

ABB PFEA112-20

Web Tension Electronics

Manufacturer	ABB
Model / order number	PFEA112-20 / 3BSE050091R20
Product identification	IP20 tension electronics
System / family context	Pressductor web tension systems

Verified scope

ABB identifies PFEA112-20 as order 3BSE050091R20, the IP20 tension electronics version. The attached original pages document technical data and the exact ordering identity.

This version uses 24 V DC (18-36 V) and supports two load cells, analog outputs and PROFIBUS-DP. Do not apply IP65 AC-supply specifications or PFEA122 Ethernet protocols to this model.

Engineering checks before replacement

- Confirm the IP20 enclosure version and exact order 3BSE050091R20 before sourcing.
- Check the 24 V DC supply and the excitation-loop cable resistance allowance.
- Match PROFIBUS configuration to ABB_0716.GSD and the required SUM signal.
- Record output scaling, filter selection and zero settings before replacement.

Official ABB source reference

ABB Web Tension Systems - 3BSE030913R0401 J001

Original technical-data and ordering pages 18 and 19 follow.

Open original ABB manufacturer document

This cover is an independent Sales PLC reference, not a manufacturer-issued datasheet. The following manufacturer pages retain their original text, layout and page numbering.

Request model verification or a quotation

info@amikon.cn | +86 18020776786

www.salesplcauto.com

Technical data

Data	PFEA111/112/122	PFEA113
Power supply		
IP 20 voltage		24 V DC (18 to 36 V)
Power requirement	7.5 W	12 W
IP 65 main voltage	24 V DC (18 to 36 V), 100 (–15 %) to 240 (+10 %) V AC	
Frequency		45 to 65 Hz
Number of load cells	2	4
Load cell excitation		
Current	0.5 A RMS, 330 Hz	0.5 A RMS, 330 Hz
Max. load	2 load cells plus 5 Ω cable resistance	4 load cells plus 10 Ω cable resistance
Inputs		
Digital inputs (remote zero or gain scheduling)	—	1
Analog inputs (connection of multiple PFEA113 units)	—	2
Outputs		
Analog outputs (voltage or current)	—	6
–5 to 11 V (max.load 5 mA)	1	—
0 to 21 mA (max. load 550 Ω)	1	—
Selectable filter		
Step response (0 to 90 %) can be set for each output	15, 30, 75, 250, 750, 1500 ms	5, 15, 30, 75, 250, 750, 1500 ms
Scaling function of analog outputs	Yes	Yes
Digital outputs (Status OK and/or Level detectors)	—	4
Self diagnostics, Status OK		
LED (green/red)	Yes	Yes
Alarm on Digital output	—	Yes
Alarm via PROFIBUS (for PFEA112 and PFEA113)	Yes	Yes
Alarm via PROFINET or EtherNet/IP (for PFEA122)	Yes	—
Multi-language interactive display ¹	Yes	Yes
Selectable tension units on the display	N, kN, kg and lbs, N/m, kN/m, kg/m, pli	
Maximum load memory	Yes	Yes
Zero offset memory	Yes	Yes
Communication		
PROFIBUS DP, baud rate up to 12 Mbit	PFEA112 (GSD-file ABB_0716.GSD) ² PFEA113 (GSD-file ABB_0717.GSD) ²	
PROFINET RT	PFEA122 (GSDML-V2.42-ABB-PFEA122-20230330.xml) ²	
EtherNet/IP	PFEA122 (ABB_PFEA122_1_0.eds) ²	
Environmental tolerance		
Electrical environment		
Electrical interference environment		As per EMC Directive 2014/30/EU
Electrical safety		As per Low Voltage Directive 2014/35/EU As per UL508 Industrial control equipment ³
Ambient temperature		5 to 55 °C
Degree of protection		IEC 529 Protection class IP 20 or IP 65

¹ English, German, Italian, French, Japanese, Portuguese

² PFEA112: Sum signal, PFEA122: Sum, individual A & individual B signal, PFEA113: Sum, difference, individual A & individual B signal

³ UL508 approval available for PFEA111, PFEA113 and PFEA112 IP20

Product					
Load cells	Model designation	Ordering number	Load cells	Model designation	Ordering number
Nominal load kN (lb)			Nominal load kN (lb)		
0.5 (112)	PFTL 101A-0.5	3BSE004160R1	10.0 (2250)	PFTL 201C-10.0	3BSE007913R10
0.5 (112)	PFTL 101AE-0.5	3BSE004211R1	10.0 (2250)	PFTL 201CE-10.0	3BSE007913R11
0.5 (112)	PFTL 101AER-0.5	3BSE023010R1	20.0 (4500)	PFTL 201C-20.0	3BSE007913R20
1.0 (225)	PFTL 101A-1.0	3BSE004166R1	20.0 (4500)	PFTL 201CE-20.0	3BSE007913R21
1.0 (225)	PFTL 101AE-1.0	3BSE004212R1	50.0 (11250)	PFTL 201C-50.0	3BSE007913R50
1.0 (225)	PFTL 101AER-1.0	3BSE023011R1	50.0 (11250)	PFTL 201CE-50.0	3BSE007913R51
2.0 (450)	PFTL 101A-2.0	3BSE004172R1	50.0 (11250)	PFTL 201D-50.0	3BSE008922R50
2.0 (450)	PFTL 101AE-2.0	3BSE004213R1	50.0 (11250)	PFTL 201DE-50.0	3BSE008922R51
2.0 (450)	PFTL 101AER-2.0	3BSE023012R1	100.0 (22500)	PFTL 201D-100.0	3BSE008922R100
2.0 (450)	PFTL 101B-2.0	3BSE004185R1	100.0 (22500)	PFTL 201DE-100.0	3BSE008922R101
2.0 (450)	PFTL 101BE-2.0	3BSE004214R1			
2.0 (450)	PFTL 101BER-2.0	3BSE023158R1	5.0 (1125)	PFCL 201C-5.0	3BSE027070R5
5.0 (1125)	PFTL 101B-5.0	3BSE004191R1	5.0 (1125)	PFCL 201CD-5.0	3BSE029774R5
5.0 (1125)	PFTL 101BE-5.0	3BSE004215R1	5.0 (1125)	PFCL 201CE-5.0	3BSE027062R5
5.0 (1125)	PFTL 101BER-5.0	3BSE023159R1	10.0 (2250)	PFCL 201C-10.0	3BSE027070R10
10.0 (2250)	PFTL 101B-10.0	3BSE004197R1	10.0 (2250)	PFCL 201CD-10.0	3BSE029774R10
10.0 (2250)	PFTL 101BE-10.0	3BSE004216R1	10.0 (2250)	PFCL 201CE-10.0	3BSE027062R10
10.0 (2250)	PFTL 101BER-10.0	3BSE023160R1	20.0 (4500)	PFCL 201C-20.0	3BSE027070R20
20.0 (4500)	PFTL 101B-20.0	3BSE004203R1	20.0 (4500)	PFCL 201CD-20.0	3BSE029774R20
20.0 (4500)	PFTL 101BE-20.0	3BSE004217R1	20.0 (4500)	PFCL 201CE-20.0	3BSE027062R20
20.0 (4500)	PFTL 101BER-20.0	3BSE023161R1	50.0 (11250)	PFCL 201C-50.0	3BSE027070R50
			50.0 (11250)	PFCL 201CD-50.0	3BSE029774R50
			50.0 (11250)	PFCL 201CE-50.0	3BSE027062R50
Cables	Cable with male plug connector		15 m (49 ft)		3BSE018741R15
	Cable with male plug connector		30 m (98 ft)		3BSE018741R30
	Cable with male plug connector		50 m (164 ft)		3BSE018741R50
	Cable with male angled plug connector		15 m (49 ft)		3BSE018741R115
	Cable with male angled plug connector		30 m (98 ft)		3BSE018741R130
	Cable with male angled plug connector		50 m (164 ft)		3BSE018741R150
	Male plug connector without cable				YM 321 002-D
	Male angled plug connector without cable				3BSC860249R1
Adapter plates	Set of upper and lower adapter plates for PFTL101A				3BSE030638R2
	Upper adapter plates for PFTL101A				3BSE030638R3100
	Lower adapter plates for PFTL101A				3BSE030638R3101
	Set of upper and lower adapter plates for PFTL101B				3BSE030638R3
	Upper adapter plates for PFTL101B				3BSE030638R3200
	Lower adapter plates for PFTL101B				3BSE030638R3201
	Customized adapter plates				3BSE030638R99
Junction box			PFXC 141		3BSE029997R1
Tension electronics	PFEA111, IP20		PFEA111-20		3BSE050090R20
	PFEA111, IP65		PFEA111-65		3BSE050090R65
	PFEA112, IP20		PFEA112-20		3BSE050091R20
	PFEA112, IP65		PFEA112-65		3BSE050091R65
	PFEA113, IP20		PFEA113-20		3BSE050092R20
	PFEA113, IP65		PFEA113-65		3BSE050092R65
	PFEA113, IP65, incl. 1 insulation amplifier PXUB 201 – voltage output		PFEA113-65.1PXV		3BSE050092R165
	PFEA113, IP65, incl. 2 insulation amplifier PXUB 201 – voltage output		PFEA113-65.2PXV		3BSE050092R265
	PFEA113, IP65, incl. 3 insulation amplifier PXUB 201 – voltage output		PFEA113-65.3PXV		3BSE050092R365
	PFEA113, IP65, incl. 4 insulation amplifier PXUB 201 – voltage output		PFEA113-65.4PXV		3BSE050092R465
	PFEA113, IP65, incl. 1 insulation amplifier PXUB 201 – current output		PFEA113-65.1PXC		3BSE050092R1165
	PFEA113, IP65, incl. 2 insulation amplifier PXUB 201 – current output		PFEA113-65.2PXC		3BSE050092R1265
	PFEA113, IP65, incl. 3 insulation amplifier PXUB 201 – current output		PFEA113-65.3PXC		3BSE050092R1365
	PFEA113, IP65, incl. 4 insulation amplifier PXUB 201 – current output		PFEA113-65.4PXC		3BSE050092R1465
	PFEA122, IP20		PFEA122-20		3BSE096217R20
	PFEA122, IP65		PFEA122-65		3BSE096217R65
Options					
Insulation amplifier			PXUB 201		3BSC630149R1
Relay board			PXKB 201		3BSC810039R1
Power supply device (3 A)			SD831		3BSC610064R1
Power supply device (5 A)			SD832		3BSC610065R1
Power supply device (10 A)			SD833		3BSC610066R1
Floor cabinet MNS select, sealed IP54					3BSE030582R54
Floor cabinet MNS select, ventilated IP21					3BSE030582R21