆ ■ — —	3754 ■	9R34U0W ▼ ■
—	9C54U0	—	9R54U0W ▼
—	9C64U1	—	9R64U1
—	9C64U2	—	9R64U2
7428-78^	— — — —	—	SCF7324-78
DS3516FP+	—	DS3516FR+	—

◆ Standard 0.750 Bushing.

■ DuraGard® receptacles and connectors 30/50A will accept only DuraGard® or Spec Grade. FS/FD™ Aluminum 30A plugs must be used with FS/FD™ metal connectors or receptacles.

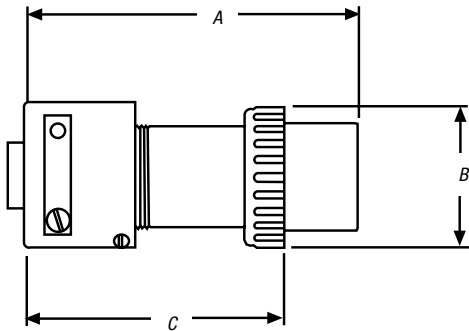
^ Angle Type Line

+ MaxGard® Line — for further information, see **pages H-296-H-343**.

▼ Requires 3711A conduit FD box or 3781A DSFD Box (50A).

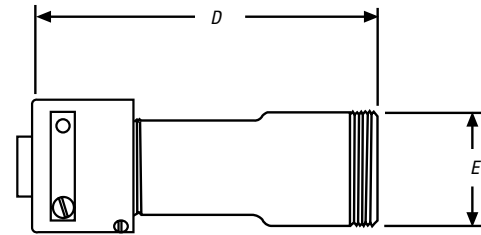
## Computer System Interconnections

### Plugs



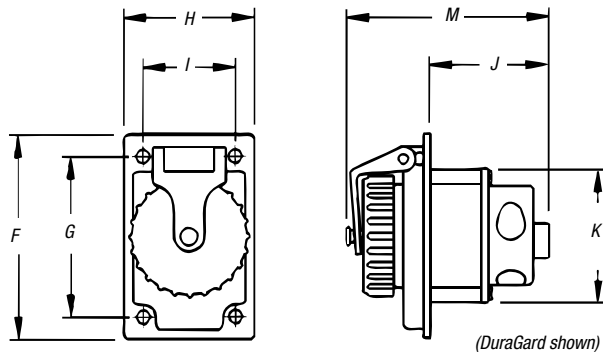
RECEPTACLE SIZE		A	B	C
FS/FD™	20 Amp	3 5/8"	2"	2 1/4"
	30 Amp	3 3/4"	2 1/4"	2 3/8"
Angle Type DP (Thermoplastic)	60 Amp	8"	2 1/2"	3 3/4"
Spec Grade DuraGard®	20 Amp	3 1/4"	2 1/8"	2 1/8"
	30 Amp	5"	2 3/8"	3 3/8"
	50 Amp	5 1/4"	2 3/8"	3 3/8"

### Connectors



RECEPTACLE SIZE		D	E
FS/FD™	20 Amp	4"	1 7/8"
	30 Amp	4 5/8"	2 1/8"
Angle Type (Metallic)	60 Amp	9 1/2"	3 1/2"
Spec Grade DuraGard®	20 Amp	4 1/8"	1 7/8"
	30 Amp	5 1/8"	2 1/8"
	50 Amp	5 1/8"	2 1/8"

### Receptacles



RECEPTACLE SIZE		F	G	H	I	J	K	M
FS/FD™	20 Amp	4 1/8"	3 1/4"	2 5/8"	1 7/8"	1 1/8"	2 1/4"	2 1/2"
	30 Amp	4 1/8"	3 1/4"	2 5/8"	1 7/8"	1 3/8"	2 3/4"	2 5/8"
Angle Type (Metallic)	60 Amp	3 1/2"	2 7/8"	3 1/2"	2 5/8"	—	2 1/2"	6"
DuraGard®	20 Amp	4 1/8"	3 1/4"	2 5/8"	1 7/8"	1 1/2"	2"	3 3/8"
	30 Amp	4 1/8"	3 1/4"	2 5/8"	1 7/8"	2 1/2"	2 3/4"	4 1/8"
	50 Amp	4 1/8"	3 1/4"	2 5/8"	1 7/8"	2 1/2"	2 3/4"	4 1/8"