JABATAN KERJA RAYA MALAYSIA
CAWANGAN KEJURUTERAAN ELEKTRIK
UNIT PENSIJILAN BAHAN DAN STANDARD

TECHNICAL INFORMATION **OVERCURRENT RELAY**

A. COMPANY INFORMATION			
COMPANY NAME :			
ADDRESS :			
POSTCODE :		**TELEPHONE NO. :**	
STATE :		**COMPANY EMAIL :**	

ISO CERTIFICATION					**REGISTRATION NO.**	**SCOPE**
1. ISO 9001	☐	YES	☐	NO		
2. ISO 14001	☐	YES	☐	NO		
3. ISO 50001	☐	YES	☐	NO		
4. ISO	☐	YES	☐	NO		

B. PRODUCT INFORMATION				
BRAND NAME :				
MODEL	**VARIANT / PART NO. (IF APPLICABLE)**	**MANUFACTURER NAME**	**MANUFACTURER ADDRESS**	**COUNTRY OF ORIGIN**
1.				
2.				
3.				
4.				
5.				
6.				

Note:
Please cross ☒ whichever applicable and fill in the required blanks.

C. COMPLIANCE REQUIREMENTS

NO.	REQUIREMENTS	REMARKS	YES	NO
1.	The rated voltage of input and energizing voltage is 230/400 VAC.		☐	☐
2.	The minimum operating voltage should be less than or equal to 90 VAC, and the maximum operating voltage should be greater than or equal to 250 VAC.		☐	☐
3.	Ambient temperature of 50 °C and above.		☐	☐
4.	Relative humidity up to 95%.		☐	☐
5.	Suitable for tropical condition.		☐	☐
6.	Overcurrent and earth fault protection shall be provided by externally connected current transformer.		☐	☐
7.	The protection relay shall be of three phase overcurrent protection with instantaneous, definite time and inverse time characteristics.		☐	☐
8.	Provided with either instantaneous or inverse time lag characteristics in the overload range (low set).		☐	☐
9.	Provided with instantaneous with or without time delay in the short circuit range (high set).		☐	☐
10.	Time/current characteristic of IDMT overcurrent and earth fault relay shall be of standard inverse curve (3/10).		☐	☐
11.	Flushed panel mounting type.		☐	☐
12.	The test report shall comply with: • "Impulse Voltage Test" of IEC 60255-27. • "AC/DC Dielectric Voltage" of IEC 60255-27. • "Electrostatic Discharge Immunity Test" of IEC 60255-26. • "Electrical Fast Transient/Burst Immunity Test" of IEC 60255-26. • "Surge Immunity Test" of IEC 60255-26.		 ☐ ☐ ☐ ☐ ☐	 ☐ ☐ ☐ ☐ ☐

Note:

Please cross ☒ whichever applicable and fill in the required blanks.

D. SPECIFICATIONS

1. GENERAL

MODEL	DIMENSION (WIDTH x HEIGHT x DEPTH)	RATED AC VOLTAGE (V)	OPERATING AC VOLTAGE (V)	RATED FREQUENCY (Hz)	OPERATING FREQUENCY (Hz)	RATED CURRENT INPUT (5 A, 1 A)	RATED AMBIENT TEMPERATURE (°C)	RELATIVE HUMIDITY (%)	IP RATING	WARRANTY PERIOD (YEARS)	LIFE EXPECTANCY (YEARS)	PRICE (RM)
1. ……												
2. ……												
3. ……												
4. ……												
5. ……												
6. ……												

2. INPUT/OUTPUT

MODEL	DISPLAY PANEL (YES/NO)	PHASE CURRENT MEASUREMENT DISPLAY (YES/NO)	NOS. OF DIGITAL INPUT	TYPE OF DIGITAL INPUT	DIGITAL INPUT RATED VOLTAGE (V)	NOS. OF PROGRAMMABLE OUTPUT CONTACT	OUTPUT CONTACT RATED VOLTAGE (V)	OUTPUT CONTACT CONTINUOUS CURRENT (A)	ALARM CONTACT (YES/NO)	SELF-TEST/DIAGNOSTIC (YES/NO)	POWER SUPPLY FAILURE ALARM (YES/NO)
1. ……											
2. ……											
3. ……											
4. ……											
5. ……											
6. ……											

Note:
Please ensure the models declared within this page are in exact match as in page 3.

3. DATA LOGGING

MODEL	PASSWORD PROTECTION (YES/NO)	EVENT RECORD (YES/NO)	NOS. OF EVENT RECORD	SETTING CHANGES – EVENT RECORD (YES/NO)	FAULT RECORD (YES/NO)	NOS. OF FAULT RECORD	REAL-TIME CLOCK/RTC (YES/NO)	TIMESTAMP (YES/NO)	DURATION FOR INTERNAL CLOCK RETENTION DURING POWER INTERRUPTION (HOURS)
1. ……									
2. ……									
3. ……									
4. ……									
5. ……									
6. ……									

Note:
Please ensure the models declared within this page are in exact match as in page 3.

4. COMMUNICATION

MODEL	REMOTE COMMUNICATION SUPPORT (YES/NO)	CLOSE COMMUNICATION SUPPORT (YES/NO)	BUILT-IN COMMUNICATION INTERFACE (YES/NO)	EXTENSIBLE WITH EXTERNAL COMMUNICATION MODULE (YES/NO)	COMMUNICATION INTERFACE TYPE	COMMUNICATION PROTOCOL TYPE	EQUIPPED WITH MONITORING & MANAGEMENT SOFTWARE (YES/NO)	NAME OF MONITORING & MANAGEMENT SOFTWARE	COMMUNICATION DEVICE (PC/MOBILE PHONE/REMOTE TERMINAL & ETC.)
1. ……									
2. ……									
3. ……									
4. ……									
5. ……									
6. ……									

Note:
Please ensure the models declared within this page are in exact match as in page 3.

5. OPERATING CHARACTERISTICS

MODEL	TYPE OF PROTECTION	STAGES	TIME DELAY SETTING RANGES	DEPENDENT TIME OPERATING CURVES	FAULT CURRENT SETTING RANGES
0. ……	OVERCURRENT PROTECTION	LOW SET	TMS FOR IDMT: 0.01 – 1 DELAY FOR DT: 0.01s – 100s (IF APPLICABLE)	NORMAL INVERSE 3/10, VERY INVERSE & EXTREMELY INVERSE	10% - 250% OF RATED CURRENT
		HIGH SET	TMS FOR IDMT: 0.01 – 1 (IF APPLICABLE) DELAY FOR DT: 0.01s – 100s	NORMAL INVERSE 3/10, VERY INVERSE & EXTREMELY INVERSE	10% - 2000% OF RATED CURRENT
1. ……	OVERCURRENT PROTECTION	LOW SET			
		HIGH SET			
2. ……	OVERCURRENT PROTECTION	LOW SET			
		HIGH SET			
3. ……	OVERCURRENT PROTECTION	LOW SET			
		HIGH SET			

MODEL	TYPE OF PROTECTION	STAGES	TIME DELAY SETTING RANGES	DEPENDENT TIME OPERATING CURVES	FAULT CURRENT SETTING RANGES
4. ……	OVERCURRENT PROTECTION	LOW SET			
		HIGH SET			
5. ……	OVERCURRENT PROTECTION	LOW SET			
		HIGH SET			
6. ……	OVERCURRENT PROTECTION	LOW SET			
		HIGH SET			

E. TYPE TESTS

NO.	TEST DESCRIPTION	STANDARD	TEST STANDARD	TEST REPORT NO.	PAGE	YES	NO
1	**Functional & Accuracy Tests**						
1.1	Test Reference Condition	IEC 60255-1	IEC 60255-1			☐	☐
1.2	Dimensions of Structure & Visual Inspection	IEC 60255-1	IEC 60297-3-101			☐	☐
1.3	Burden Test for Current Transformers	IEC 60255-1	IEC 60255-1			☐	☐
1.4	Burden Test for AC Power Supply	IEC 60255-1	IEC 60255-1			☐	☐
1.5	Burden Test for DC Power Supply	IEC 60255-1	IEC 60255-1			☐	☐
1.6	Burden Test for Binary Input	IEC 60255-1	IEC 60255-1			☐	☐
1.7	Contact Performance Test	IEC 60255-1	IEC 60255-1			☐	☐
1.8	Communication Requirements	IEC 60255-1	IEC 60255-1			☐	☐
1.9	Determination of Steady State Errors to the Current	IEC 60255-151	IEC 60255-151			☐	☐
1.10	Determination of Steady State Errors to the Start & Operate Time	IEC 60255-151	IEC 60255-151			☐	☐
1.11	Determination of Steady State Errors to the Reset Time	IEC 60255-151	IEC 60255-151			☐	☐
1.12	Determination of Transient Performance (Transient Overreach)	IEC 60255-151	IEC 60255-151			☐	☐
1.13	Determination of Transient Performance (Overshoot Time)	IEC 60255-151	IEC 60255-151			☐	☐
1.14	Determination of Transient Performance (Time Varying Value of the Current for Dependent Time Relay)	IEC 60255-151	IEC 60255-151			☐	☐

Note:

Please cross ☒ whichever applicable and fill in the required blanks.

NO.	TEST DESCRIPTION	STANDARD	TEST STANDARD	TEST REPORT NO.	PAGE	YES	NO
2	**Mechanical Environmental Tests**						
2.1	Vibration Response Test (sinusoidal) ↳ Class	IEC 60255-27	IEC 60255-21-1			☐	☐
2.2	Vibration Endurance Test (sinusoidal) ↳ Class	IEC 60255-27	IEC 60255-21-1			☐	☐
2.3	Shock Response Test ↳ Class	IEC 60255-27	IEC 60255-21-2			☐	☐
2.4	Shock Withstand Test ↳ Class	IEC 60255-27	IEC 60255-21-2			☐	☐
2.5	Bump Test ↳ Class	IEC 60255-27	IEC 60255-21-2			☐	☐
2.6	Seismic/Quake Test ↳ Class	IEC 60255-27	IEC 60255-21-3			☐	☐
3	**Climatic Tests**						
3.1	Dry-heat test- operational (Test Bd) ↳ Temp. ..... ↳ Humid.	IEC 60255-27	IEC 60068-2-2			☐	☐
3.2	Cold test - operational (Test Ad) ↳ Temp.	IEC 60255-27	IEC 60068-2-1			☐	☐
3.3	Dry heat test at maximum storage temperature (Test Bb) ↳ Temp. ..... ↳ Humid.	IEC 60255-27	IEC 60068-2-2			☐	☐
3.4	Cold test at minimum storage temperature (Test Ab) ↳ Temp.	IEC 60255-27	IEC 60068-2-1			☐	☐

Note:

Please cross ☒ whichever applicable and fill in the required blanks.
(e.g: Class II , Temp. 55°C , Humid. 95%)

NO.	TEST DESCRIPTION	STANDARD	TEST STANDARD	TEST REPORT NO.	PAGE	YES	NO
3	**Climatic Tests (Cont.)**						
3.5	Change of temperature (Test Nb)	IEC 60255-1	IEC 60068-2-14			☐	☐
3.6	Damp-heat test (Test Cab) ↳ Temp. ..... ↳ Humid.	IEC 60255-27	IEC 60068-2-78			☐	☐
3.7	Cyclic temperature with humidity test (Test Db)	IEC 60255-27	IEC 60068-2-30			☐	☐
4	**Safety Tests**						
4.1	Accessible Part Tests ↳ IP XX	IEC 60255-27	IEC 60529			☐	☐
4.2	Dust/Water Ingress Protection Tests ↳ IP	IEC 60255-27	IEC 60529			☐	☐
4.3	Clearances and Creepage Distances	IEC 60255-27	IEC 60255-27			☐	☐
4.4	Impulse Voltage	IEC 60255-27	IEC 60255-27			☐	☐
4.5	AC/DC Dielectric Voltage	IEC 60255-27	IEC 60255-27			☐	☐
4.6	Insulation Resistance	IEC 60255-27	IEC 60255-27			☐	☐
4.7	Protective Bonding Resistance	IEC 60255-27	IEC 60255-27			☐	☐
4.8	Protective Bonding Continuity	IEC 60255-27	IEC 60255-27			☐	☐
4.9	Single-fault Condition	IEC 60255-27	IEC 60255-27			☐	☐
4.10	Reverse Polarity & Slow Ramp	IEC 60255-27	IEC 60255-27			☐	☐
4.11	Maximum Temperature of Parts & Materials	IEC 60255-27	IEC 60255-27			☐	☐
4.12	Flammability of Insulating Materials, Components & Fire Enclosures	IEC 60255-27	IEC 60255-27			☐	☐

Note:

Please cross ☒ whichever applicable and fill in the required blanks.
(e.g: Class II , Temp. 55˚C , Humid. 95%)

NO.	TEST DESCRIPTION	STANDARD	TEST STANDARD	TEST REPORT NO.	PAGE	YES	NO
4	**Safety Tests (Cont.)**						
4.13	Thermal Short Time	IEC 60255-27	IEC 60255-27			☐	☐
4.14	Output Relay, Make & Carry	IEC 60255-27	IEC 60255-27			☐	☐
4.15	Routine Testing	IEC 60255-27	IEC 60255-27			☐	☐
5	**Electromagnetic Compatibility (EMC) Tests**						
5.1	Radiated Emission Test ↳ Class	IEC 60255-26	CISPR 11:2009			☐	☐
5.2	Conducted Emission Test ↳ Ports [2] enclosure, supply, comm, I/O, functional earth ↳ Class	IEC 60255-26	CISPR 22:2008			☐	☐
5.3	Electrostatic Discharge Immunity Test ↳ Ports [2] enclosure, supply, comm, I/O, functional earth	IEC 60255-26	IEC 61000-4-2			☐	☐
5.4	Radiated Interference Immunity Test ↳ Ports [2] enclosure, supply, comm, I/O, functional earth	IEC 60255-26	IEC 61000-4-3			☐	☐
5.5	Electrical Fast Transient/Burst Immunity Test ↳ Zone ..... ↳ Ports [2] enclosure, supply, comm, I/O, functional earth	IEC 60255-26	IEC 61000-4-4			☐	☐

Note:

Please cross ☒ whichever applicable and fill in the required blanks.
(e.g: Class II , Temp. 55°C , Humid. 95%)
[2] Please ~~strikethrough~~ the port(s) which not applicable during testing.
(e.g: ~~enclosure~~, supply, comm, I/O, ~~functional earth~~)

NO.	TEST DESCRIPTION	STANDARD	TEST STANDARD	TEST REPORT NO.	PAGE	YES	NO
5	**Electromagnetic Compatibility (EMC) Tests (Cont.)**						
5.6	Slow Damped Oscillatory Wave Immunity Test ↳ Ports [2] enclosure, supply, comm, I/O, functional earth	IEC 60255-26	IEC 61000-4-18			☐	☐
5.7	Surge Immunity Test ↳ Zone ..... ↳ Ports [2] enclosure, supply, comm, I/O, functional earth	IEC 60255-26	IEC 61000-4-5			☐	☐
5.8	Conducted Interference Immunity Test ↳ Ports [2] enclosure, supply, comm, I/O, functional earth	IEC 60255-26	IEC 61000-4-6			☐	☐
5.9	Power Frequency Immunity on DC Binary Inputs ↳ Ports [2] enclosure, supply, comm, I/O, functional earth	IEC 60255-26	IEC 61000-4-16			☐	☐
5.10	Power Frequency Magnetic Field Immunity Test ↳ Ports [2] enclosure, supply, comm, I/O, functional earth	IEC 60255-26	IEC 61000-4-8			☐	☐
5.11	AC Voltage Dips & Voltage Interruption Test ↳ Ports [2] enclosure, supply, comm, I/O, functional earth	IEC 60255-26	IEC 61000-4-11			☐	☐

Note:

Please cross ☒ whichever applicable and fill in the required blanks.
(e.g: Class II , Temp. 55°C , Humid. 95%)
[2] Please ~~strikethrough~~ the port(s) which not applicable during testing.
(e.g: ~~enclosure,~~ supply, comm, I/O, ~~functional earth~~)

NO.	TEST DESCRIPTION	STANDARD	TEST STANDARD	TEST REPORT NO.	PAGE	YES	NO
5	**Electromagnetic Compatibility (EMC) Tests (Cont.)**						
5.12	DC Voltage Dips & Voltage Interruption Test ↳ Ports [2] enclosure, supply, comm, I/O, functional earth	IEC 60255-26	IEC 61000-4-29			☐	☐
5.13	Voltage Ripple on DC Power Supply Voltage Test ↳ Ports [2] enclosure, supply, comm, I/O, functional earth	IEC 60255-26	IEC 61000-4-17			☐	☐
5.14	Gradual Shut Down / Start-up Test ↳ Ports [2] enclosure, supply, comm, I/O, functional earth	IEC 60255-26	IEC 60255-26			☐	☐

Note:

Please cross ☒ whichever applicable and fill in the required blanks.
[2] Please ~~strikethrough~~ the port(s) which not applicable during testing.
(e.g: ~~enclosure,~~ supply, comm, I/O, ~~functional earth~~)

F. LIST OF DOCUMENTS TO BE ATTACHED

NO.	DESCRIPTION	YES	NO
1.	Technical Catalogue	☐	☐
2.	Manufacturer's Installation Manual	☐	☐
3.	Operation and Maintenance Manual	☐	☐
4.	Test Report(s)	☐	☐
5.	Certificate of ISO/IEC 17025 Laboratory Accreditation	☐	☐
6.	Certificate of All Related IEC 60255 Scope Accreditation	☐	☐

G. *PENGESAHAN*

*Adalah saya, ... dengan ini mengesahkan segala keterangan yang diberikan/dikemukakan bagi bahan/barangan di atas adalah benar. Jika saya didapati membuat pengakuan **PALSU**, maka tindakan boleh diambil oleh pihak JKR terhadap permohonan pendaftaran saya.*

Setem Syarikat:

	Tandatangan	:
	Nama	:
	Jawatan	:
	Tarikh	:

H. *ULASAN (Untuk Kegunaan Pejabat)*

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Note:

Please cross ☒ whichever applicable and fill in the required blanks.