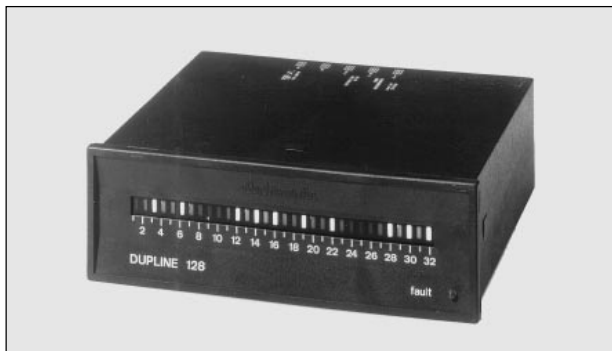


# Display for Digital Signals Types FK3C3, FK4C3



- 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	<b>FK3C 3508 024</b>	<b>FK3C 3616 024</b>	<b>FK4C 3732 024</b>
120 VAC	<b>FK3C 3508 120</b>	<b>FK3C 3616 120</b>	<b>FK4C 3732 120</b>
220 VAC	<b>FK3C 3508 220</b>	<b>FK3C 3616 220</b>	<b>FK4C 3732 220</b>
12 VDC	*	*	*
Code module	<b>FMK A to FMK P</b>	<b>FMK A-B to O-P</b>	<b>FMK A-D to M-P</b>

\* 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)
<b>Display</b>			
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

## Display/Output Specifications (cont.)

	F.3C 3508 ... (8 channels)	F.3C 3616 ... (16 channels)	F.4C 3732 ... (32 channels)
<b>Output</b>	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	$\leq 100$ mA	$\leq 100$ mA	$\leq 100$ mA
Short-circuit protection	None	None	None
Built-in protective diodes	None	None	None
Off-state leakage current	$\leq 100$ $\mu$ A	$\leq 100$ $\mu$ A	$\leq 100$ $\mu$ A
Output voltage drop	$\leq 1.5$ V	$\leq 1.5$ V	$\leq 1.5$ V
Cable length	$\leq 3$ m	$\leq 3$ m	$\leq 3$ m
Dielectric voltage			
Output - Dupline®	None	None	None
Output connection	2.8 mm faston	2.8 mm faston	2.8 mm faston
<b>Dupline® connection</b>	2.8 mm faston	2.8 mm faston	2.8 mm faston
<b>Response time</b>	< 2 pulse trains	< 2 pulse trains	< 2 pulse trains

## Supply Specifications

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

## General Specifications

<b>Output-off delay</b>	$\leq 3$ s, (LCD irregular display indication)
upon loss of Dupline® carrier	
<b>Power ON delay</b>	Undefined $\leq 1$ s
<b>Indication for</b>	
Loss of Dupline® carrier	LED, red
<b>Environment</b>	
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)
<b>Humidity (non-condensing)</b>	20 to 80%
<b>Mechanical resistance</b>	
Shock	15 G (11 ms)
Vibration	2 G (6 to 55 Hz)
<b>Dimensions</b>	
<b>Material</b>	
(see "Technical Information")	F.3C: 96 x 48 - Housing
	F.4C: 144 x 48 - Housing
<b>Weight</b>	
F.3C 3508	300 g
F.3C 3616	300 g
F.4C 3732	400 g
<b>Approvals</b>	CSA, UL

## 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

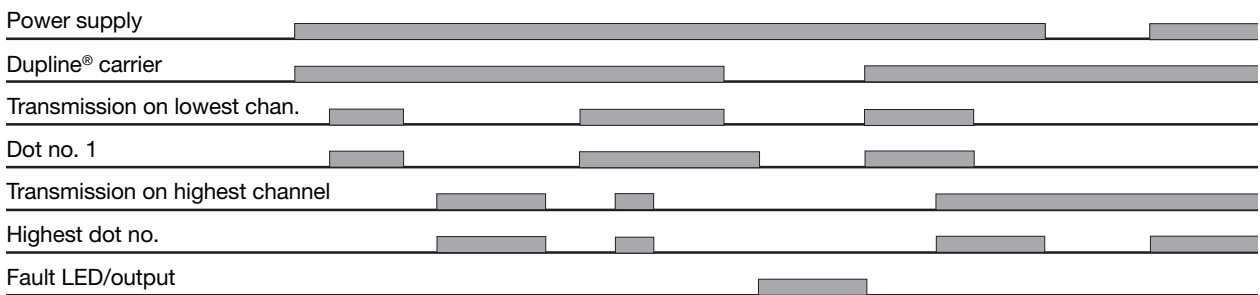
are activated by transmitters. Each dot represents the status of one Dupline® channel. The lowest figure on the front plate indicates the lowest channel of the first channel group and the highest figure indicates the highest channel of the last channel group selected by the code module.

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

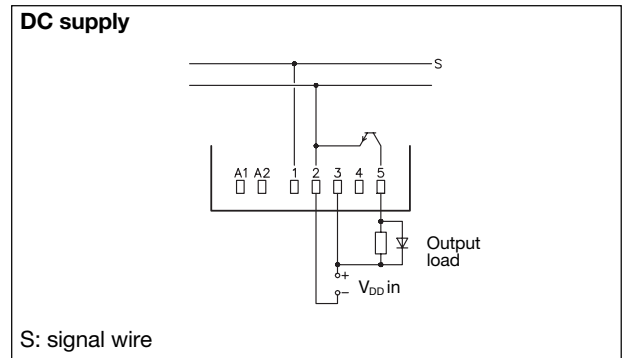
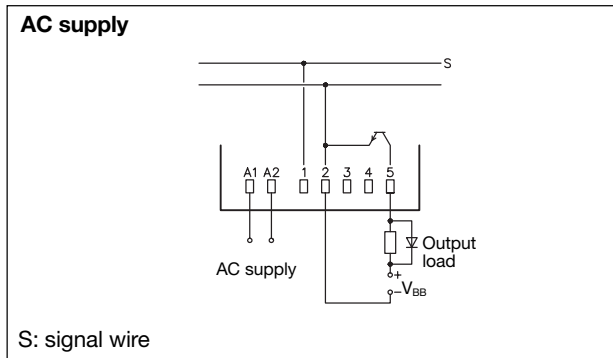
**Note:**  
 • Upon loss of Dupline® carrier the channel dots of an LED display turn off.

• 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



## 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".