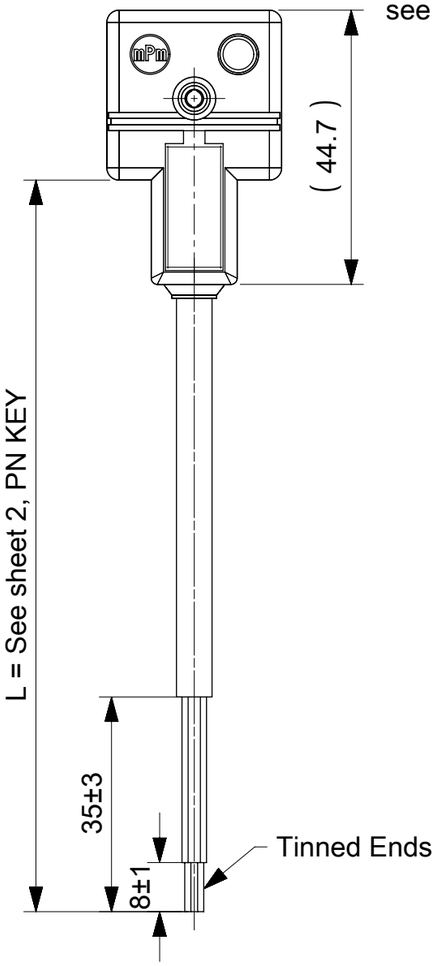
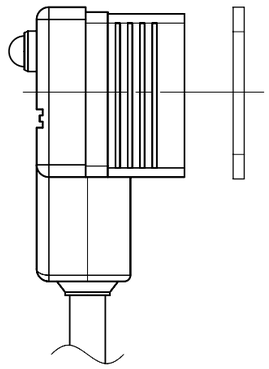
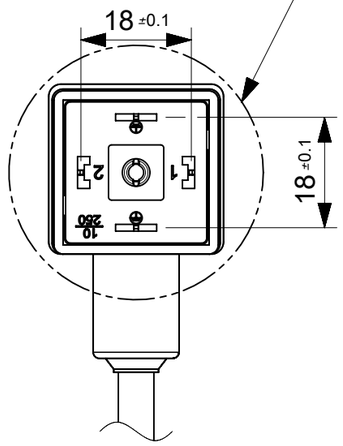


Type of Screw and Gasket
see sheet 2, PN KEY





Face View
(see Insert Orientation)



INSERT ORIENTATION	
Housing 2 Poles + 2 Earths	Housing 3 Poles + 1 Earth
Earth H6/H12 - Not Used E451XXXXXX1XXXX	Earth H12 -Not Used E451XXXXXX2XXXX PIN 3 Not Used
Earth H3/H9 - Not Used E451XXXXXX4XXXX	Earth H3 - Not Used E451XXXXXX3XXXX PIN 3 Not Used
Earth H6/H12 - Not Used E451XXXXXX1XC3X E451XXXXXX1XC7X E451XXXXXX1XR0X E451XXXXXX1XR2X	Earth H6 - Not Used E451XXXXXX6XXXX PIN 3 Not Used
Insert 180°	Earth H9 - Not Used E451XXXXXX9XXXX PIN 3 Not Used

Type of Screws and Gaskets

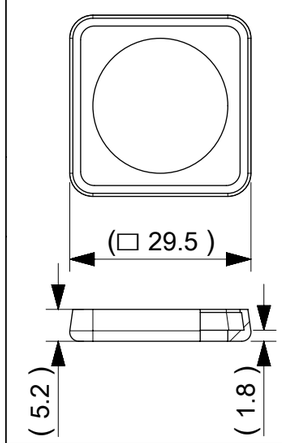
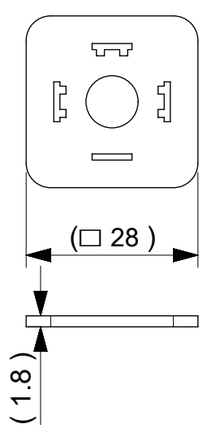
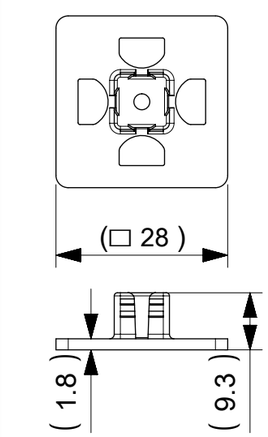
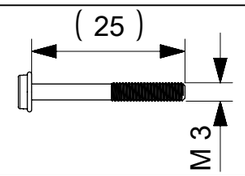
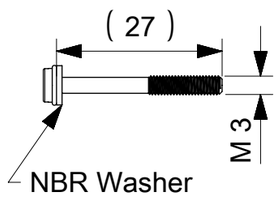
Profiled Gasket	Flat Gasket	Integrated Gasket	Screw M3x25
			
			Screw M3x27 + Washer
			

TABLE OF LENGTH TOLERANCES [mm]		
Over	Up to and Including	Tolerance
0	1000	±20
1000	3000	±30
3000	5000	±40
5000	10000	±50
10000	15000	±100
15000	20000	±150
20000		±L/100

DOCUMENT STATUS	P1	RELEASE DATE	2024/07/04 12:12:01

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

SYMBOLS: = 0

DIMENSION UNITS: mm | SCALE: 1:1

GENERAL TOLERANCES (UNLESS SPECIFIED)

ANGULAR TOL	±	1.0 °
4 PLACES	±	
3 PLACES	±	
2 PLACES	±	0.05
1 PLACE	±	0.3
0 PLACES	±	0.5

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

CURRENT REV DESC:

EC NO: 791448
DRWN: MARCIM6 2024/06/28
CHK'D: RSILLER 2024/07/04
APPR: RSILLER 2024/07/04

INITIAL REVISION:
DRWN: SSM 2019/06/04
APPR: RSILLER 2019/06/28

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 121050

molex

STANDARD E451 DIN FORM A
EN 175301-803

PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
1210504000	PSD	000	A1

MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE 1210504000_PDP	GENERAL MARKET	1 OF 3

FORMAT: molex B size A3
REVISION: H
DATE: 2018/01/16

KLUCZ / PN KEY ENGINEERING PN

E	4	5	1	X	X	X	X	X	X	X	X	X	X	X

E - Packing without bag
W - Single Packing

Number of wires:
1 - 2 Wires

Cable type:
See Table

Head Colour:
G - Grey
N - Black
A - CSA-UL Black
B - CSA-UL Grey

Cable Length in[cm]
050 = 50cm
300 = 300cm
10K = 1000cm

Earth PIN location (see insert orientation table):
1 = Double Earth on H6 & H12
2 = Earth on H12
3 = Earth on H3
4 = Double Earth on H3 & H9
6 = Earth on H6
9 = Earth on H9

Wiring Configuration:
See sheet 3

Voltage and LED Colour

Red LED	Green LED	Yellow Led
1 = 12V	A = 12V	G = 12V
2 = 24V	B = 24V	H = 24V
3 = 48V	C = 48V	K = 48V
4 = 115V	D = 115V	L = 115V
5 = 230V	E = 230V	M = 230V

Type of Gasket and Screw (see sheet 1):
1 = NBR Profile Gasket + Fixing Screw M3x25mm
2 = NBR Flat Gasket + Fixing Screw M3x25mm
3 = Silicone Profile Gasket + Fixing Screw M3x25mm
4 = Silicone Flat Gasket + Fixing Screw M3x25mm
P = NBR Integrated Gasket + Fixing Screw with Washer M3x27mm Assembled on Connector
R = NBR Integrated Gasket + Fixing Screw with Washer M3x27mm NOT Assembled on Connector
T = NBR Profile Gasket + Fixing Screw with Washer M3x27mm

CABLE LIST

CABLE TYPE	NO. OF WIRES	CROSS SECTION	CABLE O.D.	CABLE JACKET	KOLORY PRZEWODÓW WIRES COLOR	SHIELD
A2	2	AWG 20	5.4mm±0.2	PVC BLACK	BN, BU	-
A3	2	AWG 18	6.2mm±0.25	PVC BLACK	BN, BU	-
B2	2	AWG 20	5.6mm±0.2	PUR BLACK	BN, BU	-
B3	2	AWG 18	6.2mm±0.2	PUR BLACK	BN, BU	-
I2	2	0.5mm²	5.5mm+0.3	PVC GREY	BN, BU	-
I3	2	0.75mm²	5.5mm±0.2	PVC GREY	BK1,BK2	-
I4	2	1mm²	7.1mm±0.2	PVC GREY	BN, BU	-
N2	2	0.5mm²	5.25mm±0.65	PVC BLACK	BN, BU	-
N3	2	0.75mm²	6.45mm±0.75	PVC BLACK	BN, BU	-
N4	2	1mm²	6.45mm±0.75	PVC BLACK	BN, BU	-
P2	2	0.5mm²	5.5mm+0.2	PUR BLACK	BN, BU	-
P3	2	0.75mm²	6.5mm±0.2	PUR BLACK	BN, BU	-
W2	2	0.5mm²	~5.2mm	WSOR BLACK	BN, BU	-
W3	2	0.75mm²	~6.0mm	WSOR BLACK	BN, BU	-

Notes:
1. Please see excel sheet 1210504000_PDP for currently configured part numbers.
2. Drawing is a replacement for: SD-121050-004

DOCUMENT STATUS	P1	RELEASE DATE	2024/07/04 12:12:01

FORMAT: marcim Standard A3
REVISION: H
DATE: 2018/01/16

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

SYMBOLS: A = 0, B = 0, C = 0, D = 0, E = 0, F = 0, G = 0, H = 0

DIMENSION UNITS: mm
SCALE: 1:1

GENERAL TOLERANCES (UNLESS SPECIFIED)
ANGULAR TOL ± 1.0°
4 PLACES ±
3 PLACES ±
2 PLACES ± 0.05
1 PLACE ± 0.3
0 PLACES ± 0.5
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

CURRENT REV DESC:

EC NO: 791448
DRWN: MARCIM6 2024/06/28
CHK'D: RSILLER 2024/07/04
APPR: RSILLER 2024/07/04

INITIAL REVISION:
DRWN: SSM 2019/06/04
APPR: RSILLER 2019/06/28

THIRD ANGLE PROJECTION
DRAWING: A3-SIZE
SERIES: 121050

molex

STANDARD E451 DIN FORM A
EN 175301-803

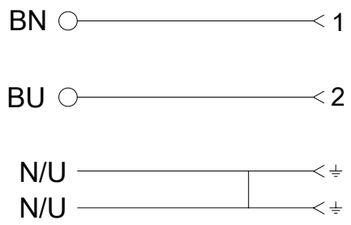
PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
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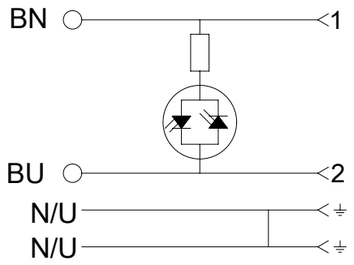
MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE 1210504000_PDP	GENERAL MARKET	2 OF 3

WIRING DIAGRAMS

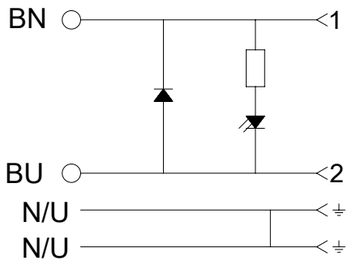
ELECTRICAL DIAGRAM 00
WITHOUT LED



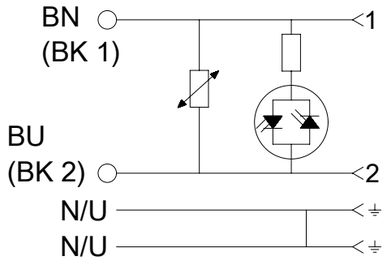
ELECTRICAL DIAGRAM A1



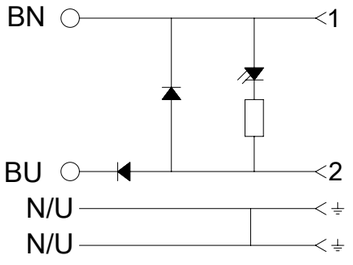
ELECTRICAL DIAGRAM C3



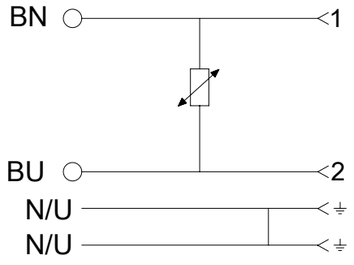
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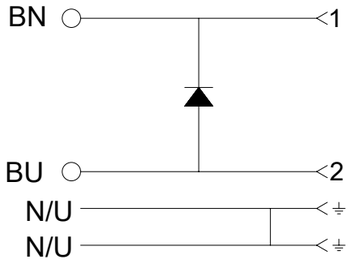
ELECTRICAL DIAGRAM C7



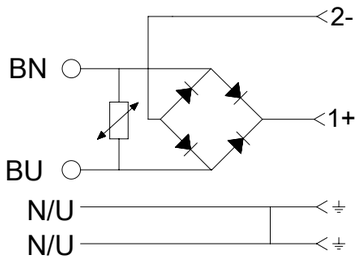
ELECTRICAL DIAGRAM D0



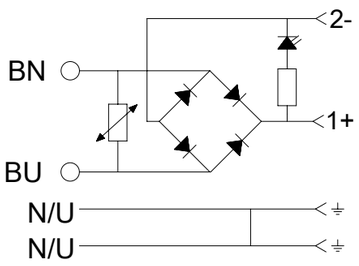
ELECTRICAL DIAGRAM E0



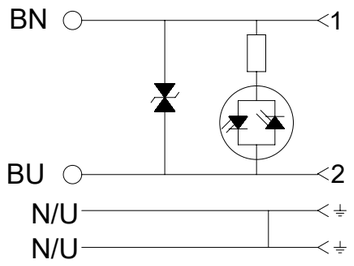
ELECTRICAL DIAGRAM R0



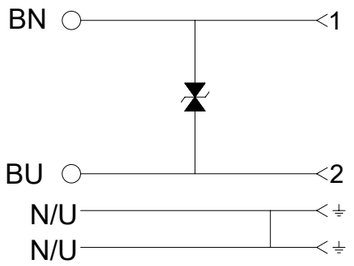
ELECTRICAL DIAGRAM R2



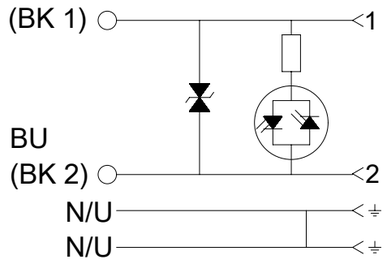
ELECTRICAL DIAGRAM S0



ELECTRICAL DIAGRAM S1



ELECTRICAL DIAGRAM S3



SYMBOLS	
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S =	0
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C =	0
☒ =	0
■ =	0
▽ =	0

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DIMENSION UNITS	SCALE
mm	1:1

GENERAL TOLERANCES (UNLESS SPECIFIED)	
ANGULAR TOL	± 1.0 °
4 PLACES	±
3 PLACES	±
2 PLACES	± 0.05
1 PLACE	± 0.3
0 PLACES	± 0.5

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

CURRENT REV DESC:

EC NO: 791448
DRWN: MARCIM6 2024/06/28
CHK'D: RSILLER 2024/07/04
APPR: RSILLER 2024/07/04

INITIAL REVISION:
DRWN: SSM 2019/06/04
APPR: RSILLER 2019/06/28

molex

STANDARD E451 DIN FORM A
EN 175301-803

PRODUCT CUSTOMER DRAWING

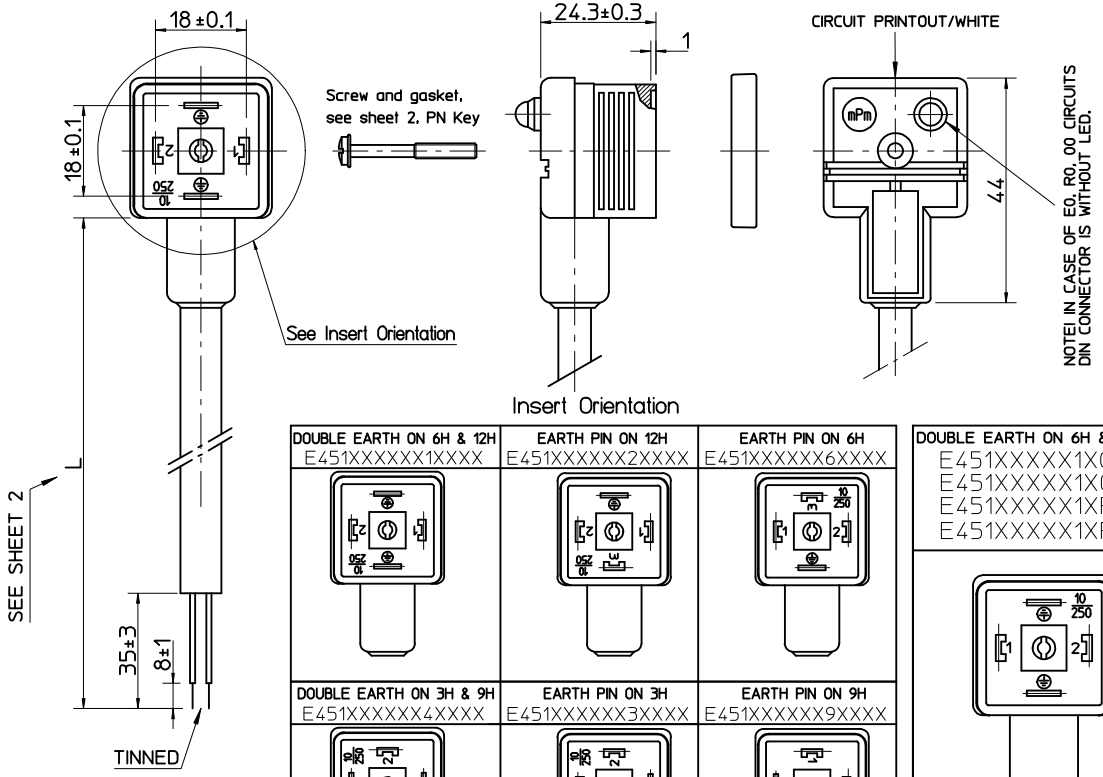
DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
1210504000	PSD	000	A1

THIRD ANGLE PROJECTION	DRAWING	SERIES
	A3-SIZE	121050

MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE 1210504000_PDP	GENERAL MARKET	3 OF 3

DOCUMENT STATUS	P1	RELEASE DATE	2024/07/04 12:12:01

FORMAT: master_Sheet-A3
REVISION: H
DATE: 2018/01/16



DOUBLE EARTH ON 6H & 12H E451XXXXXX1XXXX	EARTH PIN ON 12H E451XXXXXX2XXXX	EARTH PIN ON 6H E451XXXXXX6XXXX
DOUBLE EARTH ON 3H & 9H E451XXXXXX4XXXX	EARTH PIN ON 3H E451XXXXXX3XXXX	EARTH PIN ON 9H E451XXXXXX9XXXX

DOUBLE EARTH ON 6H & ON 12H
E451XXXXX1XC3X
E451XXXXX1XC7X
E451XXXXX1XR0X
E451XXXXX1XR2X

NOTE! IN CASE OF CIRCUIT
C3,C7,R0,R2 HOUSING INVERSE OF 180°.

WIRING CONFIGURATION

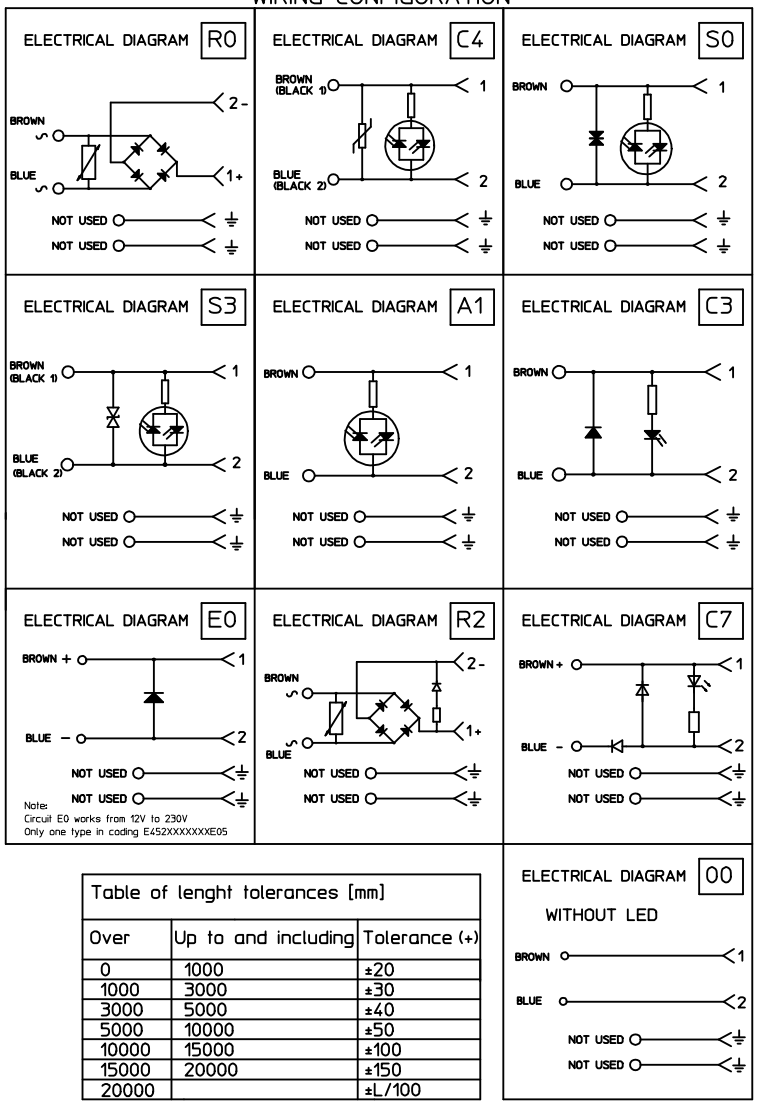


Table of lenght tolerances [mm]		
Over	Up to and including	Tolerance (+)
0	1000	±20
1000	3000	±30
3000	5000	±40
5000	10000	±50
10000	15000	±100
15000	20000	±150
20000		±L/100

ORIGINAL RELEASE
EC NO: IPG2013-1190
DRWN:JMARSZALEK 2012/11/12
CH'KD:MSZWAJKOWSKI 2012/11/12
APPR:MIWASIECZKO 2013/02/12
DESCRIPTION
A
REV

QUALITY SYMBOLS
▼=0
Ⓒ=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± ---	± ---
1 PLACE	± ---	± ---
0 PLACE	± ---	± ---

ANGULAR ±---°

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM ONLY
SCALE: -
DESIGN UNITS: METRIC
FIRST ANGLE PROJECTION

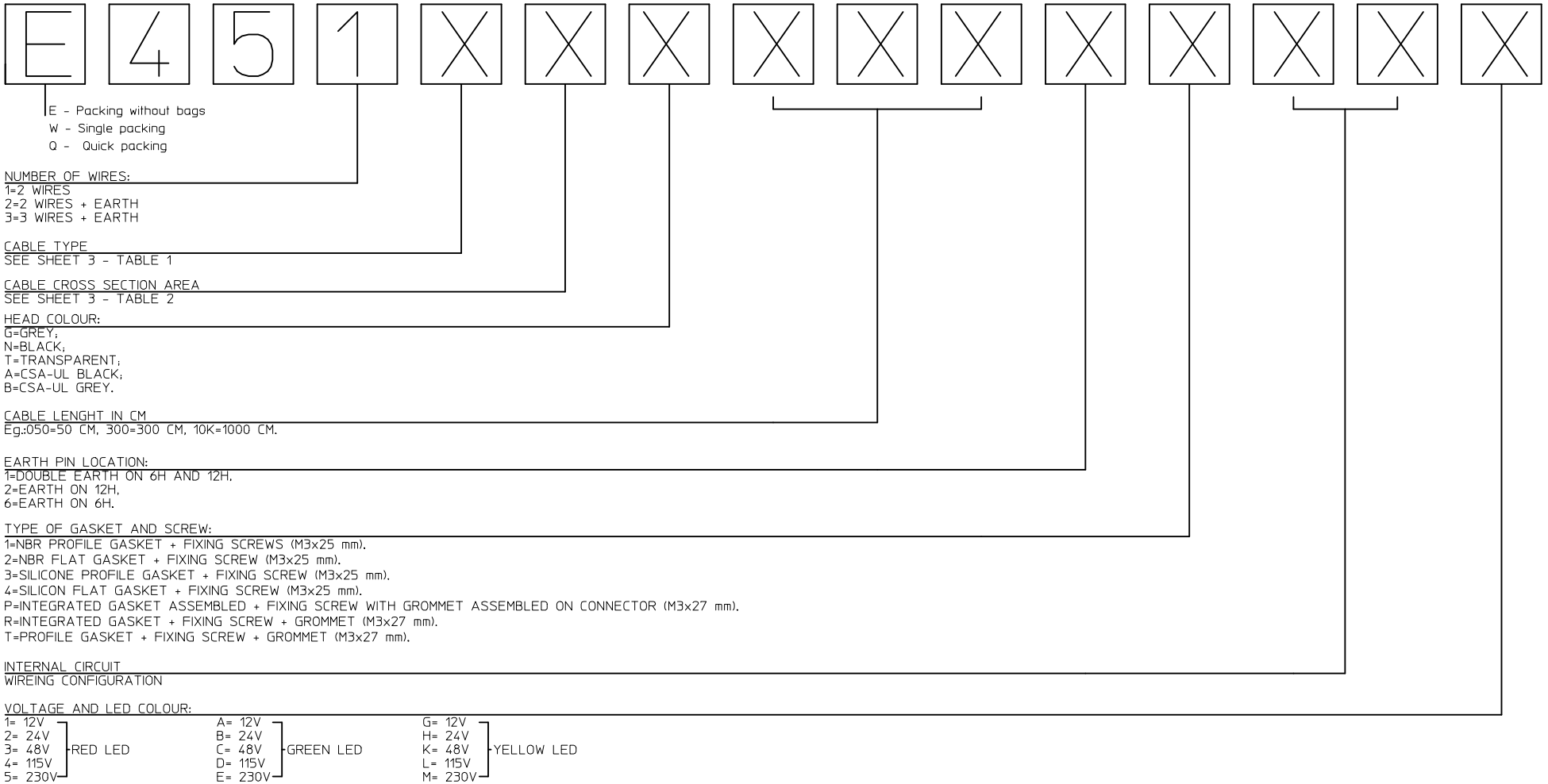
DRAWN BY: JMARSZALEK DATE: 2012/11/12
CHECKED BY: MSZWAJKOWSKI DATE: 2012/11/12
APPROVED BY: MIWASIECZKO DATE: 2013/02/12
MATERIAL NO.: MATRIX DRAWING

TITLE: E451XXXXXXXXXX
DIN FORM A
EN 175301-803

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DOCUMENT NO.: SD-121050-004
SHEET NO.: 1 OF 3
SIZE: A3

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION



ORIGINAL RELEASE
EC NO: IPG2013-1190
DRWN: JMARSZALEK 2012/11/12
CH'KD: MSZWAJKOWSKI 2012/11/12
APPR: MIWASIECZKO 2013/02/12
DESCRIPTION
A
REV

QUALITY SYMBOLS
▼=0
Ⓒ=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± ---	± ---
1 PLACE	± ---	± ---
0 PLACE	± ---	± ---

ANGULAR ±---°
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM ONLY
SCALE: -
DESIGN UNITS: METRIC
FIRST ANGLE PROJECTION
DRAWN BY: JMARSZALEK DATE: 2012/11/12
CHECKED BY: MSZWAJKOWSKI DATE: 2012/11/12
APPROVED BY: MIWASIECZKO DATE: 2013/02/12
MATERIAL NO.: MATRIX DRAWING
TITLE: E451XXXXXXXXXXX
DIN FORM A
EN 175301-803
molex
DOCUMENT NO.: SD-121050-004
SHEET NO.: 2 OF 3
SIZE: A3

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

TABLE 2 - CABLES

Molex PN	mPm	Code	Wires	Cross Section	Material	Color	Diameter Ø	DIN A-B	DIN C
1210180080	I	0	3	1 mm2	PVC CEI 2022 II O.R.	Grey RAL7035	6,4±0,2 mm	OK.	-
1210180467	A	2	2	20 AWG	PVC CSA/UL 2661	Black	5,4±0,2 mm	OK.	OK.
1210180128	A	2	3	20 AWG	PVC CSA/UL 2661	Black	5,6±0,2 mm	OK.	OK.
1210180394	A	2	4	20 AWG	PVC CSA/UL 2661	Black	6,2±0,25 mm	OK.	OK.
-	A	2	5	20 AWG	PVC CSA/UL 2661	Black	7±0,2 mm	OK.	-
1210180297	B	2	2	20 AWG	PUR CSA/UL 20668	Black	5,6±0,2 mm	OK.	OK.
1210180126	B	2	3	20 AWG	PUR CSA/UL 20668	Black	5,6±0,2 mm	OK.	OK.
1210180387	B	2	4	20 AWG	PUR CSA/UL 20668	Black	6,2±0,2 mm	OK.	OK.
-	B	2	5	20 AWG	PUR CSA/UL 20668	Black	7±0,2 mm	OK.	-
1210180122	D	2	3	0,5 mm2	PVC TI2 CEI 20-20	Grey	5,5±0,2 mm	OK.	OK.
-	F	2	3	0,5 mm2	CNOMO	Grey RAL7000	5,5±0,2 mm	OK.	OK.
1210180047	I	2	2	0,5 mm2	PVC CEI 2022 II O.R.	Grey RAL7035	5,5+0,3/-0 mm	OK.	OK.
1210180284	I	2	3	0,5 mm2	PVC CEI 2022 II O.R.	Grey RAL7035	5,5+0,3/-0 mm	OK.	OK.
1210180146	I	2	4	0,5 mm2	PVC CEI 2022 II O.R.	Grey RAL7035	6,5±0,2 mm	OK.	OK.
1210180177	I	2	5	0,5 mm2	PVC CEI 2022 II O.R.	Grey RAL7035	7±0,2 mm	OK.	-
1210180022	N	2	2	0,5 mm2	PVCH03	Black	5,2±0,2 mm	OK.	OK.
1202092753	N	2	3	0,5 mm2	PVCH03	Black	5,5±0,2 mm	OK.	OK.
1210180153	N	2	4	0,5 mm2	PVCH03	Black	6,9 mm max	OK.	OK.
1210180046	P	2	2	0,5 mm2	PUR - BLEND	Black	5,5±0,2 mm	OK.	OK.
1202092439	P	2	3	0,5 mm2	PUR - BLEND	Black	5,5 +0,3/-0 mm	OK.	OK.
1210180302	P	2	4	0,5 mm2	PUR - BLEND	Black	6,5±0,2 mm	OK.	OK.
1202092215	P	2	5	0,5 mm2	PUR - BLEND	Black	7+0,3/-0,1 mm	OK.	OK.
1210180409	A	3	2	18 AWG	PVC CSA/UL 2661	Black	6,5±0,25 mm	OK.	-
1210180129	A	3	3	18 AWG	PVC CSA/UL 2661	Black	6,5±0,25 mm	OK.	-
1210180159	A	3	4	18 AWG	PVC CSA/UL 2661	Black	7±0,3 mm	OK.	-
1210180464	A	3	5	18 AWG	PVC CSA/UL 2661	Black	7,8±0,25 mm	OK.	-
1210180351	B	3	2	18 AWG	PUR CSA/UL 20668	Black	6,8±0,2 mm	OK.	-
1210180127	B	3	3	18 AWG	PUR CSA/UL 20668	Black	6,5±0,2 mm	OK.	-
1210180160	B	3	4	18 AWG	PUR CSA/UL 20668	Black	7±0,2 mm	OK.	-
1210180463	B	3	5	18 AWG	PUR CSA/UL 20668	Black	7,8±0,2 mm	OK.	-
1210180073	D	3	3	0,75 mm2	PVC TI2 CEI 20-20	Grey	6,5±0,2 mm	OK.	OK.
1210180145	D	3	4	0,75 mm2	PVC TI2 CEI 20-20	Grey	7,1±0,2 mm	OK.	-
1202098206	I	3	2	0,75 mm2	PVC CEI 2022 II O.R.	Grey RAL7001	5,5±0,2 mm	OK.	-
1210180120	I	3	3	0,75 mm2	PVC CEI 2022 II O.R.	Grey RAL7035	6±0,2 mm	OK.	-
1210180143	I	3	4	0,75 mm2	PVC CEI 2022 II O.R.	Grey RAL7035	7±0,2 mm	OK.	-
1210180032	N	3	2	0,75 mm2	PVCH05	Black	6,2±0,2 mm	OK.	-
1210180069	N	3	3	0,75 mm2	PVCH05	Black	6,5±0,2 mm	OK.	-
1210180144	N	3	4	0,75 mm2	PVCH05	Black	7,1±0,2 mm	OK.	-
1210180174	N	3	5	0,75 mm2	PVCH05	Black	8,0+0,2-0 mm	OK.	-
1202094190	P	3	2	0,75 mm2	PUR - BLEND	Black	6,5±0,2 mm	OK.	-

TABLE 2 - CABLES

Molex PN	mPm	Code	Wires	Cross Section	Material	Color	Diameter Ø	DIN A-B	DIN C
1210180071	P	3	3	0,75 mm2	PUR - BLEND	Black	6,5±0,2 mm	OK.	
1210180152	P	3	4	0,75 mm2	PUR - BLEND	Black	7±0,2 mm	OK.	
1210180384	R	3	3	0,75 mm2	TPR HAL. FREE	Black	6,5±0,2 mm	OK.	
1210180094	T	3	3	0,75 mm2	PUR CSA/UL	Yellow	6,5±0,2 mm	OK.	-
1210180309	Y	3	3	0,75 mm2	SIL/0300	Red	6,5±0,2 mm	OK.	-
1210180081	F	4	3	1 mm2	CNOMO	Grey RAL7000	7,1+0,2/-0 mm	OK.	-
-	F	4	4	1 mm2	CNOMO	Grey RAL7000	7,1+0,2/-0 mm	OK.	
1210180042	I	4	2	1 mm2	PVC CEI 2022 II O.R.	Grey RAL7035	7,1+0,2/-0 mm	OK.	
1210180079	I	4	3	1 mm2	PVC CEI 2022 II O.R.	Grey RAL7035	7,1+0,2/-0 mm	OK.	
1210180036	N	4	2	1 mm2	PVCH05	Black	6,5±0,2 mm	OK.	
1210180082	N	4	3	1 mm2	PVCH05	Black	6,9±0,2 mm	OK.	
1210180117	R	4	3	1 mm2	TPR HAL. FREE	Black	7,1±0,2 mm	OK.	-
1210180085	N	5	3	1,5 mm2	PVCH05	Black	8,3+0,2/-0 mm	OK.	
1210180313	I	6	2	0,35 mm2	PVC CEI 2022 II O.R.	Grey RAL7035	4,8±0,2 mm	OK.	-
-	A	7	3	20 AWG	PVC CSA/UL 2661	Yellow	5,6±0,2 mm	OK.	OK.
1210180149	I	9	4	0,75 mm2	PVC CEI 2022 II O.R.	Grey RAL7035	7,3±0,2 mm	OK.	-

TABLE 1 - CABLES TYPE

Code	Cable types	Features	Stranding
N	PVC	Application general purpose cable which has good resistance to water, but usually poor oil resistance.	0.5 mm2 = 15 x 0.20 0.75 mm2 = 21 x 0.20 1 mm2 = 28 x 0.20
I	CEI	Approved to IEC 332-2A, flame retardant and self extinguishing. Limited resistant to mineral oils.	0.5 mm2 = 28 x 0.15 0.75 mm2 = 42 x 0.15 1 mm2 = 32 x 0.20
P	PUR	Offer good resistance to oil and chemicals. Can swell when constantly immersed in water.	0.5 mm2 = 28 x 0.15 0.75 mm2 = 42 x 0.15 1 mm2 = 32 x 0.20
A	PVC CSA-UL	Approved to CSA-UL 2661, application general purpose cable which has good resistance to water, but usually poor oil resistance.	20 AWG = 32 x 0.15 18 AWG = 52 x 0.15
B	PUR CSA-UL	Approved to CSA-UL 20668, very good resistance to oil and chemicals.	20 AWG = 32 x 0.15 18 AWG = 52 x 0.15

ORIGINAL RELEASE
EC NO: IPG2013-1190
DRWN:JMARSZALEK 2012/11/12
CH'KD:MSZWAJKOWSKI 2012/11/12
APPR:MIWASIECZKO 2013/02/12
DESCRIPTION
A
REV

QUALITY SYMBOLS
▼=0
Ⓒ=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± ---	± ---
1 PLACE	± ---	± ---
0 PLACE	± ---	± ---
ANGULAR ±---°		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM ONLY
SCALE: -
DESIGN UNITS: METRIC
FIRST ANGLE PROJECTION

DRAWN BY: JMARSZALEK DATE: 2012/11/12
CHECKED BY: MSZWAJKOWSKI DATE: 2012/11/12
APPROVED BY: MIWASIECZKO DATE: 2013/02/12
MATERIAL NO.: MATRIX DRAWING

TITLE: E451XXXXXXXXXX
DIN FORM A
EN 175301-803

molex

DOCUMENT NO.: SD-121050-004
SHEET NO.: 3 OF 3
SIZE: A3

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