

# Dewar DM1350 Technical Instructions

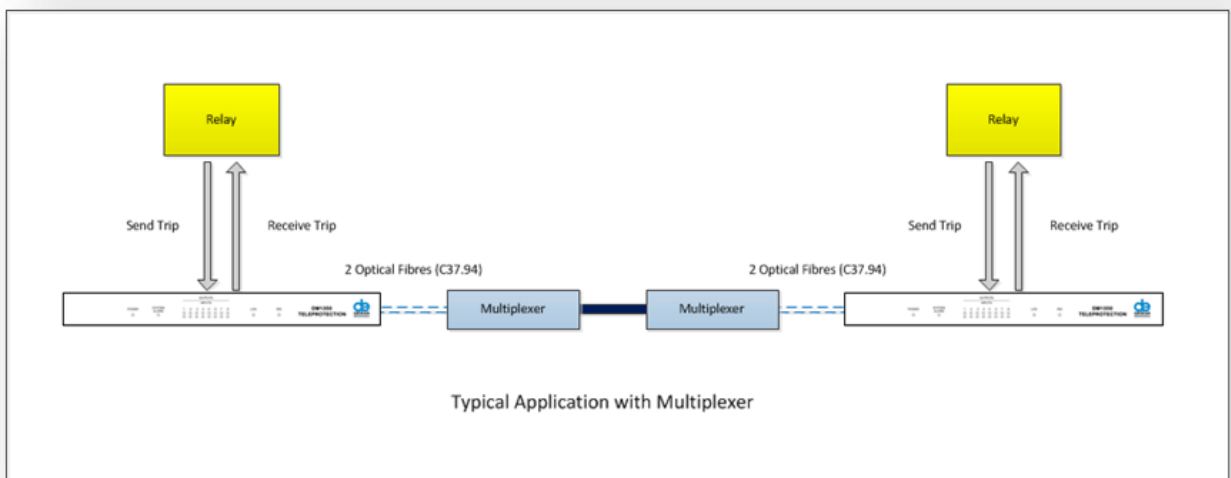
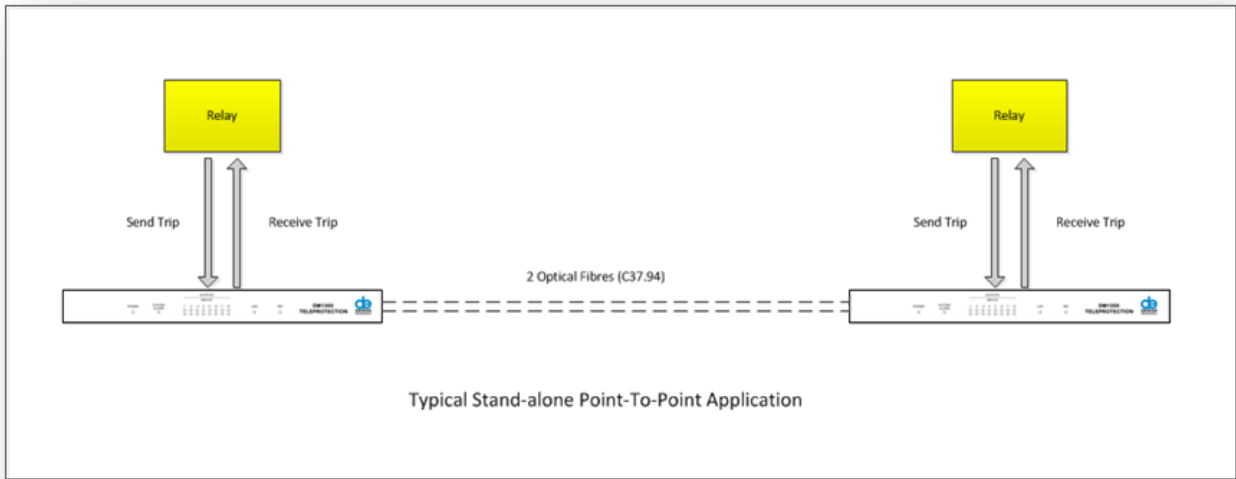
Designed and manufactured in Australia



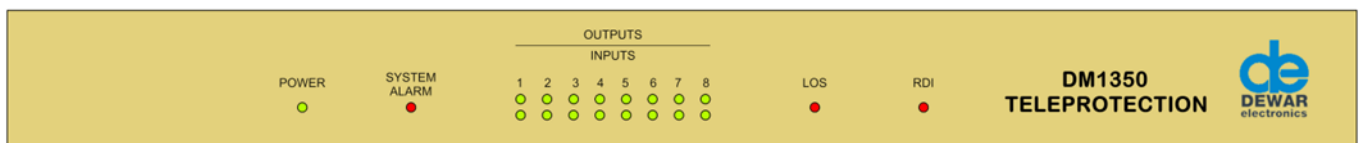
## Technical Specifications

<b>Models:</b>	DM1350
<b>Capacity:</b>	Eight independent commands.
<b>Power Supply:</b>	48 Volt DC (20 -60VDC) 110 Volt DC (66-160VDC)
<b>Command Trip Inputs:</b>	Opto-isolated Inputs. Nominal voltages of 24, 48, or 110 Volts DC ( $\pm 20\%$ Nominal Voltage). Other voltages may be available on request. User selectable at order placement.
<b>Command Trip Outputs:</b>	Eight normally open or normally closed mechanical relay contacts. Rated voltage 250VAC Max Switching voltage 400VAC Rated Current 16A
<b>C37.94 Compliant Communication:</b>	Standard compliance MM 820nm, MM 1310 nm and SM 1310nm
<b>Ambient Conditions:</b>	Exceeds IEC834-1 Ambient temperature -10°C to +55°C, Humidity 0 to 95% non-condensing, Altitude 2000 metres fully rated, 3500 metres maximum de-rated to 150 volts maximum applied voltage.
<b>Physical Size:</b>	19 inch wide, 1 U high rack mounting.
<b>Dimension:</b>	Height 43.8 mm, Width 440.5 mm, Depth 241 mm (Without Cable Holder)
<b>Weight:</b>	3 Kg. approx.
<b>Mounting:</b>	Flush or semi projection mounting.
<b>Shipping weight:</b>	4 Kg. (maximum)

# TYPICAL APPLICATIONS



## Operating a DM1350

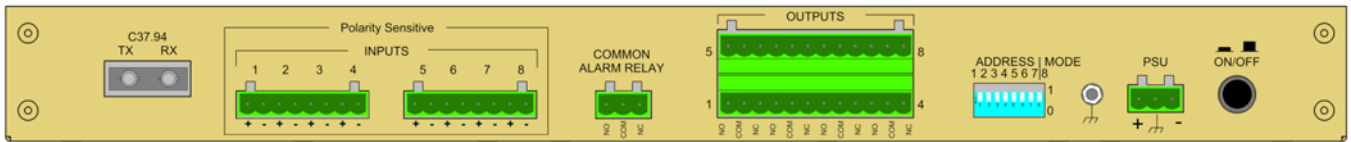


Operation of DM1350 Unit - Indication of LEDs	Power	System Alarm	LOS	RDI
Unit not powered On	OFF	OFF	OFF	OFF
Unit Operating Correctly	ON	OFF	OFF	OFF
Remote Unit not powered On or No signal Received from Remote Unit	ON	ON	ON	OFF
Remote Unit not receiving signal (Local Transmission Problem)	ON	ON	OFF	ON
Address not matching Remote Unit	ON	FLASHING	OFF	OFF

### Outputs / Inputs Status Indicating LEDs

When Trip Input activated on Local Unit the corresponding INPUT LED is ON, the corresponding OUTPUT LED on Remote Unit is ON.

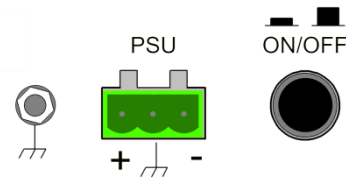
# Connecting a DM1350



## Connecting Power

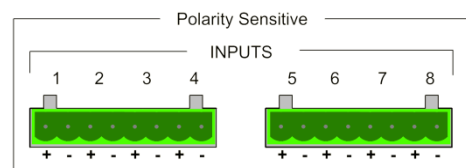
Power Supply can be 48 Volts DC, 110 Volts DC or 240 Volts AC/DC

- ◆ Chassis Earth
- ◆ Positive Input (Active)
- ◆ Negative Input (Neutral)
- ◆ On/Off Button



## Connecting Inputs

There are 8 Inputs that are **Polarity Sensitive**. The DM1350 on manufacture; can have any of these inputs configured to be 24V DC, 48V DC or 110V DC, depending on requirements. A label affixed to the lid will indicate the voltage settings for each Input.

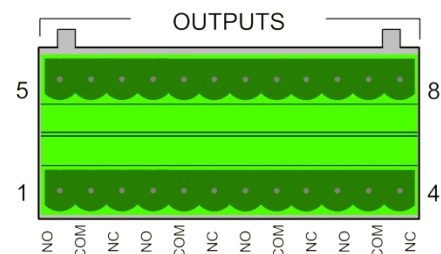


For example : The Inputs 1, 2, 3, 5 and 6 are configured for 110V DC, Input 4 is configured for 24V DC and Inputs 7 and 8 are configured for 48V DC.

WARNING								
These inputs are polarity sensitive!								
INPUTS								
	1		2		3		4	
Voltage	110V DC		110V DC		110V DC		24V DC	
Polarity	+	-	+	-	+	-	+	-
	5		6		7		8	
Voltage	110V DC		110V DC		48V DC		48V DC	
Polarity	+	-	+	-	+	-	+	-

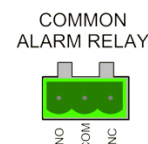
## Connecting Outputs

The 8 Electromechanical Relay Outputs can be Normally Open or Normally Closed.



## Common Alarm Relay

This Mechanical Relay can be Normally Open or Normally Closed.

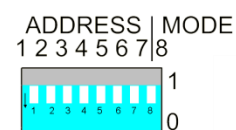


## Address / Mode Dipswitch

Switches 1 to 7 are for setting the address of the DM1350. This address setting must be the same on both DM1350 Units; otherwise communication between the two units will not take place.

Switch 8 is to set the unit to be either Internal Clock (normally used for Point-to-Point Applications) or Recovered Clock (normally used in Multiplexer Applications).

(0 = Internal Clock, 1 = Recovered Clock)



# DM1350 System Model Configuration

DM1350

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## Terminal model numbering

### Trip Inputs

Trip Input Voltage A=24VDC; B=48VDC; C = 110VDC

	T1	T2	T3	T4	T5	T6	T7	T8
24VDC=A								
48VDC=B								
110VDC=C								

### Power Supply

48VDC = 48 volt (20 to 60V DC)

110VDC = 110 volt (90 to 320V DC)

230AC = 240 volt (220-240V AC)

### Processor

STMM1 = C37.94 Processor

With FOI ST MM 850nm

STMM2 = C37.94 Processor

With FOI ST MM 1310nm (2 km)

STSM1 = C37.94 Processor

With FOI ST SM 1310nm (20km)

### Common Assembly

**NOTE:** Please contact Dewar for any long distance or other wavelength FOI (fibre optic interface) or any other special requirements

### Example.

Communication	FOI ST MM 1310nm (2 km)
PSU	48VDC
Trip Input 1	24VDC
Trip Input 2	48VDC
Trip Input 3	24VDC
Trip Input 4	48VDC
Trip Input 5	110VDC
Trip Input 6	24VDC
Trip Input 7	48VDC
Trip Input 8	110VDC

**DM1350** - **STMM2** - **48VDC** - **ABABCABC**



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