

SIEMENS

SIMATIC

Bus links

DP/PA coupler, active field distributors, DP/PA Link and Y Link

Operating Instructions

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Active field distributor AFDiS in hazardous areas

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14.3 Technical data DP/PA coupler FDC 157-0 (6ES7157-0AC83-0XA0)

Data for connecting lower-level bus components	
DP/PA coupler can be connected	Max. 5
Y coupler can be connected	1
Lower-level slaves can be connected	Max. 64
Number of slots in lower-level slaves	(244 minus number of PA field devices), but not more than 236
Delay Update for the I/O image	
<ul style="list-style-type: none"> • Single mode 	15 ms
<ul style="list-style-type: none"> • Redundancy mode <ul style="list-style-type: none"> - Detect PrmCMD primary side - Changeover without CFG changes - Changeover with CFG changes 	30 ms 3 x Ttr 4 x Ttr

14.3 Technical data DP/PA coupler FDC 157-0 (6ES7157-0AC83-0XA0)

Technical specifications	
Order number	6ES7157-0AC83-0XA0
Dimensions and weight	
Dimension W x H x D (mm)	80 x 125 x 130
Weight	Approx. 515 g
Module-specific data	
Transmission speed on PROFIBUS DP	45.45 kBaud
Transmission speed on PROFIBUS PA	31.25 kBaud
Bus protocol	PROFIBUS DP
Voltages, currents, potentials	
Rated supply voltage	24 VDC (20.4 V to 28.8 V)
<ul style="list-style-type: none"> • Polarity reversal protection 	Yes
<ul style="list-style-type: none"> • Overvoltage protection 	Yes
Output voltage for PA section:	31 VDC ± 1 V
<ul style="list-style-type: none"> • Voltage monitoring 	15.5 V
<ul style="list-style-type: none"> • Voltage monitoring 	U > 35 V; latching cutoff
<ul style="list-style-type: none"> • Power failure bypass 	Min. 5 ms
Electrical isolation of the 24 V power supply	
<ul style="list-style-type: none"> • PROFIBUS DP / PROFIBUS PA 	Yes
<ul style="list-style-type: none"> • PROFIBUS DP / supply 	Yes
<ul style="list-style-type: none"> • PROFIBUS PA / supply 	Yes
<ul style="list-style-type: none"> • All electric circuits / FE 	Yes
Insulation tested with	500 VDC

14.3 Technical data DP/PA coupler FDC 157-0 (6ES7157-0AC83-0XA0)

DP/PA coupler power consumption (24 VDC)	Max. 2.3 A
Output current PA section (for dimensioning the PA configuration)	1 A
Power loss of the module	Max. 13.4 W
Status, interrupts, diagnostics	
Status display	No
Interrupts	None
Diagnostics function	Yes
• Group error	Red LED "SF"
• Bus fault	Red LED "BF"
• PROFIBUS DP bus monitoring	Yellow LED "DP"
• PROFIBUS PA bus monitoring	Yellow LED "PA"
• DP/PA coupler monitoring	Yellow LED "ACT"
• Monitoring 24 V power supply	Green "ON" LED
Data for selecting the PA field devices	
Connection to DP/PA couplers	<ul style="list-style-type: none"> • max. power consumption of the PA field devices together 1 A • Field devices with certification for PROFIBUS PA • Field devices are located outside the hazardous area • max. 31 PA field devices can be connected