



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 : 2015RE632
Laporan Ujian Jenis	
Tarikh Tamat	: 15.06.2026
Rujukan Standard	i) SAFETY STANDARD : IEC 60255-27:2013 (10.6.4.2 IMPULSE VOLTAGE WITHSTAND & CLAUSE 10.6.4.3 DIELECTRIC TEST) ii) EMC STANDARD : IEC 60255-26:2013 (CLAUSE 5.1, 7.2.3, 7.2.4, 7.2.5, 7.2.6, 7.2.7, 7.2.8, 7.2.10 & 7.2.11)
Catatan	: i) COMMUNICATION INTERFACE : RS 485 (EXTERNAL MODULE IS REQUIRED) DAN SEPERTI LAMPIRAN



Ir. **HANIZAN BINTI SHAFFII**
Pengarah Kanan
Cawangan Kejuruteraan Elektrik
b.p. Ketua Pengarah Kerja Raya
JKR Malaysia

Tarikh dikeluarkan/diperbaharui : 7 Julai 2023

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 : 2015RE632
Tarikh Tamat	: 15.06.2026
Rujukan Standard	: i) SAFETY STANDARD : IEC 60255-27:2013 (10.6.4.2 IMPULSE VOLTAGE WITHSTAND & CLAUSE 10.6.4.3 DIELECTRIC TEST) ii) EMC STANDARD : IEC 60255-26:2013 (CLAUSE 5.1, 7.2.3, 7.2.4, 7.2.5, 7.2.6, 7.2.7, 7.2.8, 7.2.10 & 7.2.11)
Catatan	: i) COMMUNICATION INTERFACE : RS 485 (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

KETERANGAN

BIL	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 (Ie>): 2% TO 100% OF In
				b) HIGH SET TIME DELAY SETTING (te>>): 0.03 s	b) HIGH SET EARTH FAULT SETTING (Ie>>): 20% TO 1000% OF In



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 : 2015RE632
Tarikh Tamat	: 15.06.2026
Rujukan Standard	: i) SAFETY STANDARD : IEC 60255-27:2013 (10.6.4.2 IMPULSE VOLTAGE WITHSTAND & CLAUSE 10.6.4.3 DIELECTRIC TEST) ii) EMC STANDARD : IEC 60255-26:2013 (CLAUSE 5.1, 7.2.3, 7.2.4, 7.2.5, 7.2.6, 7.2.7, 7.2.8, 7.2.10 & 7.2.11)
Catatan	: i) COMMUNICATION INTERFACE : RS 485 (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	: 2 daripada 2

KETERANGAN

BIL	MODEL	POWER SUPPLY	MOUNTING TYPE	TIME DELAY SETTING RANGES	CURRENT SETTING RANGES
2	DP-31	65 ~ 275 VAC, 45 ~ 65 Hz OR 90 ~ 300 VDC	EARTH FAULT PROTECTION	a) LOW SET TIME DELAY SETTING (te>): i) TMS FOR INVERSE TIME DELAY (TMS le>): 0.05 TO 1 ii) DELAY FOR DEFINITE TIME: 0.03 s TO 20 s	a) LOW SET EARTH FAULT SETTING (Ie>): 2% TO 100% OF In
				b) HIGH SET TIME DELAY SETTING (te>>): 0 s OR 0.02 s TO 0.5 s	b) HIGH SET EARTH FAULT SETTING (Ie>>): 20% TO 1000% OF In

