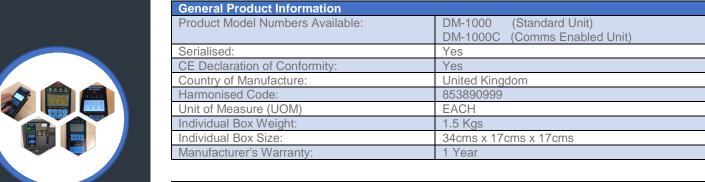
ARCH INDUSTRIAL TECHNOLOGIES LTD DM-1000

Technnical Data Sheet

TDS_DM-1000_0520_R1



Air Circuit Breaker Compatibility	
ACB Type:	Merlin Gerin Masterpact M Type ACBs Schneider Masterpact M Type ACBs Klockner Moeller IZM Type ACBs
To Replace Trip Unit Types:	STR18I / 18M / 28D / 38S / 58U (+ ST108 – ST418S) NB: Not compatible for STR68U or ST608M
Frame Size Compatibility:	M08 - M63
Current Sensor Inputs (100mA Sec):	200A - 6300A*
Breaker Fault Rating Type:	N1, H1, H2, L1
Breaker Construction Types:	Fixed Pattern or Drawout
Breaker Poles:	3 or 4
Frequency:	50 / 60 Hz
Standard:	IEC

Protective Function	Qty	Values
Protective Functions Types (Defeatable dependent upon Modelled unit selected):	7	Over Current (L), Short Time (S), Instantaneous (I), Ground Fault (G), Phase Imbalance (P), Making Current Release (MCR / DINF) and High Set Instantaneous (HSI)
Long Time Pick Up (Io x Ir) Adjustment	30	0.4 – 1.0 x ln
Long Time Delay (tr) Adjustment	6	15s – 480s (@ 1.5 x lr)
Thermal Memory Function Adjustment	2	ON / OFF
Thermal Memory Time Adjustments	9	30s - 1800s
Neutral Protection	2	100% or 50%
Short Time Pick Up (Im) Adjustment	8	1.5 – 10 x lr
Short Time Delay (tm) Adjustment	8	$0 - 0.4 (I^2 t OFF) & 0.1 - 0.3 (I^2 t ON)$
Instantaneous (I) Pick Up Adjustment NB: INST Function is "I" & "HSI" Combined	16	1.5 – 28 x ln
Ground Fault Types	2	Residual Current "T" (default) or Source Ground Return "W" (factory build)
Ground Fault Pick Up (Ih) Adjustment	12	0.10 - 1.00 (Max 1200A)
Ground Fault Delay (th) Adjustment	8	$0.1 - 0.4 (I^2 t OFF) & 0.1 - 0.4 (I^2 t ON)$
Phase Imbalance Pickup (P) Adjustment	7	0.25 – 0.70 x lr
Phase Imbalance Delay (tp) Adjustment	12	1s - 90s
Making Current Release (MCR / DINF)	2	Set dependent upon ACB Characteristics

Local Indication and Control Features		
LCD Screen	21 Character x 8 Row LCD with Backlight	
Local Programming Controls	8 Buttons for Power On and Menu Operation	
Programmable Settings via Menu System	Full View & Edit Menu System	
Indicator LEDs	4 (ON / PRE-ALARM / OVERLOAD / TRIPPED)	









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Optional Functions	Qty	Values
Optional Non-Protection Functions Available:	5	ALR / FV / R / ZSI / Comms (only on DM-1000C model)
ALR – Pre Trip Alarm Contact	1 N/O	Solid State Photo Relay with contact capacity 130mA up to 240VAC Control Circuit
ALR – Pick Up Threshold		1.125 x lr
ALR – Contact Closes On		Pickup threshold exceeded on any phase
ALR – Contact Opens On		Current falls below Pickup Threshold
ALR – External 24VDC Supply Required		Not Required
FV – Segregated Fault Trip Alarm Contact	1 N/O	Electromechanical Relay with contact capacity 5A, 240VAC / 30VDC
FV – Fault Types for Alarm Reporting	6	LTD / STD / STD / INST / GF / PI
FV – Contact Closes On		Trip caused by any of selected protection
FV – Contact Opens On		Reset of Trip Condition on Relay
FV – External 24VDC Supply Required		Yes
R – Load Monitoring Contacts	2 N/O	Solid State Photo Relay with contact capacity 130mA up to 240VAC Control Circuit
R – Ic1 Pickup Threshold Settings	8	0.80 to 1.00 x lr
R – Ic2 Pickup Threshold Settings	8	0.50 to 0.80 x lr
R – tr1 Delay Setting	1	60 Seconds
R – tr2 Delay Setting	1	30 Seconds
R – External 24VDC Supply Required		Not Required
ZSI – Zone Selective Interlocking	1 N/O	Solid State Photo Relay with contact
Output Contact		capacity 130mA up to 240VAC Control Circuit
ZSI – Output Contact Closes On		STD or GF Fault is Detected by DM-1000
ZSI – Output Contact Open On		Resets when Fault Condition Resolves
ZSI – External 24VDC Supply Required		Not Required

Modbus Communications (on DM-1000C only)	
Protocol	MODBUS RTU
Physical Network	RS-485
Wiring Type Required	Shielded Twisted Pair
Baud Rate	4800 / 9600 / 19200
Data Bits	8
Stop Bits	2
Parity	None
Default Slave ID	200
Modbus Address Map	On Request
External 24VDC Supply Required	Yes

Batteries (not used in protective functions)	
Main Battery (for LCD use only)	1 x 9V 6LR61 / PP3 Alkaline Non-Rechargeable
Coin Cell Battery (for date / time only)	1 x 3V CR2032

Additional Wiring Harnesses Required For Options	
Wiring Harness for ALR / FV / R Options	AIT DM1000-ACC-WH-OC
Wiring Harness for Comms / ZSI Options	AIT DM1000-ACC-WH-ZC
Wiring Harness for Extending Breaker Input	AIT DM1000-ACC-WH-CE
Connectors with Wiring Guard	

Test Equipment	
Secondary Injection Test Equipment Required	AIT DMTK