



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

Overview

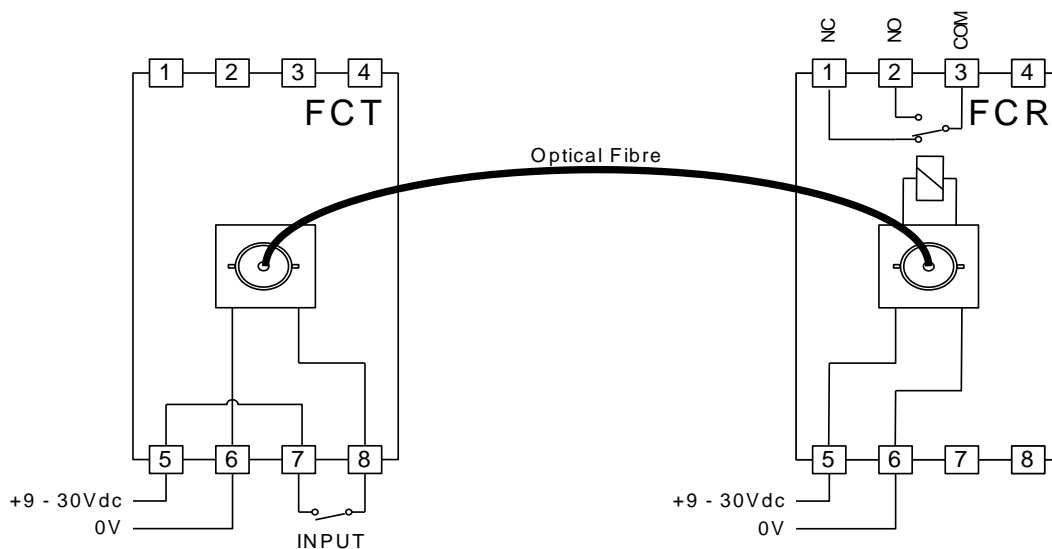
The OMNITERM FCT and FCR modules provide the ability to send a contact signal up to 9km over optical fibre. When the contact on the FCT Transmitter module is closed, the relay output on the FCR Receiver module will be energised.

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

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.

Electrical Connections

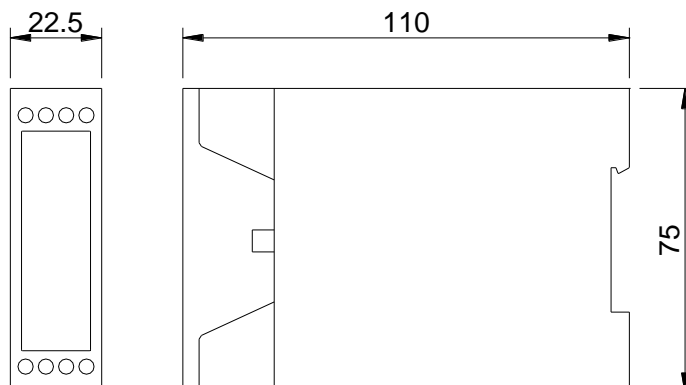




Omniterm FCT & FCR Fibre Optic Contact Repeaters

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

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	10-30Volts 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 Data

	FCT	FCR
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.

Compliance to Standards

Functional Safety	Designed to meet both IEC61508 SIL1 and SIL2.
Safety	IEC 60950:
Emissions	EN55011 Group I, Class A
Immunity – ESD	IEC 61000-4-2: 4kV
Immunity – RF Fields	IEC 61000-4-3:10V/m
Immunity – Fast Transients	IEC 61000-4-4:2kV dc power; 1kV inputs/outputs

Housing

Width	22.5mm (1.18")
Height	75mm (2.95")
Depth (from panel)	110mm (4.33")

Ordering Information

Order Code	Model
C2472A-0	Omniterm FCT 820nm multi-mode (Standard)
C2473A-0	Omniterm FCR 820nm multi-mode (Standard)

