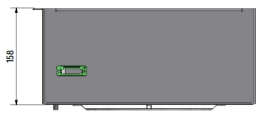
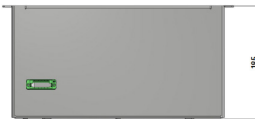
 ABB AG	DCS800 DCS800 D5 New cooling fan R2E250-RE04-10	Hardware Hint HW DCS800 3ADW000783R0101
	Date: 10.06.2021	Name: Thomas Vinz

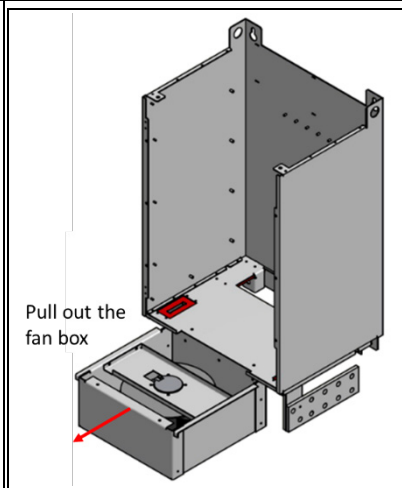
Types concerned	
	DCS800 unit size D5.

Summary	
	DCS800 unit size D5 have been equipped with the new cooling fan R2E250-RE04-10 due to ErP 2020 regulations of the EU. The type code of the concerned units has also been adapted. This document describes the adaptations.

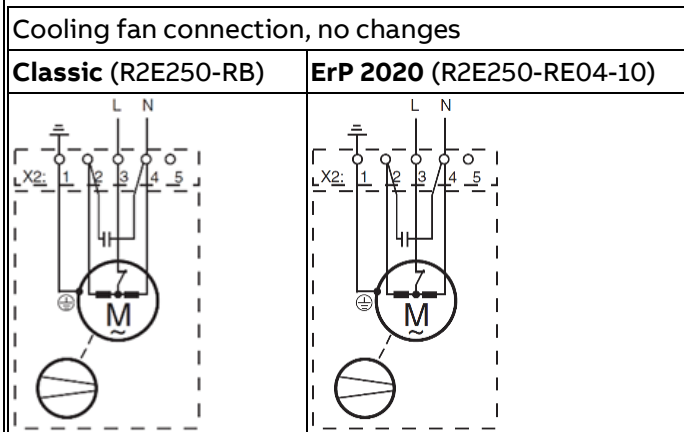
Type code			
	The drive's basic type code: DCS800-AAX-YYYY-ZZ-B		
Product family:	DCS800		
Type:	AA	= S0	Standard converter module
		= R0	Rebuild kit
		= E0	Panel solution
		= A0	Enclosed converter
Bridge type:	X	= 1	Single bridge (2-Q)
		= 2	2 anti-parallel bridges (4-Q)
Module type:	YYYY	=	Rated DC current
Rated AC voltage:	ZZ	= 04	230 V _{AC} ... 400 V _{AC}
		= 05	230 V _{AC} ... 525 V _{AC}
		= 06	270 V _{AC} ... 600 V _{AC}
		= 07	315 V _{AC} ... 690 V _{AC}
		= 08	360 V _{AC} ... 800 V _{AC}
		= 10	450 V _{AC} ... 990 V _{AC}
		= 12	540 V _{AC} ... 1200 V _{AC}
Power connection:	-	=	Standard D1 ... D6
		= L	Left side D7
		= R	Right side D7
Revision code:	B	=	Standard
		= a	Second thyristor type D5, D6
		= b	ErP compliant cooling fan D5, D6, D7 Second thyristor type D5, D6
		= c	ErP 2020 compliant cooling fan D4+ ErP 2020 compliant cooling fan D5

Cooling fan (R2E250-RE04-10)																																						
	<p>The unit size D5 is now equipped with an ErP 2020 compliant cooling fan (R2E250-RE04-10). The ErP 2020 regulations enforce a reduction of fan losses.</p> <p>The ErP 2020 compliant cooling fan is built on a backward curved impeller. This is the most energy saving design and latest technology not using an inverter. The cooling fan is equipped with a single-phase 230 V_{AC} motor, which is the most suitable voltage supply configuration all over the world.</p> <p>The fan is located in the fan box mounted under the drive. The fan box can be easily pulled out, providing the best access during installation, commission and service.</p>																																					
	<table border="1"> <tr> <td>ErP 2020 compliant cooling fan</td> <td colspan="2">R2E250-RE04-10 (3ADT754047P0001)</td> </tr> <tr> <td>ErP 2020 fan box (including fan)</td> <td colspan="2">Order number (3ADT754033R0002)</td> </tr> <tr> <td>Rated voltage [V_{AC}]</td> <td colspan="2">230; 1~</td> </tr> <tr> <td>Tolerance [%]</td> <td colspan="2">+10/-15</td> </tr> <tr> <td>Frequency [Hz]</td> <td>50</td> <td>60</td> </tr> <tr> <td>Power consumption [W]</td> <td>220</td> <td>348</td> </tr> <tr> <td>Current consumption [A]</td> <td>1.00</td> <td>1.57</td> </tr> <tr> <td>Blocking current [A]</td> <td>2.5</td> <td>2.4</td> </tr> <tr> <td>Air flow [m³/h] at working point</td> <td>800 0.9 A</td> <td>850 1.5 A</td> </tr> <tr> <td>Max. ambient temperature [°C]</td> <td>< 80</td> <td>< 50</td> </tr> <tr> <td>Useful lifetime of grease</td> <td colspan="2">approximately 40000 h at 40°C</td> </tr> <tr> <td>Protection</td> <td colspan="2">Internal connected temperature detector</td> </tr> </table>		ErP 2020 compliant cooling fan	R2E250-RE04-10 (3ADT754047P0001)		ErP 2020 fan box (including fan)	Order number (3ADT754033R0002)		Rated voltage [V _{AC}]	230; 1~		Tolerance [%]	+10/-15		Frequency [Hz]	50	60	Power consumption [W]	220	348	Current consumption [A]	1.00	1.57	Blocking current [A]	2.5	2.4	Air flow [m ³ /h] at working point	800 0.9 A	850 1.5 A	Max. ambient temperature [°C]	< 80	< 50	Useful lifetime of grease	approximately 40000 h at 40°C		Protection	Internal connected temperature detector	
ErP 2020 compliant cooling fan	R2E250-RE04-10 (3ADT754047P0001)																																					
ErP 2020 fan box (including fan)	Order number (3ADT754033R0002)																																					
Rated voltage [V _{AC}]	230; 1~																																					
Tolerance [%]	+10/-15																																					
Frequency [Hz]	50	60																																				
Power consumption [W]	220	348																																				
Current consumption [A]	1.00	1.57																																				
Blocking current [A]	2.5	2.4																																				
Air flow [m ³ /h] at working point	800 0.9 A	850 1.5 A																																				
Max. ambient temperature [°C]	< 80	< 50																																				
Useful lifetime of grease	approximately 40000 h at 40°C																																					
Protection	Internal connected temperature detector																																					

D5 module				
	The height of the unit size D5 is increased by 35 mm (1.38 inch).			
	Unit with classic cooling fan		Unit with ErP 2020 compliant cooling fan	
	h · w · d [mm]	h · w · d [inch]	h · w · d [mm]	h · w · d [inch]
	944 · 510 · 410	37.17 · 20.10 · 16.15	979 · 510 · 410	38.55 · 20.10 · 16.15
	Fan box			
		Classic (R2E250-RB)	ErP 2020 (R2E250-RE04-10)	
		Height = 158 mm (6.22 inch):	Height = 185 mm (7.29 inch):	
				



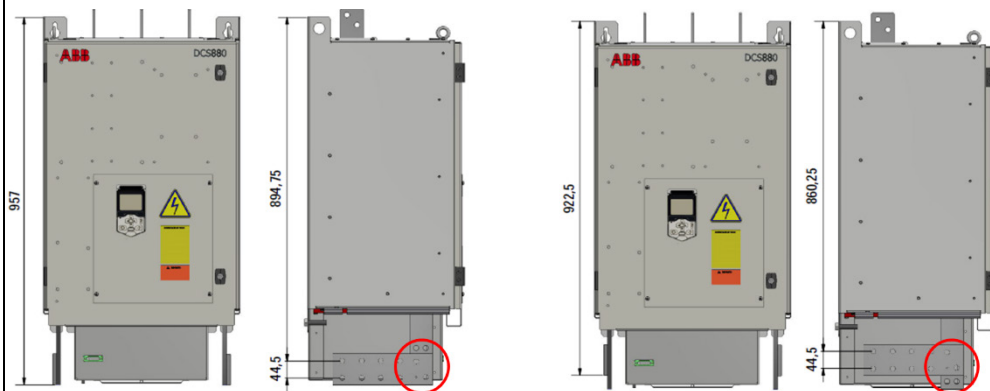
Width and depth stay the same.



Note: The ErP 2020 compliant fan box is a suitable spare part for drives with a classic fan box. Classic and ErP 2020 compliant fan boxes are electrically and mechanically compatible. Except for their heights. See drawings above.

Exchange a classic unit size D5 with an ErP 2020 compliant unit size D5 is possible.

Note: The ErP 2020 compliant unit is higher (see above). Additionally, it is possible to adjust the armature circuit busbars to their previous height:



Note: Mount the screw in the proper direction:



Parts list	
<p>Drives DCS800-S0x-0900-06-b ... DCS800-S01-2000-07-b are equipped with the classic cooling fan.</p> <p>Drives DCS800-S0x-0900-06-c ... DCS800-S01-2000-07-c are equipped with the ErP 2020 compliant cooling fan.</p>	
Module with classic cooling fan (R2E250-RB)	Module with ErP 2020 compliant cooling fan (R2E250-RE04-10)
DCS800-S0x-0900-06-b	DCS800-S0x-0900-06- c
DCS800-S0x-0900-07-b	DCS800-S0x-0900-07- c
DCS800-S0x-1200-04-b	DCS800-S0x-1200-04- c
DCS800-S0x-1200-05-b	DCS800-S0x-1200-05- c
DCS800-S0x-1500-04-b	DCS800-S0x-1500-04- c
DCS800-S0x-1500-05-b	DCS800-S0x-1500-05- c
DCS800-S0x-1500-06-b	DCS800-S0x-1500-06- c
DCS800-S0x-1500-07-b	DCS800-S0x-1500-07- c
DCS800-S0x-2000-04-b	DCS800-S0x-2000-04- c
DCS800-S0x-2000-05-b	DCS800-S0x-2000-05- c
DCS800-S01-2000-06-b	DCS800-S01-2000-06- c
DCS800-S01-2000-07-b	DCS800-S01-2000-07- c

Change	
<p>The ErP 2020 compliant cooling fan is used since:</p> <p>Date of change: 16th of December 2021</p> <p>Serial number of change: 0394409P21500302</p>	