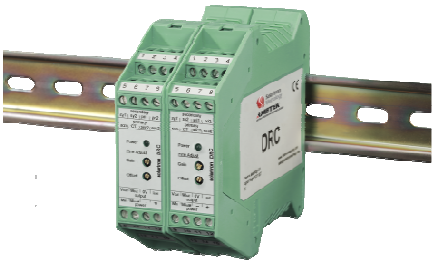
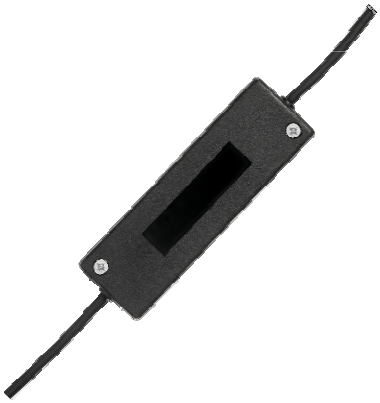
Analogue Electronics

OD Series

The OD series of conditioning units is used to interface with Solartron's sensors to provide different functionality to suit different applications.
The OD2 is a two wire 4-20mA signal conditioner. It is designed for long distance signal transmission due to low noise susceptibility. A cable break results in no current flow indicating a fault.
The OD4 (OD5 is a mains powered equivalent) is a signal conditioning unit powered from a single 10-30VDC supply. The outputs are fully adjustable allowing a range of voltage and current outputs to be selected.









DRC DIN Rail Module

The DRC is a DIN rail mounted version of the OD4 (see above).

BICM in line module

The BICM provides a simple low cost in line conditioning unit. This is designed for use where the sensor is in a harsh environment as the BICM can be connected up to 10m from the sensor. An IP67 variant of the BICM is also available.

ATM TLL converter

TTL RS 232 Differential Quadrature is one of the most commonly used methods of communication between Linear Displacement Sensors and Control or Data Acquisition Systems. Its simplicity of interfacing with programmable systems also makes Solartron's ATM one of the most cost effective.

Module	OD2	OD4	OD5	DRC	BICM	
Power Requirement						
Input Voltage	13-42 VDC	10-30 VDC	90-264 VAC	10-30 VDC	±15 VDC	24 VDC
Input Current (mA)	<30	140-50	250-100	160-70	±12	24
Frequency (Hz)	-		47-63	-		
Sensor Excitation						
Primary voltage (Vms)	0-9	3			1.2 - 21	
Primary frequency (kHz)	5 or 13	2.5 or 5	-	5, 10 or 13	5	
Signal Input						
Input Range	30-530mV/V	55 TO 5000 mv/v lvdt full range		Up to 3.5		
Input Load (kΩ)	2	2, 10, 100		2,100	100	
Options	-	Forward and reverse polarity, half bridge		See note 2	-	
Signal Output						
Voltage Output	-	Up to ± 10				
Current Output	4-20	Up to ±20 into 150Ω load				
Output Ripple	<38µA rms	< mV rms	-		< 14	
Output Offset	Up to 100% on maximum gain (coarse and fine adjustment)					
Temperature Coefficient Gain (%FSO/℃)	<0.01				<0.03	
Temperature Coefficient Offset (%FSO/℃)	<0.01				<0.02	
Warm up (minutes)	15 Minutes					
Linearity (%FSO)	<0.02				<0.1	
Bandwidth (-3dB) (Hz)	25	500Hz, 1khz			250	
Environmental						
Storage Temperature	-40 to +80	-20 to +80			-	
Operating Temperature	0 to +60				-	
IP rating	65	40		None	IP40/67	IP40
Mechanical						
Sensor Connections	Terminals	DIN connector	-	Terminals	Solder tag or factory fit for IP67	
Power Connections	Terminals	-	IEC320 C14	-	-	
Weight						
Material	ABS	Painted Aluminium Box		Plastic	Plastic or Stainless Steel IP67	
Mounting	Holes	-		DIN rail	-	

Module	ATM TLL converter
Measurement	
Sensors types	All Solartron Displacement Sensors
Accuracy (%FSO)	<0.25
Resolution (x4 interpolation)	0.1
Repeatability	Sensor dependent
Electrical	
Power	±5 = 0.25 VDC @ 100 mA
Output Signal	A and B, /A and /B TTL square waves RS422 levels
Output frequency (kHz)	50, 100, M125, 250 & 500 (factory selectable)
Bandwidth	100 Hz
Signal Input	
Sealing	IP43
Operating temperature (kHz)	0 to +60
Storage temperature (℃)	-20 to -70