 ABB AG	DCS880 DCS880 H5 New cooling fan R2E250-RE04-10	Hardware Hint HW DCS880 3ADW000762R0101
	Date: 19.11.2021	Name: Thomas Vinz

Types concerned	
	DCS880 unit size H5.

Summary	
	DCS880 unit size H5 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: DCS880-aab-cccc-ddef + plus code		
	Product family:	DCS880	
	Product type:	aa	= S0 Standard converter module
			= R0 Rebuild kit
			= U1 Upgrade kit
			= A0 Enclosed converter
	Bridge type:	b	= 1 Single bridge (2-Q)
			= 2 2 anti-parallel bridges (4-Q)
	Module type:	cccc	= Rated DC current (IP00)
	Rated AC voltage:	dd	= 04 100 V _{AC} ... 415 V _{AC}
			= 05 100 V _{AC} ... 500 V _{AC} (IEC)/525 V _{AC} (UL)
			= 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}
	Power connection:		= 12 540 V _{AC} ... 1190 V _{AC}
		e	= X Standard H1 ... H7
			= L Left side H8
	Revision code:		= R Right side H8
		f	= 0 1 st generation
			= A H7: Double fusing
			= B H5/H6: New cooling fan R2E250-RE04-10

Cooling fan (R2E250-RE04-10)

The unit size H5 is now equipped with an ErP 2020 compliant cooling fan (R2E250-RE04-10). The ErP 2020 regulations enforce a reduction of fan losses.

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.



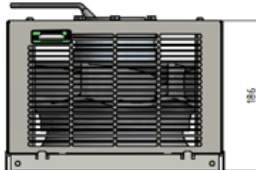
The fan is located in the fan box mounted on top of the drive. The fan box can be easily detached, providing the best access during installation, commission and service.

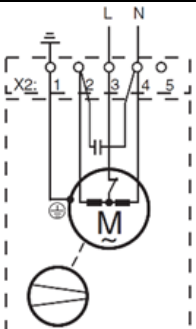
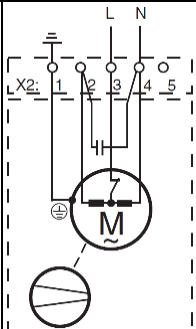
ErP 2020 compliant cooling fan	R2E250-RE04-10 (3ADT754047P0001)	
ErP 2020 fan box (including fan)	Order number (3ADT754042R0012)	
Rated voltage [V _{AC}]	230; 1~	
Tolerance [%]	+10/-15	
Frequency [Hz]	50	60
Power consumption [W]	220	348
Current consumption [A]	1.00	1.57
Blocking current [A]	2.5	2.4
Air 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	

H5 module

The height of the unit size H5 is increased by 27 mm (1.06 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]
740.5 x 270 x 368	29.16 x 10.63 x 14.49	767.5 x 270 x 368	30.22 x 10.63 x 14.49

Fan box		
	Classic (R2E250-RB)	ErP 2020 (R2E250-RE04-10)
	Height = 159 mm (6.27 inch): 	Height = 186 mm (7.33 inch): 
	Width and depth stay the same.	

Cooling fan connection, no changes	
Classic (R2E250-RB)	ErP 2020 (R2E250-RE04-10)
	

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 arrangements are electrically and mechanically compatible. Except for their heights. See drawings above.

Exchange a classic unit size H5 with an ErP 2020 compliant unit size H5 is possible.
Note: The ErP 2020 compliant unit is higher (see above). The 4 mounting holes at the back of the unit remain the same compared to the classic units.

Classic fan box	ErP 2020 compliant fan box
 <p>A classic ABB fan box unit with a white front panel and a black top section. The ABB logo is visible at the bottom.</p>	 <p>An ErP 2020 compliant ABB fan box unit, which is taller than the classic unit. It has a grey front panel and a black top section. The ABB logo is visible at the bottom.</p>

Parts list								
	<p>Drives DCS880-S0b-1190-0dX0 are equipped with the classic cooling fan. Drives DCS880-S0b-1190-0dXB are equipped with the ErP 2020 compliant cooling fan.</p>							
	<table border="1"> <thead> <tr> <th data-bbox="430 1240 783 1323">Module with classic cooling fan (R2E250-RB)</th> <th data-bbox="783 1240 1214 1323">Module with ErP 2020 compliant cooling fan (R2E250-RE04-10)</th> </tr> </thead> <tbody> <tr> <td data-bbox="430 1323 783 1361">DCS880-S0b-1190-04X0</td> <td data-bbox="783 1323 1214 1361">DCS880-S0b-1190-04XB</td> </tr> <tr> <td data-bbox="430 1361 783 1400">DCS880-S0b-1190-05X0</td> <td data-bbox="783 1361 1214 1400">DCS880-S0b-1190-05XB</td> </tr> </tbody> </table>	Module with classic cooling fan (R2E250-RB)	Module with ErP 2020 compliant cooling fan (R2E250-RE04-10)	DCS880-S0b-1190-04X0	DCS880-S0b-1190-04XB	DCS880-S0b-1190-05X0	DCS880-S0b-1190-05XB	
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DCS880-S0b-1190-04X0	DCS880-S0b-1190-04XB							
DCS880-S0b-1190-05X0	DCS880-S0b-1190-05XB							

Change		
	<p>The ErP 2020 compliant cooling fan is used since: Date of change: 17th of February 2022. Serial number of change: 0390472P22060393.</p>	