

Omniterm FCT & FCR Fibre Optic Contact Repeaters

Model C2472A FCT and C2473A FCR – Fibre Optic Contact Transmitter and Receiver

DATASHEET

- Send a digital contact over a Fibre Optic Link
- Transmission distance up to 4km on 820nm link
- Potential free contact in
- Form C contact out
- 10-30Vdc powered
- **High Reliability Circuit**
- Certified to IEC61508 SIL2 Safety Standard

Features

- **DIN Rail or surface mountable**
- Narrow 22.5mm module width
- 10 30V dc powered
- **Fitted with ST Fibre optic Terminations**

Overview

The OMNITERM FCT and FCR modules provide the ability to send a contact signal up to 9km over optical fibre. When the contact on the FCT Transmitter module is closed, the relay output on the FCR Receiver module will be energised.

LED's are provided to indicate the state of the input and output contacts and the presence of instrument power.



- Wide operating temperature range
- Multi-mode 820nm and 1300nm models
- **CE Mark Compliant**

Fail safety is a key feature of this design. Care has been taken to ensure the highest level of reliability.

Forming part of OMNIFLEX's extensive OMNITERM range of industrial instrumentation, the OMNITERM FCT and FCR are designed to be DIN rail or surface mounted and are an economical 22.5mm wide.

ğ g 9 2-3-4 2 3 1 - 4 -FCT FCR **Optical Fibre** 6 5 6 7 5 -7 8 +9 - 30Vdc +9 - 30Vdc 0V 0V INPUT





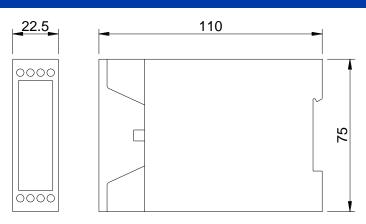


Electrical Connections



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Mechanical Details



Specifications

Input				
-		FCT		
Input Type		Potential Free Contact		
Contact Rating		30Vdc 100mA		
Maximum Resistance		50 ohms		
Output				
		FCR		
Output Type		Form C Contact		
Max switching current		1A		
Max switching voltage		60Vdc 125Vac		
Max switching power		30W, 62.5VA		
Min Contact Load		1mA @ 5Volts		
Electrical life at rated load		100 x 10 ³		
Mechanical life		5 x 10 ⁶		
Power Supply				
	FCT		FCR	
Operating Range	10-3	0Volts dc	10-30Volts dc	
Supply Current	35mA @ 24Vdc 50mA @ 12Vdc		30mA @ 24Vdc 45mA @ 12Vdc	
Optical Link				
	820nm multi-mode		1300nm multi- mode	
Connector Type	ST		ST	
Fibre Size	50/125µm/ 62.5/125µm		50/125µm/ 62.5/125µm	
Min.Power Budget (10e-9 BER)	12dB		9dB	
Typical Power Budget	16dB		13dB	
Distance (Corning OM2 cable)	4km @ 3dB/km		9km @ 1dB/km	
Distance (Belden OM2 cable)	3.4km @ 3.5dB/km		7.5km @ 1.2db/km	
Distance Calculations	Distances shown are calculated using typical cable attenuation. Actual distance achieved will also depend upon cable splices and additional connectors.			

Reliability DataFCTFCRMTBF151.8 Years103.4 yearsPFD (TI = 2 years)1.75 x 10°1.3 x 10°3SFF99.7%87%TemperatureStorage-20 to +70°COperating0 to +60°CWeightUnpacked130g approx.Packed130g approx.PackedDesigned to meet both IEC61508 SIL1 and SIL2.SafetyIEC 60950:EmissionsEN55011 Group I, Class AImmunity – ESDIEC 61000-4-2: 4kVInmunity – RF FieldsIEC 61000-4-3:10V/mImmunity – Fast TransientsIEC 61000-4-4:2kV dc power; 1kV inputs/outputsHousingWidth22.5mm (1.18")Height75mm (2.95")Depth (from panel)110mm (4.33")Order CodeModelC2472A-0Omniterm FCT 820nm multi-mode (Standard) C2473A-0Omniterm FCR 820nm multi-mode (Standard)								
MTBF 151.8 Years 103.4 years PFD (TI = 2 years) 1.75 x 10 ⁻⁶ 1.3 x 10 ⁻³ SFF 99.7% 87% Temperature Storage -20 to +70°C Operating 0 to +60°C Weight Unpacked 130g approx. Packed 155g approx. Packed Designed to meet both IEC61508 SIL1 and SIL2. Safety Functional Safety Designed to meet both IEC61508 SIL1 and SIL2. Safety Emissions EN55011 Group I, Class A Immunity – ESD IEC 61000-4-2: 4kV Immunity – Fast Transients IEC 61000-4-2: 4kV Width 22.5mm (1.18")	Reliability D	ata						
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	Order Code	Model						
C2473A-0 Omniterm FCR 820nm multi-mode (Standard)	C2472A-0	Omniterm FCT 820nm multi-mode (Standard)						
	C2473A-0	Omniterm FCR 820nm multi-mode (Standard)						





