



CAWANGAN KEJURUTERAAN ELEKTRIK
JABATAN KERJA RAYA MALAYSIA

SIJIL EMAL

Sijil Pendaftaran Bahan/Barangan Elektrik (Electrical Material Approved List) ini dikeluarkan kepada pengilang/pembekal :

Syarikat : **DELAB SCIENTIFIC SDN. BHD.**
Alamat : NO. 22, JALAN TEMBAGA SD5/2D, BANDAR SRI DAMANSARA,
52200 KUALA LUMPUR.

Bahan : **PROTECTION RELAY (EARTH FAULT RELAY)**

Pendaftaran ini adalah seperti butiran di bawah dan tertakluk kepada Spesifikasi JKR dan **syarat-syarat di muka surat 2**. Sijil ini hendaklah dibaca bersama **Lampiran** (2 muka surat).

Pengilang	: DELAB SCIENTIFIC SDN. BHD.
Negara Pengilang	: MALAYSIA
Jenama	: DELAB
Model	: DP-21 & DP-31
Kadaran	: SEPerti LAMPIRAN
No. Perakuan ST/No. Sijil/	: LAPORAN UJIAN SIRIM : 2025RE0367
Laporan Ujian Jenis	
Tarikh Tamat	: 15.06.2029
Rujukan Standard	i) SAFETY STANDARD : IEC 60255-27:2023 (CLAUSE 9.6.4.2 IMPULSE VOLTAGE WITHSTAND & CLAUSE 9.6.4.3 DIELECTRIC TEST) ii) EMC STANDARD : IEC 60255-26:2023 (CLAUSE 7.2.2, 7.2.3, 7.3.2, 7.3.3, 7.3.4, 7.3.5, 7.3.6, 7.3.7, 7.3.8, 7.3.9, 7.3.10, 7.3.11 & 7.3.12)
Catatan	: i) COMMUNICATION INTERFACE: RS 485 (EXTERNAL MODULE IS REQUIRED) DAN SEPerti LAMPIRAN



Tarikh dikeluarkan/diperbaharui : 24 April 2026


Ir. ZURAIDAH BINTI MUHAMAD
Pengaruh Perunding Rekabentuk
Cawangan Kejuruteraan Elektrik
b.p. Ketua Pengarah Kerja Raya
JKR Malaysia

LAMPIRAN

Perihal Barangan : EARTH FAULT RELAY
Nama Syarikat : DELAB SCIENTIFIC SDN. BHD.
Alamat Syarikat : NO. 22, JALAN TEMBAGA SD5/2D, BANDAR SRI DAMANSARA, 52200 KUALA LUMPUR.
No. Telefon : 03 – 6272 6506
No. Faksimile : 03 – 6272 6915
E-mel : steven@delab.com.my
Nama Pengilang : DELAB SCIENTIFIC SDN. BHD.
Negara Pengilang : MALAYSIA
Jenama : DELAB
No. Perakuan ST / No. Sijil / Laporan Ujian : LAPORAN UJIAN SIRIM : 2025RE0367
Tarikh Tamat : 15.06.2029
Rujukan Standard : i) SAFETY STANDARD : IEC 60255-27:2023 (CLAUSE 9.6.4.2 IMPULSE VOLTAGE WITHSTAND & CLAUSE 9.6.4.3 DIELECTRIC TEST)
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Catatan : i) COMMUNICATION INTERFACE : RS485 (EXTERNAL MODULE IS REQUIRED)
ii) COMMUNICATION PROTOCOL : MODBUS RTU (EXTERNAL MODULE IS REQUIRED)
iii) COMMUNICATION DEVICE : PERSONAL COMPUTER (EXTERNAL MODULE IS REQUIRED)
iv) REMOTE REAL TIME MONITORING AND MANAGEMENT SYSTEM : YES (EXTERNAL MODULE IS REQUIRED)
v) AMBIENT TEMPERATURE : 0 °C TO 55 °C
vi) RELATIVE HUMIDITY : 93%
vii) DEGREE OF PROTECTION : IP 54 AT PANEL
viii) FAULT RECORD : YES
ix) EVENT RECORD : YES
x) BUILT-IN SELF-TEST/DIAGNOSTIC : YES (DEVICE FAILURE - DUF)
xi) EXTERNAL ALARM CONTACT FOR PROTECTION RELAY FAILURE/DEFECT : YES
xii) OTHER (S) : LATEST FIRMWARE REVISION : 2.05
Muka Surat : 1 daripada 2



DESCRIPTIONS

NO.	MODEL	POWER SUPPLY	MOUNTING TYPE	TIME DELAY SETTING RANGES	CURRENT SETTING RANGES
1	DP-21	65 ~ 275 VAC, 45 ~ 65 Hz OR 90 ~ 300 VDC	EARTH FAULT PROTECTION	a. LOW SET TIME DELAY SETTING (te>): 0.03 s TO 20 s	a) LOW SET EARTH FAULT SETTING (le>): 2% TO 100% OF In
				b) HIGH SET TIME DELAY SETTING (te>>): 0.03 s	b) HIGH SET EARTH FAULT SETTING (le>>): 20% TO 1000% OF In

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iv) REMOTE REAL TIME MONITORING AND MANAGEMENT SYSTEM : YES (EXTERNAL MODULE IS REQUIRED)
v) AMBIENT TEMPERATURE : 0 °C TO 55 °C
vi) RELATIVE HUMIDITY : 93%
vii) DEGREE OF PROTECTION : IP 54 AT PANEL
viii) FAULT RECORD : YES
ix) EVENT RECORD: YES
x) BUILT-IN SELF-TEST/DIAGNOSTIC : YES (DEVICE FAILURE - DUF)
xi) EXTERNAL ALARM CONTACT FOR PROTECTION RELAY FAILURE/DEFECT : YES
xii) OTHER (S) : LATEST FIRMWARE REVISION : 2.05
Muka Surat : 2 daripada 2



DESCRIPTIONS

NO.	MODEL	POWER SUPPLY	MOUNTING TYPE	TIME DELAY SETTING RANGES	CURRENT SETTING RANGES
1	DP-31	65 ~ 275 VAC, 45 ~ 65 Hz OR 90 ~ 300 VDC	EARTH FAULT PROTECTION	a) LOW SET TIME DELAY SETTING ($t_{c>}$): i. TMS FOR INVERSE TIME DELAY (TMS $I_{e>}$): 0.05 TO 1 ii. DELAY FOR DEFINITE TIME: 0.03 s TO 20 s	a) LOW SET EARTH FAULT SETTING ($I_{e>}$): 2% TO 100% OF I_n
				b) HIGH SET TIME DELAY SETTING ($t_{e>>}$): 0 s OR 0.02 s TO 0.5 s	b) HIGH SET EARTH FAULT SETTING ($I_{e>>}$): 20% TO 1000% OF I_n