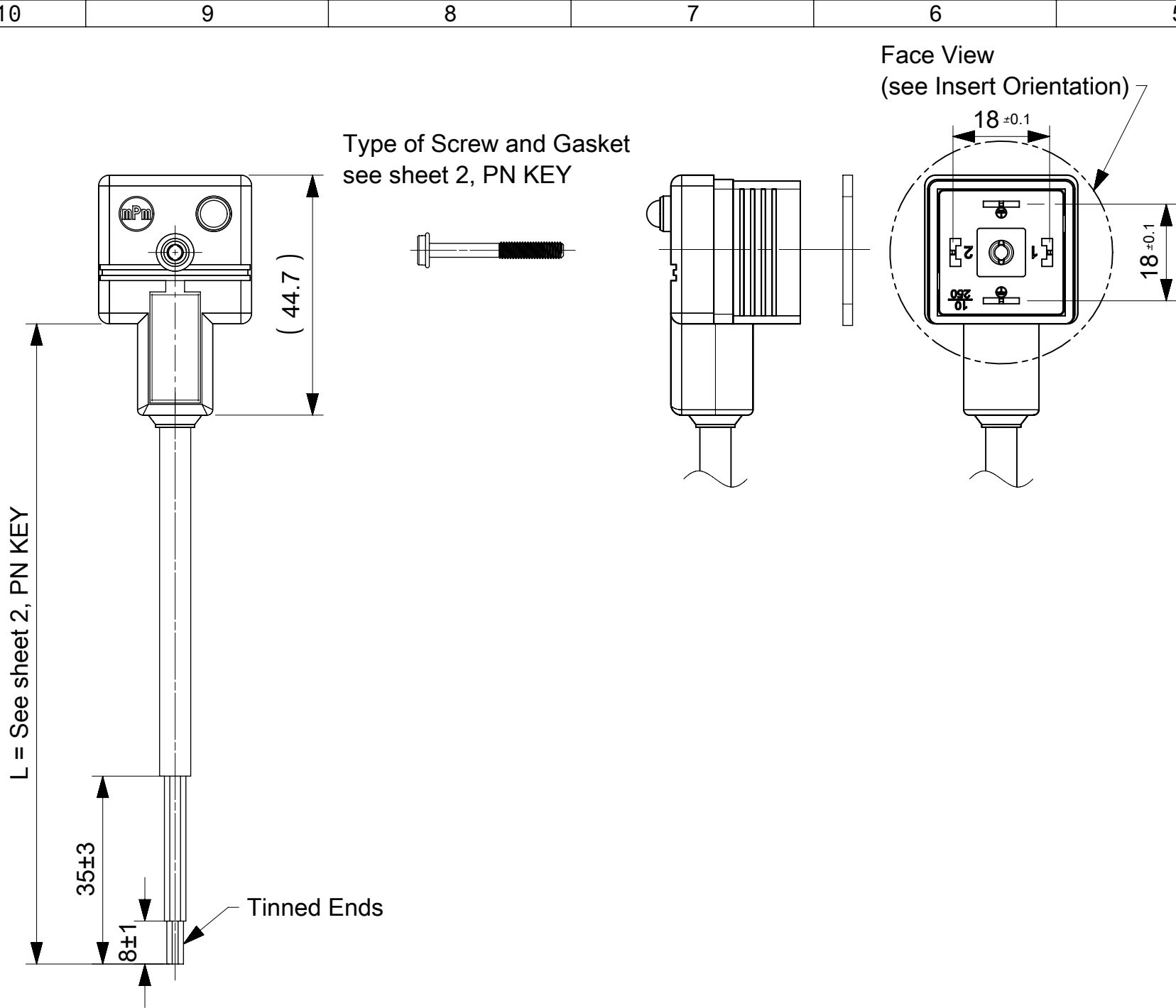




INSERT ORIENTATION	
Housing 2 Poles + 2 Earths	Housing 3 Poles + 1 Earth
Earth H6/H12 - Not Used E451XXXXXX1XXXX	Earth H12 -Not Used E451XXXXXX2XXXX PIN 3 Not Used
Earth H3/H9 - Not Used E451XXXXXX4XXXX	Earth H3 - Not Used E451XXXXXX3XXXX PIN 3 Not Used
Earth H6/H12 - Not Used E451XXXXXX1XC3X E451XXXXXX1XC7X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

SYMBOLS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		CURRENT REV DESC:		molex			
	DIMENSION UNITS	SCALE			STANDARD E451 DIN FORM A EN 175301-803			
▽ = 0	mm	1:1						
▽ = 0	GENERAL TOLERANCES (UNLESS SPECIFIED)							
▽ = 0	ANGULAR TOL	± 1.0 °						
▽ = 0	4 PLACES	±						
▽ = 0	3 PLACES	±						
▽ = 0	2 PLACES	± 0.05						
▽ = 0	1 PLACE	± 0.3						
▽ = 0	0 PLACES	± 0.5						
▽ = 0	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS							
▽ = 0			THIRD ANGLE PROJECTION	DRAWING	SERIES	MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
▽ = 0				A3-SIZE	121050	SEE 1210504000_PDP	GENERAL MARKET	1 OF 3

KLUCZ / PN KEY ENGINEERING PN

E

4

5

1

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

1 = 12V
2 = 24V
3 = 48V
4 = 115V
5 = 230V

Green LED

A = 12V
B = 24V
C = 48V
D = 115V
E = 230V

Yellow Led

G = 12V
H = 24V
K = 48V
L = 115V
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

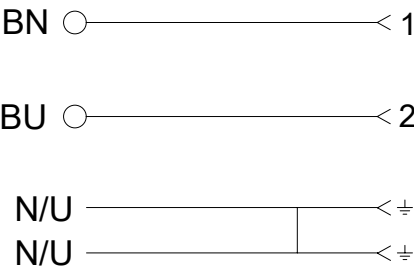
CABLE TYPE	NO. OF WIRES	CROSS SECTION	CABLE O.D.	CABLE JACKET	KOLORY PRZEWODÓW WIRES COLOR	SHIELD
A2	2	AWG 20	5.4mm±0.2	PVC BLACK	BN, BU	-
A3	2	AWG 18	6.2mm±0.25	PVC BLACK	BN, BU	-
B2	2	AWG 20	5.6mm±0.2	PUR BLACK	BN, BU	-
B3	2	AWG 18	6.2mm±0.2	PUR BLACK	BN, BU	-
I2	2	0.5mm²	5.5mm+0.3	PVC GREY	BN, BU	-
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

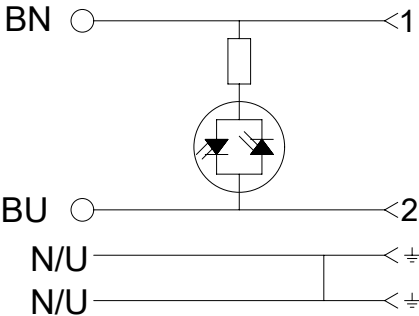
SYMBOLS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION															
	DIMENSION UNITS		SCALE		CURRENT REV DESC:					molex STANDARD E451 DIN FORM A EN 175301-803						
	mm		1:1													
	GENERAL TOLERANCES (UNLESS SPECIFIED)															
	ANGULAR TOL ± 1.0 °															
	▽ = 0	4 PLACES		±	EC NO: 791448					DOCUMENT NUMBER 1210504000			DOC TYPE PSD	DOC PART 000	REVISION A1	
	▽ = 0	3 PLACES		±	DRWN: MARCIM6 2024/06/28											
	▽ = 0	2 PLACES		± 0.05	CHK'D: RSILLER 2024/07/04											
	▽ = 0	1 PLACE		± 0.3	APPR: RSILLER 2024/07/04					INITIAL REVISION:						
	▽ = 0	0 PLACES		± 0.5	DRWN: SSM 2019/06/04					MATERIAL NUMBER					CUSTOMER	
▽ = 0	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		THIRD ANGLE PROJECTION		DRAWING		SERIES		121050		GENERAL MARKET		2 OF 3			

WIRING DIAGRAMS

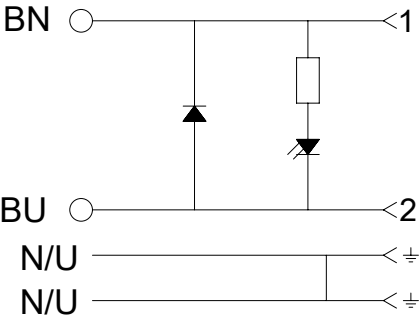
ELECTRICAL DIAGRAM 00
WITHOUT LED



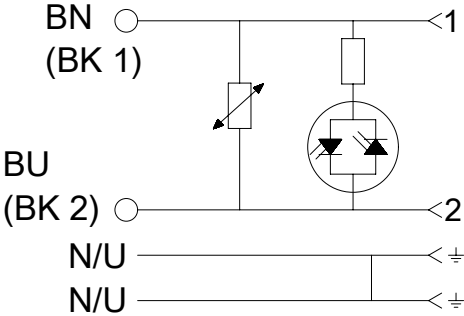
ELECTRICAL DIAGRAM A1



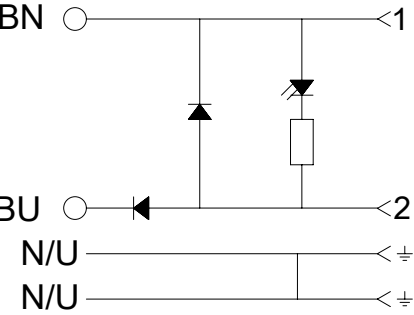
ELECTRICAL DIAGRAM C3



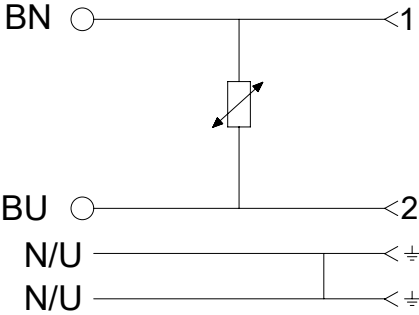
ELECTRICAL DIAGRAM C4



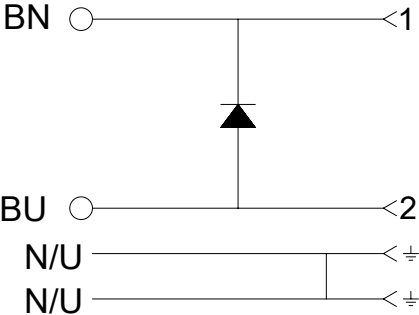
ELECTRICAL DIAGRAM C7



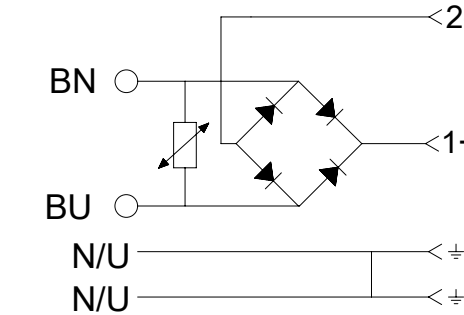
ELECTRICAL DIAGRAM D0



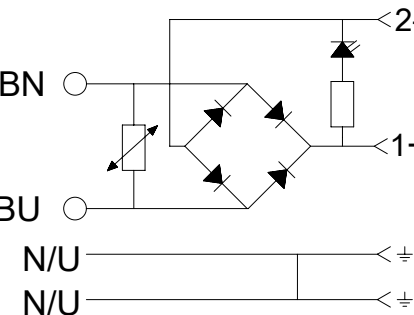
ELECTRICAL DIAGRAM E0



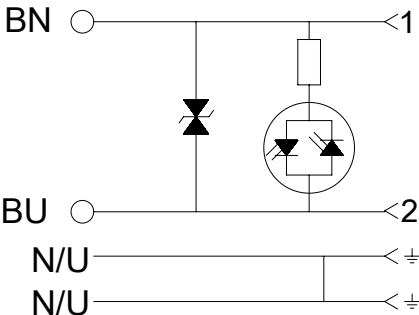
ELECTRICAL DIAGRAM R0



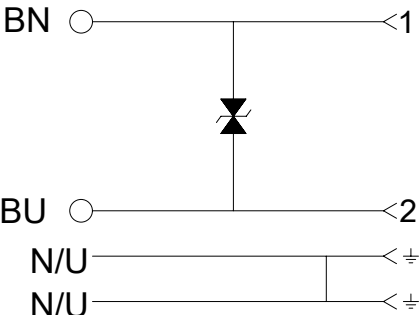
ELECTRICAL DIAGRAM R2



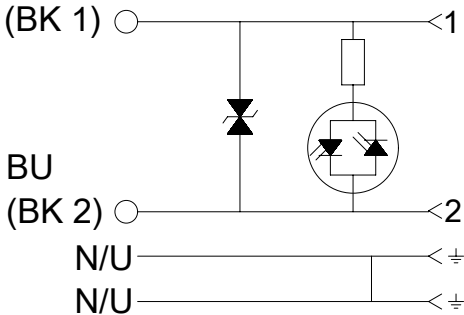
ELECTRICAL DIAGRAM S0



ELECTRICAL DIAGRAM S1

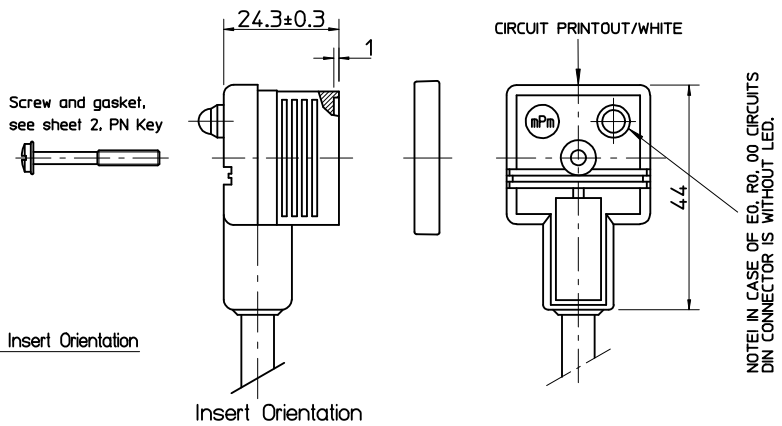
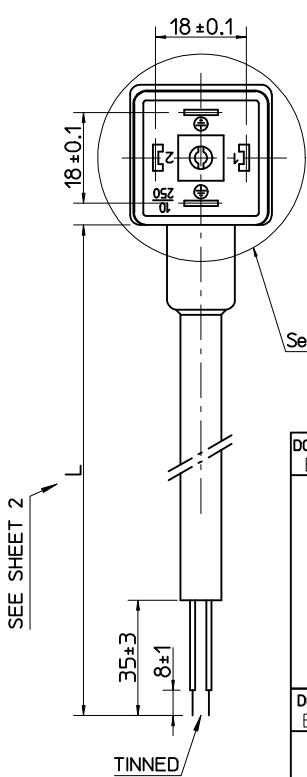


ELECTRICAL DIAGRAM S3



SYMBOLS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	
	DIMENSION UNITS	SCALE
= 0	mm	1:1
= 0	GENERAL TOLERANCES (UNLESS SPECIFIED)	
= 0	ANGULAR TOL	± 1.0 °
= 0	4 PLACES	±
= 0	3 PLACES	±
= 0	2 PLACES	± 0.05
= 0	1 PLACE	± 0.3
= 0	0 PLACES	± 0.5
= 0	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	
= 0	THIRD ANGLE PROJECTION	
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
DOCUMENT NUMBER		1210504000
DOC TYPE		PSD
DOC PART		000
REVISION		A1
MATERIAL NUMBER		SEE 1210504000_PDP
CUSTOMER		GENERAL MARKET
SHEET NUMBER		3 OF 3

10 9 8 7 6 5 4 3 2 1



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
E451XXXXXX1XC3X
E451XXXXXX1XC7X
E451XXXXXX1XR0X
E451XXXXXX1XR2X

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

WIRING CONFIGURATION

ELECTRICAL DIAGRAM R0 NOT USED	ELECTRICAL DIAGRAM C4 NOT USED	ELECTRICAL DIAGRAM S0 NOT USED																								
ELECTRICAL DIAGRAM S3 NOT USED	ELECTRICAL DIAGRAM A1 NOT USED	ELECTRICAL DIAGRAM C3 NOT USED																								
ELECTRICAL DIAGRAM E0 NOTE: Circuit E0 works from 12V to 230V. Only one type in coding E4520000000E05	ELECTRICAL DIAGRAM R2 NOT USED	ELECTRICAL DIAGRAM C7 NOT USED																								
Table of lenght tolerances [mm] <table><thead><tr><th>Over</th><th>Up to and including</th><th>Tolerance (+)</th></tr></thead><tbody><tr><td>0</td><td>1000</td><td>±20</td></tr><tr><td>1000</td><td>3000</td><td>±30</td></tr><tr><td>3000</td><td>5000</td><td>±40</td></tr><tr><td>5000</td><td>10000</td><td>±50</td></tr><tr><td>10000</td><td>15000</td><td>±100</td></tr><tr><td>15000</td><td>20000</td><td>±150</td></tr><tr><td>20000</td><td></td><td>±L/100</td></tr></tbody></table>			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
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																								
ELECTRICAL DIAGRAM 00 WITHOUT LED																										

ORIGINAL RELEASE EC NO: IPG2013-1190 DRWN: JMARSZALEK 2012/11/12 CHKD: MSZWAJKOWSKI 2012/11/12 APPR: MIWASIECZKO 2013/02/12	QUALITY SYMBOLS =0 =0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE -	DESIGN UNITS METRIC	FIRST ANGLE PROJECTION	
		4 PLACES 3 PLACES 2 PLACES 1 PLACE 0 PLACE	mm INCH	DRAWN BY JMARSZALEK CHECKED BY MSZWAJKOWSKI APPROVED BY MIWASIECZKO	DATE 2012/11/12 DATE 2012/11/12 DATE 2013/02/12	TITLE E451XXXXXXXXXX DIN FORM A EN 175301-803			
							MATERIAL NO.		
							DOCUMENT NO.		
							SHEET NO.		
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MATRIX DRAWING		SD-121050-004		1 OF 3			

9 8 7 6 5 4 3 2 1

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	5,6±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.	-
1202098208	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
CHKD: MSZWAJKOWSKI 2012/11/12
APPR: MIWASIECZKO 2013/02/12

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

DRAWN BY	DATE
JMARSZALEK	2012/11/12
CHECKED BY	DATE
MSZWAJKOWSKI	2012/11/12
APPROVED BY	DATE
MIWASIECZKO	2013/02/12

MATERIAL NO.
MATRIX DRAWINGSIZE
A3SCALE
-DESIGN UNITS
METRICFIRST ANGLE
PROJECTION

E451XXXXXXXXXXXX
DIN FORM A
EN 175301-803

molex

DOCUMENT NO.

SD-121050-004

SHEET NO.

3 OF 3

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