1. Title	Maintain the trackside equipment of the railway signal and control system and interlock	
2. Code	EMRAMA308A	
3. Range	Maintain the trackside equipment of the railway signal and control system and interlock at railway premises, railway traffic control rooms and signal switch rooms according to maintenance instructions by applying maintenance techniques for electronic and electrical equipment.	
4. Level	3	
5. Credits	6	
6. Competency		Performance Requirements
	6.1 Structure and working principles of the railway signal and control system and interlock devices	♦ Understand the working principles of the railway signal and control system ♦ Understand the structure and working principles of the railway signal interlock system, including: • PLC equipment • Solid-state interlock equipment • Relay interlock equipment • Electronic control circuits ♦ Understand the structure and working principles of the trackside equipment of the railway signal and control system, including: • PLC and control components • Train location detecting devices • Platform screen door control devices • Railway signal display devices • Electronic interface devices • Point machines • Supervisory, Control and Data Acquisition System (SCADA) ♦ Understand the scope and standards for maintenance
	6.2 Methods and procedures of maintaining the trackside equipment of the railway signal and control system and interlock devices	♦ Able to read the maintenance instructions and relevant information of the railway signal and control system and select suitable information for use ♦ Capable to maintain and test the trackside signal and control equipment according to maintenance instructions by applying maintenance techniques for electronic and PLC equipment ♦ Capable to maintain point machines and their control and protection equipment according to maintenance instructions by applying maintenance techniques for electric motors and mechanical devices ♦ Capable to test the SCADA functions according to maintenance instructions

		♦ Capable to maintain signal interlock systems and equipment according to maintenance instructions by applying maintenance techniques for processors, PLC and electronic control circuits ♦ Capable to make effective use of typical tools and instruments for maintaining general electrical, electronic and signal system equipment
	6.3 Professionalism in maintaining the trackside equipment of railway signal and control system and interlock devices	♦ Capable to follow the requirements of maintenance instructions to ensure that the procedures and quality of repair are up to standard ♦ Understand the safety guidelines and codes of practice for railway engineering in handling maintenance for the trackside equipment of railway signal and control system and interlock devices
7. Assessment Criteria	The integrated outcome requirement of this unit of competency is: (i) Capable to test the trackside equipment of the railway signal and control system correctly and efficiently in compliance with maintenance standards and the code of safety; (ii) Capable to test the railway point machines correctly and efficiently in compliance with maintenance standards and the code of safety; and (iii) Capable to test the central interlock components of the interlock system correctly and efficiently in compliance with maintenance standards and the code of safety.	
8. Remarks	The credit value of this unit of competency is set on the presumption that the person already possesses basic electrical and electronic knowledge.	