

< DIL CONTACTORS

277274



Overview



Specifications



Resources

How to

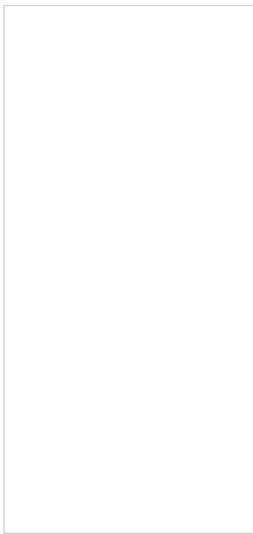


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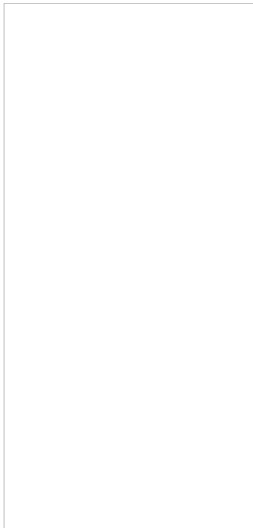


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277274

Eaton Moeller® series DILM Contactor, 3 pole, 380V  
24: 24 - 27 VDC, DC operation, Screw terminals DIL

Contact sales about this product



Contact technical support

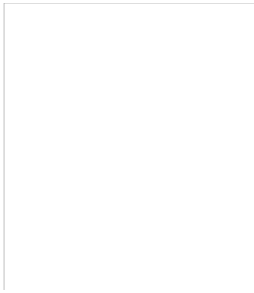


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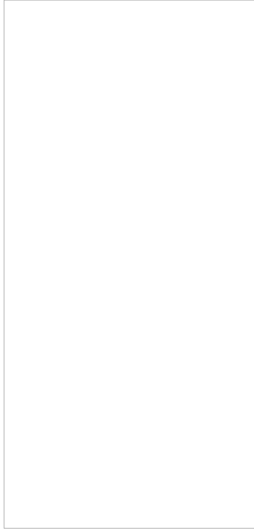


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**277377**

Eaton Moeller® series DILM Auxiliary contact module, 4 pole, Ith= 16 A, 2 N/O, 2 NC, Front fixing, Screw terminals, DILM7-10 - DILM38-10

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**276426**

Eaton Moeller® series DILA Auxiliary contact module, 4 pole, Ith= 16 A, 2 N/O, 2 NC, Front fixing, Screw terminals, DILA, DILM7 - DILM38

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**278452**

Eaton Moeller® series ZB Overload relay, ZB32, Ir= 10 - 16 A, 1 N/O, 1 N/C, Direct mounting, IP20

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**278453**

Eaton Moeller® series ZB Overload relay, ZB32, Ir= 16 - 24 A, 1 N/O, 1 N/C, Direct mounting, IP20

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## GENERAL SPECIFICATIONS

General specifications	>	<b>PRODUCT NAME</b>	Eaton Moeller® series DILM contactor
		<b>CATALOG NUMBER</b>	277274
Features & Functions	>	<b>MODEL CODE</b>	DILM32-10(RDC24)
		<b>EAN</b>	4015082772741
General	>	<b>PRODUCT LENGTH/DEPTH</b>	97 mm
		<b>PRODUCT HEIGHT</b>	85 mm
Ambient conditions, mechanical	>	<b>PRODUCT WIDTH</b>	45 mm
		<b>PRODUCT WEIGHT</b>	0.534 kg
Climatic environmental conditions	>		CSA File No.: 012528 CSA Class No.: 2411-03, 3211-04 IEC/EN 60947
Electro Magnetic Compatibility	>		CSA-C22.2 No. 60947-4-1-14 UL CE
Terminal capacities	>	<b>CERTIFICATIONS</b>	CSA VDE 0660 UL File No.: E29096 UL 60947-4-1 IEC/EN 60947-4-1 UL Category Control No.: NLDX
Electrical Rating	>		
Short-circuit rating	>	<b>CATALOG NOTES</b>	Contacts according to EN 50012

## FEATURES & FUNCTIONS

Switching capacity	>	<b>FITTED WITH:</b>	Suppressor circuit in actuating electronics
Switching time	>	<b>NUMBER OF POLES</b>	Three-pole
Magnet system	>	<b>GENERAL</b>	

		<b>APPLICATION</b>	Contactors for Motors
Motor Rating	>	<b>FRAME SIZE</b>	FS2
		<b>LIFESPAN, MECHANICAL</b>	10,000,000 Operations (DC operated)
Communication	>	<b>OPERATING FREQUENCY</b>	5000 mechanical Operations/h (DC operated)
		<b>OVERVOLTAGE CATEGORY</b>	III
Contacts	>	<b>POLLUTION DEGREE</b>	3
		<b>PRODUCT CATEGORY</b>	Contactors
Safety	>	<b>PROTECTION</b>	Finger and back-of-hand proof, Protection against disarming actuated from front (EN 50274)
Special purpose ratings	>	<b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>	8000 V AC
		<b>RESISTANCE PER POLE</b>	2.7 mΩ
Design verification	>	<b>SUITABLE FOR</b>	Also motors with efficiency class IE3
		<b>UTILIZATION CATEGORY</b>	AC-3: Normal AC induction motors: starting, switching AC-1: Non-inductive or slightly inductive loads, resistive AC-4: Normal AC induction motors: starting, plugging, inching
		<b>VOLTAGE TYPE</b>	DC

## AMBIENT CONDITIONS, MECHANICAL

		<b>SHOCK RESISTANCE</b>	5 g, N/C auxiliary contact, Mechanical, according to IEC 60068-2-27, Halfsinusoidal shock 10 ms 5.3 g, N/O auxiliary contact, Mechanical, according to IEC 60068-2-27 when tabletop-mounted, Halfsinusoidal shock 10 ms 6.9 g, N/O main contact, Mechanical, according to IEC 60068-2-27 when tabletop-mounted, Halfsinusoidal shock 10 ms 3.5 g, N/C auxiliary contact, Mechanical, according to IEC 60068-2-27 when tabletop-mounted, Halfsinusoidal shock 10 ms 7 g, N/O auxiliary contact, Mechanical, according to IEC 60068-2-27, Halfsinusoidal shock 10 ms 10 g, N/O main contact, Mechanical, according to IEC 60068-2-27, Halfsinusoidal shock 10 ms
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## CLIMATIC ENVIRONMENTAL CONDITIONS

		<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-25 °C
		<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	60 °C
		<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN</b>	25 °C
		<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX</b>	40 °C

**MAX**

<b>AMBIENT STORAGE TEMPERATURE - MIN</b>	40 °C
<b>AMBIENT STORAGE TEMPERATURE - MAX</b>	80 °C
<b>CLIMATIC PROOFING</b>	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78

**ELECTRO MAGNETIC COMPATIBILITY**

<b>EMITTED INTERFERENCE</b>	According to EN 60947-1
<b>INTERFERENCE IMMUNITY</b>	According to EN 60947-1

**TERMINAL CAPACITIES**

<b>TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)</b>	2 x (0.75 - 2.5) mm <sup>2</sup> , Control circuit cables 1 x (0.75 - 2.5) mm <sup>2</sup> , Control circuit cables 1 x (0.75 - 16) mm <sup>2</sup> , Main cables 2 x (0.75 - 10) mm <sup>2</sup> , Main cables
<b>TERMINAL CAPACITY (SOLID)</b>	2 x (0.75 - 2.5) mm <sup>2</sup> , Control circuit cables 1 x (0.75 - 4) mm <sup>2</sup> , Control circuit cables 2 x (0.75 - 10) mm <sup>2</sup> , Main cables 1 x (0.75 - 16) mm <sup>2</sup> , Main cables
<b>TERMINAL CAPACITY (SOLID/STRANDED AWG)</b>	Single 18 - 6, double 18 - 8, Main cables 18 - 14, Control circuit cables
<b>TERMINAL CAPACITY (STRANDED)</b>	1 x 16 mm <sup>2</sup> , Main cables
<b>STRIPPING LENGTH (MAIN CABLE)</b>	10 mm
<b>STRIPPING LENGTH (CONTROL CIRCUIT CABLE)</b>	10 mm
<b>SCREW SIZE</b>	M5, Terminal screw, Main cables M3.5, Terminal screw, Control circuit cables
<b>SCREWDRIVER SIZE</b>	2, Terminal screw, Pozidriv screwdriver 0.8 x 5.5/1 x 6 mm, Terminal screw, Standard screwdriver
<b>TIGHTENING TORQUE</b>	3.2 Nm, Screw terminals, Main cables 1.2 Nm, Screw terminals, Control circuit cables

**ELECTRICAL RATING**

<b>RATED BREAKING CAPACITY AT 220/230 V</b>	320 A
<b>RATED BREAKING CAPACITY AT 380/400 V</b>	320 A
<b>RATED BREAKING CAPACITY AT 500 V</b>	320 A

<b>RATED BREAKING CAPACITY AT 660/690 V</b>	180 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V</b>	45 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V</b>	32 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V</b>	32 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 440 V</b>	32 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V</b>	32 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V</b>	18 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 220 V, 230 V, 240 V</b>	15 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 400 V</b>	15 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 500 V</b>	15 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 660 V, 690 V</b>	12 A
<b>RATED OPERATIONAL CURRENT (IE) AT DC-1, 60 V</b>	40 A
<b>RATED OPERATIONAL CURRENT (IE) AT DC-1, 110 V</b>	40 A
<b>RATED OPERATIONAL CURRENT (IE) AT DC-1, 220 V</b>	40 A
<b>RATED INSULATION VOLTAGE (UI)</b>	690 V
<b>RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V</b>	45 A
<b>RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ</b>	11 kW
<b>RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ</b>	15 kW
<b>RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ</b>	19 kW
<b>RATED OPERATIONAL POWER AT AC-4, 220/230 V, 50 HZ</b>	4 kW
<b>RATED OPERATIONAL POWER AT AC-4, 240 V, 50 HZ</b>	4.5 kW
<b>RATED OPERATIONAL POWER AT AC-4, 415 V, 50 HZ</b>	7.5 kW
<b>RATED OPERATIONAL POWER AT AC-4, 440 V, 50 HZ</b>	8 kW
<b>RATED OPERATIONAL POWER AT AC-4, 500 V, 50 HZ</b>	9 kW
<b>RATED OPERATIONAL POWER AT AC-4, 660/690 V, 50 HZ</b>	10 kW
<b>RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX</b>	690 V

## SHORT-CIRCUIT RATING

<b>SHORT-CIRCUIT CURRENT RATING (BASIC RATING)</b>	5 kA, SCCR (UL/CSA) 125 A, max. Fuse, SCCR (UL/CSA) 125 A, max. CB, SCCR (UL/CSA)
<b>SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 480 V)</b>	10/65 kA, CB, SCCR (UL/CSA) 10/100 kA, Fuse, SCCR (UL/CSA) 50/32 A, max. CB, SCCR (UL/CSA) 125/70 A, Class J, max. Fuse, SCCR (UL/CSA)
<b>SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 600 V)</b>	10/100 kA, Fuse, SCCR (UL/CSA) 125/125 A, Class J, max. Fuse, SCCR (UL/CSA) 10/22 kA, CB, SCCR (UL/CSA) 50/32 A, max. CB, SCCR (UL/CSA)
<b>SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 400 V</b>	125 A gG/gL
<b>SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 690 V</b>	63 A gG/gL
<b>SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 400 V</b>	63 A gG/gL
<b>SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 690 V</b>	35 A gG/gL

## CONVENTIONAL THERMAL CURRENT

<b>CONVENTIONAL THERMAL CURRENT I<sub>TH</sub> (1-POLE, ENCLOSED)</b>	90 A
<b>CONVENTIONAL THERMAL CURRENT I<sub>TH</sub> (3-POLE, ENCLOSED)</b>	36 A
<b>CONVENTIONAL THERMAL CURRENT I<sub>TH</sub> AT 55°C (3-POLE, OPEN)</b>	42 A
<b>CONVENTIONAL THERMAL CURRENT I<sub>TH</sub> OF MAIN CONTACTS (1-POLE, OPEN)</b>	100 A

## SWITCHING CAPACITY

<b>SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)</b>	40 A, Maximum motor rating (UL/CSA)
<b>SWITCHING CAPACITY (AUXILIARY CONTACTS, GENERAL USE)</b>	1 A, 250 V DC, (UL/CSA) 10 A, 600 V AC, (UL/CSA)
<b>SWITCHING CAPACITY (AUXILIARY CONTACTS, PILOT DUTY)</b>	A600, AC operated (UL/CSA) P300, DC operated (UL/CSA)

## SWITCHING TIME

ARCING TIME	10 ms
SWITCHING TIME (DC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX	47 ms
SWITCHING TIME (DC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX	30 ms

## MAGNET SYSTEM

DROP-OUT VOLTAGE	0.6 - 0.15 x UC, DC operated At least smoothed two-phase bridge rectifier or three
DUTY FACTOR	100 %
PICK-UP VOLTAGE	24 - 27 V DC (RDC 24) 0.7 - 1.2 V DC x Uc
POWER CONSUMPTION (PICK-UP) AT DC	12 W
POWER CONSUMPTION (SEALING) AT DC	0.9 W
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN	24 V
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX	27 V

## MOTOR RATING

ASSIGNED MOTOR POWER AT 115/120 V, 60 HZ, 1-PHASE	2 HP
ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE	10 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE	5 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE	10 HP
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-	



ASSIGNED MOTOR POWER AT 480/208 V, 60 HZ, 3-PHASE	20 HP
ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE	25 HP
<b>COMMUNICATION</b>	
CONNECTION	Screw terminals
CONNECTION TO SMARTWIRE-DT	In conjunction with DIL-SWD SmartWire DT contact Yes
<b>CONTACTS</b>	
NUMBER OF CONTACTS (NORMALLY OPEN CONTACTS)	1
NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	1
<b>SAFETY</b>	
SAFE ISOLATION	440 V AC, Between coil and contacts, According to EN 60947-1 440 V AC, Between the contacts, According to EN 60947-1
<b>SPECIAL PURPOSE RATINGS</b>	
SPECIAL PURPOSE RATING OF BALLAST ELECTRICAL DISCHARGE LAMPS	40 A (600V 60Hz 3phase, 347V 60Hz 1phase) 40 A (480V 60Hz 3phase, 277V 60Hz 1phase)
SPECIAL PURPOSE RATING OF DEFINITE PURPOSE RATING	192 A, LRA 480 V 60 Hz 3-ph, 100,000 cycles acc. (UL/CSA) 32 A, FLA 480 V 60 Hz 3-ph, 100,000 cycles acc. (UL/CSA)
SPECIAL PURPOSE RATING OF ELEVATOR CONTROL	7.5 HP, 200 V 60 Hz 3-ph, (UL/CSA) 22 A, 240 V 60 Hz 3-ph, (UL/CSA) 22 A, 600 V 60 Hz 3-ph, (UL/CSA) 25.3 A, 200 V 60 Hz 3-ph, (UL/CSA) 7.5 HP, 240 V 60 Hz 3-ph, (UL/CSA) 20 HP, 480 V 60 Hz 3-ph, (UL/CSA) 20 HP, 600 V 60 Hz 3-ph, (UL/CSA) 27 A, 480 V 60 Hz 3-ph, (UL/CSA)
	30 A, FLA 600 V 60 Hz 3phase; (CSA)

<b>SPECIAL PURPOSE RATING OF REFRIGERATION CONTROL (CSA ONLY)</b>	240 A, LRA 480 V 60 Hz 3phase; (CSA) 180 A, LRA 600 V 60 Hz 3phase; (CSA) 40 A, FLA 480 V 60 Hz 3phase; (CSA)
<b>SPECIAL PURPOSE RATING OF RESISTANCE AIR HEATING</b>	40 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (U 40 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (U
<b>SPECIAL PURPOSE RATING OF TUNGSTEN INCANDESCENT LAMPS</b>	40 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (U 40 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (U
<b>DESIGN VERIFICATION</b>	
<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>	6.6 W
<b>HEAT DISSIPATION CAPACITY PDISS</b>	0 W
<b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	32 A
<b>10.2.2 CORROSION RESISTANCE</b>	Meets the product standard's requirements.
<b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>	Meets the product standard's requirements.
<b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>	Meets the product standard's requirements.
<b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b>	Meets the product standard's requirements.
<b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>	Meets the product standard's requirements.
<b>10.2.5 LIFTING</b>	Does not apply, since the entire switchgear needs to
<b>10.2.6 MECHANICAL IMPACT</b>	Does not apply, since the entire switchgear needs to
<b>10.2.7 INSCRIPTIONS</b>	Meets the product standard's requirements.
<b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>	Does not apply, since the entire switchgear needs to
<b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>	Meets the product standard's requirements.
<b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>	Does not apply, since the entire switchgear needs to
<b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>	Does not apply, since the entire switchgear needs to
<b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>	Is the panel builder's responsibility.
<b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>	Is the panel builder's responsibility.
<b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>	Is the panel builder's responsibility.
<b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>	Is the panel builder's responsibility.
<b>10.9.4 TESTING OF ENCLOSURES MADE OF</b>	Is the panel builder's responsibility.

## INSULATING MATERIAL

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### 10.10 TEMPERATURE RISE

The panel builder is responsible for the temperature rise. Eaton will provide heat dissipation data for the device.

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### 10.11 SHORT-CIRCUIT RATING

Is the panel builder's responsibility. The specifications must be observed.

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### 10.12 ELECTROMAGNETIC COMPATIBILITY

Is the panel builder's responsibility. The specifications must be observed.

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### 10.13 MECHANICAL FUNCTION

The device meets the requirements, provided the instructions in the instruction leaflet (IL) is observed.

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Catalogs

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Characteristic curve

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Declarations of conformity

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Drawings

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eCAD model

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Installation instructions

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Installation videos

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mCAD model

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PEP Eco-passport

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System overview

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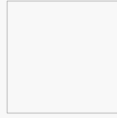
Wiring diagrams

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