

Selection Table for SCCR Power Distribution Blocks and Power Terminal Blocks

Short-Circuit Current Rated Power Distribution Blocks

Cooper Bussmann offers three distinctly different styles of short-circuit current rated power distribution blocks (PDBs) and power terminal blocks (PTBs) to match different application needs. The differences are whether the power distribution blocks are enclosed or not, and whether they are UL1953 Listed PDBs or UL1059 Recognized PTBs, which have different minimum spacing requirements. The table on this page can assist in the selection of the right series for your application requirements.

Why these are important?

Assembly short-circuit current ratings (SCCRs) are now required in the 2008 NEC® and UL 508A Listed Industrial

Control Panels. Marking the SCCR on Industrial Control Panels (NEC® 409.110), Industrial Machinery Electrical Panels (NEC® 607.3(A)), and HVAC equipment (NEC® 440.4(B)) is now required by the National Electrical Code. PDBs or PTBs not marked with a SCCR, typically are the weakest link and may limit an assembly to no more than 10kA SCCR. The PDBFS and PDB Series have increased spacing required where used in feeder circuits in equipment listed to UL508A (UL1059 PTBs must be evaluated for proper spacings). Also, for building wiring systems, the PDBFS Series and PDB Series power distribution blocks can be used to meet the new 2008 NEC® requirements in section 376.56(B) for PDBs in wireways.

Selection Table

Description	Catalog Page	UL	Enclosed	High SCCR*	Spacing** 1" Air 2" Surface	Industrial Control Panels UL 508A Branch Circuit	Industrial Control Panels UL 508A Feeder Circuit	HVAC UL 1995	Wireways NEC® 376.56(B) (Requires UL 1953)
Series PDBFS	295	UL 1953 Listed	Yes†	Yes	Yes	Yes	Yes	Yes	Yes
Series PDB	296	UL 1953 Listed	No***	Yes	Yes	Yes	Yes	Yes	Yes w/optional cover

† IP20 finger-safe under specific conditions, see datasheet 1149.

*When protected by proper fuse class with maximum ampere rating specified or less.

** See PDB Spacing Requirements for Equipment table below.

***Optional covers are available. Not IP20, but provide a safety benefit.

****No, except: Yes, if single pole units installed with proper spacings.

PDB & PTB Minimum Spacing Requirements for Equipment

UL Standard	Spacing between live parts of opposite polarity		Spacing between live parts and grounded parts or enclosure @600V
	Through air @600V	Over surface @600V	
508A Feeder Circuits	1"	2"	1"
508A Branch Circuits	3/8"	1/2"	1/2"
1995 HVAC	3/8"	1/2"	1/2"

Note: Refer to Specific UL standards for complete spacing details.



Series PDBFS



Series PDB

Series PDBFS of Power Distribution Blocks

Feature/Benefits

- Enclosed, safer installation; IP20 finger-safe under specific conditions
- High short-circuit current ratings up to 200kA: PDBs do not have to be the weak link in achieving high SCCR for an industrial control panel
- Small footprint saves panel space
- Listed to UL 1953 which has minimum spacing requirements at 600V of at least 1" through air and 2" over surface required for feeders in UL 508A Industrial Control Panels
- For 2D CAD drawings visit www.cooperbussmann.com



Electrical

- 600Vac/dc (UL 1953), 690Vac/dc (IEC)
- IP20 finger-safe under specific conditions
- Short-circuit current ratings up to 200kA, see table
- Ampacities up to 760 amps
- Cu wire range 14 AWG to 500 kcmil or 2.5 to 240 mm²

Mechanical

- DIN rail or panel mount; PDBFS330 & PDBFS504 panel mount only
- Captive termination screws; screws do not get misplaced
- Wire ready: captive termination screws shipped backed out to save time on conductor installations
- Sliding DIN rail latch for easy mounting
- Single pole, gang mountable for multiple pole applications with interlocking dovetail accessory (optional)
- Flammability, UL 94V0
- Tin-plated Al connectors suitable for Cu conductors
- Elongated hole for panel mounting; easier mounting with greater flexibility in matching up with drilled panel holes
- Part 2A1279: Interlocking dovetail pin accessory
One pin interlocks two units, two pins to interlock three units
- DIN rail end anchors required to prevent damage to block when torquing

Agency/Standards

- UL Listed 1953, Guide QPQS, File E256146
- CSA Certified, Class 6228-01, File 15364
- IEC 60947-7-1
- IEC 60529, IP20 (finger-safe) under specific wiring conditions

Series PDBFS

Electrical		Terminal Copper Conductor Capability			Short-Circuit Current Rating Data							
		Line	Load	Configuration	Conductors		Max Fuse Class & Amp**				SCCR	
Catalog Number <small>(All Single Pole)</small>	Amps	Wire Range	Wire Range	Line	Load	Line AWG or kcmil	Load AWG or kcmil	J LPJ	T JJS JJN	RK1 LPS-RK LPN-RK		RK5 FRS-R FRN-R
PDBFS204	175A	2/0 to 8 AWG 70 to 10 mm ²	2/0 to 8 AWG 70 to 10 mm ²			2/0 to 8	2/0 to 8	200	200	100	60	200kA
PDBFS220	175A	2/0 to 8 AWG 70 to 10 mm ²	4 to 14 AWG 25 to 2.5 mm ²		2/0 to 8	4 to 12	200	200	100	60	200kA	
						14	175	175	100	60	100kA	
							200	200	100	60	50kA	
PDBFS303	310A	350kcmil to 6 AWG 185 to 16 mm ²	350kcmil to 6 AWG 185 to 16 mm ²			350 to 6	350 to 6	400	400	200	100	200kA
PDBFS330	380A	500kcmil to 6 AWG 240 to 16 mm ²	2 to 14 AWG 35 to 2.5 mm ²		500 to 6	2 to 6	400	400	200	100	200kA	
						8 to 14	200	200	100	30	50kA	
							175	175	100	30	100kA	
PDBFS377	570A	300kcmil to 4 AWG 150 to 12 mm ²	4 to 14 AWG 25 to 2.5 mm ²		300	4 to 8	600	600	400	200	200kA	
						250 to 4	4	600	600	400	200	50kA
							6 to 14	200	200	100	30	50kA
PDBFS500	620A	350kcmil to 4 AWG 185 to 12 mm ²	350kcmil to 4 AWG 185 to 12 mm ²		350	350	600	600	400	200	200kA	
						300 to 4	300 to 4	600	800*	600	200	100kA
							500	500	600	800*	600	400
PDBFS504	760A	500kcmil to 6 AWG 240 to 16 mm ²	500kcmil to 6 AWG 240 to 16 mm ²		400 to 6	500	500	600	800*	600	400	200kA
						600	800*	600	600	100kA		
						600	600	400	200	100kA		

Ampacities 75°C per NEC® Table 310.16 and UL 508A Table 28.1

*Class L 800A (KRP-C 800_SP) or less fuses suitable for this particular SCCR case.

** Class G 60A (SC-60) or less or Class CC 30A (LP-CC-30, FNQ-R-30, KTK-R-30) or less are suitable for all SCCRs in this table.

Data Sheet: 1049