

Electronic dimmers



The Kwant Controls electronic dimmers of the ED-series yield an output voltage almost independent from the load current. This is a great advantage compared to the traditional solution using a power potentiometer. They have two galvanically isolated circuits that are suitable for systems supplied by 24VDC and are each protected by an internal fuse.

Specifications

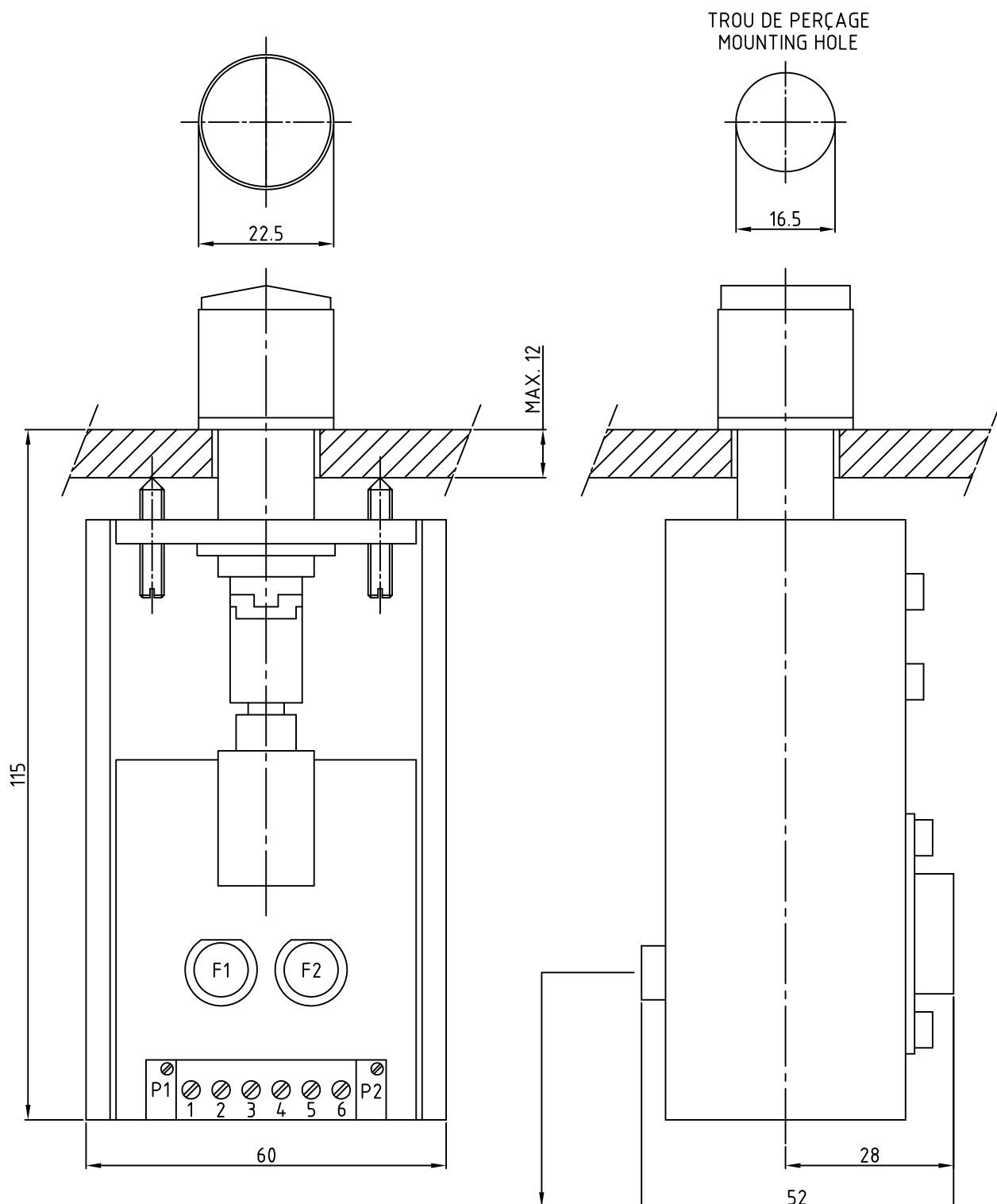
The dimmer circuit is wired in series with the lamps and acts as a controllable power resistor. Each dimmer circuit has a pre-set potentiometer for adjusting the minimum brightness level of the lamps. If the dimmer circuit is placed in the positive supply lead of the lamps, it will source the lamp current. This is referred to as a P-type circuit. If the dimmer circuit is placed in the negative (minus) supply lead of the lamps, it will sink the lamp current. This is referred to as an M-type circuit.

Options

The electronic dimmer is available in five different executions:

- Execution 1: ED-MM = both circuits are of the M-type;
- Execution 2: ED-PP = both circuits are of the P-type;
- Execution 3: ED-MP = first circuit is of the M-type, second circuit is of the P-type;
- Execution 4: QED-MMMM = all four circuits are of the M-type;
- Execution 5: QED-PPPP = all four circuits are of the P-type;

If more than two groups of lamps have to be dimmed, a central multi-section potentiometer is used, available in 4, 6 or 10 gangs, each gang serving 1 dimmer circuit. Each dimmer power module is now supplied with a pluggable terminal block instead of the dual section potentiometer. The suffix 'S' (for Separate) is added to the type ID of the dimmer module (for example: ED-MM becomes ED-MMS).



TO INCREASE MINIMUM LAMPBRIGHTNESS:
ROTATE P1 (P2) CLOCKWISE.

POUR DIMINUER LA LUMINOSITE:
TOURNEZ P1 (P2) DANS LE SENS HORAIRE.

IP 56

C = IP 65 -----> IP 56 13-08-03 HS
B = OMGEZET NAAR CAD 23-4-96 EVD
A = FRENCH TEXT 2-2-94 NJV

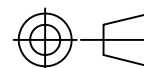
- ALLOW AT LEAST 30mm. FREE ROOM TO REPLACE THE FUSE.
- TO REMOVE THE FUSE: PUSH THE KNOB AND ROTATE IT 45° COUNTERCLOCKWISE.
- TO SECURE THE FUSE: PUSH THE KNOB AND ROTATE IT 45° CLOCKWISE.
- FUSE IS 2A (SIZE 5x20mm.)

- PREVOIR AU MOINS 30mm POUR REMPLACER LE FUSIBLE.
- POUR CHANGER LE FUSIBLE: PUSSEZ LE CAPOT ET TOURNER LE DE 45° DANS LE SENS ANTI-HORAIRE.
- POUR REMETTRE LE FUSIBLE: PUSSEZ LE CAPOT ET TOURNER LE DE 45° DANS LE SENS HORAIRE.
- FUSIBLE 2A (DIMENSIONS 5x20mm).

SKETCH ELECTRONIC DIMMER, TYPE ED-MM/PP
ATTENUATEUR DE LUMIERE ELECTRONIQUE

4 A0099494

PROJ. METHODE



KWANT CONTROLS

KWANT CONTROLS B.V. SNEEK HOLLAND
HET AUTEURSRECHT WORDT VOORBEHOUDEN OVEREENKOMSTIG DE WET

WIJZ.

C

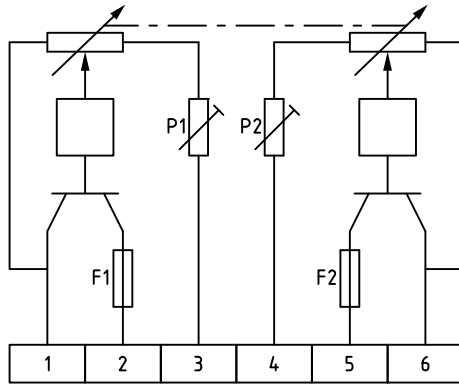
GET. EVD

D.D. 21-02-90 GEZ.

SCHAAL: 1:1

BLAD.

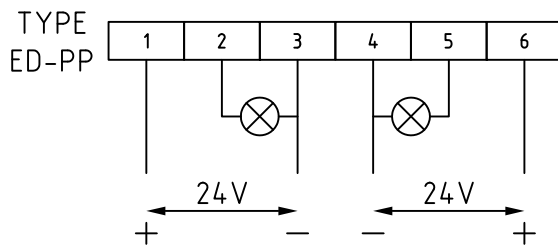
LET.	ST.NR.	WIJZIGING	D.D.	NAAM
A				
B		FRENCH	02-02-94	NJV
C		TYPE ED-PM REMOVED	27-02-96	NJV
D		FRENCH IMPROVED	11-04-97	TTW
E		CONVERTED TO CAD	20-08-01	JR



Technical specification

Maximum ratings for each circuit:

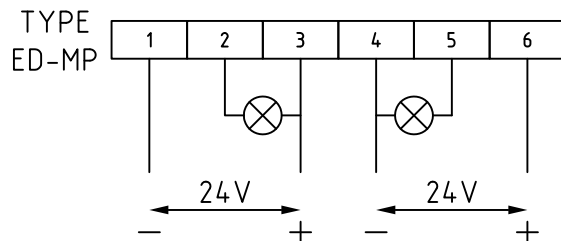
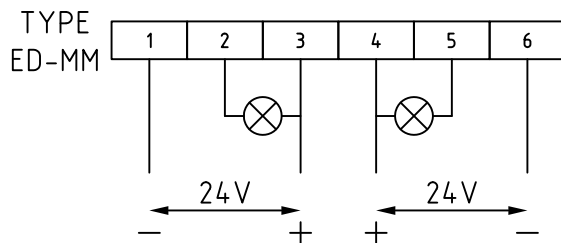
- supply voltage 32Vdc
- current 2A
- power dissipation 12W
- ambient temperature 80°C
- isolation
 - each circuit to heatsink 500Vac
 - circuit 1 to circuit 2 500Vac
- protection degree IP65 (in mounted condition)



Spécification technique

Caractéristiques maximales pour chaque circuit:

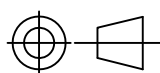
- tension d'alimentation 32Vdc
- courant 2A
- puissance dissipée 12W
- température ambiante 80°C
- isolement entre chaque circuit et le radiateur 500Vac
- isolement entre circuit 1 et 2 500Vac
- degré de protection IP65 (dans les conditions de montage)



WIRING DIAGRAM ELECTRONIC DIMMER
Schéma de l'atténuateur électronique

4 A0099495

PROJ. METHODE



KWANT CONTROLS

KWANT CONTROLS B.V. SNEEK HOLLAND
HET AUTEURSRECHT WORDT VOORBEHOUDEN OVEREENKOMSTIG DE WET

WIJZ.

E

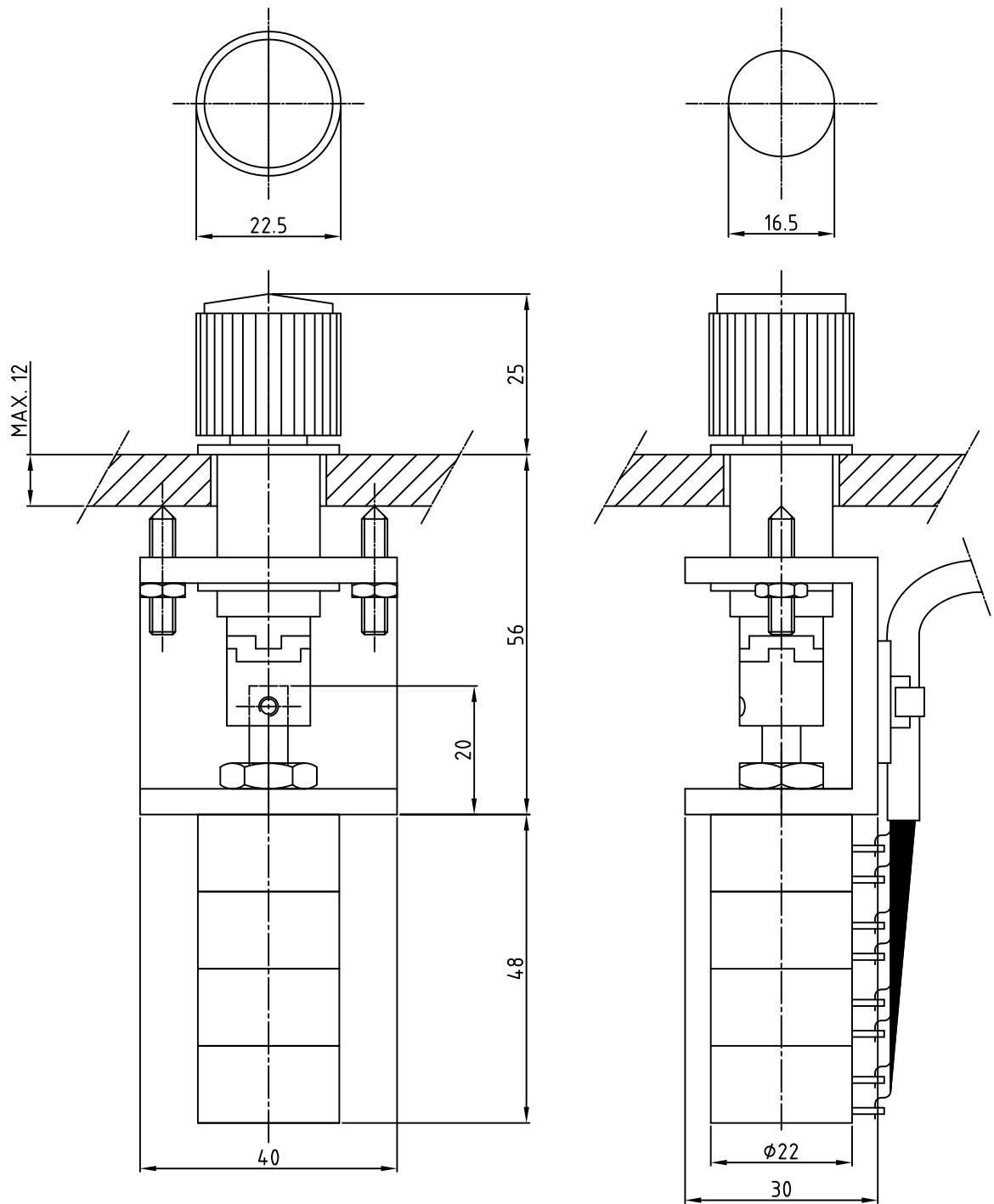
GET. NJV

D.D. 29-03-90 GEZ.

SCHAAL:

BLAD.

MOUNTING HOLE



IP 56

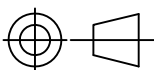
MULTI-GANGED POTENTIOMETER FOR ELECTRONIC
DIMMER CONTROL (ED/MMS OR ED/PPS)

KWANT CONTROLS

KWANT CONTROLS B.V. SNEEK HOLLAND
HET AUTEURSRECHT WORDT VOORBEHOUDEN OVEREENKOMSTIG DE WET

4 A0104907

PROJ. METHODE



WIJZ.

A

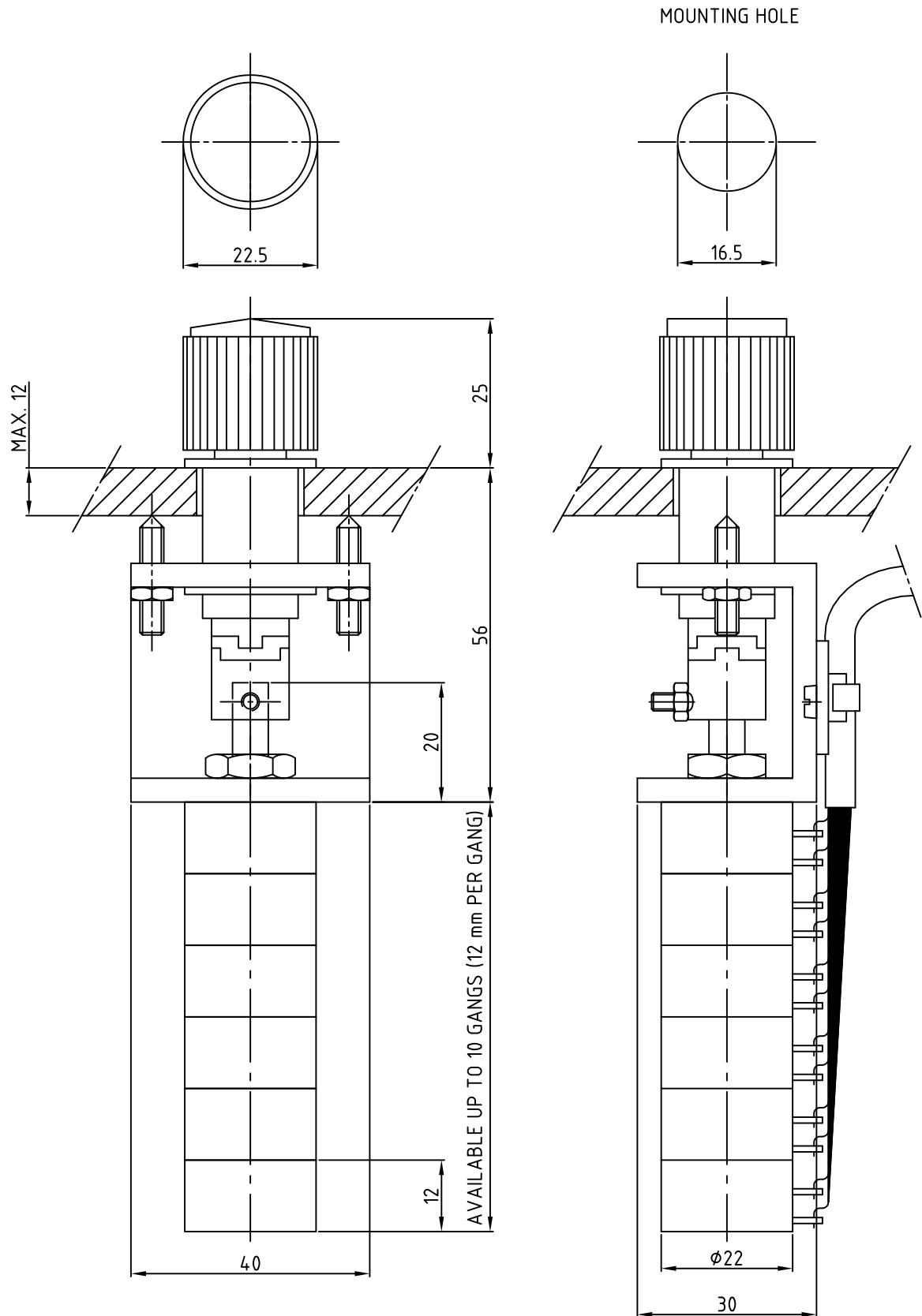
GET. EVD

D.D. 29-08-97 GEZ.

SCHAAL: 1:1

BLAD.

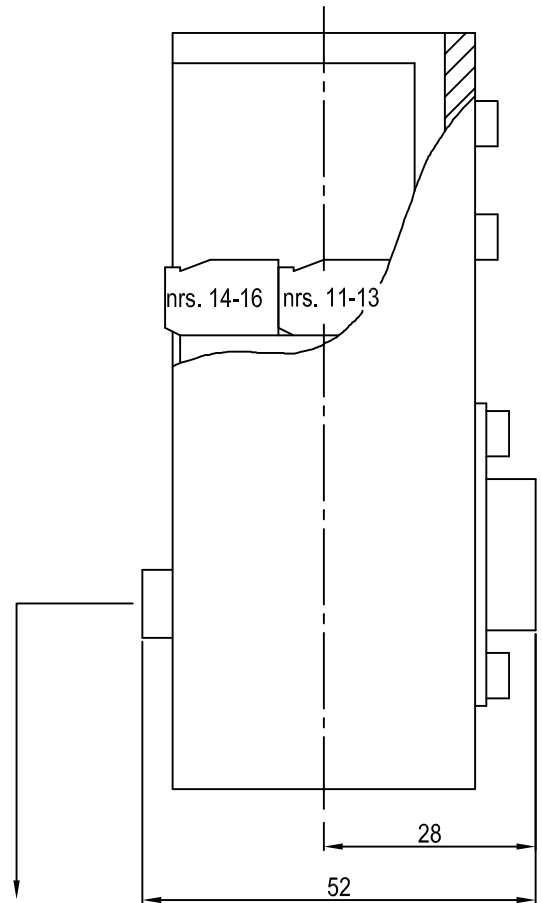
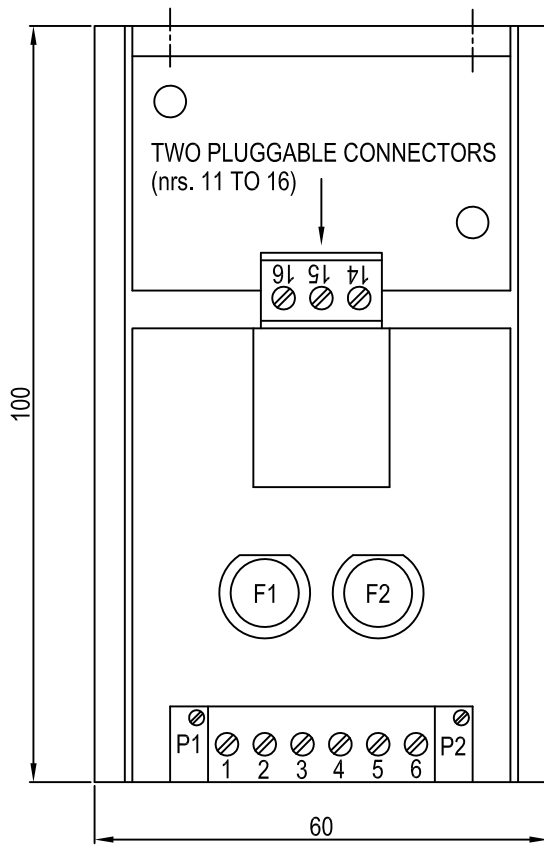
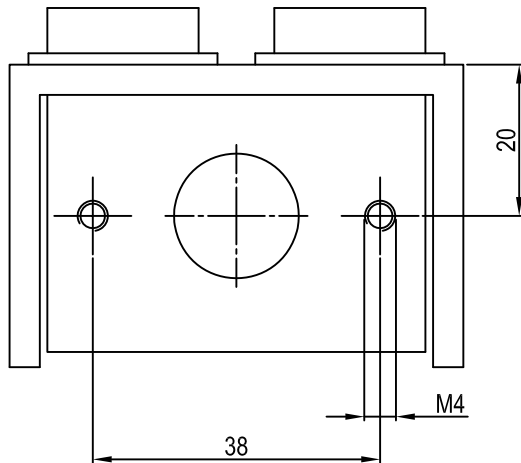
LET.	ST.NR.	WIJZIGING	D.D.	NAAM
A		IP 65 -----> IP 56	13-08-'03	HS



IP 56

MULTI-GANGED POTENTIOMETER FOR ELECTRONIC DIMMER CONTROL (ED/MMS OR ED/PPS)		4 A0104367		PROJ. METHODE
KWANT CONTROLS		WIJZ.	A	
KWANT CONTROLS B.V. SNEEK HOLLAND		GET. EVD	D.D. 17-02-97	GEZ.
HET AUTEURSRECHT WORDT VOORBEHOUDEN OVEREENKOMSTIG DE WET		SCHAAL: 1:1	BLAD.	

LET.	ST.NR.	WIJZIGING	D.D.	NAAM
A		OMGEZET NAAR CAD	24-04-96	EVD
B		GATEN Ø4.2 GEW. IN M4	4-9-97	EVD



TO INCREASE MINIMUM LAMPBRIGHTNESS:
ROTATE P1 (P2) CLOCKWISE.

- ALLOW AT LEAST 30mm. FREE ROOM TO REPLACE THE FUSE.
- TO REMOVE THE FUSE: PUSH THE KNOB AND ROTATE IT 45° COUNTERCLOCKWISE.
- TO SECURE THE FUSE: PUSH THE KNOB AND ROTATE IT 45° CLOCKWISE.
- FUSE IS 2A (SIZE 5x20mm.)

ELECTRONIC DIMMER TYPE ED-MMS / ED-PPS

4 A 0100431

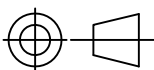
PROJ. METHODE

KWANT CONTROLS

KWANT CONTROLS B.V. SNEEK HOLLAND
HET AUTEURSRECHT WORDT VOORBEHOUDEN OVEREENKOMSTIG DE WET

WIJZ.

B



GET. EVD

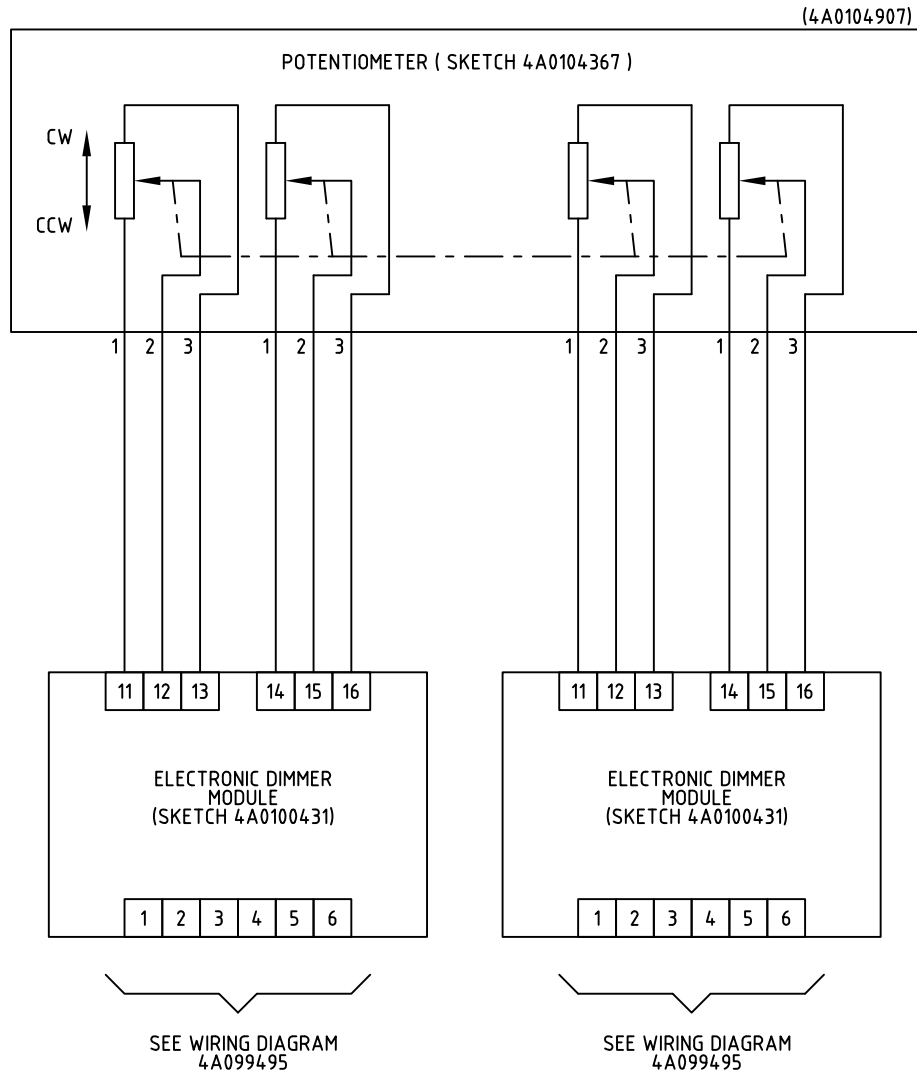
D.D. 12-07-'91

GEZ.

SCHAAL: 1:1

BLAD.

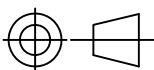
LET.	ST.NR.	WIJZIGING	D.D.	NAAM
A				
B		CONVERTED TO CAD	20-08-01	JR
C		TERMINAL MARKING 1,2,3	13-05-03	TTW



BLOCK DIAGRAM
FOR DIMMING MORE THAN TWO SYSTEMS

4 A0100432

PROJ. METHODE



KWANT CONTROLS

KWANT CONTROLS B.V. SNEEK HOLLAND
HET AUTEURSRECHT WORDT VOORBEHOUDEN OVEREENKOMSTIG DE WET

WIJZ.

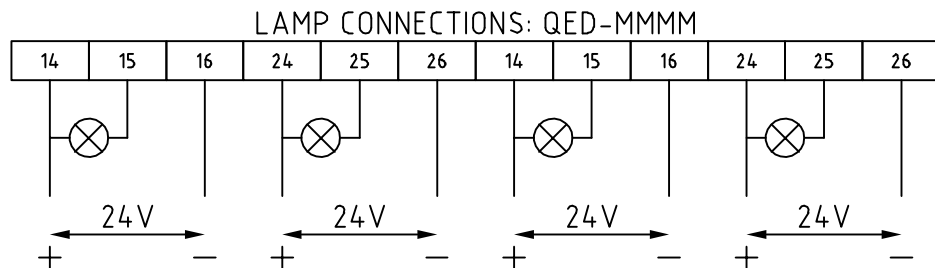
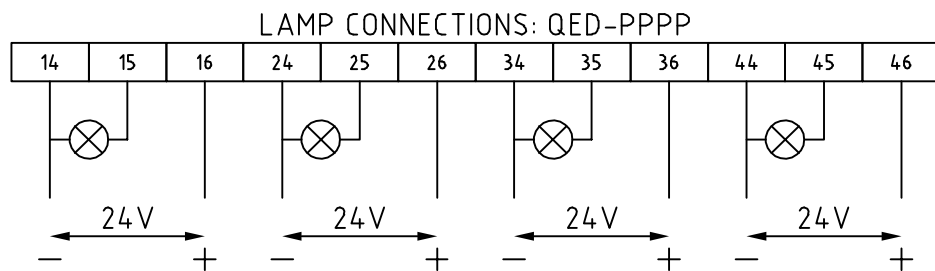
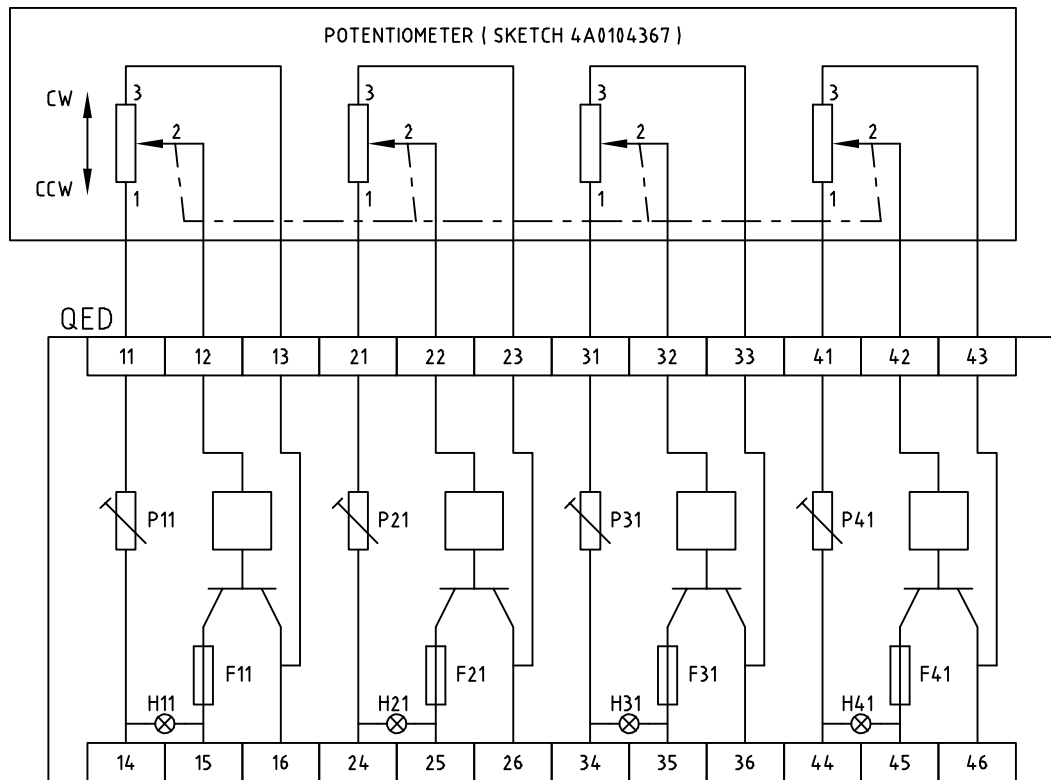
C

GET. NJV

D.D. 29-07-91 GEZ.

SCHAAL:

BLAD.



Technical specification

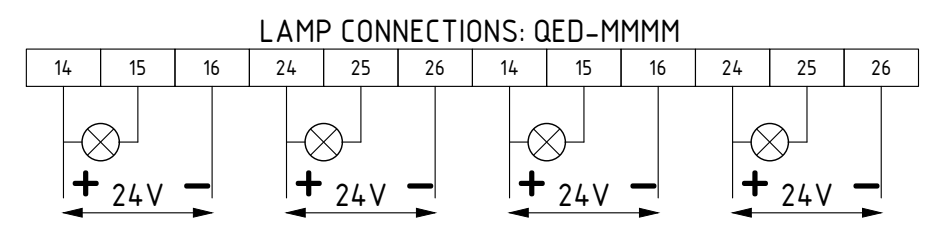
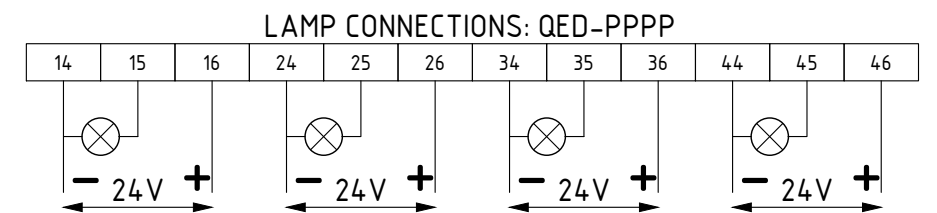
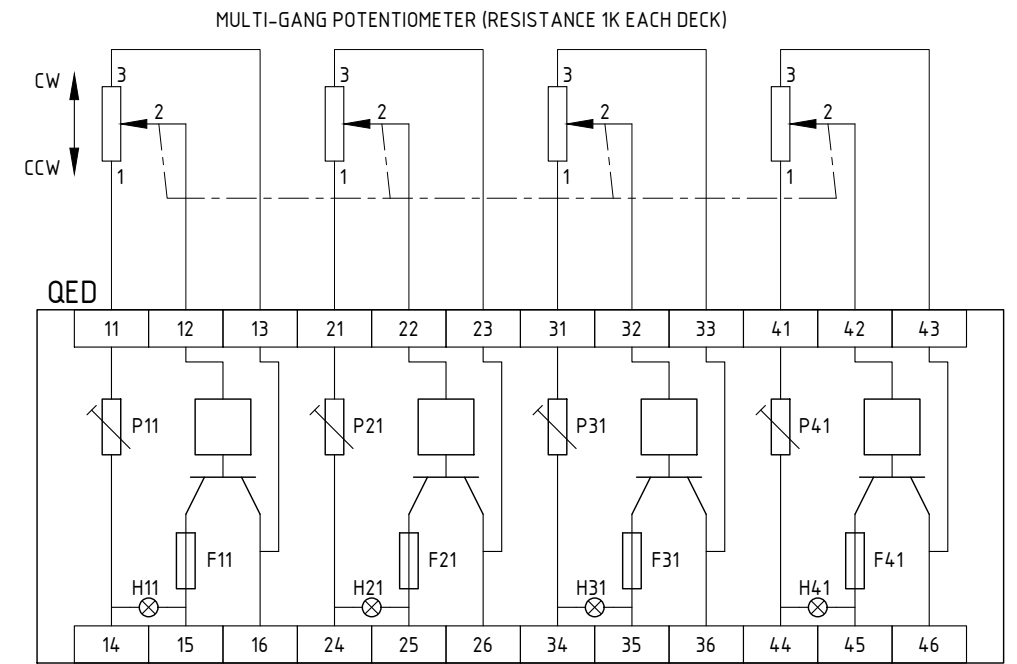
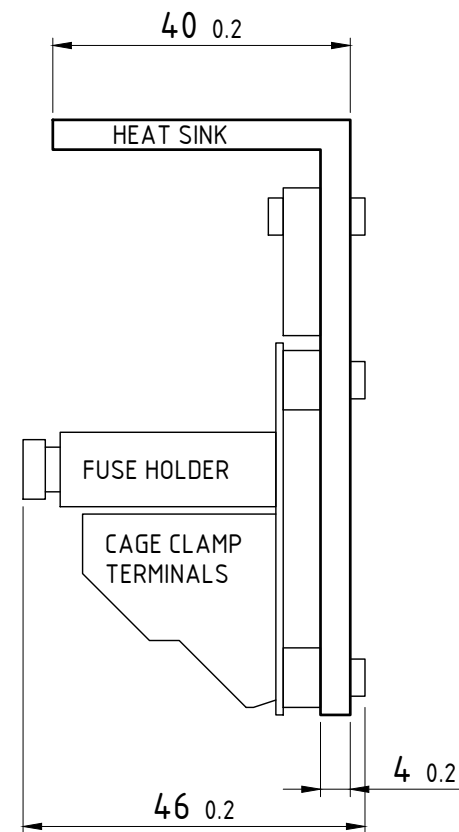
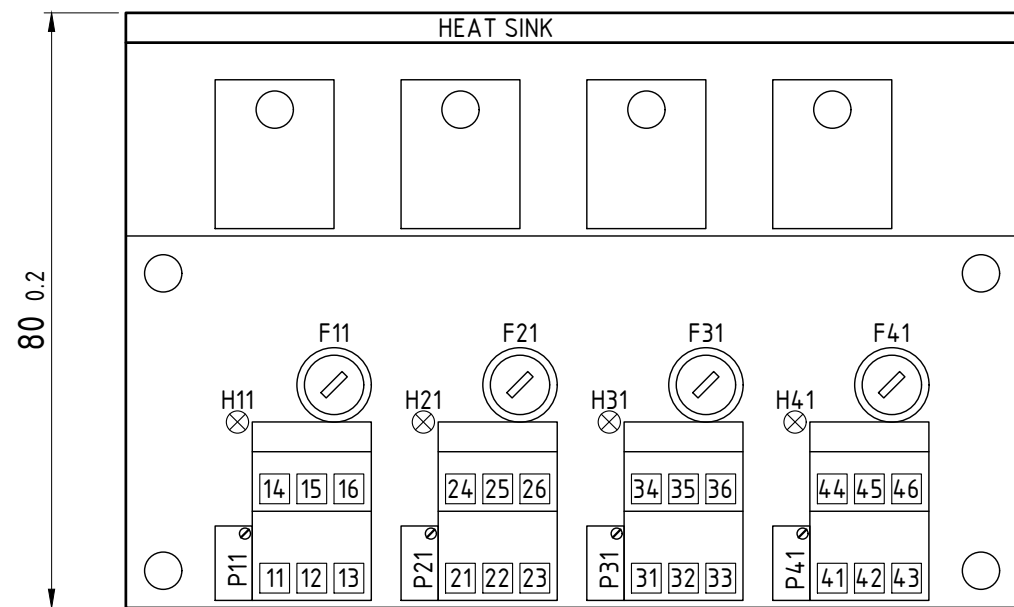
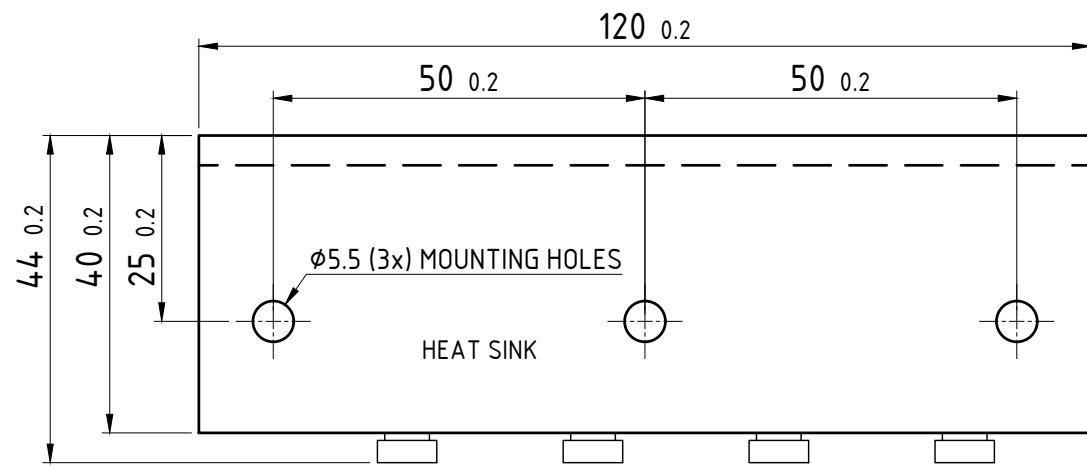
Maximum ratings for each circuit:

- supply voltage: 32 VDC
- fuse: 1A slow (size 5x20mm)
- power dissipation: 12W
- ambient temperature: 80°C
- isolation
- each circuit to heatsink: 500 VAC
- circuit to circuit: 500VAC

KWANT CONTROLS sneek-holland	Drawn by: RW	15-12-2009	Doc. type: CONNECTION DIAGRAM		
	Appr. by: NJV	1-5-2013	Doc. title: ELECTRONIC DIMMER MODULE QED		
Drawing scale: -	Fact. No.: STD	Doc. Ref.: 4A0117449	Rev.: -	Sheet: 1	of: 1

Drawing scale= 1:1

1	2	3	4	5	6	7	8	9
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REMARKS

- FUSES ARE 1AT MAXIMUM (SIZE $\phi 5 \times 20 \text{mm}$.)
- ALLOW AT LEAST 30mm. FREE ROOM TO REPLACE THE FUSE
- TO REMOVE THE FUSE: PUSH THE KNOB AND ROTATE IT 45° COUNTERCLOCKWISE.
- TO SECURE THE FUSE: PUSH THE KNOB AND ROTATE IT 45° CLOCKWISE.
- TO INCREASE MINIMUM LAMPBRIGHTNESS: ROTATE TRIM POTENTIOMETER (Px1) CLOCKWISE.
- type QED-MMMM = K.C. part No. 28010104
- type QED-PPPP = K.C. part No. 28010105

AVAILABLE POTENTIOMETER UNITS:

- 2-DECK DRW. 4A0112850 = K.C. part No. 19000002
- 4-DECK DRW. 4A0104907 = K.C. part No. 19000004
- 6-DECK DRW. 4A0104367 = K.C. part No. 19000006
- 10-DECK DRW. 4A0104367 = K.C. part No. 19000010

Technical specification

- Maximum ratings for each circuit:
- supply voltage: 32 VDC
 - fuse: maximum 1A slow (size 5x20mm)
 - power dissipation: 12W
 - ambient temperature: 80 C
 - isolation each circuit to heatsink: 500 VAC
 - circuit to circuit: 500VAC

B	FUSES TO BE USED MUST BE IN RANGE OF 100mAT TO 1AT	19-1-2018	NJV	Project name:	-	KWANT CONTROLS s n e e k - h o l l a n d	Drawn by: NJV	23-2-2015	Doc. type: DATA SHEET		
A	LEDs ADDED ON THE COMPONENT VIEW	17-7-2017	NJV	Customer:	-		Appr. by: -	-	Doc. title: ELECTRONIC DIMMER BLOCK, type QED		
Rev.	Description	Date	By:	Project Ref.:	-		Fact. No.: STD	-	Doc. Ref.: A0114793	Rev.: B	Sheet: 1