

$$R_{Ch} = 12.5\Omega \quad v101$$

**Info (not part of baseline)**

Review of old 802.3af presentations and modern understanding of cable properties has revealed that supporting a link section resistance of 20Ω is not required. This matches with Table 33–1 which lists an  $R_{Ch}$  of 12.5Ω for Type 3 and Type 4 PSEs. As such, some basic parameters need to be updated to reflect this.

### 145.1.3 System parameters

In Table 145–1, replace the “minimum cabling type” as follows:

From	To
Class D (ISO/IEC 11801:2002) or Category 5e (ANSI/EIA/TIA-568-B.2:2001)	Class D (ISO/IEC 11801:1995) or Category 5 (ANSI/EIA/TIA-568-A:1995)

#### 145.1.3.1 Cabling requirements

Change text in 145.1.3.1 as follows:

~~Type 3 and Type 4 operation requires Class D or better cabling as specified in ISO/IEC 11801:2002. These requirements are also met by Category 5e or better cable and components as specified in ANSI/TIA-568-C.2.~~

Type 3 and Type 4 operation requires Class D, or better, cabling as specified in ISO/IEC 11801:1995 with the additional requirement that channel DC loop resistance shall be 25 Ω or less. These requirements are also met by Class D or better cabling as specified by ISO/IEC 11801:2002, Category 5e or better cable and components as specified in ANSI/TIA-568-C.2, or Category 5 cable and components as specified in ANSI/TIA/EIA-568-A-1995.

### 145.2.7 PSE classification of PDs and mutual identification

Change Table 145–11 as follows:

PD Requested Class	Number of PSE class events	Assigned Class	$P_{Class}$	$P_{Class-2P}$
PSEs connected to a single-signature PD				
1	1	1	4 W	—
2	1	2	<del>7</del> 6.7 W	—
0, 3 to 8	1	3	<del>15.4</del> 14 W	—
4 to 8	2 or 3	4	30 W	—
5	4	5	45 W	—
6 to 8	4	6	60 W	—
7	5	7	75 W	—
8	5	8	90 W	—
PSEs connected to a dual-signature PD				
1	1, 2, or 3	1	—	4 W
2	1, 2, or 3	2	—	<del>7</del> 6.7 W
3	1, 2, or 3	3	—	<del>15.4</del> 14 W
4 or 5	1	3	—	<del>15.4</del> 14 W
4 or 5	2 or 3	4	—	30 W
5	4	5	—	45 W

NOTE 1 — ...

NOTE 2 — ...

NOTE 3 — The number of PSE class events refers to the number of class events since the most recent PD reset.

NOTE 3a — The values of  $P_{Class}$  and  $P_{Class-2P}$  are calculated for the lowest Type PSE that is able to support that power level.

**Info (not part of baseline)**

This also influences the  $V_{Port\_PD}$  parameter. In addition:

- This parameter does not yet indicate that it is per the assigned Class.
- A Type 3/4 PD cannot be assigned to Class 0, per our convention we equate that to Class 3.

### 145.3.8 PD power

Change item 1 in Table 145–28 as follows:

Item	Parameter	Symbol	Unit	Min	Max	PD Type
1	Input DC voltage per pairset <i>per the assigned Class</i>					
	Class 1	$V_{Port\_PD}$	V	<del>42.1</del> 42.8	57	3
	Class 2			<del>40.8</del> 42		3
	Class <del>0</del> ; 3			<del>37</del> 39.9		3, 4
	Class 4			42.5		3, 4
	Class 5, single-signature PD			44.3		3
	Class 5, dual-signature PD			<del>41.2</del> 41.1		4
	Class 6			42.5		3, 4
	Class 7			42.9		4
	Class 8			<del>41.2</del> 41.1		4

**Info (not part of baseline)**

This is the 17th draft for 802.3bt and we *still* have mistakes in the “PD Type” column for Table 145–28. Note that only Classes that can be demoted into need to list “3, 4”, other Classes are only for Type 3 or Type 4.

In Table 145–28, for items 10 and 11, change the PD Type column per what follows:

Assigned Class	PD Type
Single-signature	
1	⇒ 3
2	⇒ 3
3	⇒ 3, 4
4	⇒ 3, 4
5	⇒ 3
6	⇒ 3, 4
7	⇒ 4
8	⇒ 4
Dual-signature	
1	⇒ 3
2	⇒ 3
3	⇒ 3, 4
4	⇒ 3, 4
5	⇒ 4