Tokyo Metro's procurement plan of major railway related goods subject to government procurement (public tenders) for FY2025/26 - FY2027/28 (April 2024 - March 2028)

Listed below are Tokyo Metro's procurement prospects of major railway related goods subject to government procurement (public tenders) for FY2025/26 - FY2027/28 (April 2025-March 2028). The list is based on the information as of the date indicated on the document, and may be subject to change without notice.

For this document, the Japanese version is the original and the English version is for reference purposes. If there is any inconsistency or discrepancy between these two versions, the Japanese version shall prevail. Each procurement will be prepared and executed in Japanese language.

			Planned order quantity for each FY					
Category	Item		2025/26 FY	2026/27 FY	2027/28 FY			
Rolling stock	Car wheel lathes	[P2-4]	1 set	1set	-			
	Wheel load adjusting and mesuring device	[P5]	1set	-	-			
	Comprehensive brake test device	[P6]	1set	-	-			
	Rails*	[P7-8]	46,500m	47,200m	50,470m			
Track	Switches and crossings* [P9-14]		Single crossover JIS 50N Rail 10#: 2 set <minamisunamachi station=""></minamisunamachi>	Scissors crossover JIS 60 Rail 16#: 1set <kotake-mukaihara station=""></kotake-mukaihara>	-			
	Track motor cars (Infrastructure Maintenance Dept.)	[P15-16]	2 [20t car]	-	-			
	Track measurement device	[P17]	3set	-	-			
	Track material monitoring device	[P18]	3set	-	-			
Electric, Signalling, Communication	Electronic Interlocking system	[P19-20]	1 set <saginuma depot,="" takenotsuka<br="">Depot></saginuma>					

^{*} participation in a tender may require obtaining and submitting of Product Approval Sheets issued by Tokyo Metro or other relevant certifications. Issuance of Product Approval Sheets or obtaining other relevant certificates may require a period of 1 year or more to complete. There is a risk of failing to meet tender deadlines if the approval or certification process is started after the public announcement of a tender. Therefore, companies willing to participate in Tokyo Metro open tenders should consider the required time and contact our procurement team well beforehand.

1

Rolling Stock > Car wheel lathes (1/3)

I. Public notification year and quantity	2025/26FY: Car wheel lathes, 1 set				
2. Installation location	Nakano depot				
8. Product specification					
(1) Summary	Equipment for grinding and measuring wheels as they are without removing the wheels from the cars. (Underfloor type car wheel lathe machine)				
(2) Target	 Series 1000 EMUs on Ginza Line. Series 2000 EMUs on Marunouchi Line. Track motor cars (including Track inspection cars and Rail grinding machines). 				
(3) Configuration of equipment	Equipment consists of a lathe, hydraulic unit, control panel, smoke suction device, chip processing device, etc.				
(4) Size and Weight	 Lathe body about W2500mm x D2100mm x H2300mm Weight: about 20,000kg Hydraulic unit: about W1220mm x D850mm x H1210mm Weight: about 500kg Control panel about W2250mm x D650mm x H2000mm Weight: about 900kg 				
(5) Equipment spec	 Grinding method: CNC method Gauge: 1,435 mm (standard gauge) Grinding wheel: diameter 600~1,400mm, width 120~145mm Grinding accuracy: 0.1mm or less runout at the wheel Left and right wheel diameter difference 0.1 mm or less Contour shape error 0.2 mm or less Grinding ability: Grinding speed 6~125m/min Feed amount 0.15~3.0mm/rev Maximum depth of cut 0.5 to 10 mm Maximum axle weight that can be grinding: 25,000 kg 				
(6) Others	Comply with JIS, JEM, JEC, electrical equipment technical standards, and other related laws and regulations.				
Delivery conditions	To be delivered at contractor's expense to a designated location in Japan				

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Rolling Stock > Car wheel lathes (2/3)

1. Public notification year and quantity	2026/27FY: Car wheel lathes, 1 set				
2. Installation location	Ayase depot				
3. Product specification					
(1) Summary	Equipment for grinding and measuring wheels as they are without removing the wheels from the cars. (Underfloor type car wheel lathe machine)				
(2) Target	 Series 16000 and Series 05 EMUs on Chiyoda Line. Track motor cars (including Track inspection cars and Rail grinding machines) Series 9000 and Series SR2000 EMUs on Namboku Line and Saitama Stadium Line Series 10000 and Series 17000 EMUs on Yurakucho Line and Fukutoshin Line. Series 13000 EMUs on Hibiya Line Series 08 and Series 18000 EMUs on Hanzomon Line 				
(3) Configuration of equipment	Equipment consists of a lathe, hydraulic unit, control panel, smoke suction device, chip processing device, etc. • Lathe body: Approx. W2500mm x D2100mm x H2300mm Weight: Approx. 20,000kg • Hydraulic unit: Approx. W1220mm x D850mm x H1210mm Weight: Approx. 500kg • Control panel: Approx. W2250mm x D650mm x H2000mm Weight: Approx. 900kg				
(4) Size and Weight					
(5) Equipment spec	 Grinding method: CNC method Gauge: 1,067 mm (narrow gauge) Grinding wheel: diameter 600~1,400mm, width 120~145mm Grinding accuracy: 0.1mm or less runout at the wheel Left and right wheel diameter difference 0.1 mm or less Contour shape error 0.2 mm or less Grinding ability: Grinding speed 6~125m/min Feed amount 0.15~3.0mm/rev Maximum depth of cut 0.5 to 10 mm Maximum axle weight that can be grinding: 25,000 kg 				

Rolling Stock > Car wheel lathes (3/3)

	(6) Others	Comply with JIS, JEM, JEC, electrical equipment technical standards, and other related laws and regulations.			
4.	Delivery conditions	To be delivered at contractor's expense to a designated location in Japan			

Rolling Stock > Wheel load adjusting and measuring device (1/1)

1. Public notification year and quantity	2025/26FY: Wheel load adjusting and measuring device, 1 set					
2. Installation location	Fukagawa depot					
3. Product specification						
(1) Summary	Equipment for managing the static wheel load balance on a car by providing liner proper value for adjusting wheel load and by measuring each wheel load.					
(2) Target	 Series 05, Series 07 and Series 15000 EMUs on Tozai Line. Series TR2000 EMUs on Toyo Rapid Line. 					
(3) Configuration of equipment	Equipment consists of control unit, air supply and exhaust valve unit, measurement sensor unit for height and internal pressure of each air spring, wheel load measurement unit, etc.					
(4) Size and Weight	 Wheel load measurement unit on 8 wheel loads (two 2-axle bogies): Approx. W3500mm x D1600mm xH780mm (ground to rail level), 2set Control panel and housing board: Approx. W2000mm xD400mm xH1500mm Distance between two bogies: 13800mm Wheel base: 2100mm Distance between centers of each rail: 1131mm 					
(5) Equipment spec	Wheel load measuring upper limit: 40000kg(40ton)/car Function items: Estimating function on carbody twist Indication function on height adjustment value of an air spring Static wheel load measurement function Specific format outputting/recording function Self-diagnosis function etc.					
(6) Others	Comply with JIS, JEM, JEC, electrical equipment technical standards, and other related laws and regulations.					
4. Delivery conditions	To be delivered at contractor's expense to a designated location in Japan					

Rolling Stock > Comprehensive brake test device (1/1)

1. Public notification year and quantity	2025/26FY: Brake comprehensive test device (pneumatic parts), 1 set				
. Installation location	Ayase depot				
S. Product specification	•				
(1) Summary	Equipment for testing brake equipment (pneumatic valve etc.) on rolling stock. Not only unit test on each valve but also combination test on brake working box and even on comprehensive brake system shall be available.				
(2) Target	 Series 16000 and Series 05 EMUs on Chiyoda Line. Series 9000 and Series SR2000 EMUs on Namboku Line and Saitama Stadium Line Series 10000 and Series 17000 EMUs on Yurakucho Line and Fukutoshin Line. Equipment consists of test device body integrated with switching valves, pressure control valves, electric control unit, etc. Test device body: Approx. W3450mm x D2700mm xH2680mm 				
(3) Configuration of equipment					
(4) Size and Weight					
(5) Equipment spec	Test items:				
(6) Others	Comply with JIS, JEM, JEC, electrical equipment technical standards, and other related laws and regulations.				
I. Delivery conditions	To be delivered at contractor's expense to a designated location in Japan				

Track > Rails (1/2)

1. Public notification year and quantity	2025/26 FY: rails, 46,500m 2026/27 FY: rails, 47,200m 2027/28 FY: rails, 50,470m					
2. Product specification						
(1) Rail types		ON head hardened head hardened ra				
(2) Standards		o's specification m railway rails, He	ad hardened rai	ls.		
(3) Shape		50N rail		60 rail		
	153	R500			25 1.4 145 NA	
(4) Dimensional deviation		Dimension	50N rail	60 rail		
	Length	Less than 12.5m Greater than 12.5m, less than 25m	±7.0mm ±10.0mm			
		Greater than 25m Height	+10.0mm -5.0mm +1.0mm	+10.0mm -3.0mm		
	I	Head width	+1.0mm -0.5mm	+0.8mm -0.5mm		
		Web width	+1.0mm -0.5mm	+1.0mm -0.5mm		
	Foot max.	Footmax. width and half width		±0.8mm		
Delivery conditions	To be delive	ered at contractor	's expense to a o	designated locat	ion in Japan	

Track > Rails (2/2)

4. Installation environment and conditions	Flat bottom rails: straight and plane curve sections with curve radius of ≥ 600m at above-ground sections, tunnels and bridges Head hardened rails: plane curve and turnout sections with curve radius of < 600m at above-ground sections and tunnels
5. Notes on public tender participation	In principle, participation in the tender requires submitting of "Certificate of Product Approval" issued by Tokyo Metro. Please refer to the Notice "Issuance of Certificate of Product Approval"* for details. If it is necessary to conduct prototype product tests for evaluation, the process may require a period of 1 year or more to complete. Therefore, suppliers intending to participate in the tender are advised to contact our procurement team beforehand. (a) Items for evaluation**: 1. Contract execution capability (financial metrics, past records of similar scale orders delivery, design management system, manufacturing management system, maintenance system, etc.) 2. Product conformity to the level required by Tokyo Metro (conformity with specifications, production capacity, third-party technical evaluation (technical standards conformity certificate), reliability under Tokyo Metro lines conditions) (b) Evaluation method: 1. Documents screening 2. (If necessary) Performance evaluation tests on finished products by methods designated by Tokyo Metro (commercial lines tests, third-party evaluation) for period of about 1-2 years. (c) Notes: Cost of tests are, in principle, to be borne by the supplier. Test prototypes shall be returned to the supplier after completion of the tests. • The document can be found at the following URL: https://www.tokyometro.jp/lang_en/corporate/business/procurement/index.html ** Includes items that are evaluated again during the tender process.

Switches and crossings (Single crossover, JIS 50N Rail, 10#) (1/3)

1. Public notification year and quantity		2025/26 FY: Switches and crossings, 2 set of single crossover						
2	. Product specification							
	(1) Geometrical form	Single crossover	s 5°43′)					
	(2) Standards	Japanese Industrial Standard ① JIS E 1303 Railway turnouts and crossings ② Other JIS E series (Standard series for railway) Tokyo Metro's specification ③ Switches and crossings, Vibration-reducing equipment for switches and crossings, Flat bottom railway rails, Head hardened rails, Synthetic sleepers, Manganese crossings.						
	(3) Tolerances for geometry quality			Rail profile				
	quanty	Items		50N	Additional information			
		Track gauge	Main line	±2mm	The difference of the tolerances between			
			Branch line		adjacent fastening systems shall be ±1mm.			
			Main line		It shall be measured by 10m chord length.			
		Alignment	Branch line		The tolerance of 1m chord length shall be ±1mm.			
		Cross level	Main line					
		Cross level	Branch line		-			
		Check gauge	H type check rail	Specified value +2mm, 0mm	-			
			Others	Specified value +3mm, -1mm	-			
		Range of move movable of	Range of movement for switch and movable obtuse crossing		-			

Switches and crossings (Single crossover, JIS 50N Rail, 10#) (2/3)

	lte.	ems	Rail profile	Additional in	formation	
	ILE	21115	50N	Additional ii	Additional information	
	Difference of rail alignment		1.Omm	-		
	Joint —	Unevenness in height	0.5mm	-		
		en outside rail and ck rail	+1mm, -0.5mm	-		
	Difference of the rail and	Difference of the height of outside rail and check rail		-		
(4) Dimensional deviation	Measure	ment point	Tolerance			
		Entire length of the switch and crossing Joint gap				
	Joir					
		witch and crossing de and end side)	±5mm			
(5) Contact and fixing conditions of the stock rail and the switch rail	Contact condition: In the area of 500mm from the switch rail toe, the gap between the switch rail and stock rail shall be less than 0.5mm. In the other area, the gap shall be less than 1mm.					
	Fixing condition: Under the 0.98kN pressure, in the area of 500mm from the switch rail toe and stock rail shall be completely in close contact (In case of the flexible switch, the pressure shall be 2.94kN).					
3. Delivery conditions	To be delivered at contractor's expense to a designated location in Japan					
4. Installation environment and conditions	Above-ground sections and tunnels					

Switches and crossings (Single crossover, JIS 50N Rail, 10#) (3/3)

5. Notes on public tender participation

The rails used for the turnouts at participation in the tender should preferably be rails that have obtained "Certificate of Product Approval" issued by Tokyo Metro, or rails procured from manufacturers that have obtained "Certificate of Product Approval". Please refer to the Notice "Issuance of Certificate of Product Approval"* for details. If it is necessary to conduct prototype product tests for evaluation, the process may require a period of 1 year or more to complete. Therefore, suppliers intending to participate in the tender are advised to contact our procurement team beforehand.

- (a) Items for evaluation**:
- 1. Contract execution capability (financial system, past records of similar scale orders delivery, design management system, manufacturing management system, maintenance system, etc.)
- 2. Product conformity to the level required by Tokyo Metro (conformity with specifications, production capacity, technical evaluation by third-party (certificate of technical standards conformity), reliability under Tokyo Metro lines conditions)
- (b) Evaluation method:
- 1. Documents screening
- 2. (If necessary) Performance evaluation tests on finished products by methods designated by Tokyo Metro (commercial lines tests, third-party evaluation) for period of about 1-2 years.
- (c) Notes: Cost of tests are, in principle, to be borne by the supplier. Test prototypes shall be returned to the supplier after completion of the tests.
- * The document can be found at the following URL : https://www.tokyometro.jp/lang_en/corporate/business/procurement/index.html

** Includes items that are evaluated again during the tender process.

Switches and crossings (Scissors crossover, JIS 60kg Rail, 16#) (1/3)

. Public notification year and uantity	2026/27 FY: Switches and crossings, 1 set of scissors crossover						
. Product specification							
(1) Geometrical form	Scissors crosso	Scissors crossover, 60kg rail, 16# (The angle of crossing vee is 3°34.5′)					
(2) Standards	Japanese Industrial Standard ① JIS E 1303 Railway turnouts and crossings ② Other JIS E series (Standard series for railway) Tokyo Metro's specification ③ Switches and crossings, Flat bottom railway rails, Head hardened rails, Synthetic sleepers, Manganese crossings.						
(3) Tolerances for geometry quality							
quanty	Items		60kg	Additional information			
	Tueste serves	Main line	±1mm	The difference of the tolerances between			
	Track gauge	Branch line	±2mm	adjacent fastening systems shall be ±1mm.			
	Alignment	Main line	±1mm	It shall be measured by 10m chord length.			
	Aligninient	Branch line	±2mm	The tolerance of 1m chord length shall be ±1mm			
	Cross level	Main line	±1mm				
	Cross level	Branch line	±2mm	-			
	Check gauge	H type check rail	Specified value +2mm, 0mm	-			
	Oneck gauge	Others	Specified value +3mm, -1mm	-			
	Range of mo	vement for switch obtuse crossing	± 5 mm	-			

Switches and crossings (Scissors crossover, JIS 60kg Rail, 16#) (2/3)

		Items		Rail profile		Additional information	
					60kg	Additional information	
		Difference of rail alignment			1.0mm	-	
		Joint	Unevenness in height		0.5mm	-	
			ween outside rail check rail	+	1mm, -0.5mm	-	
		Difference outside rail	of the height of I and check rail	+	1.5mm, -2mm	-	
	(4) Dimensional deviation						
			easurement point			Tolerance	
		entire length of the switch and cross		ssing		±10mm	
		Joint gap				±1mm	
			the switch and crossing side and end side		±5mm		
	(5) Contact and fixing conditions of the stock rail and the switch rail		f 500mm from the s			ween the switch rail and pap shall be less than 1mm.	
		Fixing condition: Under the 0.98kN pressure, 500mm from the switch rail toe and stock rail shall be completely in close contact (In case of the flexible switch, the pressure shall be 2.94kN).					
3.	Delivery conditions	To be delivered at contractor's expense to a designated location in Japan					
	Installation environment ad conditions	Above-ground sections and tunnels					

Switches and crossings (Scissors crossover, JIS 60kg Rail, 16#) (3/3)

5. Notes on public tender participation

The rails used for the turnouts at participation in the tender should preferably be rails that have obtained "Certificate of Product Approval" issued by Tokyo Metro, or rails procured from manufacturers that have obtained "Certificate of Product Approval". Please refer to the Notice "Issuance of Certificate of Product Approval"* for details. If it is necessary to conduct prototype product tests for evaluation, the process may require a period of 1 year or more to complete. Therefore, suppliers intending to participate in the tender are advised to contact our procurement team beforehand.

- (a) Items for evaluation**:
- 1. Contract execution capability (financial metrics, past records of similar scale orders delivery, design management system, manufacturing management system, maintenance system, etc.)
- 2. Product conformity to the level required by Tokyo Metro (conformity with specifications, production capacity, third-party technical evaluation (technical standards conformity certificate), reliability under Tokyo Metro lines conditions)
- (b) Evaluation method:
- 1. Documents screening
- 2. (If necessary) Performance evaluation tests on finished products by methods designated by Tokyo Metro (commercial lines tests, third-party evaluation) for period of about 1-2 years.
- (c) Notes: Cost of tests are, in principle, to be borne by the supplier. Test prototypes shall be returned to the supplier after completion of the tests.
- The document can be found at the following URL : https://www.tokyometro.jp/lang_en/corporate/business/procurement/index.html

** Includes items that are evaluated again during the tender process.

Track > Track motor cars (Infrastructure Maintenance Dept.) (1/2)

Public notification year and uantity	2025/26 FY: Track motor cars (2 pcs) (20t car, G=1,067)			
Product specification	•			
(1) Summary	Track motor cars to run on Tokyo Metro lines (1,067mm gauges), equipped with a hydraulic crane and generator aimed to transport heavy equipment coupled with various transport vehicles.			
(2) Running performance	20t car: Able to run at speed of 5 km/h on tracks of 55/1,000 (55‰) with traction load of 60t (excluding own weight).			
(3) Main dimensions	Carbody	G=1, 067	Driver's cab	G=1, 067
	Max. length	8,000mm +0mm -20mm	Length	2,500mm ±10mm
	Max. width	2,400mm +0mm -20mm	Width	2,400mm +0mm -10mm
	Max. height	3,400mm from the rail level. +0mm -20mm Including hanger.	Height	1,600mm or more. Within the maximum height of the vehicle.
	Floor	G=1, 067	Check gauge	989mm
	Length	7,000mm +0mm -10mm	Empty weight	+1mm -0mm 20,000kg
	Width	2,600mm +0mm -10mm	Zimpty weight	20,000118
	Height	1,100mm from the rail level. ±15mm		

Track > Track motor cars (Infrastructure Maintenance Dept.) (2/2)

(4) Miscellaneous	Level of exhaust gas shall conform to standard values set by the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) of Japan.
3. Delivery conditions	To be delivered at contractor's expense to a designated location in Japan.
4. [Reference] Product image	

Track > Track measurement device (1/1)

Nature and quantity of the products to be purchased		2025/26 FY: Track measurement device, 3 set.		
2. Pr	oduct specification			
(1) Overview		The system shall be mounted under the floor of Tokyo Metro Series 10000, 08 and 9000 cars.		
(2) Measuring method (3) Track conditions		Measure track irregularity by the inertial measuring method and the differential method.		
		•Gauge: 1,067mm •Minimum curve radius: 110m		
	(4) Dimensions of the Track measurement device	It shall fit within the outfit limit of Tokyo Metro Series 10000, 08, and 9000 cars.		
	(5) Control method	Start and end of the measuring is controlled by the information from the ground unit on the tracks.		
	(6) Data processing method	 The Measuring data is transmitted to the cloud service automatically. The alert is output when the track irregularity exceeds the threshold specified by Tokyo Metro Co., Ltd. The Measuring data is selected automatically every day, and the data is transmitted to the analysis system specified by Tokyo Metro Co., Ltd. 		
3. De	elivery conditions	To be delivered at contractor's expense to a designated location in Japan		
5. Qualifications for participating in the tendering procedures		Suppliers eligible for participating in the proposed tender are those who shall: ① be recognized to be able to serve the purchaser with maintenance, inspection and repair of the products at his requests even after the products are purchased. ② be recognized to be able to repair the products in Japan.		
6. Required inspection results		The product fulfills: (1) Insulation resistance test (2) Withstand voltage test (3) Surge test (4) Noise test (5) Temperature test (temperature rise test, low temperature test, high temperature test, high temperature and high humidity test, temperature cycle test) (6) Vibration test (7) Continuous energization test (8) Dimension testings (9) Structural and visual testings		

Track > Track material monitoring device (1/1)

	ature and quantity of the lucts to be purchased	2025/26 FY: Track material monitoring device, 3 set.		
2. Pr	oduct specification			
(1) Overview		The system shall be mounted under the floor of Tokyo Metro Series 10000, 08 and 9000 cars.		
	(2) Configuration of the Track Material Monitoring Device	 A profile camera to obtain elevation information from the vertical upside of the rails. A line sensor camera to take photos of the track material from the vertical upside and the both sides of the rails. The elevation information and photos of the right and left rails are taken individually. 		
	(3) Track conditions	• Gauge: 1,067mm • Minimum curve radius: 110m		
	(4) Dimensions of the Track Material Monitoring Device	It shall fit within the outfit limit of Tokyo Metro Series 10000, 08, and 9000 cars.		
	(5) Control method	Start and end of the monitoring is controlled by the information from the ground unit on the tracks.		
	(6) Data processing method	 Monitoring data is selected automatically, and the data is stored on a removable recording medium. Monitoring data is analyzed by the analysis system specified by Tokyo Metro Co., Ltd. 		
3. De	elivery conditions	To be delivered at contractor's expense to a designated location in Japan		
4. Qualifications for participating in the tendering procedures		Suppliers eligible for participating in the proposed tender are those who shall: ① be recognized to be able to serve the purchaser with maintenance, inspection and repair of the products at his requests even after the products are purchased. ② be recognized to be able to repair the products in Japan.		
5. Required inspection results		The product fulfills: (1) Insulation resistance test (2) Withstand voltage test (3) Surge test (4) Noise test (5) Temperature test (temperature rise test, low temperature test, high temperature test, high temperature and high humidity test, temperature cycle test) (6) Vibration test (7) Continuous energization test (8) Dimension test (9) Structural and visual test		

Electric, Signalling, Communication > Electronic Interlocking system (1/2)

Public notification year and quantity	2025/26 FY: Electronic Interlocking system – 1 set <saginuma depots="" depots,="" takenotsuka="" tra="" train=""> (To be replaced according to the Electronic Interlocking system's replacement)</saginuma>
Product specifications	
(1) Summary	In order to safely and reliably carry out car transfers in train depots, the routes (conflicting, opposing, etc.) and point machines are locked, and the routes and point machines are interlocked in certain order and certain controls.
(2) General rating of Electronic Interlo	ocking system (per interlocking station / train depot)
a. Quantity of routes	150 / 56 routes (Maximum quantity for the system operation cycle)
b. Quantity of Track circuits	80 / 60 tracks (Maximum quantity for the system operation cycle)
c. Quantity of Controlling point machines	50 / 46 sets [Singular control(1 set) or Plural control(2 sets, 3 sets or 4 sets are controlled at the same time)] (Maximum quantity for the system operation cycle)
d. Quantity of Controlling signals	50 / 56 units (Maximum quantity for the system operation cycle)
e. Details of controlling and locking	TBA
f. System operation cycle	300 / 200 ms or less
g. Interlocking sequence	The interlocking sequence is based on relay sequence diagrams
h. AC input voltage	105 V AC ± 10% (5kVA max) / 105 V AC ± 10% (10kVA max)
i. DC power supply voltage	5 V DC ± 5% / 5 V DC ± 5% (for internal use) 24 V DC ± 10% / 24 V DC ± 10% (for internal use) 28 V DC ± 10% / 26 V DC ± 10% (for external use)
j. Route setting time (from lever reversal to lock completion)	With switching of point machine: Switching time + 3sec or less / + 3sec or less Without switching of point machine: 2sec or less / 3sec or less

Electric, Signalling, Communication > Electronic Interlocking system (2/2)

