

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

SIEMENS SIMATIC S7

6ES7157-0AG83-0XA0

PROFIBUS FIELD DEVICE COUPLER

Applicable product family: SIMATIC distributed I/O networks

OFFICIAL SOURCE

6ES7157-0AG83-0XA0.pdf

The following pages are selected from the supplied manufacturer document and retain their original page content.

ACTIVE FIELD DISTRIBUTOR AFDIS FISCO FIELD BARRIER FOR PROFIBUS PA FOR FOUNDATION FIELDBUS H1 6 SHORT-CIRCUIT PROOF AND INTRINSICALLY SAFE SPURS WITH CHATTER SUPPRESSION LOGIC INTEGRATED FIELDBUS REPEATER AUTOMATIC BUS TERMINATION FOR LINE- AND RING-TOPOLOGY FOR ENHANCED TEMPERATURE RANGE PROTECTION CLASS IP 66



Figure similar

General information	
Product type designation	Active field distributor
Hardware product version	01
Product function	
• Repeater function	Yes
Supply voltage	
Design of the power supply	via fieldbus
permissible range, lower limit (DC)	16 V
permissible range, upper limit (DC)	32 V
Reverse polarity protection	Yes; only in conjunction with FDC 157
Overvoltage protection	No
Input current	
Current consumption, max.	400 mA; at 20 V input voltage
Current consumption in the case of short-circuit at all spur lines	100 mA; at 24 V input voltage
Power loss	

Power loss, typ.	1.4 W; minimum - typ. specification not possible because load-dependent
Power loss, max.	5.9 W

Interfaces

PROFIBUS PA

- | | |
|--|------------------------------|
| • Transmission rate, max. | 31.25 kbit/s |
| • Number of connectable PA field devices | 6 |
| • Current output to PA field devices, max. | 260 mA |
| • permissible current per spur line | 40 mA; first spur line 60 mA |

Protocols

PROFIBUS DP	No
PROFIBUS PA	Yes
AS-Interface	No
FOUNDATION Fieldbus H1	Yes

Interrupts/diagnostics/status information

Status indicator	Yes
Alarms	No
Diagnostic functions	Yes

Diagnostics indication LED

- | | |
|-----------------------------|-----|
| • Main line status | Yes |
| • Main line failure | Yes |
| • Spur line status/fault | Yes |
| • automatic bus termination | Yes |

Potential separation

between main line and spur lines	Yes
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Isolation

Isolation tested with	2 550 V DC
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Degree and class of protection

Degree of protection acc. to EN 60529	
• IP66	Yes

Standards, approvals, certificates

Use in hazardous areas	
• EX Zone 1	Yes
• EX zone 11	No; EX zone 21
• EX zone 2	Yes
• EX zone 22	Yes
• Class I Zone 1	Yes
• Class I Zone 2, Division 2	Yes
• Type of protection acc. to KEMA	10 ATEX 0055
• Test number KEMA	10 ATEX 0055

Ambient conditions	
Ambient temperature during operation	
• min.	-40 °C
• max.	70 °C
Ambient temperature during storage/transportation	
• min.	-40 °C
• max.	70 °C
Relative humidity	
• Operation, max.	95 %
Connection method	
Main line	
• Number of main lines	2
• Design of terminals	Screw terminal block
• Type of connection (enclosure cable gland)	M16
• Type of cable	Type A
• Cable diameter, min.	4 mm
• Cable diameter, max.	9 mm
• Conductor cross-section, min.	0.2 mm ²
• Conductor cross-section, max.	2.5 mm ²
• automatic bus termination	Yes
• permissible main line current	1 A
Spur line	
• Number of spur lines	6
• Design of terminals	Screw terminal block
• Type of connection (enclosure cable gland)	M16
• Type of cable	Type A
• Cable diameter, min.	4 mm
• Cable diameter, max.	9 mm
• Conductor cross-section, min.	0.2 mm ²
• Conductor cross-section, max.	2.5 mm ²
• total current output to field devices, max.	260 mA
• Number of connectable field devices	6
• Current limitation per field device, max.	40 mA; 60 mA on S1
• No-load voltage, max.	15.3 V; on spur lines
• short-circuit proof	Yes
• Short-circuit current (test current); max.	5 mA; on spur lines
• intrinsically safe according to FISCO model	Yes
• Debounce logic	Yes
Dimensions	
Width	380 mm

Height	85 mm
Depth	170 mm
Weights	
Weight, approx.	4 500 g
last modified:	03/11/2017 