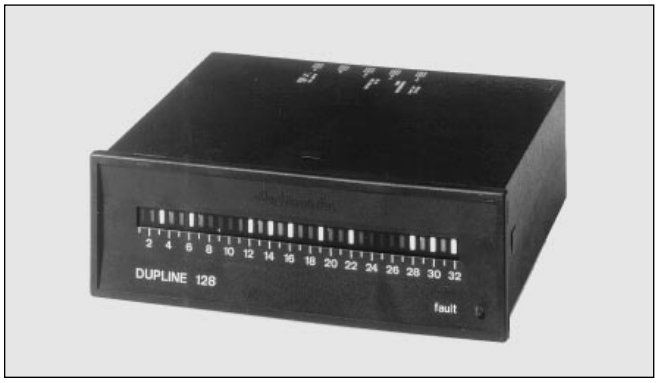
Display for Digital Signals
Types FK3C3, FK4C3

Dupline® Fieldbus Installationbus



- **8-, 16- or 32-channel status indicator**
- **8-, 16- or 32-dot LED display**
- **NPN transistor output for loss of Dupline® carrier**
- **Horizontal or vertical panel mounting, DIN 43700**
- **AC/DC power supply**

Product Description

Dupline® display for panel mounting. Status indication of 8, 16 or 32 channels in 8-, 16- or 32-segment single-point LED representation. Display function normal or inverted for fast locating of deviations from normal operation, e.g. missing start-up conditions, open doors and windows, machine fault annunciation etc.

Ordering Key

FK3C 3508 024

Type: Dupline®
Display type
Housing
Type no.
Supply

Type Selection

Supply	Ordering no. 8 channels 8-dot LED	Ordering no 16 channels 16-dot LED	Ordering no. 32 channels 32-dot LED
24 VAC	**FK3C 3508 024**	**FK3C 3616 024**	**FK4C 3732 024**
120 VAC	**FK3C 3508 120**	**FK3C 3616 120**	**FK4C 3732 120**
220 VAC	**FK3C 3508 220**	**FK3C 3616 220**	**FK4C 3732 220**
12 VDC	*	*	*
Code module	**FMK A to FMK P**	**FMK A-B to O-P**	**FMK A-D to M-P**

* All AC-types may be supplied with 12 VDC at pins 2 & 3

Display/Output Specifications

	F.3C 3508 ... (8 channels)	F.3C 3616 ... (16 channels)	F.4C 3732 ... (32 channels)
Display			
Display format	Channel status	Channel status	Channel status
Display range	8 dots	16 dots	32 dots
Display type	LED	LED	LED
Size of dots	5 x 5 mm	6 x 3 mm	5 x 2 mm
Display colour	Red	Red	Red
Display test	None	None	None
Transmission protocol	Binary	Binary	Binary

Dupline® Fieldbus Installationbus

Display/Output Specifications (cont.)

	F.3C 3508 ... (8 channels)	F.3C 3616 ... (16 channels)	F.4C 3732 ... (32 channels)
Output	1 NPN transistor	1 NPN transistor	1 NPN transistor
Output voltage range V_{BB}	4 to 35 VDC (or V_{DD} in)	4 to 35 VDC (or V_{DD} in)	4 to 35 VDC (or V_{DD} in)
Reverse-polarity protection	Yes	Yes	Yes
Current per output	≤ 100 mA	≤ 100 mA	≤ 100 mA
Short-circuit protection	None	None	None
Built-in protective diodes	None	None	None
Off-state leakage current	≤ 100 µA	≤ 100 µA	≤ 100 µA
Output voltage drop	≤ 1.5 V	≤ 1.5 V	≤ 1.5 V
Cable length	≤ 3 m	≤ 3 m	≤ 3 m
Dielectric voltage			
Output - Dupline®	None	None	None
Output connection	2.8 mm faston	2.8 mm faston	2.8 mm faston
Dupline® connection	2.8 mm faston	2.8 mm faston	2.8 mm faston
Response time	< 2 pulse trains	< 2 pulse trains	< 2 pulse trains

Supply Specifications

Power supply AC types		Overvoltage cat. III (IEC 60664)
Operational voltage		
through pins A1 & A2	220	230 VAC +6%, -15% (IEC 60038)
	120	120 VAC ± 10% (IEC60038)
	024	24 VAC ± 10%
Frequency		45 to 65 Hz
Voltage interruption		≤ 40 ms
Rated operational power		Typ. 6 VA
Rated impulse withstand		
voltage	220	4 kV
	120	2.5 kV
	024	800 V
Dielectric voltage		
Supply - Dupline®		≥ 2 kVAC (rms)
Supply - Output		≥ 2 kVAC (rms)
Alternative DC supply		Overvoltage cat. III (IEC 60664)
Operational voltage (V_{DD} in)		
through pins 2 & 3		
FK...		12 VDC ± 10% (ripple included)
Reverse polarity protection		Yes
Rated operational current		
FK3C 3508		≤ 125 mA
FK3C 3616		≤ 250 mA
FK4C 3732		≤ 500 mA
Inrush current		≤ 1 A
Transient protection voltage		800 V
Dielectric voltage		
Supply - Dupline®		None
Supply - Output		None
Supply connection		2.8 mm faston

General Specifications

Output-off delay upon loss of Dupline® carrier	≤ 3 s, (LCD irregular display indication)
Power ON delay	Undefined ≤ 1 s
Indication for	
Loss of Dupline® carrier	LED, red
Environment	
Degree of protection	IP 40
Pollution degree	3 (IEC 60664)
Operating temperature	0° to +50°C (+32° to +122°F)
Storage temperature	-20° to +60°C (-4° to +140°F)
Humidity (non-condensing)	20 to 80%
Mechanical resistance	
Shock	15 G (11 ms)
Vibration	2 G (6 to 55 Hz)
Dimensions	
Material	
(see "Technical Information")	F.3C: 96 x 48 - Housing F.4C: 144 x 48 - Housing
Weight	
F.3C 3508	300 g
F.3C 3616	300 g
F.4C 3732	400 g
Approvals	CSA, UL

Specifications are subject to change without notice (28.09.99)
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Mode of Operation

8-, 16- or 32-channel status indicator with LED dot display.

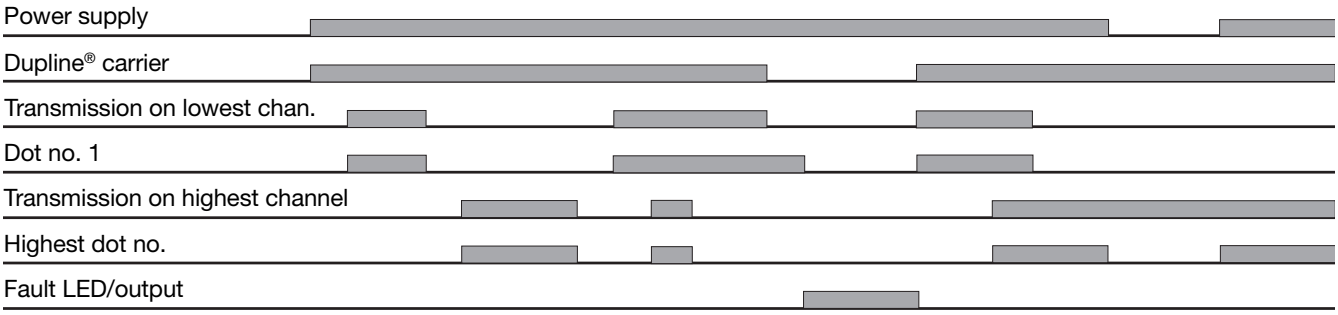
The displays are used to monitor 1, 2 or 4 Dupline® channel groups.

The output dots turn on when the respective channels of the selected channel groups are activated by transmitters. Each dot represents the status of one Dupline® channel. The lowest figure on the front plate indicates the lowest channel of the first channel group and the highest figure indicates the highest channel of the last channel group selected by the code module.

In case of Dupline® carrier loss the fault LED and the output (pins 2 & 5) turn on. Reaction time typically 1 s.

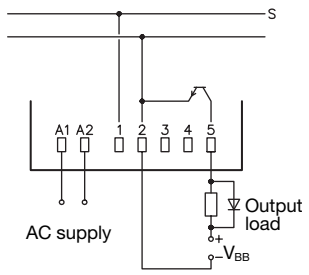
Note:
- Upon loss of Dupline® carrier the channel dots of an LED display turn off.
- If DC-supplied displays are used the length of the supply bus must not exceed 3 m in order to avoid disturbances unbalancing the Dupline®.

Operation Diagram



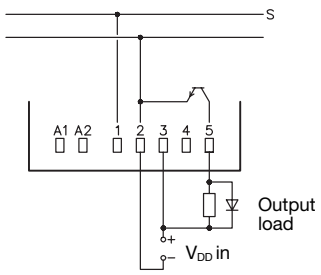
Wiring Diagrams

AC supply



S: signal wire

DC supply



S: signal wire

Additional Information

Scope of supply:

1 x Display F..C...
1 x Front plate for horizontal mounting
1 x Front plate for vertical mounting

Accessories

For further information refer to "Accessories".

Общество с ограниченной ответственностью «МосЧип» ИНН 7719860671 / КПП 771901001
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