

**PT. OMRON ELECTRONICS**

Menara Bidakara 1 Lantai 22  
 Jl. Jend. Gatot Subroto Kav.71 -73,  
 Pancoran, Jakarta Selatan 12870 - Indonesia  
 Tel: (62) 21-29497500 Fax: (62) 21-29497555

Dengan hormat,

Kami ucapkan terima kasih atas perhatian Anda terhadap Training Otomatisasi kami.  
 Kami, selaku Pusat Training Otomatisasi OMRON ingin menawarkan sebuah kerjasama dengan perusahaan Bapak/Ibu dalam memenuhi kebutuhan perusahaan terhadap Training FA (Factory Automation/Otomatisasi Pabrik) dan CC (Control Component/Komponen Kontrol).  
 Dengan ini kami berikan penawaran kami seperti tercantum di bawah ini :  
 Silakan hubungi Bagian Training di Tel : (62-21) 2949-7500 untuk informasi lebih lanjut.

Jadwal Training 2018 - 2019									
Kode	Training	Durasi (hari)	Biaya untuk 1 Peserta (Rp) + PPn 10%	Okt	Nov	Des	Jan	Feb	Mar
TRB001	PLC Basic	2	1,650,000.00	9-10	13-14	11-12	15-16	7-8	5-6
TRI001	PLC Intermediate	2	1,650,000.00		15-16		17-18		19-20
TRI002	PLC/HMI Integration	2	1,980,000.00	11-12		13-14		19-20	
TRA001	PLC Special I/O	2	2,200,000.00				24-25		
TRA002	Network Solution	2	2,200,000.00		27-28				26-27
TRM-P	Maintenance Package	4	3,300,000.00	2-5	6-9		8-11	12-15	12-15
TRB002	Sysmac Controller Basic	2	1,650,000.00	16-17	21-22	18-19	22-23	21-22	21-22
TRI003	Sysmac Motion Basic	2	2,200,000.00	18-19		20-21		26-27	

- Harga tersebut sudah termasuk : Pendaftaran, Materi Training, Sertifikat Omron, Snack + Makan Siang (**termasuk PPn : 10%**).
- Peralatan yang di sediakan : 1 Komputer dan 1 Demo Kit digunakan untuk 2 peserta.
- Jadwal sewaktu-waktu dapat berubah, dan akan di konfirmasi sebelumnya.
- **Tempat training : PT. OMRON ELECTRONICS – Ruang Training , Waktu training : 09.30 – 16.00 WIB.**
- **Pembayaran harus sudah ditransfer minimal 1 (satu) minggu sebelum training , dengan nomor rekening sebagai berikut:**

**PT. OMRON ELECTRONICS**  
**MUFG BANK, LTD**  
**A/C No. 665-146100 (IDR)**  
 Jl. Jend. Sudirman-MID Plaza Building  
 Jakarta

dan fax/email copy slip transfer ke (62-21) 2949-7555/training\_id@ap.omron.com

- **Cara Pendaftaran :**  
 Pendaftaran per fax/email dianggap konfirm. Pembayaran harus sudah ditransfer minimal **1 (satu) minggu** sebelum training & **fax/email copy slip transfer** ke kantor kami, jika tidak pendaftaran kami anggap batal.  
**Invoice dan faktur pajak akan di terbitkan setelah bukti pembayaran kami terima.**  
 Jika terdapat pembatalan, paling lambat harus menginformasikan **7 hari** sebelum training.  
 Pembatalan setelahnya, akan dikenakan biaya pembatalan sebesar **limapuluh persen (50%)** dari biaya training.  
**Tidak ada pengembalian biaya untuk pembatalan training 1 (satu) hari sebelumnya.**
- **Kapasitas Minimum Kelas : 6 Orang**  
 Dibawah Kapasitas Minimum Kelas, training akan ditunda mengikuti jadwal selanjutnya atau sampai Kapasitas Minimum Kelas terpenuhi.

Semoga penawaran ini dapat memenuhi permintaan & menjadi pertimbangan Bapak/Ibu.  
 Terima kasih atas perhatian & kerjasamanya.

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**Kode: TRB001 – PLC Basic**

**Pengenalan Programmable Controller dan Dasar Pemrograman**

**Topik :**

- Pengenalan PLC
- I/O Connection & Wiring
- Sistem Konfigurasi CP Series
- Fungsi, Karakteristik, & Fitur CP Series
- Pengalamatan & Alokasi I/O CP Series
- Instruksi Dasar: LD, AND, OR
- Pengenalan Programming tools CX-One
- Operasi Dasar dari CX-Programmer: Pengaturan PLC, Membuat Project Baru, Menyimpan Project Baru, Upload/Download, Monitoring program
- Pemrograman Dasar: Timer, Counter, Set/Reset, Keep, Differentiate
- Contoh Aplikasi

**Kode: TRI001 – PLC Intermediate**

**Pengenalan Modular Programmable Controller dan Pemrograman Intermediate**

**Topik :**

- Pengenalan Modular PLC
- Sistem Konfigurasi CS & CJ Series
- Fungsi, Karakteristik, & Fitur CS/CJ Series
- Memori PLC, Pengalamatan & Alokasi I/O CS/CJ Series
- Pengaturan I/O Table
- Pemrograman Intermediate: Move, Shift Register, Compare, Arithmetic Operation, Increment/Decrement, FAL/FALS
- Advance operation of CX-Programmer: Setup PLC, Memory Monitoring, Watch Window
- Contoh Aplikasi

**Kode: TRI002 – PLC/HMI Integration**

**Pengenalan Human Machine Interface & Integrasi ke PLC**

**Topik :**

- Pengenalan Omron Programmable Terminal sebagai HMI
- Omron Product Line up
- Fungsi, Karakteristik, & Fitur NS Series
- Penjelasan PLC Modular
- Pengaturan & Integrasi ke PLC
- Pengenalan alat Pemrograman: CX-Designer
- Merancang *Screen Basic* menggunakan CX-Designer
- Upload/Download *Screen*
- Contoh Aplikasi

**Code: TRB001 – PLC Basic**

***Introduction to Programmable Controller and Basic Programming***

**Topics :**

- *Introduction to PLC*
- *I/O Connection & Wiring*
- *System Configuration of CP Series*
- *Function, Characteristic, & Feature of CP Series*
- *Addressing & I/O Allocation of CP Series*
- *Basic Instruction: LD, AND, OR*
- *Introduction to Programming Tools CX-One*
- *Basic Operation of CX-Programmer: Setup PLC, Create New Project, Saving New Project, Upload/Download, Monitoring Program*
- *Basic Programming: Timer, Counter, Set/Reset, Keep, Differentiate*
- *Application Examples*

**Code: TRI001 – PLC Intermediate**

***Introduction to Modular Programmable Controller and Intermediate Programming***

**Topics :**

- *Introduction to Modular PLC*
- *System Configuration of CS & CJ series*
- *Function, Characteristic, & Feature of CS/CJ series*
- *PLC Memory, Addressing & I/O Allocation of CS/CJ series*
- *Setup I/O Table*
- *Intermediate programming: move, shift register, compare, arithmetic operation, increment/decrement, FAL/FALS*
- *Advance operation of CX-Programmer: Setup PLC, memory monitoring, watch window*
- *Application examples*

**Code: TRI002 – PLC/HMI Integration**

***Introduction to Human Machine Interface & Integration to PLC***

**Topics :**

- *Introduction to Omron Programmable Terminal as HMI*
- *Omron Product Line up*
- *Function, Characteristic, & Feature of NS series*
- *Review of Modular PLC*
- *Setup & Integration to PLC*
- *Introduction to Programming tool: CX-Designer*
- *Basic screen designing using CX-Designer*
- *Screen upload/download*
- *Application examples*

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### **Kode: TRA001 – PLC Special I/O**

#### **Pengenalan & Aplikasi Spesial I/O**

##### **Topik :**

- Ulasan Omron PLC
- Omron Product Line up Special I/O (CP, CJ, CS Series)
- Fungsi, Karakteristik, & Fitur Special I/O
- Sistem Konfigurasi dari PLC menggunakan Special I/O
- Pengalamatan & alokasi memori dari Special I/O
- Pengaturan I/O Tabel untuk Special I/O
- Pemrograman dasar yang berkaitan dengan Special I/O
- Contoh Aplikasi

### **Kode: TRA002 – Solusi Network**

#### **Pengenalan & Aplikasi Solusi Network**

##### **Topik :**

- Ulasan Omron PLC
- Pengenalan system Komunikasi dan Jaringan: Device Level, Controller level, Information level
- Omron Product Line up Komunikasi dan Jaringan (CP, CJ, CS Series)
- Sistem Konfigurasi dari PLC menggunakan modul Networking
- Pengalamatan & alokasi memori dari modul Networking
- Sistem CompoNet
- Sistem DeviceNet
- Sistem Controller Link
- Sistem Ethernet

### **Kode: TRM-P – Maintenance Package**

#### **Electric Maintenance Course**

##### **Topik :**

- Bekerja dengan aman pada system elektrik
- Diagnosa terputusnya deretan rangkaian
- Struktur Relay
- Contoh rangkaian menggunakan Relay
- Malfungsi rangkaian dan penyebabnya
- Struktur waktu
- Malfungsi waktu dan penyebabnya

### **Code: TRA001 – PLC Special I/O**

#### **Introduction & Application of Special I/O**

##### **Topics :**

- *Review of Omron PLC*
- *Omron Product Line up of Special I/O (CP, CJ, CS series)*
- *Function, Characteristic, & Feature of Special I/O*
- *System Configuration of PLC using Special I/O*
- *Addressing & Memory allocation of Special I/O*
- *Setup I/O Table for Special I/O*
- *Basic programming related to Special I/O*
- *Application examples*

### **Code: TRA002 – Network Solution**

#### **Introduction & Application of Network Solution**

##### **Topics :**

- *Review of Omron PLC*
- *Introduction to Communication & Networking system: Device Level, Controller level, Information level*
- *Omron Product Line up of Communication & Network (CP, CJ, CS series)*
- *System Configuration of PLC using Networking module*
- *Addressing & Memory allocation of Networking module*
- *CompoNet system*
- *DeviceNet system*
- *Controller Link system*
- *Ethernet system*

### **Code: TRM-P – Maintenance Package**

#### **Electric Maintenance Course**

##### **Topics :**

- *Safety When Working with Electricity*
- *Diagnosis of Disconnected Sequence Circuits*
- *Relay Structure*
- *Examples of Circuits That Use Relays*
- *Relay Malfunctions and Their Causes*
- *Timer Structure*
- *Timer Malfunctions and Their Causes*

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**Kode: TRM-P – Maintenance Package**  
**Detection Device Maintenance Course**

**Topik :**

- Pengetahuan dasar mengenai alat deteksi
- Fitur dari Limit Switch
- Perawatan Sensor Proximity
- Perawatan Sensor Photoelectric
- Peralatan deteksi lainnya

**Kode: TRM-P – Maintenance Package**  
**PLC Maintenance Course**

**Topik :**

- Pengaturan perangkat keras
- Pengaturan perangkat lunak
- Pemrograman dasar ladder
- Pemeliharaan korektif
- Pelatihan troubleshooting
- Perbaikan program untuk debugging
- Operasi pemeriksaan (Operasi Tes)
- Manajemen program
- Pergantian dan pengembalian unit dan baterai
- Materi referensi

**Kode: TRB002 – Sysmac Controller Basic**  
**Pengenalan Machine Automation Controller Basic**

**Topik :**

- Pengenalan Sysmac
- Koneksi I/O & Pengkabelan
- Konfigurasi sistem seri NX1P
- Fungsi, Karakteristik, & Fitur seri NX1P
- Pengenalan Programming Tools Sysmac Studio
- Pengoperasian Dasar Sysmac Studio
- Pengaturan Sysmac, Buat Project Baru, Menyimpan Proyek Baru, Upload / Download, Monitoring Program
- Pengalamatan Variable & Alokasi I/O seri NX1P
- Petunjuk Dasar: LD, AND, OR
- Pemrograman Dasar: Timer, Counter, Set/Reset, Differentiate
- Cross reference, Output window, Watch window
- Pengecekan Kesalahan/ Pemecahan Masalah
- Latihan Aplikasi
- Pemrograman lanjut: Move, Compare, Increment/Decrement, dll
- Pengenalan Pemrograman Structured Text (ST)
- Pemrograman NX1P di ST
- Latihan Pemrograman ST
- Latihan Aplikasi HMI NB
- Fungsi, Karakteristik, & Fitur seri NB

**Code: TRM-P – Maintenance Package**  
**Detection Device Maintenance Course**

**Topics :**

- *Basic Knowledge about Detection Devices*
- *Features of Limit Switches*
- *Proximity Sensor Maintenance*
- *Photoelectric Sensor Maintenance*
- *Other Detection Devices*

**Code: TRM-P – Maintenance Package**  
**PLC Maintenance Course**

**Topics :**

- *Hardware Settings*
- *Software Settings*
- *Basic Knowledge about Ladder Programming*
- *Corrective Maintenance*
- *Troubleshooting Practice*
- *Editing Programs for Debugging*
- *Checking Operation (Test Operation)*
- *Program Management*
- *Replacing and Restoring Units and Batteries*
- *Reference Materials*

**Code: TRB002 – Sysmac Controller Basic**  
**Introduction to Machine Automation Controller Basic**

**Topics :**

- *Introduction to Sysmac*
- *I/O Connection & Wiring*
- *System configuration of NX1P series*
- *Function, Characteristic, & Feature of NX1P series*
- *Introduction to Programming Tools Sysmac Studio*
- *Basic Operation of Sysmac Studio*
- *Setup Sysmac, Create New Project, Saving New Project, Upload/Download, Monitoring Program*
- *Variable Addressing & I/O Allocation of NX1P series*
- *Basic Instruction: LD, AND, OR*
- *Basic Programming: Timer, Counter, Set/Reset, Differentiate*
- *Cross reference, Output window, Watch window*
- *Check Error/Troubleshooting Error*
- *Application Exercise Examples*
- *Intermediate Programming: Move, Compare, Increment/Decrement, etc*
- *Overview of ST Programming*
- *NX1P Programming in ST*
- *ST Programming Exercise*
- *Application Exercise Examples HMI NB*
- *Function, Characteristic, & Feature of NB series*
- *Introduction to Programming Tool: NB Designer Setup & Integration to Sysmac Controller*

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- Pengenalan Alat Pemrograman: Setup NB Designer & Integrasi dengan Sysmac Controller

### **Kode: TRI003 – Sysmac Motion Basic** **Pengenalan Sysmac Motion Basic**

#### **Topik :**

- Pengenalan secara umum Servomotor
- Komposisi Servo: Perangkat Keras, Perangkat Lunak & Pengkabelan
- Konfigurasi Sistem Servo
- Alat Pemrograman: Software Sysmac Studio
- Pengenalan Function Block (FB) untuk aplikasi Motion Control
- Pemrograman Gerak (MC\_Power, Home, Stop, Stop Zero, Jog)
- Troubleshooting Kesalahan dan Reset Ethercat dan Motion
- Latihan Aplikasi
- Pemrograman Gerak: (MC\_Velocity, Move Relative, Move Absolute)
- Konsep Gearing Elektronik, MC\_GearIn
- Tracing Data
- Simulasi 3D
- Latihan Aplikasi

### **Code: TRI003 – Sysmac Motion Basic** **Introduction to Sysmac Motion Basic**

#### **Topics :**

- *Introduction of Generally Servomotor*
- *Composition Servo: Hardware, Software & Wiring*
- *System Configuration of Servo*
- *Programming Tools : Sysmac Studio Software*
- *Introduction of FB Motion*
- *Motion Programming (MC\_Power, Home, Stop, Stop Zero, Jog)*
- *Troubleshooting Error and Reset Ethercat and Motion*
- *Application Exercise Examples*
- *Motion Programming : (MC\_Velocity, Move Relative, Move Absolute)*
- *Electronic Gearing Concept, MC\_GearIn*
- *Data Tracing*
- *3D Simulation*
- *Application Exercise Examples*

#### ***Peserta :***

***Operator, Teknisi, Supervisor yang terlibat dalam design, troubleshooting & pengoperasian PLC pada Otomatisasi Industri***

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**FORMULIR PENDAFTARAN**

<b>PERUSAHAAN</b>	:				
<b>ALAMAT</b>	:				
<b>TEL / HP</b>	:				
<b>FAX NO</b>	:				
<b>E-MAIL</b>	:				
<b>ACC &amp; FIN CONTACT PERSON</b>	:				
<b>E-MAIL (ACC &amp; FIN DIV.)</b>	:				
<b>NO. NPWP</b>	:				
<b>ALAMAT NPWP</b>	:				
<b>KORDINATOR TRAINING / JABATAN:</b>					
<b>TANGGAL</b>	<b>KODE #</b>	<b>SUBJEK TRAINING</b>	<b>NAMA PESERTA</b>	<b>JABATAN</b>	<b>DEPT.</b>
<b>TANDA TANGAN/TANGGAL:</b>					

**Catatan** : Mohon lengkapi dengan komplet data tsb diatas & fax/email formulir pendaftaran ini dengan menyertakan copy slip transfer

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ke 'PT OMRON ELECTRONICS` untuk training yang akan diikuti. Untuk keterangan lebih lanjut mengenai Training Syllabus, silakan hubungi : [training\\_id@ap.omron.com](mailto:training_id@ap.omron.com)